



REGULATORY EXCELLENCE

▪ SURGING TOWARD ▪  
**THE FUTURE**

**2018 NCSBN Annual Meeting**  
Minneapolis · Aug. 15-17, 2018

---

REGULATORY EXCELLENCE

▪ SURGING TOWARD ▪

**THE FUTURE**

## **SECTION I: MEETING RESOURCES**

Save the Date: 2018-2019 Upcoming Events	9
Directions for Obtaining Continuing Education (CE) Contact Hours for the 2018 Delegate Assembly	10
Business Agenda of the 2018 Delegate Assembly	11
NCSBN Awards	12

## **SECTION II: COMMITTEE REPORTS**

### **Reports with Recommendations**

Summary of Recommendations to the 2018 Delegate Assembly	15
Report of the Board of Directors (BOD)	17
Attachment A: Annual Strategic Plan Progress Report, October 2017 – May 2018	23
Attachment B: Terms and Conditions of NCSBN Exam User Membership	28
Attachment C: College of Registered Nurses of British Columbia exam user member application	31
Attachment D: College of Registered Nurses of Manitoba exam user member application	34
Attachment E: College of Nurses of Ontario exam user member application	37
Attachment F: National Center for Independent Examination (NCIE) – Kazakhstan associate member application	40
Report of Leadership Succession Committee (LSC)	43
Attachment A: LSC Policy 1.0	45
Attachment B: 2018 Leadership Brochure	49
Attachment C: Leadership Recognition Card	51
Attachment D: 2018 Slate of Candidates	52
Report of the NCLEX® Examination Committee (NEC)	85
Attachment A: Proposed 2019 NCLEX-RN® Test Plan – Strikethrough Copy	93
Attachment B: Proposed 2019 NCLEX-RN® Test Plan – Clean Copy	101
Attachment C: Timeline for Implementation of the 2019 NCLEX-RN® Test Plan	109
Attachment D: Annual Report of Pearson VUE for the NCLEX	110

### **Informational Reports**

Report of the 40th Anniversary Committee	129
Report of the Awards Committee	130
Attachment A: 2018 Awards Brochure	133
Report of the Commitment to Ongoing Regulatory Excellence (CORE) Committee	146
Report of the Finance Committee	148
Attachment A: Report of the Independent Auditors FY17	149
Report of the Institute of Regulatory Excellence (IRE) Committee	167
Report of Marijuana Regulatory Guidelines Committee	169
Attachment A: Medical Marijuana and Nursing Practice: Current Legislation, scientific literature review and nursing implications	171
Attachment B: NCSBN Guidelines for APRNs: Certifying a Medical Marijuana Program Qualifying Condition	221
Attachment C: NCSBN Recommendations: Cannabis-specific Education Content for APRN Nursing Programs	232
Attachment D: NCSBN Guidelines for Nurses: Care of a Patient Using Medical Marijuana	242
Attachment E: NCSBN Recommendations: Cannabis-specific Education Content for Pre-licensure Nursing Programs	250
Attachment F: NCSBN Guidelines for the Board of Nursing: Complaints Involving a Licensee and Cannabis	257

---

Report of the NCSBN Standards Development Committee (NSDC)	270
Attachment A: 2015 NCSBN 001	274
Attachment B: 2016 NCSBN 002	277
Attachment C: 2016 NCSBN 003	279
Attachment D: NCSBN Framework	282
Report of the National Nurse Aide Assessment Program (NNAAP®) and the Medication Aide Certification Examination (MACE®)	287
Report of the Nursing Education Outcomes and Metrics Committee	291
<b>SECTION III: NCSBN RESOURCES</b>	
Standing Rules of the Delegate Assembly	295
Orientation Manual for Delegate Assembly Participants	299
NCSBN Delegate Seating Chart	305
NCSBN Organizational Chart	306
NCSBN Bylaws	307



---

## Membership

The National Council of State Boards of Nursing, Inc. (NCSBN) is a not-for-profit organization whose membership comprises the boards of nursing in the 50 states, the District of Columbia and four U.S. territories—American Samoa, Guam, Northern Mariana Islands and the Virgin Islands. There are also 30 associate members.

## Mission

The National Council of State Boards of Nursing (NCSBN) provides education, service and research through collaborative leadership to promote evidence-based regulatory excellence for patient safety and public protection.

## Vision

Advance regulatory excellence worldwide.

## Values

**Collaboration:** Forging solutions through respect, diversity and the collective strength of all stakeholders.

**Excellence:** Striving to be and do the best.

**Innovation:** Embracing change as an opportunity to better all organizational endeavors and turning new ideas into action.

**Integrity:** Doing the right thing for the right reason through honest, informed, open and ethical dialogue.

**Transparency:** Demonstrating and expecting openness, clear communication and accountability of processes and outcomes.

## Purpose

The purpose of NCSBN is to provide an organization through which boards of nursing act and counsel together on matters of common interest and concern affecting the public health, safety and welfare, including the development of licensing examinations in nursing.

NCSBN's programs and services include developing the NCLEX-RN® and NCLEX-PN® Examinations, performing policy analysis and promoting uniformity in relationship to the regulation of nursing practice, disseminating data related to the licensure of nurses, conducting research pertinent to NCSBN's purpose and serving as a forum for information exchange for members.

The National Council of State Boards of Nursing (NCSBN) provides education, service, and research through collaborative leadership to promote evidence-based regulatory excellence for patient safety and public protection.

Copyright ©2018 National Council of State Boards of Nursing, Inc. (NCSBN®)

All rights reserved. NCSBN®, NCLEX®, NCLEX-RN®, NCLEX-PN®, NNAAP®, MACE®, TERCAP®, Nursys®, Nursys e-Notify® and Question Dissection® are registered trademarks of NCSBN and this document may not be used, reproduced or disseminated to any third party without written permission from NCSBN.

Permission is granted to boards of nursing to use or reproduce all or parts of this document for licensure related purposes only. Nonprofit education programs have permission to use or reproduce all or parts of this document for educational purposes only. Use or reproduction of this document for commercial or for-profit use is strictly prohibited. Any authorized reproduction of this document shall display the notice: "Copyright by the National Council of State Boards of Nursing, Inc. All rights reserved." Or, if a portion of the document is reproduced or incorporated in other materials, such written materials shall include the following credit: "Portions copyrighted by the National Council of State Boards of Nursing, Inc. All rights reserved."

Address inquiries in writing to NCSBN Permissions, 111 E. Wacker Drive, Suite 2900, Chicago, IL 60601-4277.



## **SECTION I: MEETING RESOURCES**





# SAVE THE DATE

## 2018-2019 UPCOMING EVENTS

Sept. 24, 2018

**2018 NCSBN NCLEX® Conference**

*Charlotte, N.C.*

Oct. 22–23, 2018

**2018 International Nurse Regulator  
Collaborative Symposium**

*Chicago*

Oct. 24, 2018

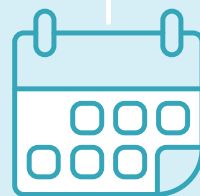
**2018 NCSBN Scientific Symposium**

*Chicago*

March 26–28, 2019

**NCSBN Midyear Meeting**

*San Antonio, TX*



FOR MORE INFORMATION, VISIT  
**[www.ncsbn.org/events](http://www.ncsbn.org/events)**

---

## Directions for Obtaining Continuing Education (CE) Contact Hours for the 2018 Delegate Assembly

In an attempt to streamline the CE process, as well as to be environmentally responsible, we will award your CE certificates electronically.

Please follow these directions carefully if you'd like to receive your CE contact hours:

1. Check in using the iPads at the registration desk once per day. **This is critical for obtaining CE contact hours.** If you don't check in, you will not be eligible to receive the contact hours.
2. After the meeting concludes, NCSBN will email the electronic evaluation form, which must be completed in order to obtain CE contact hours.
3. Once we receive your electronic evaluation, NCSBN will send you an electronic CE certificate. **The deadline to complete the electronic evaluation is Friday, Sept. 7, 2018.**
4. If you have any questions, email Qiana McIntosh at [qmcintosh@ncsbn.org](mailto:qmcintosh@ncsbn.org).

*Provider Number: ABNP1046, expiration date October 2018*



---

## Business Agenda of the 2018 Delegate Assembly

### Wednesday, Aug. 15, 2018

9:30-11:40 am

#### OPENING CEREMONIES

- Introductions
- Announcements

#### OPENING REPORT

- Credentials Report

#### ADOPTION OF STANDING RULES

#### ADOPTION OF AGENDA

#### REPORT OF THE LEADERSHIP SUCCESSION COMMITTEE

- Presentation of the 2018 Slate of Candidates
- Nominations from Floor

#### PRESIDENT'S ADDRESS

#### CEO'S ADDRESS

### Thursday, Aug. 16, 2018

8:30-9:00 am

#### ELECTIONS

10:00-10:15 am

#### ELECTION RESULTS

### Friday, Aug. 17, 2018

11:00 am-12:00 pm

#### BOARD OF DIRECTORS' RECOMMENDATIONS

- Approve the Terms and Conditions of NCSBN Exam User Membership
- Approve the College of Registered Nurses of British Columbia as an Exam User Member of NCSBN
- Approve the College of Registered Nurses of Manitoba as an Exam User Member of NCSBN
- Approve the College of Nurses of Ontario as an Exam User Member of NCSBN
- Approve the National Center for Independent Examination (NCIE) - Kazakhstan as an Associate Member of NCSBN

#### NCLEX® EXAMINATION COMMITTEE'S RECOMMENDATIONS

- Adopt the proposed 2019 NCLEX-RN® Test Plan

#### NEW BUSINESS

#### CLOSING CEREMONY

#### ADJOURNMENT

**Note:** Business conducted during the Delegate Assembly will be continuous, advancing through the agenda as time and discussion permit.

---

## NCSBN Awards Schedule

On Aug. 16, 2018, NCSBN will recognize its dedicated and exceptional membership and guests at its annual awards ceremony,

The following award recipients will be honored:



### R. Louise McManus Award

Gloria Damgaard, MS, RN, FRE,  
Executive Director, South Dakota  
Board of Nursing

The R. Louise McManus Award is the most prestigious award. Individuals nominated for this award shall have made sustained and significant contributions through the highest commitment and dedication to the mission and vision of NCSBN.



### Founders Award

Joyce Schowalter, MEd, RN,  
Former Minnesota Board of Nursing  
Executive Director

This prestigious award is given only upon occasion that an individual with ethics, integrity and sincerity has demonstrated the highest regard for the ideals and beliefs upon which NCSBN was founded.



### Exceptional Contribution Award

- Lois Hoell, MS, MBA, RN, Commission Member, Washington State Nursing Care Quality Assurance Commission (left)
- Suellyn Masek, MSN, RN, CNOR, Commission Member, Washington State Nursing Care Quality Assurance Commission (right)

The Exceptional Contribution Award is granted for significant contribution and demonstrated support of NCSBN's mission.



### Distinguished Achievement Award

- Gregory Y. Harris, JD, Former Board Member, Arizona State Board of Nursing and Partner, Lewis, Roca Rothgerber Christie LLP (left)
- Deb Soholt, MS, RN, Former Board Member, South Dakota Board of Nursing, South Dakota State Senator, and Director of Women's Health, Avera Medical Group (right)

The Distinguished Achievement Award is given to individuals whose contributions or accomplishments have impacted NCSBN's mission and vision.



### Regulatory Achievement Award

College of Nurses of Ontario  
Anne Coghlan, MScN, RN, Executive Director and  
Chief Executive Officer

The Regulatory Achievement Award recognizes the member board or associate member that has made an identifiable, significant contribution to the mission and vision of NCSBN in promoting public policy related to the safe and effective practice of nursing in the interest of public welfare.

## **SECTION II: COMMITTEE REPORTS**



# Summary of Recommendations to the 2018 Delegate Assembly

## Board of Directors Recommendations:

### 1. Approve the Terms and Conditions of NCSBN Exam User Membership.

#### Rationale:

The NCSBN Bylaws, article III, section 2 states, "To qualify for approval, and to maintain membership as a Member Board or Exam User Member, a jurisdictional board of nursing that regulates registered nurses and/or practical/vocational nurses must...execute a current Terms and Conditions of NCSBN Membership, as amended from time to time by Delegate Assembly..."

#### Fiscal Impact:

None.

### 2. Approve the College of Registered Nurses of British Columbia as an exam user member of NCSBN.

#### Rationale:

The NCSBN Bylaws, article III, section 1c states, "An Exam User Member is a jurisdictional board of nursing that has an organizational mandate exclusively related to the regulation of the profession and protection of the public and uses the pre-licensure exam developed by NCSBN..." The Bylaws require approval of the membership by the full membership of the Delegate Assembly. The current applications for Exam User Membership meet the qualifications as stated in the NCSBN Bylaws.

#### Fiscal Impact:

Upon acceptance, each new exam user member will pay a \$750 annual fee.

### 3. Approve the College of Registered Nurses of Manitoba as an exam user member of NCSBN.

#### Rationale:

The NCSBN Bylaws, article III, section 1c states, "An Exam User Member is a jurisdictional board of nursing that has an organizational mandate exclusively related to the regulation of the profession and protection of the public and uses the pre-licensure exam developed by NCSBN..." The Bylaws require approval of the membership by the full membership of the Delegate Assembly. The current applications for Exam User Membership meet the qualifications as stated in the NCSBN Bylaws.

#### Fiscal Impact:

Upon acceptance, each new exam user member will pay a \$750 annual fee.

### 4. Approve the College of Nurses of Ontario as an exam user member of NCSBN.

#### Rationale:

The NCSBN Bylaws, article III, section 1c states, "An Exam User Member is a jurisdictional board of nursing that has an organizational mandate exclusively related to the regulation of the profession and protection of the public and uses the pre-licensure exam developed by NCSBN..." The Bylaws require approval of the membership by the full membership of the Delegate Assembly. The current applications for Exam User Membership meet the qualifications as stated in the NCSBN Bylaws.

#### Fiscal Impact:

Upon acceptance, each new exam user member will pay a \$750 annual fee.

**5. Approve the National Center for Independent Examination (NCIE) - Kazakhstan as an associate member of NCSBN.**

**Rationale:**

The NCSBN Bylaws, article III, section 1d states, "An Associate Member is a nursing regulatory body or empowered regulatory authority that is in whole or in part empowered by government to license and regulate nursing practice in the jurisdiction." The Bylaws require approval of the membership by the full membership of the Delegate Assembly. The current applications for Associate Membership meet the qualifications as stated in the NCSBN Bylaws.

**Fiscal Impact:**

Upon acceptance, each new associate member will pay a \$1,500 annual fee.

**NCLEX® Examination Committee (NEC) Recommendation:**

**6. Adopt the proposed 2019 NCLEX-RN® Test Plan.**

**Rationale:**

The NEC reviewed and accepted the report of findings from the 2017 *RN Practice Analysis: Linking the NCLEX-RN® Examination to Practice* (NCSBN, 2018) as the basis for recommending revisions to the 2016 *NCLEX-RN® Test Plan* to the Delegate Assembly. Empirical evidence from the practice analysis, feedback from the members boards and legal counsel, and the professional judgment of the NEC provide support for the recommendation to the Delegate Assembly to adopt the proposed 2019 *NCLEX-RN® Test Plan*.

**Fiscal Impact:**

Incorporated into the fiscal year 2018 (FY18) budget.

**Leadership Succession Committee (LSC) Recommendations:**

**7. Present the 2018 Slate of Candidates.**

**Rationale:**

The LSC has prepared the 2018 Slate of Candidates with due regard for the qualifications required by the positions open for election, fairness to all candidates, and attention to the goals and purpose of NCSBN. Full biographical information and application responses for each candidate are posted in the Business Book under the Report of the Leadership Succession Committee. Candidates will present himself or herself at the Candidate's Forum on Wednesday, Aug. 15, 2018.

**Fiscal Impact:**

Incorporated into the FY18 budget.



# Report of the Board of Directors (BOD)

## Highlights of Business Activities

Oct. 1, 2017 – May 31, 2018

### STRATEGIC IMPLEMENTATION

**Strategic Plan 2017-2019:** Excellent progress has been made in relation to the pursuit of the 2017–2019 Strategic Plan with major objectives being met across all four of the Strategic Initiatives. One area relating to exploration of mobility within the NAFTA group of countries has been postponed due to the uncertainty of the wider agreement currently being negotiated between the administrations of Mexico, Canada and the United States. Fiscal year 2019 (FY19) will see the start of discussions with the membership in preparation for the next three-year cycle.

**Enhanced Nurse Licensure Compact (eNLC) Activity:** Tremendous progress has been made regarding passage of legislation at the state level, culminating in the implementation of the eNLC ahead of the default date of December 2018. This work has only been possible by the coordinated efforts of a wide range of stakeholders at both state and national levels. In addition to the passage of legislation, the commission has been established, rules drafted and implemented, increased numbers of endorsements secured and a wide range of alliances built. This achievement has only been possible through the hard work of regulators and their partners at the state level as well as the support of the NCSBN cross-organizational team working to address the various issues that have emerged as a result of bringing about such large-scale change.

**Regulation 2030:** The initial work on Regulation 2030 – First Steps of a Journey, was completed with the publication of a supplement to the Journal of Nursing Regulation. Multiple requests for copies of the report have been received, as well as positive feedback from a number of ministries and jurisdictions from across the world. Presentations have been given on request to a number of NCSBN Member Boards and Associate Members. In addition, presentations to other sister regulatory disciplines have been made, as well as discussions with federal level staff at the FTC and the Department of Labor.

**Next Generation NCLEX®:** Continued progress has been made in developing the scientific underpinnings for the next generation licensing exam. Data collection has commenced and the response rate in relation to requests for participation have been high. NCSBN has received an increasing number of requests to provide a presentation on the work from interested stakeholders in the education and measurement sectors.

**Membership Model:** In August 2017 the Delegate Assembly voted to create a new category of membership entitled exam user member. Three applications for entry into this class of membership will be considered at the 2018 Delegate Assembly.

**Substance Abuse:** Changes to legislation relating to the medicinal and recreational use of marijuana, as well as the opioid crisis has featured extensively in the work of both NCSBN and individual boards. The work of the Marijuana Regulatory Guidelines Committee has resulted in the development of a wide range of support materials that will be finalized and published in the coming months. The decision to make the eLearning resource on substance use disorder available for free has resulted in a significant increase in the use of this learning resource.

For a more comprehensive list of FY18 organizational achievements and actions see the FY18 highlights and accomplishments detailed later in this report.

### Members

Katherine Thomas, MN, RN, FAAN, Texas, Area III, President  
Julia L. George, MSN, RN, FRE, North Carolina, Area III, President-Elect  
Gloria Damgaard, MS, RN, FRE, South Dakota, Area II, Treasurer  
Cynthia LaBonde, MN, RN, Wyoming, Area I, Director  
Adrian Guerrero, CPM, Kansas, Area II, Director  
James D. Cleghorn, MA, Georgia, Area III Director  
Valerie Fuller, PhD, DNP, AGACNP-BC, FNP-BC, FAANP, Maine, Area IV Director  
Karen Scipio-Skinner, MSN, RN, District of Columbia, Area IV, Director-at-Large  
Valerie Smith, MS, RN, FRE, Arizona, Area I, Director-at-Large  
Lori Scheidt, MBA-HCM, Missouri, Area II, Director-at-Large  
Elizabeth Lund, MSN, RN, Tennessee, Area III, Director-at-Large

### Staff

David Benton, RGN, PhD, FRCN, FAAN, Chief Executive Officer  
Ashby Rosenberger, Senior Manager, Executive Office

### Meeting Dates

- Aug. 18, 2017
- Sept. 18–20, 2017
- Oct. 30–31, 2017 (Board Retreat)
- Dec. 4–5, 2017
- Feb. 5–6, 2018
- March 6, 2018
- May 7–9, 2018
- July 12–13, 2018

### Attachments

- Annual Strategic Plan Progress Report, October 2017 – May 2018
- Terms and Conditions of NCSBN Exam User Membership
- College of Registered Nurses of British Columbia Exam User Member Application
- College of Registered Nurses of Manitoba Exam User Member Application

- E. College of Nurses of Ontario Exam User Member Application
- F. National Center for Independent Examination (NCIE) – Kazakhstan Associate Member Application

## Recommendations to the Delegate Assembly

### 1. Approve the Terms and Conditions of NCSBN Exam User Membership.

#### Rationale:

The NCSBN Bylaws, article III, section 2 states, “To qualify for approval, and to maintain membership as a Member Board or Exam User Member, a jurisdictional board of nursing that regulates registered nurses and/or practical/vocational nurses must...execute a current Terms and Conditions of NCSBN Membership, as amended from time to time by Delegate Assembly...”.

#### Fiscal Impact:

None

### 2. Approve the College of Registered Nurses of British Columbia as an exam user member of NCSBN.

#### Rationale:

The NCSBN Bylaws, article III, section 1c states, “An Exam User Member is a jurisdictional board of nursing that has an organizational mandate exclusively related to the regulation of the profession and protection of the public and uses the pre-licensure exam developed by NCSBN...” The Bylaws require approval of the membership by the full membership of the Delegate Assembly. The current applications for Exam User Membership meet the qualifications as stated in the NCSBN Bylaws.

#### Fiscal Impact:

Upon acceptance, each new exam user member will pay a \$750 annual fee.

### 3. Approve the College of Registered Nurses of Manitoba as an exam user member of NCSBN.

#### Rationale:

The NCSBN Bylaws, article III, section 1c states, “An Exam User Member is a jurisdictional board of nursing that has an organizational mandate exclusively related to the regulation of the profession and protection of the public and uses the pre-licensure exam developed by NCSBN...” The Bylaws require approval of the membership by the full membership of the Delegate Assembly. The current applications for Exam User Membership meet the qualifications as stated in the NCSBN Bylaws.

#### Fiscal Impact:

Upon acceptance, each new exam user member will pay a \$750 annual fee.

### 4. Approve the College of Nurses of Ontario as an exam user member of NCSBN.

#### Rationale:

The NCSBN Bylaws, article III, section 1c states, “An Exam User Member is a jurisdictional board of nursing that has an organizational mandate exclusively related to the regulation of the profession and protection of the public and uses the pre-licensure exam developed by NCSBN...” The Bylaws require approval of the membership by the full membership of the Delegate Assembly. The current applications for Exam User Membership meet the qualifications as stated in the NCSBN Bylaws.

#### Fiscal Impact:

Upon acceptance, each new exam user member will pay a \$750 annual fee.

**5. Approve the National Center for Independent Examination (NCIE) - Kazakhstan as an associate member of NCSBN.**

**Rationale:**

The NCSBN Bylaws, article III, section 1d states, "An Associate Member is a nursing regulatory body or empowered regulatory authority that is in whole or in part empowered by government to license and regulate nursing practice in the jurisdiction." The Bylaws require approval of the membership by the full membership of the Delegate Assembly. The current applications for Associate Membership meet the qualifications as stated in the NCSBN Bylaws.

**Fiscal Impact:**

Upon acceptance, each new associate member will pay a \$1,500 annual fee.

## **FY18 Highlights and Accomplishments**

### **Strategic Partnership Meeting Attendance by BOD and/or NCSBN Staff**

- American Association of Colleges of Nursing (AACN)
- Citizen Advocacy Center (CAC) Annual Meeting
- National Student Nurses Association (NSNA)
- National Organization for Associate Degree Nursing (N-OADN)
- National League for Nursing (NLN) Education Summit
- Nursing Organization Alliance (NOA) Fall Summit
- CGFNS International leadership meeting
- Council on Licensure, Enforcement & Regulation (CLEAR) Educational Symposium
- International Nurse Regulator Collaborative (INRC) Symposium & Business Meeting
- WHO/ICN/ICM Triad meeting of government nursing and midwifery officers, national nursing associations and regulatory bodies
- ICN/ICM Credentialing and Regulators Forum
- National Quality Forum (NQF) Annual Conference
- Federation of Associations of Regulatory Boards (FARB) Annual Forum
- American Organization of Nurse Executives (AONE)
- Federation of State Medical Boards (FSMB)
- Canadian Nurses Association Biennial Convention
- National Patient Safety Foundation (NPSF)
- Tri-Regulator Collaborative Meeting
- Tri-Council for Nursing
- American Nurses Association (ANA)
- World Health Organization (WHO / Pan-American Health Organization (PAHO) launch of their work on advanced nursing practice

### **Governance and Policy**

- The BOD were provided with a range of resources relevant to the governance of not for profit 501 (c)(3) organizations.
- President Katherine Thomas, along with Chief Executive Officer David Benton, facilitated a board member briefing and orientation with contributions from Chief Financial Officer Rob

Clayborne, Tom Abram (Outgoing Legal Counsel), Tom Wilde (Incoming Legal Counsel) and Elizabeth Hall (Co-counsel) covering issues of fiduciary responsibility, governance, not-for-profit finance and 501 (c)(3) status.

- The BOD completed a review of all NCSBN board policies through examination of the various sections to reflect the changes resulting from the inclusion of the new exam user category of member.
- The BOD identified and appointed board liaisons to the various committees and mentors for those newly appointed board members.
- The BOD resolved to establish an expert-driven committee to examine the implications on active supervision resulting from the decision of the Supreme Court regarding the Federal Trade Commission (FTC) case against the North Carolina Dental Board.
- The BOD considered a request from the Executive Officer Leadership Council to consider if NCSBN should offer a view on the proposed change of title from veterinary technician to veterinary nurse. Due to lack of any public safety risk, the BOD decided not to intervene.
- The BOD considered and approved a draft member agreement in relation to the new exam user member category and resolved to forward this to the Delegate Assembly for consideration.
- The BOD appointed Tony Graham to the vacant position of chairperson and Demetrius Chapman to the vacant Area I member position on the Leadership Succession Committee (LSC).
- The BOD agreed to withdraw from membership of the American National Standards Institute (ANSI) as the standards development process is poorly aligned with the mandate of Boards of Nursing (BONs).
- The BOD agreed to establish a model act committee that would subsume the role of standards development.
- The BOD reviewed education and advocacy efforts in Washington, D.C. throughout the year, including collaborative efforts with the government relations firm Prime Policy Group.
- The BOD reviewed and discussed various environmental issues at each meeting. Topics included the opioid crisis, issues emerging from the changes to legislation on medicinal and recreational use of marijuana, ongoing issues emerging from the decision of the Supreme Court regarding the FTC case against the North Carolina Dental Board, moves towards consolidation of regulatory boards, attempts to introduce a broad-based licensure compact, and changes to the copyright laws.
- The BOD hosted a conference call/webinar for member boards during each BOD meeting. President Katherine Thomas highlighted environmental issues identified by the BOD, solicited current issues from member boards and facilitated dialogue with participating members.
- The BOD continuously reviewed performance outcome data from NCSBN-hosted education meetings and conferences.
- The BOD continuously reviewed and discussed performance measures and outcome data related to the NCSBN Strategic Plan.
- The BOD determined the education session content for the Midyear and Annual Meetings.
- The BOD held a retreat in October to consider the implications of the development of next generation testing and implications of the findings from the Regulation 2030 work.
- The BOD reviewed and discussed the annual environmental assessment report.
- The BOD set the initial FY19 board meeting and retreat dates.

## Finance

- The BOD approved the proposed budget for FY18.
- The BOD approved quarterly financial statements throughout the fiscal year.
- The BOD approved the proposed audit plan for FY17.
- The BOD approved the annual banking resolution authorizing the CEO to establish and maintain banking accounts.
- The BOD accepted the independent auditor's report for the NCSBN 403(b) defined contribution retirement plan for the year ended June 30, 2017.
- The BOD accepted the report of the independent auditors for the year ended Sept. 30, 2017.
- The BOD reviewed the 2017 IRS 990 form.
- The BOD met with NCSBN investments managers to review and discuss NCSBN's investment portfolio and performance analysis.

## Testing

- The BOD agreed to submit a tender for the Licensed Practical Nurse licensing exam in the Canadian Provinces, with the exception of Quebec.
- The BOD discussed and approved a plan to investigate the evolution of nursing support roles, their regulation and testing.
- The BOD discussed and approved the renewal of the Pearson Vue contract for a further five years.
- The BOD reviewed progress on the introduction of a new look and feel product that test candidates can utilize to familiarize themselves with the NCLEX test format.
- The BOD reviewed the NCLEX update reports on the NCLEX examination program.
- The BOD monitored NCLEX implementation in Canada and reviewed the report of the language commissioner who found the French translation to be appropriate.
- The BOD reviewed update reports on the National Nurse Aide Assessment Program (NNAAP®) and Medication Aide/Assistant Certification Examination (MACE®) examination programs.
- The BOD approved minor revisions to various NCLEX policies.

## Information Technology (IT)

- The BOD reviewed operational and performance outcome data related to Nursys® and programs, products and services from the Interactive Services department throughout the year.
- The BOD received an update on progress to support the exchange of licensure and discipline information between Canadian regulatory bodies and member boards.
- The BOD received the results of an NCSBN data security audit and were pleased to note the results.
- The BOD received an update on the implementation of the contractual relationship with the National Registry of Emergency Medical Technicians (NREMT) to provide the necessary software code to enable NREMT to implement their licensure compact.
- The BOD reviewed the progress and implementation of the ORBS project and noted that a number of changes to the sequence of those boards seeking to introduce the system had been made. Despite these changes, the phase two rollout of the project was progressing as anticipated,

- The BOD reviewed and approved a general risk-based framework to coordinate and control access to data.

### **Nursing Regulation and Research**

- The BOD received the results from an initial analysis of substance use disorder programs. It was noted that care in the interpretation of the results would be needed due to the variability of coding at the local level.
- The BOD received and approved a proposal to undertake research to identify potential metrics to assist BONs in deciding on the quality of educational programs.
- The BOD received an update report on the National APRN campaign and strategy. It was noted that this work is done at the request of individual boards and is a collaborative and coordinated activity.
- The BOD reviewed and approved a proposal to conduct a comprehensive review of the leadership development activities of NCSBN. Subsequently on receipt of the report, the BOD reviewed and approved proposals to redesign the Institute of Regulatory Excellence and other leadership development activities so as to produce a more coherent and member-need focused set of offerings.
- The BOD reviewed and discussed the annual environmental scan.
- The BOD received and discussed a synopsis of the current and planned future research activities.
- The BOD received a report that a number of issues relating to the APRN Compact have emerged and resolved to convene a meeting of member board executive officers to discuss how to resolve these matters.
- The BOD received regular updates on the work associated with eNLC legislative action, as well as the work of the associated implementation group.
- The BOD reviewed the development work that had been completed on the CORE portal, enabling members to run their own reports of their data.



## NCSBN STRATEGIC PLAN Fiscal Year 2017–2019

### Annual Strategic Progress Report, October 2017 – May 2018

The Annual Strategic Progress Report is provided as a summary of the year's activities and accomplishments in the work toward aligning the strategies with NCSBN's vision, mission and values and achieving the organization's strategic initiatives. This summary provides feedback around both internal business processes and external outcomes in order to continuously improve strategic performance and results.

#### **A: Envision and refine regulatory systems for increased relevance and responsiveness to changes in health care.**

NCSBN's purpose, vision and mission all incorporate statements about its relation to regulation and ensuring the safety and well-being of the public. With this in mind and recognizing the fast pace of change occurring in the health care environment, NCSBN needs to be on the cutting edge of evidence, knowledge and practice relating to regulatory systems that support contemporary health care. NCSBN must be a thought leader, informed by wider global and regional changes, and fully supportive and committed to the optimal delivery of jurisdiction-based, evidence-informed licensure. NCSBN will be proactive in identifying emergent trends so as to propose innovative yet pragmatic solutions. To this end NCSBN will communicate extensively with all its stakeholders so as to interpret and prioritize multiple complex perspectives, data and information.

#### **STRATEGIC OBJECTIVE A1**

##### **Create a global regulatory platform to facilitate understanding, dialogue and collaboration between nurse regulators.**

One of the major challenges and critical outcomes of regulatory efforts is reaching a common, consistent and unified definition of what the work entails. NCSBN continues to diligently explore ways to achieve common ground amongst all the major stakeholders. With this in mind, NCSBN is assembling the first ever comprehensive resource of nursing regulation around the world. Providing invaluable information to nurses, educators and researchers, this publication will detail the regulatory bodies of each country, registration or licensure requirements, levels of nursing and mandatory education as well as many other aspects of regulatory data. This resource will be free of charge and ready for distribution at the Annual Meeting/Delegate Assembly in 2018.

#### **STRATEGIC OBJECTIVE A2**

##### **Develop and promote measurable performance competencies for achieving excellence in regulatory governance.**

Defining the end state is crucial for providing the appropriate strategic direction to pursue. For its major outcomes, NCSBN has identified and defined performance competencies for key dimensions of Board governance and operations, and has incorporated those results into the Commitment to Ongoing Regulatory Excellence (CORE) project. CORE requirements for key dimensions are defined and consistently monitored across all member jurisdictions. This project is being extended so that the framework for the performance competencies will be in alignment with the EO leadership competencies also being developed.

#### **STRATEGIC OBJECTIVE A3**

##### **Help the boards of nursing (BONs) achieve operational excellence and efficiency.**

In order to help BONs achieve operational excellence and efficiency, NCSBN has enhanced Nursys.com to clearly display practice privileges by jurisdiction for employers, nurses and the public. In addition, NCSBN is working closely with those Boards that are not part of the Nursys License Verification for Endorsement to secure comprehensive coverage. As a result, fraud is reduced and a standardized, secure system is utilized for all licensure verification requests in the U.S. Lastly, via the CORE Portal, the CORE program helps BONs demonstrate their effectiveness and efficiency in protecting the public using a rigorous and valid set of performance measures. BONs have objective, jurisdictionally comparable measures that accurately reflect their efficiency and effectiveness in carrying out regulatory functions, including key aspects of regulatory governance.

---

## STRATEGIC OBJECTIVE A4

### **Amongst all relevant stakeholders, facilitate the generation and transfer of knowledge that supports decision making and evidence-based regulation.**

Recognizing the need for regulatory and educational systems to be aligned and in sync with the changing and evolving health care environment, NCSBN has put in place initiatives that will drive the use of best and evidence-based practices. NCSBN has developed a public policy course together with George Washington University, which is designed to increase the participant's public policy knowledge and skill as a regulator. NCSBN members play an active role in advancing nursing regulation and shaping public policy at the state and federal level. NCSBN has also identified the gaps in scientific evidence around nursing regulatory issues, conducting rigorous studies and analysis, with plans to publish results in peer-reviewed journals. NCSBN-supported research fills evidence gaps and is used to inform regulation and develop policy. In order to advance the knowledge of nursing regulation throughout the profession, NCSBN has developed the Regulatory Scholars Program for nursing students. NCSBN also encourages the increase of proposals submitted to the Center for Regulatory Excellence (CRE) Program from doctoral students as well as international researchers. A growing number of new researchers conduct regulatory research and NCSBN is a global resource to develop research capacity in investigators interested in advancing the science of nursing regulation.

## STRATEGIC OBJECTIVE A5

### **Increase the visibility and impact of the organization and establish it as the preeminent voice in regulation.**

NCSBN is interested in increasing its visibility and impact of the organization and establishing itself as the preeminent voice in regulation. Currently, NCSBN is undergoing a rebranding effort of the NCSBN message and value-added contribution. When complete, more peers, customers and stakeholders will understand NCSBN's vision and mission and align their efforts and forge partnerships in achieving common goals and strategies.

## **B. Champion regulatory solutions to address borderless health care delivery.**

Defining the nurse licensure regulatory framework for borderless health care delivery over the next few years will be complex and challenging. It will require increased collaboration with multiple stakeholders and involve working synergistically by utilizing advanced technology to deliver optimal results. Telehealth's influence in health care has increased over the last two decades. It has taken on new political influence that will impact jurisdiction-based licensure systems and will require new ways of working outside our traditional jurisdictional borders. Being cognizant of the legislative process, keeping an eye on current and emergent issues, as well as knowledgeable of where and how regulators can get involved will help accelerate the achievement of desired results for BONs and public protection.

## STRATEGIC OBJECTIVE B1

### **Promote and implement mechanisms that facilitate trans-jurisdictional practice.**

NCSBN is concentrating on building relationships with state stakeholders to achieve consensus on this model of licensure in order to enable practice beyond jurisdictional boundaries. At this time there are 30 jurisdictions who have enacted the eNLC and 8 are pending passing their state legislature in FY18 (IL, MA, MI, MN, NJ, NY, RI, VT). NCSBN is also testing a solution to exchange nurse licensure and discipline information with Canadian regulatory bodies. Licensure information is shared securely and regulators can make better informed licensure decisions. As significant numbers of Canadian Nurses have licenses in the U.S. and vice versa this development will further contribute to public protection. NCSBN openly supports the eNLC and assists states in adopting and implementing it. When complete, all states will have adopted the eNLC and licensees will understand their state is in the compact and its implications for licensure. Likewise, NCSBN assists states in adopting and enacting the consensus model and the APRN Compact. In regards to the APRN compact, two states have adopted it in 2016 (WY, ID), one state in 2017 (ND), and none have legislation pending. Gains continue to be made with alignment in 2018. The APRN Maps Project tracks movement toward total consensus. 25 MAP points have been added so far in 2018.

---

## **STRATEGIC OBJECTIVE B2**

### **Develop a North American model of licensure with U.S. trading partners.**

NCSBN is currently awaiting clarity once the U.S. Government conducts discussions regarding NAFTA, etc. Once complete, NCSBN will convene a consensus conference between U.S., Canada and Mexico to develop a model capable of facilitating borderless practice between countries.

## **STRATEGIC OBJECTIVE B3**

### **Identify normative tools that facilitate trans-jurisdictional mobility at the international/global level.**

NCSBN believes in identifying normative tools that facilitate trans-jurisdictional mobility at the international/global level. One of these will entail conducting a practice analysis in the CARICOM nations. Work on this initiative is currently on-hold as we evaluate its status for global use of the NCLEX and the NCLEX items. Another active initiative is to develop and deploy ORBS licensing system to the BONs. Boards are able to significantly reduce paper in their operations by introducing electronic applications and communication with applicants, nurses, educational institutions, employers and the public. Still another initiative is increasing the number of boards submitting standardized nurse supply workforce data to the Nurse Workforce Repository managed by NCSBN. Boards are better equipped to make informed nurse and workforce decisions.

## **STRATEGIC OBJECTIVE B4**

### **Develop contemporary regulatory language and models.**

2018 saw the publication of a rigorous analysis of the global regulatory evidence. This identified and explored 25 major trends that are now informing further work that will shape the next generation of strategic initiatives. A number of other health disciplines have requested presentations on the work and the final report has been distributed to a number of Federal agencies as well as jurisdictional regulators in a number of regions of the world.

## **C. Expand the active engagement and leadership potential of all members.**

NCSBN's success in achieving its vision, mission and goals is directly proportional to the active engagement and leadership of our members. NCSBN is committed to developing programs and services that support BON performance and facilitate sharing of best practices, mentoring of talent and diffusion of expertise. This initiative concentrates on: exploring structured methods for leadership development to build and further the dissemination of regulatory expertise; implementation of leadership succession planning; address the specific needs of the executive officer; embrace and respond to generational changes in nursing regulation; and leverage the role of the regulator in complex inter-dependent systems that collectively secure public safety.

## **STRATEGIC OBJECTIVE C1**

### **Support BONs in identifying policy and legislative change that drives and advances the attainment of the organizations vision and mission.**

NCSBN supports BONs in identifying policy and legislative change by linking and aligning regulatory outcomes to specific actions and then drilling down and disseminating those actions to all levels of the boards. All individuals and plans are aligned and calibrated to the structured methods required to accomplish goals and deliverables within the scope and timeframes allowed.

## **STRATEGIC OBJECTIVE C2**

### **Promote standardization and the use of evidence-based criteria and decision making when supporting BONs in the achievement of regulatory excellence.**

NCSBN believes that establishing a national standard for licensure requirements is necessary to assure that health care providers are safe and competent. NCSBN also believes that by achieving this direction it will be able to further advance its mission by focusing on the protection of the public through evidence-based standards. After pursuing formal standardization through working closely and following the process of the American National Standards Institute (ANSI), both the Standards Development Committee and the Board of Directors believed that the ANSI process did not fit the nature of regulatory boards. Regulatory standards need to flow from and align with the Model Act and Rules. By taking this approach, the Board of Directors established

---

a new committee to perform ongoing review, revision, and development of Model Act and Rules to reflect the current regulatory environment. They will also help to develop standards to assist member boards to operationalize Model Act and Rules, and ensure alignment with the rest of the NCSBN Committees.

### **STRATEGIC OBJECTIVE C3**

**Continue to identify and promote behaviors that transform how the BONs define and accomplish value-added work, and challenge innovative ways of getting things done.**

Developing leadership competencies for the membership to adopt that create a pathway from service to leadership is a direction that excites and interests leaders. Boards will shift their approach and move beyond just providing service to a body that demonstrates and delivers leadership and the transfer of knowledge to their membership. NCSBN leadership is currently reviewing and analyzing the competencies developed in the last EO Job Description Analysis, as well as the competencies developed by the EO Leadership Council. The analysis also includes the Associate EOMembers as well.

### **STRATEGIC OBJECTIVE C4**

**Alert and support members to proactively address contemporary legal, environmental and social issues and challenges that impact nursing regulation.**

Alerting and supporting members to proactively address legal, social and environmental issues is one of the biggest responsibilities NCSBN has. An example of this is the formation of a special Committee to address Marijuana Regulatory Guidelines for nurses. The Committee focused on the following guidelines and recommendations:

1. NCSBN Guidelines for APRNs: Certifying a Medical Marijuana Program Qualifying Condition
2. NCSBN Recommendations: Cannabis-Specific Education Content for APRN Nursing Programs
3. NCSBN Guidelines for Nurses: Care of Patient Using Medical Marijuana
4. NCSBN Recommendations: Cannabis-Specific Education Content for Pre-Licensure Nursing Programs
5. NCSBN Guidelines for the Board of Nursing: Complaints Involving a Licensee and Cannabis

The Board of Directors approved the Marijuana Guidelines and recommendations for education. They are evidence-based and designed to meet the needs of BONs and the nursing profession. The Board noted the intent to publish the work as a supplement to the Journal of Nursing Regulation. In addition, the National League of Nursing (NLN) and American Association of Colleges of Nursing (AACN) have been contacted to explore collaborative efforts to promote these guidelines.

## **D. Pioneer competency assessments to support the future of health care and the advancement of regulatory excellence.**

NCSBN is dedicated to providing state-of-the-art competency assessments that are psychometrically sound, secure and legally defensible. Maintaining the industry benchmark for consistency and value, and defining its future development and application requires a team effort. Areas of focus include further enhancing precision of measurement, optimizing ease of delivery of NCLEX® to candidates through the use of technologies as well as exploring alternative usage of exam items.

### **STRATEGIC OBJECTIVE D1**

**Enhance precision of the measurement of NCLEX® candidates through the use of state-of-the-art technologies and unfolding scoring models.**

NCSBN enhances the precision of the NCLEX exam by developing assessment processes that ensure the fidelity as well as the reliability/validity of the measurement of entry to practice and ensuring that the evidence provided by the measure of NCLEX reflects entry-level practice.

---

Next Generation NCLEX (NGN) item prototypes began to be administered in July 2017 to NCLEX-RN® candidates as a special research section at the end of their NCLEX exam session. The data collected from the special research session informs the viability of NGN items and the directions of future NGN item development. In addition, the Next Generation NCLEX (NGN) project team worked throughout the year with item writing panels of subject matter experts to develop item prototypes. These items are incorporated into the special research sections delivered to NCLEX candidates.

The 2017 entry-level RN practice analysis survey closed in July 2017, the results of which formed the basis of the 2019 NCLEX-RN test plan. The 2019 NCLEX-RN Test Plan was reviewed by member boards, and the final NEC-recommended test plan will be presented to the Delegate Assembly in August 2018.

The PN practice analysis process began with the PN subject matter expert panel in November 2017. The results of this panel were incorporated into the PN practice analysis survey which was administered to entry-level nurses beginning in April 2018. The survey results will form the basis of the 2020 NCLEX-PN® test plan.

## **STRATEGIC OBJECTIVE D2**

### **Investigate the use of NCSBN's exam resources to support the work of the regulatory boards and educational institutions.**

NCSBN is exploring the development of RN/PN licensure maintenance assessment tools which can be used by nurses and member boards to help identify strengths and weaknesses related to knowledge, skill and ability necessary for safe and effective nurse practice. The examinations department continues to investigate best practices of licensure maintenance assessments that support NCSBN membership and aligns with our organizations mission.

NCSBN is also exploring the development of a primary source data portal for member boards and education programs that would provide flexible and direct access of NCLEX data by boards of nursing and education programs. A prototype data portal developed by exams staff was presented to the NEC over the course of FY2016. Exams staff is working with the IR Division to develop the portal.

Lastly, exam staff has developed an NCLEX practice examination designed to provide candidates who are registered to take the NCLEX with the opportunity to experience the look and feel of the exam prior to sitting for the actual exam. Exams staff is working on finalizing the product to ensure positive user experience as well as to ensure security and compliance rules are followed. The Nurse Practice Exams will launch in June 2018.

## Terms and Conditions of NCSBN Exam User Membership

### TERMS AND CONDITIONS OF NCSBN EXAM USER MEMBERSHIP

The [Name of Exam User] (“Exam User Member”) with principal offices at [address] is an Exam User Member of the National Council of State Boards of Nursing (“NCSBN”) within the meaning of NCSBN’s Bylaws and is entitled to participate in the affairs of NCSBN as an Exam User Member as provided in the Bylaws and agrees to the following terms and conditions of membership (“Terms and Conditions”):

1. Compliance with Membership Requirements.

(a) As a condition of membership in NCSBN, Exam User Member shall comply with all NCSBN requirements necessary to maintain its status as an Exam User Member in good standing as set out in the NCSBN Bylaws. This shall include, but not be limited to, Exam User Member paying the membership fees as determined by the NCSBN Delegate Assembly from time to time.

2. Nurse Licensure Examinations

(a) NCSBN has developed and administers an examination for the licensure of Registered Nurse (RN) and Practical Nurse (PN) (“Nurse Licensure Examination”) that is valid, reliable, legally defensible and in compliance with professionally accepted psychometric standards. NCSBN shall establish passing standards for the Nurse Licensure Examination that appropriately and reliably evaluate licensure candidates’ competence for safe and effective entry level nursing practice and report to the Exam User Member examination results of candidates for licensure in its jurisdiction in accordance with the applicable provisions of the NCSBN Policy and



---

Procedures Manual and the [name of Agreement between NCSBN and Exam User Member] and successors thereto (“Agreement”).

(b) NCSBN shall provide Exam User Member, at no cost to the Exam User Member and as a privilege of membership in NCSBN, the Nurse Licensure Examination(s) and related services for use in nurse licensure in its jurisdiction.

(c) In providing Exam User Member the Nurse Licensure Examination(s) for use in its nurse licensing, NCSBN shall comply with all applicable non-discrimination laws and shall provide accessibility to, and Exam User Member authorized reasonable accommodations in, the administration of the examination(s) in compliance with the applicable law of the Exam User Member jurisdiction.

(d) Exam User Member shall use the Nurse Licensure Examination(s) as the sole and exclusive Nurse Licensure Examination for [registered nurses/practical nurses] in Exam User Member’s jurisdiction in accordance with the terms and conditions set forth in the NCSBN Bylaws and applicable NCSBN policies and procedures and the Agreement.

(e) In using the Nurse Licensure Examination for purpose of licensing in its jurisdiction, Exam User Member shall comply with all applicable terms and conditions for the use of the Nurse Licensure Examination(s) set out in the Bylaws, these Terms and Conditions and the NCSBN Policy and Procedures Manual and the Agreement.

(f) In using the Nurse Licensure Examination for nurse licensure in its jurisdiction, Exam User Member shall be responsible for determining candidate eligibility to take the examination and the authorization for any accommodation in the administration of the

---

examination and for complying with all applicable security and confidentiality requirements set out in the NCSBN policies and procedures.

3. NCSBN Use of Candidate Data. Exam User Member hereby authorizes NCSBN to use any and all candidate data collected for the purposes of administering the Nurse Licensure Examination, including, but not limited to, identifying candidates approved for the examination, determining their status as first-time, repeat and/or multiple application candidates, preparing the examination results related to the validity and psychometric integrity of the Nurse Licensure Examination. Nothing in this paragraph shall limit or supersede any authorization or requirement for the disclosure and use of candidate data pursuant to, where applicable, the Agreement or a NURSYS® Participation Agreement and Data Access Authorization and Restriction Requirements Form.

[NAME OF MEMBER BOARD]

By: \_\_\_\_\_  
Executive Director

Dated: \_\_\_\_\_

# College of Registered Nurses of British Columbia Exam User Member Application

## NCSBN Exam User Member Application

### Organization Information

Full Legal Name of Organization <b>College of Registered Nurses of British Columbia</b>	
Chief Staff Person <b>Cynthia Johansen</b>	Credentials <b>MA, MSc</b>
Email Address <b>johansen@crnbc.ca</b>	Direct Phone Number <b>604-314-8941</b>

Organization Mailing Address <b>2855 Arbutus Street</b>			
City <b>Vancouver</b>	State <b>BC</b>	Country <b>Canada</b>	Postal Code <b>V6J 3Y8</b>
Organization Physical Address (if same as mailing address, enter "N/A") <b>N/A</b>			
City	State	Country	Postal Code
Organization Main Phone Number <b>(604) 736-7331</b>	Organization Email Address <b>ceo@crnbc.ca</b>	Website <b>www.crnbc.ca</b>	

### Organization Description

1. List all the professions the organization regulates:

Registered Nurses  
Nurse Practitioners

2. List the number of persons regulated (by profession):

39,500 RNs  
450 NPs

3. Describe the authority under which the organization regulates:

Health Professions Act (Government of BC)

---

4. Include the organization's mission statement in the space below:

Purpose:

Regulate registered nurses and nurse practitioners in the public interest.

5. Is this a membership organization?

No.

6. List the date the organization was founded:

1912 - 1934: Graduate Nurses Association of British Columbia

1935 - 2005: Registered Nurses Association of British Columbia

2005 - Current: College of Registered Nurses of British Columbia

7. Does the jurisdiction currently use a prelicensure exam developed by NCSBN?

Yes ☒

No ☐

7a. If yes, list the specific exam(s) the jurisdiction uses:

NCLEX- RN

7b. If yes, how long has the jurisdiction used the exam(s)?

Since January 2015

8. Is the organizational mandate exclusively related to the regulation of the profession and protection of the public?

Yes.

9. Describe why the organization wants to be an NCSBN Exam User Member:

We have benefited immensely from the collaborative nature of our associate member status. We believe that further collaboration between our jurisdiction and others will enhance public safety. The new membership model offered by NCSBN aligns with this goal and intention.

---

10. Is the organization incorporated?

Yes ☒

No ☐

10a. If yes, check one of the following:

For-profit ☐

Nonprofit ☒

11. List the number of staff working within the organization:

120

12. How many members are on the organization's governing board?

14 (9 elected nurses and 5 appointed lay members)

13. If the organization is not determined to be eligible for Exam User Membership, would it be interested in applying for Associate Membership?

N/A

**Upon completion submit this application form via email to [memberrelations@ncsbn.org](mailto:memberrelations@ncsbn.org) along with a copy of the organization's Bylaws as an attachment.**

***By signing this application the undersigned understands that, if approved for membership, applicants are required to abide by NCSBN bylaws and the NCSBN Board Policy Manual. Failure to pay annual exam user membership fee of \$750 USD may result in termination of status. Decisions of the NCSBN Delegate Assembly regarding membership are final.***

Signature 

Registrar/CEO

Title

Mar 28, 2018

Date

# College of Registered Nurses of Manitoba Exam User Member Application



## NCSBN Exam User Member Application

### Organization Information

Full Legal Name of Organization <b>College of Registered Nurses of Manitoba</b>	
Chief Staff Person <b>Katherine Stansfield</b>	Credentials <b>RN MN</b>
Email Address <b>kstansfield@crnm.mb.ca</b>	Direct Phone Number <b>204-784-5188</b>

Organization Mailing Address <b>890 Pembina Highway</b>			
City <b>Winnipeg</b>	State <b>MB</b>	Country <b>Canada</b>	Postal Code <b>R3M 2M8</b>
Organization Physical Address (if same as mailing address, enter "N/A") <b>N/A</b>			
City	State	Country	Postal Code
Organization Main Phone Number <b>204-774-3477</b>	Organization Email Address	Website <b>www.crnmb.ca</b>	

### Organization Description

1. List all the professions the organization regulates:

**Registered Nurses**  
**Registered Nurse (Nurse Practitioners)**

2. List the number of persons regulated (by profession):

**approximately 14,000**

3. Describe the authority under which the organization regulates:

**Currently: The Registered Nurse Act & Regulations**  
**Effective May 31, 2018: The Regulated Health Professions Act & Regulations**

4. Include the organization's mission statement in the space below:

Mission:

To protect the public through quality registered nursing regulation.

5. Is this a membership organization?

No we are a regulator

6. List the date the organization was founded:

1913

7. Does the jurisdiction currently use a prelicensure exam developed by NCSBN?

Yes ☒

No ☐

7a. If yes, list the specific exam(s) the jurisdiction uses:

NCLEX-RN

7b. If yes, how long has the jurisdiction used the exam(s)?

Since 2015

8. Is the organizational mandate exclusively related to the regulation of the profession and protection of the public?

Yes

9. Describe why the organization wants to be an NCSBN Exam User Member:

We wish to have opportunities for further involvement in NCSBN activities and committees. As a Canadian self-regulatory college we have long-standing expertise in self-regulation and protection of the public (our sole mandate).

10. Is the organization incorporated?

Yes ☒

No ☐

10a. If yes, check one of the following:

For-profit ☐

Nonprofit ☒

11. List the number of staff working within the organization:

35

12. How many members are on the organization's governing board?

13 Board members in total (will become 12 effective August 1, 2018):

9 Registered Nurse members and 4 public members

13. If the organization is not determined to be eligible for Exam User Membership, would it be interested in applying for Associate Membership?

We already are Associate Members of NCSBN

**Upon completion submit this application form via email to [memberrelations@ncsbn.org](mailto:memberrelations@ncsbn.org) along with a copy of the organization's Bylaws as an attachment.**

***By signing this application the undersigned understands that, if approved for membership, applicants are required to abide by NCSBN bylaws and the NCSBN Board Policy Manual. Failure to pay annual exam user membership fee of \$750 USD may result in termination of status. Decisions of the NCSBN Delegate Assembly regarding membership are final.***



Signature

Digitally signed by: Katherine Stansfield  
DN: CN = Katherine Stansfield email =  
kstansfield@crnm.mb.ca C = CA O = CRNM  
Date: 2018.04.09 12:08:50 -06'00'

Executive Director

Title

April 9, 2018

Date



# College of Nurses of Ontario Exam User Member Application



## NCSBN Exam User Member Application

### Organization Information

Full Legal Name of Organization <b>College of Nurses of Ontario</b>	
Chief Staff Person <b>Anne Coghlan</b>	Credentials Executive Director and Chief Executive Officer
Email Address <b>acoghlan@cnomail.org</b>	Direct Phone Number <b>416-963-7525</b>

Organization Mailing Address <b>101 Davenport Road</b>			
City <b>Toronto</b>	State <b>Ontario</b>	Country <b>Canada</b>	Postal Code <b>M5R 3P1</b>
Organization Physical Address (if same as mailing address, enter "N/A") <b>N/A</b>			
City	State	Country	Postal Code
Organization Main Phone Number <b>416-928-0900</b>	Organization Email Address <b>cno@cnomail.org</b>	Website <b>www.cno.org</b>	

### Organization Description

1. List all the professions the organization regulates:

Registered Nurse  
Registered Practical Nurse  
Nurse Practitioner

2. List the number of persons regulated (by profession):

175,000

3. Describe the authority under which the organization regulates:

The Regulated Health Professions Act, 1991 and the Nursing Act, 1991 determine how the nursing profession is regulated in Ontario.

---

4. Include the organization's mission statement in the space below:

Regulating nursing in the public interest.

5. Is this a membership organization?

No

6. List the date the organization was founded:

1963

7. Does the jurisdiction currently use a prelicensure exam developed by NCSBN?

Yes ☒

No ☐

7a. If yes, list the specific exam(s) the jurisdiction uses:

NCLEX-RN

7b. If yes, how long has the jurisdiction used the exam(s)?

Since January, 2015.

8. Is the organizational mandate exclusively related to the regulation of the profession and protection of the public?

Yes

9. Describe why the organization wants to be an NCSBN Exam User Member:

CNO's mandate and vision of leading in regulatory excellence is directly aligned with NCSBN's vision. CNO has benefitted from our participation as an Associate Member of NCSBN. We look forward to new opportunities to contribute to advancing regulatory excellence worldwide as an Exam User Member.

10. Is the organization incorporated?

Yes ☒

No ☐

10a. If yes, check one of the following:

For-profit ☐

Nonprofit ☒

11. List the number of staff working within the organization:

240

12. How many members are on the organization's governing board?

21 members of the profession and 16 members of the public.

13. If the organization is not determined to be eligible for Exam User Membership, would it be interested in applying for Associate Membership?

CNO is currently an Associate Member.

**Upon completion submit this application form via email to [memberrelations@ncsbn.org](mailto:memberrelations@ncsbn.org) along with a copy of the organization's Bylaws as an attachment.**

*By signing this application the undersigned understands that, if approved for membership, applicants are required to abide by NCSBN bylaws and the NCSBN Board Policy Manual. Failure to pay annual exam user membership fee of \$750 USD may result in termination of status. Decisions of the NCSBN Delegate Assembly regarding membership are final.*



Signature

Executive Director and CEO

Title

April 6, 2018

Date

## National Center for Independent Examination (NCIE) – Kazakhstan Associate Member Application



### NCSBN Associate Member Application

#### Organization Information

Full Legal Name of Organization National Center for Independent Examination	
Chief Staff Person Gulmira Zhangereyeva	Credentials ByLaw, Certificate of accreditation
Email Address office@ncie.kz	Direct Phone Number +7 701 753 01 39

Organization Mailing Address 8 Mangilik Yel avenue (premise 1b-9v), Astana, Republic of Kazakhstan			
City Astana	State Akmola	Country Republic of Kazakhstan	Postal Code 010000
Organization Physical Address (if same as mailing address, enter "N/A") N/A			
City	State	Country	Postal Code
Organization Main Phone Number +7 71 72 70 09 95	Organization Email Address office@ncie.kz	Website www.qazexam.kz	

#### Organization Description

1. List all the professions the organization regulates:

Doctors, nurses, dentists, doctor's assistants, pharmacists, faculty of medical schools and colleges, medical students, graduates of medical schools and colleges

2. List the number of persons regulated (by profession):

Total number of individuals from nursing profession that undertook the assessment from 2015 is 116 153 persons.

3. Describe the authority under which the organization regulates:

Acts of Republic of Kazakhstan; the act on health, the law on education.  
Ministry of Health Rules "Assessment of professional readiness and confirmation of compliance of qualification of specialists in the field of health care" (Regulation #404)

---

4. Include the organization's mission statement in the space below:

To protect the public health through the assessment of the health professionals

5. Is this a membership organization?

Yes

6. List the date the organization was founded:

NCIE was the division of the Republican Center for Health Development and started the assessment from October 2015. As a self-regulatory organization NCIE was founded on November 7, 2017.

7. Describe why the organization wants to be an NCSBN Associate Member:

Considering great experience of NCSBN in the field of license examination NCIE wants to make the contribution to assessment and to undertake education reform in the Republic of Kazakhstan

8. Is the organization incorporated?

Yes ☒

No ☐

8a. If yes, check one of the following:

For-profit ☐

Nonprofit ☒

9. List the number of staff working within the organization:

91 individuals

10. How many members are on the organization's governing board?

5 members of the Board and Chairman of the Board

---

Upon completion, submit this application form via email to [memberrelations@ncsbn.org](mailto:memberrelations@ncsbn.org) along with a copy of the organization's Bylaws as an attachment.

*By signing this application the undersigned understands that, if approved for membership, applicants are required to abide by NCSBN bylaws and the NCSBN Board Policy Manual. Failure to pay annual associate membership fee may result in termination of status. Decisions of the NCSBN Delegate Assembly regarding membership are final.*

  
\_\_\_\_\_  
Signature

Chairman of the Board  
\_\_\_\_\_  
Title

April 9, 2018  
\_\_\_\_\_  
Date



# Report of Leadership Succession Committee (LSC)

## Committee Recommendations to the Delegate Assembly:

### 1. *Present the 2018 Slate of Candidates*

#### Rationale

The LSC has prepared the 2018 Slate of Candidates with due regard for the qualifications required by the positions open for election, fairness to all nominees, and attention to the goals and purpose of NCSBN. Full biographical information for each candidate follows. Each candidate will present himself or herself at the Candidate's Forum at the 2018 NCSBN Annual Meeting in Minneapolis.

## Background

During fiscal year 2018 (FY18), the LSC met in four face-to-face meetings. LSC members actively participated in engaging members by having information tables at the Midyear and Annual meetings; conducted Leadership Succession conference calls that were open to all NCSBN members for participation, sponsored articles in the NCSBN online newsletter; In Focus on the topic of Leadership Perspectives; conducted a survey of the NCSBN membership; and developed new marketing materials aimed at the recognition of members' leadership potential. Because of the resignation of Chair Stacey Cropley, the former chair, Tony Graham, was appointed to the position of LSC chair for the remainder of FY18. Area I Member, Demetrius Chapman submitted his resignation effective April 27, 2018. Due to the timing of the resignation, the BOD, after discussing with the LSC Chair, decided not to appoint a replacement to the Area I member position, opting instead to wait until the position is voted on at the Delegate Assembly in August 2018. The LSC continues to be a visible participant in engaging members to be actively involved as leaders in NCSBN and in engaging members to identify themselves or others to run for NCSBN offices.

## FY18 Highlights and Accomplishments

**Charge: Present a slate of candidates through a determination of qualifications and geographic distribution for inclusion on a ballot for the election of the Board of Directors (BOD) and the LSC.**

- The LSC, which now has one overall charge, reviewed the NCSBN Bylaws, with special attention to Article VII related to LSC composition and duties.
- Reviewed LSC Policy 1.0, with the goal of addressing feedback from the candidate forum at Annual Meeting, the candidate portal and its utilization, and the welcome reception. The LSC policy 1.0, section 4.6 was revised to clarify the definition of posted candidate photos at Annual Meeting (see attachment A). Particular attention was paid to the process for nominations from the floor to address concerns related to perceptions of fairness. After extensive discussion and review of Robert's Rules of Order's section on Nominations from the Floor, the LSC decided to continue the current process. A delegate will identify the nominee and state their qualifications at the Delegate Assembly. Someone who plans to nominate from the floor will continue to be identified as such at the reception, after they have interviewed with the LSC and have been approved to nominate from the floor.
- The LSC Leadership Brochure, Advancing Potential: Discover the Leader Within, for 2018 was reviewed and accepted (see attachment B).
- The e-application form, along with the application questions, was reviewed and revised for 2018. There are two sets of questions for the application form; one set for BOD applicants and one set for LSC applicants. The interview questions for applicants were also reviewed and revised for 2018.

## Members

Tony Graham, CPM, North Carolina, Area III Member, Chair  
Kaci Bohn, PhD, Arkansas, Area III, Member-at-Large  
Demetrius Chapman, MPH, RN, New Mexico, Area I Member (Resigned, effective 4/27/18)  
Stacey Cropley, DNP, RN, Texas, Area III Member (Chair, Sept. meeting – resigned, effective 11/27/17)  
Patricia Dufrene, PhD, RN, Louisiana RN, Area III, Member-at-Large  
Kim Esquibel, PhD, MS, RN, Maine, Area IV Member  
Melissa Hanson, MSN, RN, North Dakota, Area II Member  
Tracy Rude, LPN, Washington State, Area I, Member-at-Large

## Staff

David Benton, RGN, PhD, FFNF, FRCN, FAAN, Chief Executive Officer  
Linda Olson, PhD, RN, NEA-BC, FAAN, Senior Program Advisor, Nursing Regulation  
Ashby Rosenberger, Senior Manager, Executive Office

## Meeting Dates

- Sept. 25–26, 2017
- Dec. 12–13, 2017
- Feb. 20–21, 2018
- April 30–May 2, 2018

## Relationship to Strategic Plan

### Strategic Initiative C:

Expand the active engagement and leadership potential of all members.

## Attachments:

- A. LSC Policy 1.0
- B. 2018 Leadership Brochure
- C. Leadership Recognition Card
- D. 2018 Slate of Candidates

- Marketing strategies included development of a Leadership Recognition Card (see attachment C) for members to use as a format for giving each other positive affirmations and to identify colleagues with the potential to run for NCSBN office. The cards were included in Midyear Meeting registration packets and completed cards were turned into the LSC.
- A membership survey was conducted, to which 54 respondents recommended 48 members as potential leaders to pursue elected NCSBN positions. All those named in the survey were contacted by email in recognition of their being named as possessing leadership skills.
- Leadership Succession calls were held using an interview format, with discussion and comments following the interviews with recognized NCSBN leaders.
- LSC members reviewed resource books on leadership: BoardSource (2005). Twelve Principles of Governance That Power Exceptional Boards, and Tagliareni, S.J., & Brewington, J.G. (2018). Roving Leadership: Breaking Through the Boundaries. Wolters Kluwer. Maxwell, J.C. (1995). Developing the Leaders Around You. Thomas Nelson, Inc.,
- Goleman, D. (2004). What makes a leader? Harvard Business Review Reprint, and Best Practices in Succession Planning (2018), Trustee.
- The LSC conducted candidate interviews April 30, May 1-2 and produced the 2018 Slate of Candidates (see attachment D).



## LSC Policy 1.0

### Leadership Succession Committee Policy and Procedure

POLICY NUMBER	1.0
POLICY NAME	LEADERSHIP SUCCESSION COMMITTEE
DATE OF ORIGIN	December 2008
PURPOSE	<ul style="list-style-type: none"><li>▪ To define the role, function, and procedures for the Leadership Succession Committee (LSC).</li><li>▪ To utilize core leadership competencies to determine applicants' readiness for candidacy for all elected positions consistent with the mission, vision and values of NCSBN.</li><li>▪ To establish a timeline of activity for engagement, preparation, and presentation of a slate of candidates at Delegate Assembly.</li><li>▪ To implement a nomination, selection, and campaign process that reflects the values of fairness, integrity, and accountability.</li></ul>

---

1.0 POLICY	1.1 LSC presents a slate of candidates through a determination of qualifications, including geographic distribution, for inclusion on the ballot for the election of the Board of Directors and LSC.
2.0 STANDARDS / CRITERIA	<p>2.1 Facilitate the operations of the committee.</p> <p>2.2 Determine applicant's qualifications for candidacy based on demonstration of identified essential competencies for governance leadership as stated in the leadership development plan.</p> <p>2.3 Establish equitable, fair, and consistent campaign procedures.</p>
3.0 OPERATIONAL DEFINITIONS	<p>3.1 <b>Annual Meeting:</b> This term refers to NCSBN's annual meeting held yearly in August.</p> <p>3.2 <b>Delegate Assembly:</b> During the Annual Meeting, the Delegate Assembly, NCSBN's voting body, convenes. Activity includes discussion and voting on NCSBN business items and election of individuals to the Board of Directors and LSC.</p> <p>3.3 <b>Candidate:</b> A member who has submitted an application, has been vetted by the LSC and has been added to the slate of candidates.</p>

- 
- 3.4 **Candidate Forum:** This is the designated time during the Annual Meeting when candidates address the delegates regarding their qualifications, relevant experience, and leadership abilities.

#### **4.0 OPERATIONAL PROCEDURE**

##### **4.1 Annual LSC Performance Review**

###### **Committee Charges**

- (a) Review committee performance against established success measures.
- (b) Review and modify success measures annually and identify opportunities for improvement.

##### **4.2 Preparation of Slate and Interview Process**

- (a) Issue Call for Nominations through NCSBN communication channels which may include:
  - (1) NCSBN website
  - (2) Council Connector
  - (3) Electronic notification distribution and direct mailing to Member Board Presidents, Executive Officers, Member Boards, all current NCSBN committee members, and all member networks.
- (b) LSC directly engages NCSBN committees & conference attendees. For example, LSC members attend official NCSBN events and seek opportunities to engage members.
- (c) Determine applicant eligibility and qualifications.
- (d) Validate the applicant eligibility to serve a complete term with proper documentation.
- (e) Conduct applicant interviews to validate essential competencies in governance leadership.
  - (1) Contact applicants
  - (2) Explain process of the interview
  - (3) Conduct interview and allow applicant to ask questions
  - (4) Conclude interview
  - (5) Notify each applicant in writing of acceptance or denial of candidacy
- (f) Members of the LSC who have submitted a nomination form for a second term shall recuse themselves from the interview of applicants for that position.
- (g) Prepare slate of candidates.

##### **4.3 Presentation of the Slate**

- (a) LSC announces and submits the slate of candidates to the Business Book.
- (b) The report of the LSC is read at the first business meeting of the Delegate Assembly and nominations from the floor are accepted pursuant to NCSBN Bylaws Article 7, Section 1(f).
- (c) Conduct Candidate Forum.
- (d) Election (Delegate Assembly Volunteer Committee)

##### **4.4 Nominations from the Floor Procedure**

- (a) Members nominated from the floor: Any member who intends to be nominated from the floor is required to take the following steps:
  - (1) Complete & submit nomination form from NCSBN.

- 
- (2) Person intending to be nominated from the floor will schedule an interview with LSC through NCSBN (no later than the day before adoption of the slate by the Delegate Assembly).
  - (3) The interview questions and nomination form will be disseminated by NCSBN to the individual intending to be nominated from the floor.
  - (4) Nominee is interviewed by LSC no later than the day prior to adoption of the slate by the Delegate Assembly.
  - (5) Written notification of LSC's recommendation is delivered to the individual intending to be nominated from the floor following the interview, prior to Delegate Assembly.
  - (6) Individual intending to be nominated from the floor identifies a delegate to make a nomination from the floor during Delegate Assembly.
  - (7) The identified delegate makes the nomination from the floor, and may utilize up to 2 minutes to state the nominee's qualifications.
  - (8) Delegate obtains resolution form at Delegate Assembly, as instructed by the President.
  - (9) Forms are collected by Delegate Assembly ushers.
  - (10) Nominees from the floor will be subject to provisions 4.5, 4.6 and 4.7.

#### **4.5 Campaign Procedure**

- (a) LSC actively monitors campaign activity. LSC members are prohibited from providing opinion, counsel or advice about candidates or campaign strategies; however, the members can provide information regarding the campaign process.
- (b) Campaign violations will be addressed by LSC as identified.
- (c) LSC provides a web portal for the purpose of campaigning.
- (d) LSC will provide an Annual Meeting Attendee list approximately two weeks prior to the Annual Meeting upon request.
- (e) A ribbon and a button will be provided to the candidate by NCSBN and is the only candidate identification allowed during Annual Meeting.

#### **4.6 Campaign Rules**

- (a) Candidates will be expected to act ethically and professionally at all times and in accordance with the organizational values.
- (b) Campaign activity is permitted only after the member has been added to the slate of candidates.
- (c) Prior to Annual Meeting, candidates may only engage in electronic campaign activity by communicating with the membership via the NCSBN web portal and / or contact information included in a campaign distribution list provided by NCSBN.
- (d) At Annual Meeting, including pre-meetings, permitted campaign activities include: candidate ribbon, candidate button, candidate application photo posted by NCSBN staff, introduction at welcome reception and candidate forum presentation. Candidates may converse with attendees and informally present their positions during Annual Meeting events.

- 
- (e) Campaign activity shall not include: distribution of printed materials, gifts, favors or other inducements to vote.
  - (f) Persons violating this policy will be redirected to the campaign rules. A second infraction may result in removal of candidate from the slate of candidates.

#### **4.7 Candidate Forum**

- (a) The Candidate Forum occurs during Annual Meeting, and provides each candidate the opportunity to make a presentation to the membership (use of audio-visuals is optional).
- (b) Candidate photos will be posted outside the meeting rooms.
- (c) A candidate unable to attend Annual Meeting may have his or her personal statement read during the candidate forum by their member board representative or submit an audio visual presentation in accordance with subsection (d).
- (d) Individual candidate presentation time is limited to the following time intervals:
  - Five (5) minutes for Presidential candidates
  - Four (4) minutes for Director positions
  - Three (3) minutes for LSC candidates
- (e) Order of Candidate Forum Presentations  
The order of candidate presentations shall be as follows:
  - 1. Officers
  - 2. Area directors
  - 3. Directors-at-Large
  - 4. LSC Candidates

#### **4.8. Election Results**

Refer to Board Policy 5.7. Annual Meeting; Process and Role of Committee on Elections.

#### **Revision Dates:**

- January 4, 2010
- April 20, 2011
- April 11, 2012
- September 5, 2012
- November 29, 2012
- September 24, 2013
- November 5, 2013
- September 22, 2014
- December 10, 2014
- April 16, 2015
- November 9, 2015
- October 10, 2016
- September 25, 2017

## Attachment B

# 2018 Leadership Brochure

Individuals who serve in NCSBN leadership positions and committees have much to gain:

- Impact nursing regulation;
- Network with state, national and international health care leaders;
- Advance leadership and professional development;
- Stay abreast of emerging global events affecting nursing regulation; and
- Recognition by peers.



### 2018 LEADERSHIP SUCCESSION COMMITTEE

**Tony Graham**, Chair, Area III Member (2017–2018)  
tgraham@ncsbn.com

**Demetrius Chapman**, Area I Member (2017 – 2018)  
demetrius.chapman@state.nm.us

**Melissa Hanson**, Area II Member (2016 – 2018)  
mhanson@ndbn.org

**Patricia Dufrene**, Member-at-Large (2017 – 2019)  
dufrenep@lsbn.state.la.us

**Kim Esquibel**, Area IV Member (2016 – 2018)  
kim.esquibel@maine.gov

**Kaci Bohn**, Member-at-Large (2017 – 2019)  
kbohn@harding.edu

**Tracy Rude**, Member-at-Large (2015 – 2019)  
tracyrude58@gmail.com

### 2018 BOARD OF DIRECTORS

**Katherine Thomas**, President (2016–2018)

**Julia George**, President-elect (2016–2018)

**Gloria Damgaard**, Treasurer (2016–2019)

**Cynthia LaBonde**, Area I Director (2017–2019)

**Adrian Guerrero**, Area II Director (2015–2019)

**Jim Cleghorn**, Area III Director (2014–2019)

**Valerie Fuller**, Area IV Director (2017–2019)

**Karen Scipio-Skinner**, Director-at-Large (2015–2018)

**Lori Scheidt**, Director-at-Large (2016–2018)

**Elizabeth Lund**, Director-at-Large (2017–2018)

**Valerie Smith**, Director-at-Large (2015–2018)

 **NCSBN**  
*National Council of State Boards of Nursing*  
111 E. Wacker Drive, Suite 2900  
Chicago, IL 60601-4277  
312.525.3600  
www.ncsbn.org



ADVANCING POTENTIAL:  
**DISCOVER THE  
LEADER WITHIN**

Leadership  
Succession is Everyone's  
Responsibility

## NCSBN needs experienced and emerging leaders who:

- Serve the purpose, mission, vision and values of NCSBN;
- Advance and promote excellence in nursing regulation;
- Sustain the success and viability of NCSBN;
- Represent diversity in opinions and perspectives; and
- Cultivate good relations, stewardship and service.

### ELIGIBILITY AND COMPETENCIES

Board members and staff of NCSBN Member Boards are eligible to apply. Each individual should consider the skills and competencies necessary to be successful in the position if elected.

#### BOARD OF DIRECTORS COMPETENCIES:

Knowledge and skills that add to the strength and value of the collective governing body, including governance, investment policy, regulation, negotiation, consensus building, critical thinking, forecasting, and state, national and international health care policy.

#### LEADERSHIP SUCCESSION COMMITTEE COMPETENCIES:

Knowledge and skills that add strength and value to the committee in carrying out its charges, including effective communication, leadership, critical thinking, and public policy.

### TIME COMMITMENT

#### BOARD OF DIRECTORS:

Five 3-day meetings and one 2-day strategy retreat per year, in addition to Midyear and Annual Meetings.

#### LEADERSHIP SUCCESSION COMMITTEE:

Four 2- to 3-day meetings per year, in addition to Midyear and Annual Meetings.

### 2018 ELECTION POSITIONS

#### BOARD OF DIRECTORS

##### President-elect (2018–2020)

- Assists the president and performs the duties of the president in the president's absence
- Assumes the office of the president at the conclusion of the president's term and fills any vacancy in the office of the president
- The President-elect shall have served NCSBN as either a delegate, a committee member, a director or an officer before being elected to the office of President-elect

##### Director-at-Large (4 positions) (2018–2020)

- Serves as a representative of all member boards
- Transacts the business and affairs, and acts on behalf of NCSBN

#### LEADERSHIP SUCCESSION COMMITTEE

##### Area Members (4 positions)

Presents a slate of candidates through a determination of qualifications for inclusion on a ballot for the election of the Board of Directors and the Leadership Succession Committee

##### Area I Member (2018–2019)

(1-year term, per bylaws proviso)

Alaska, American Samoa, Arizona, California, Colorado, Guam, Hawaii, Idaho, Montana, Nevada, New Mexico, Northern Mariana Islands, Oregon, Utah, Washington and Wyoming

##### Area II Member (2018–2020)

Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, West Virginia and Wisconsin

##### Area III Member (2018–2019)

(1-year term, per bylaws proviso)

Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia

##### Area IV Member (2018–2020)

Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont and U.S. Virgin Islands

### RESOURCES

The Leadership Succession Committee page of NCSBN's website provides opportunities to assist you in learning more about NCSBN. In addition, NCSBN holds various annual conferences that assist boards of nursing in achieving their regulatory missions. The following are a few available educational listings:

**Leadership Development Plan:**  
[ncsbn.org/ldp.htm](https://ncsbn.org/ldp.htm)


**NCSBN Courses:**  
<https://courses.ncsbn.org>

- NCSBN 101
- President's Governance Role on a Board of Nursing
- Delegate Orientation
- Governing Responsibly




## Attachment C

# Leadership Recognition Card



LEADERSHIP SUCCESSION COMMITTEE  
LEADERSHIP RECOGNITION FORM

 **NCSBN**  
*National Council of State Boards of Nursing*

The Leadership Succession Committee (LSC) is interested in identifying potential applicants for elected positions at NCSBN. We would like to hear which of your colleagues may have the leadership qualities needed to help NCSBN advance in global regulatory excellence.

The person you name will be notified by an LSC member that she or he has been recognized as having outstanding leadership skills. Additionally, resources and links to information about serving in an elected position at NCSBN will be provided.

Your Name \_\_\_\_\_

Your Jurisdiction \_\_\_\_\_

Potential Applicant \_\_\_\_\_

**Please list three or more leadership qualities this individual possesses:**

---

---

---

Additional comments:

---

---

Would you like your submission to remain anonymous? ☐ Yes ☐ No

**Please turn this completed card into the LSC table for a thank you gift!**

Additional recognition cards are available at the LSC table.

**DETAILED INFORMATION**, as taken directly from application forms and organized as follows:

1. Name, Jurisdiction, Area
2. Present board of nursing position, board of nursing name
3. Application Questions:

**Board of Directors:**

1. Describe all relevant professional, regulatory and community experience.
2. What is your perspective regarding the following issues affecting nursing regulation?
  - a. Borderless health care delivery
  - b. Regulation of nursing education
  - c. The role of regulation in evolving scopes of practice
3. Please describe a strategy or activity to increase participation in the leadership of the organization.

**Leadership Succession Committee:**

1. Describe all relevant professional, regulatory, and community experience.
2. Please describe a strategy or activity to increase participation in the leadership of the organization.
3. Why do you want to serve in the role you are applying for?

**Attachment D**

## 2018 Slate of Candidates

The following is the slate of candidates developed and adopted by the Leadership Succession Committee. Each candidate profile is taken directly from the candidate's nomination form. The Candidate Forum will provide the opportunity for candidates to address the 2018 Delegate Assembly.

### Board of Directors

#### President-elect

Jim Cleghorn	Georgia, Area III	page 53
Paula Meyer	Washington, Area I	page 55

#### Director-at-Large (4 positions)

Peggy Benson	Alabama, Area III	page 57
Cathy Borris-Hale	Washington DC, Area IV	page 59
Tammy Claussen Vaughn	Arkansas, Area III	page 61
Ann Coughlin	Pennsylvania, Area IV	page 63
Elizabeth Lund	Tennessee, Area III	page 65
Mark Majek	Texas, Area III	page 67
Lori Scheidt	Missouri, Area II	page 69
Sharyl Toscano	Alaska, Area I	page 71
Ellen Watson	Vermont, Area IV	page 73

### Leadership Succession Committee

#### Area I Member

Susan Engle	California, Area I	page 75
-------------	--------------------	---------

#### Area II Member

Lori Glenn	Michigan, Area II	page 77
Melissa Hanson	North Dakota, Area II	page 79

#### Area III Member

Sandra Culpepper	Mississippi, Area III	page 81
Sara Griffith	North Carolina, Area III	page 83

#### Area IV Member

Vacant



## Board of Directors

### President-elect

#### Jim Cleghorn, MA

Executive Director, Georgia Board of Nursing

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

Serving as the executive director of the Georgia Board of Nursing since August 2010, I have instituted several innovative program changes to streamline regulatory processes and have taken advantage of the opportunities afforded to me through involvement with NCSBN. The executive coaching program in 2012-2013 provided a “jump start” in a broader look at regulation. As a member of the Commitment to Ongoing Regulatory Excellence (CORE) Committee from 2012 through 2014 the importance of documenting and defining the immediate outcomes of the regulatory work became clear in helping identify promising practices for public safety. In September 2014 I was appointed to the Board of Directors as Area III Director and have worked ardently to learn the essential elements of representing the membership and the organization. In 2015 I was appointed as board member liaison to the NCLEX Committee. Over the last three years I have gained a deeper understanding of the developmental process and administration of the NCLEX. Prior to my work with the Georgia Board of Nursing I served as business analyst with the Georgia Secretary of State’s Office. In that role, I worked with the agency’s Professional Licensing Boards Division to review licensure and discipline processes, identify inconsistencies and inefficiencies and recommend improvements to maximize constituent services, agency productivity and protection of the public.

My service with NCSBN has provided me with many rewarding opportunities to learn from the examples set by leaders in nursing regulation. The invaluable education and experience has enabled me to increase my personal knowledge of board operations, regulation and management principles and has challenged me to become a well-rounded leader.

Our family is very involved with our local church where my wife and I participate in various ministries and lead a Sunday School class for young couples.

#### **WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?**

##### **A. BORDERLESS HEALTH CARE DELIVERY**

The health care delivery system is rapidly changing and the number of patients seeking care is rising. Telemedicine has enabled providers to work to meet the new demands by expanding their practice across jurisdictional lines into other states and even into other countries. I am enthusiastic about the future of the enhanced Nurse Licensure Compact and look forward to working with boards of nursing and NCSBN to identify issues and barriers and develop solutions to ensure that our constituents continue to have access to safe and competent care through every possible delivery model.

##### **B. REGULATION OF NURSING EDUCATION**

New models of nursing education are being developed to meet the demands of an increasingly complex health care system. Advances in technology are changing the classroom and increasing access for interested students. Boards of nursing must work to advance regulatory structures for programs using evidence based research to maintain high quality program outcomes. This effort will require collaboration and partnerships with education programs and practice settings.



### **C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE**

As our health care system continues to grow and evolve, the scope of practice for nurses will have to expand to meet the increasing needs. As practice changes, we will see tasks shifted and ultimately, tasks reserved for a person who has been in nursing for many years will be performed by entry level nurses. As the nursing profession advocates for increased scope of practice, nursing regulation must be a partner in the process and work to enable nurses to practice to the full extent of their knowledge and training to ensure safe and competent care is available to all consumers.

### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

The National Council of State Boards of Nursing (NCSBN) provides many opportunities for individuals to explore leadership roles, develop leadership traits and be mentored by individuals with proven track records of successful leadership. I believe early engagement is absolutely essential to increase participation in the leadership of the organization. A new member who becomes aware of the importance and benefit of participation in NCSBN activities early on will learn about the opportunities available to them and be encouraged to develop and utilize their leadership skills.

Additionally, I believe that a targeted approach to identifying potential leaders may be appropriate. Each member has a unique set of talents and abilities. NCSBN may benefit from maintaining an inventory of specific education and leadership strengths for members. This inventory could be utilized to match strengths and expertise with membership needs when seeking candidates for committee appointments and other leadership activities.

Finally, the potential impact of personal encouragement cannot be understated. Encouraging members to take advantage of the numerous leadership development opportunities that are presented by the organization is essential. Truly, each member has a responsibility to work toward the future success of the organization. There are opportunities for service and leadership development at every level. It is incumbent upon the organization's leadership to seek out potential leaders. As a membership organization, we all must be ready to identify potential leaders and help them start the leadership journey today!

## President-elect

### Paula Meyer, MSN, RN, FRE

Executive Director, Washington State Nursing Care Quality Assurance Commission

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

I have 20 years experience as the executive director of the WA State Nursing Commission. I included some of the highlights below. Advanced Practice: In 1998, Advanced Registered Nurse Practitioners (ARNP) in WA had independent practice with prescriptive authority for Schedule V and legend drugs. Legislation passed allowing ARNPs prescriptive authority for Schedule II through IV drugs under a collaborative agreement. The legislation directed the Medical Commission, Board of Osteopathic Medicine and Nursing Commission to collaboratively write the rules. I lead the session and the draft rules were adopted without questions or comments. One year later, ARNPs presented research to the legislature demonstrating no increase in disciplinary cases and increased patient satisfaction. The legislature overwhelmingly passed removal of the collaborative agreement giving ARNPs full, independent prescriptive authority and practice. The Nursing Commission recently recognized Clinical Nurse Specialists as ARNPs. Washington is now fully compliant with the Consensus Model by including Nurse Practitioners, Certified Nurse Anesthetists, Certified Nurse Midwives and Clinical Nurse Specialists. The educational requirements listed in the Consensus Model mirror the requirements for advanced practice in Washington State. The Nursing Commission is currently developing rules for Opioid Prescribing with members of the Medical Commission, Board of Osteopathic Medicine, Dental Commission and Board of Podiatrists. Model rules have been drafted for each individual board to consider adopting in September, 2018.

Registered Nurses and Licensing Practical Nurses. In 2008, rules were adopted for continuing competency. The rules required active practice and continuing education for an active license. Washington now has a much clearer number of the nurses working in nursing. On January 1, 2018, the rules for collection of demographic data became required for active licensure. Each nurse must complete a two part survey: one question collecting ethnic data specific to Washington state; the second survey uses the E-notify registration and profile to collect data. At the end of 2018, Washington will have a full data set to use for its supply data. Increased Authority for the Nursing Commission: Using CORE data and state performance measures, the Nursing Commission was granted additional budget and personnel authority. Working in an umbrella agency, this significant increase in authority lead to increased independence. The project and report was the basis for my Fellowship in Regulatory Excellence.

#### **WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?**

##### **A. BORDERLESS HEALTH CARE DELIVERY**

Large, multistate health care organizations now require multistate practice. Large medical centers have provided multistate care to people in large regions for decades. School nurses accompany students on field trips across the United States and even to countries beyond our national borders. States along our national borders cooperate to provide medical care in the face of natural disasters. This glimpse of multistate practice confirms the necessity for nursing licenses to be portable. This portability demands a system allowing the nurse to provide care to patients regardless of location. The regulatory system needs to assure patient safety in the case of a poor outcome. The Enhanced Nurse Licensure Compact meets these requirements.

##### **B. REGULATION OF NURSING EDUCATION**

Nursing Education must meet the demands of our ever changing health care delivery system. Nurse Educators, nurse regulators and health care industry representatives must work



together to identify knowledge and competencies necessary to prepare new nurses to provide fundamental nursing care. Educators, regulators and industry representatives need to work together to identify resources needed to address the shortage of faculty and cooperative solutions. Educators, regulators and industry representatives must work together on projecting health care demands of the near future to assure nurses continue their education to respond to patients' needs. Multistate health care organizations provide care across the continuum. Initial and continuing nursing education needs to be inclusive of care settings beyond acute care.

### **C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE**

Nursing care continues to evolve and meet the ever changing demands of patient care. As regulators, we need to assure safe patient care. Regulators need to allow nursing practice to expand and not place barriers that may limit safe nursing practice. The Scope of Practice decision tree, used by many state boards of nursing, places the responsibility for professional nursing practice with the individual nurse to determine possession of necessary knowledge and competencies to safely perform nursing functions. The nurse determines if there are prohibitions in law or professional standards. The nurse determines if they are competent and safe to perform the intervention. The nurse must also possess the confidence necessary to say no if they do not possess the knowledge and competency to perform the interventions.

### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

Early engagement of new members nurtures new leaders. Twenty potential leaders are now new executive officers! Each year, there are new board presidents, each holding competencies necessary to provide leadership in our organization. Members express concern about the time needed to be a leader in our organization. While there is a considerable amount of time needed to invest in being leaders, the multiple rewards outweigh the investment of the time. Members possess competencies in leading meetings, recruiting and assessing stakeholder input, and conducting research to provide evidence to support regulatory decisions. Engagement includes encouraging new members to serve on committees, participate in knowledge networks, and come to meetings.

Executive officers (EO) are the key to early engagement by encouraging and recruiting new leaders. EOs recognize talent and abilities in each other, in their staff and board members. NCSBN announces opportunities for service on committees each year. EOs need to identify peers, staff and board members possessing the competencies necessary to serve. EOs need to encourage people to serve and provide the resources to allow service: time, finances, and access to learning. Finances are available through NCSBN resource funds. NCSBN also financially supports the expenses for people to attend committee meetings. If time is the issue, EOs may need to communicate with board members and employers and influence them to invest in their board members and employees. The EO can also find resources to fill in for staff so they can participate in events. This allows new staff to step up and provides career progression.

EOs need to be comfortable recruiting new leaders. Recruiting takes time to build a relationship, assess skills and abilities, and begin to match the emerging leader with opportunities. Recruiting requires the EO to work through anxieties expressed by the emerging leader. The new leader may just need the encouragement to serve or access to information.

## Director-at-Large

### **Peggy Benson, MSHA, MSN, BC-NE, RN**

Executive Officer, Alabama Board of Nursing

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

Peggy brings 39 years of experience in nursing and health care leadership to her role with ABN. She is a board-certified nurse executive who has worked in various executive roles in nursing and human resources. Peggy's previous roles include Chief Nursing Officer (CNO), System Director of Critical Care and Medical Surgical Nursing over a five-hospital system, Director of Nursing for Specialty Services, and Assistant Administrator of Human Resources, Deputy Director, and Executive Officer of the Alabama Board of Nursing. She has served as a Board Member and President of the Alabama Board of Nursing, member of the Governor's Task Force on Health care Improvement, Chair of the Governor's Infrastructure Committee, board member and Past President of the Alabama Organization of Nurse Executives, past board member and Secretary for the Central District Alabama Organization of Nurse Executives, and current member of the Standards Committee-NCSBN. Extensive experience in nursing regulation at all levels.

#### **WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?**

##### **A. BORDERLESS HEALTH CARE DELIVERY**

I believe and support borderless health care and easing the burden of practice across state lines. With seamless care comes the responsibility to ensure a safe process that protects all citizens. The NLC is off to a good start and I look forward to the final development of bylaws, policies, and procedures that will define the exact structure of the compact. I have worked with many of Alabama's health care leaders on telehealth issues and regulatory processes to expedite delivery of care in Alabama.

##### **B. REGULATION OF NURSING EDUCATION**

I believe strongly that nursing education programs must be held to the highest possible standards and boards of nursing are in the best position to ensure those standards. A paramount issue we see in Alabama is accreditation requirements for proprietary and distance programs, which has become a national problem and priority for nursing regulation. Boards cannot ensure the rigor of programs without clear regulatory authority and standards.

##### **C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE**

The ABN began addressing this issue 16 years ago with the establishment of a standardized procedure process which allows for the scope of practice to be expanded as nursing practice evolves beyond basic education. However, advanced practice nurses continue to experience difficulties in practicing to their full scope, especially in those practice settings where APRN scope intersects with the practice of other professionals. Regulatory boards working together can be a driver of change and change initiatives to ensure full practice authority. In Alabama, the pharmacy, medical, and nursing boards conduct routine tri-regulator meetings to address potential conflicts proactively.

#### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

To create synergy and engagement, I believe the current NCSBN leadership should develop processes for member boards that include: An Executive Officer consultant group to aid struggling boards. Executive Officer engagement groups to identify issues of common concern and build a team mentality across jurisdictional lines. Revamped policy paradigm that invites



participation from all member boards throughout the NCSBN planning process. This will open lines of communication, create opportunities for active participation, and develop the inclusive culture and synergy necessary to foster involvement by otherwise disengaged or inactive members.

## Director-at-Large

### Cathy Borris-Hale, MHA, RN

Nurse Specialist II – Discipline, District of Columbia Board of Nursing

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

My nursing career spans 35 years; my greatest success has been bringing significant, positive changes to nursing practice to improve health care delivery in a variety of roles and settings. In 2008, I joined the executive team at SHW-Hadley Hospital as the Chief Nursing Officer and methodically rose in the ranks to become the second African American Woman appointed CEO of a District of Columbia Hospital. My work, in conjunction with the nursing directors and nurse educators, empowered nursing practice and instituted nurse directed protocols. As a consequence, the hospital experienced a 78% decrease in hospital acquired infections and zero acquired pressure ulcer rate. In 2012, I was appointed Chair, District of Columbia Board of Nursing and subsequently the Regulation and Discipline Sub-Committee. Currently as the Nurse Specialist for discipline for the D. C Board of Nursing, my work includes fostering a “just culture” and creating a forum where governmental agencies, schools and health care providers work together to address the needs our community. During the 2017 delegate assembly, I served as Chair of the Resolutions Committee.

I am an active member of NCSBN's Medical Marijuana Regulatory Guidelines Committee which is commissioned to develop guidelines for nurses, make recommendations for education, and establish guidelines for Boards of Nursing as well as explore trends related to marijuana use and its relationship to nursing regulation.

#### **WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?**

##### **A. BORDERLESS HEALTH CARE DELIVERY**

Technological advances in the areas of communication and medicine provide a previously unimaginable path to improving health care across the nation and globally. Researchers and providers now have an opportunity to share knowledge that will enhance health care safety and delivery previously only dreamt about. The formation of such partnerships will potentially reduce replicating, identify best practices, and bring high-level, evidence based care to patients in under served areas of our nation and world. Nursing regulators need to be forward thinking and create regulations which allow for expanding roles but ensure safe care for the public.

##### **B. REGULATION OF NURSING EDUCATION**

Since the role of the nurse is crucial to the health of our communities and the care of the ill, it is imperative that nursing education has a minimum standard of academic rigor from all institutions. How can we truly protect the public and the profession if Boards don't hold schools of nursing accountable for providing the highest quality nursing education and instituting guidelines for nursing practice and nursing assistant personnel practice regulations. Our community is entitled to safe and compassionate care and high standards of practice.

##### **C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE**

Nurse's role in health care has been a topic of discussion for policy-makers, health-care reform activist for as long as modern nursing has existed. With the changing landscape and push for health care reform, nursing is in a position to make huge strides in improving access, decreasing cost and improving outcomes.

Regulators play a key role in protecting the public as well as advancing the scope of nursing by making meaningful regulatory amendments, removing ambiguous language and supporting



the use of the “Scope of Nursing Practice Decision-Making Framework” tool to determine if a specific task falls within the state’s licensing laws.

**PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

Identifying opportunities for state board members and/or staff to engage with the organization, may be useful in recruiting emerging nurse leaders who could be instrumental in implementing meaningful change and their successes shared with the membership.

Organizational change meets with success when leaders recognize efforts must include cultural changes and as complete participation as possible from all holders.

In order to achieve meaningful and lasting cultural change, a robust plan that includes specific goals, establishes methods to meet them, and strategies to create interest and participation. One such way would be to create leadership training workshops for your non-traditional nurse leaders to gain insight into the skills they possess and how they can use these to lead in their personal and professional life.



## Director-at-Large

### Tammy Claussen Vaughn, MSN, RN, CNE

ASBN Program Coordinator, Arkansas State Board of Nursing

#### DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.

I have worked at the Arkansas State Board of Nursing for more than seven years as the Program Coordinator for Nursing Education. With more than 60 nursing schools, I have site visited and provided regulatory guidance to each of them. I also have regulatory responsibility for Medication Aid Certified (MA-C) programs and International graduate licensure.

Since joining the Board I have been actively involved in promoting the mission of the National Council of State Boards of Nursing (NCSBN). I served five years on the NCLEX Examination Committee (NEC) and I am currently serving my third year on the NCLEX Item Review Subcommittee (NIRSC). I have also attended and participated in many NCSBN Annual and Midyear meetings, Leadership and Policy conferences and Education Consultant round tables and conference calls.

Prior to beginning my work at the Arkansas State Board of Nursing, I worked in a variety of nursing education and clinical roles. From the first day of nursing school I knew education was my passion and was determined to make it my future. Following graduation from a Baccalaureate of Science in Nursing program, I worked in the maternal-newborn clinical area before beginning my role as a nurse educator in a hospital based diploma registered nurse program. I spent many years in nursing education, teaching foundations, maternal-newborn and leadership and management. I earned a Master of Science degree in Nursing Administration and Education and also earned credentials from NLN as a Certified Nurse Educator (CNE). Throughout my nursing career, I actively participated in professional nursing associations on the state and national level, serving in many elected and appointed roles.

Each of these areas of professional responsibility has enhanced my knowledge of regulation and increased my passion for assuring that nurses provide safe and effective care and the public remains protected.

#### WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?

##### A. BORDERLESS HEALTH CARE DELIVERY

Technology has played a huge role in the evolution of health care and how it is delivered. Nurses must be able to provide care through many electronic means and provide it in a safe and effective manner. NCSBN has been a leader in the discussion on telehealth and providing solutions to borderless health care delivery. Through support of the enhanced nurse licensure compact, nurses can provide care and have more mobility, while Boards continue to meet their mission of protecting the public. As technology and health care continues to become more mobile on a national and even global level, we must be quick at identifying solutions to ensure that the public is receiving safe care across all borders.

##### B. REGULATION OF NURSING EDUCATION

Regulation of nursing education is becoming difficult as more online and alternative programs are being implemented. Boards of nursing must work together to develop consistent strategies to evaluate programs and program outcomes, to provide the highest quality and standards for nursing education at all levels. NCSBN is in the early stages of trying to address this concern through collecting data from each Board on how program approval is completed. As the research is completed, it will be important for Boards to collaborate with NCSBN in developing



standards and approval processes that are consistent and provide quality nursing education for all students.

### **C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE**

Regulation exists to ensure that the nurse functions to their full scope of practice and education, while standards are maintained to protect the public. As nursing practice continues to evolve and expand at all levels of nursing, Boards need to remain at the forefront of assuring that educational preparation is appropriate, so the public remains confident that nurses in their state are competent to perform safe and effective care.

### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

Strong leadership is needed in an ever-changing and fast-paced health care environment. In order to sustain an organization and maintain its viability, an organization is dependent on volunteer leaders. Although some people believe that leadership is a trait gained only at birth, I am convinced that a person can develop leadership abilities if they are truly passionate about a cause. NCSBN has so many causes to be excited about at the present time; promotion of the new generation NCLEX; the new eNLC research being done with the Education Outcomes and Metrics committee; regulations being developed by the Marijuana Regulatory Guidelines Committee; and, so much more.

The NCSBN Leadership Succession does a wonderful job of getting the word out to the membership about leadership opportunities and also provides guidance towards valuable tools and resources to learn more about the organization. I think this needs to continue with added strategies to attract new leaders in the organization. Just as a marathon runner has to love running to prepare and train for a race, leaders must have the passion to want to be involved as a leader and gain more knowledge about the organization. We can attract these potential leaders, who are excited about the causes NCSBN is promoting, through identifying them early and developing a mentor type relationship. We need to engage them in discussion and empower them with the knowledge they need to grow as a leader in the organization.

I've always been taught that the success of an effective leader in any organization is to cultivate leadership in others.

## Director-at-Large

### **Ann Michelle Coughlin, RN, MSN, MBA**

Vice Chairperson, Pennsylvania State Board of Nursing

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

I have over 24 years' experience in the health care industry; including a clinical nurse in an acute care hospital, case management supervisor in the insurance industry, triage nurse for a disease management company, clinical nursing supervisor for a large university hospital and a nurse regulator. My previous position as a Regulatory Affairs and Compliance Auditor for a large Mail Order Pharmacy, Specialty Pharmacy and Infusion Company demanded a focus on regulations. My Supervisory position in Regulatory Affairs has enhanced my knowledge and experience with regulations for the past 8 years. My role as an Internal Auditor required review of regulations for individual states as well as review of federal regulations. My current role as Manager for the department of Patient and Family Experience at an academic medical center has broadened my knowledge in patient safety, satisfaction, quality of care and risk management.

I was honored to be appointed to the Pennsylvania State Board of Nursing in 2010 and to be named Vice-Chair 2012 and Chair for 2013 & 2014 term. In addition, I served on the following committees: IT, Finance, Probable Cause and Application Review. For three years I served on the Leadership Succession Committee (LSC) for NCSBN. I also have served on the NCLEX Item Sub-Review Committee. I am dedicated to continuing my commitment and passion for regulation in order to enhance and support the development of regulation and the role of nursing in the health care environment. I look to support NCSBN and will lend my diverse experience and knowledge to support the mission and vision. It would be an honor to continue to serve with the talented group of professionals to identify and nurture leadership in nursing that is pivotal to the advancement of nursing regulation and safety of the public.

#### **WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?**

##### **A. BORDERLESS HEALTH CARE DELIVERY**

Border Technology and innovation is driving treatment options in the health care market. Virtual tools to monitor and maintain health are popular items utilized across the world. Also tele health and tele rounding are utilized in many venues and impact borderless delivery. We will continue to see tremendous growth with technology and borderless delivery. We need to work together to maintain high standards and regulations. Borderless health care will assist with the collaboration the ability to share resources, information and knowledge. Borderless health care will need to be monitored and closely regulated in order to maintain patient safety. In the current health care market I think borderless health care delivery is vital, important and will continue to expand across the globe. Policymakers, stakeholders and practitioners need to work together to implement creative solutions when crossing borders. The need for expanding health care access continues to grow so we need to think on a national and global level to stay progressive in the efforts to address borderless health care delivery.

##### **B. REGULATION OF NURSING EDUCATION**

I think we need to regulate nursing education. We need to maintain quality, evidence based practice, high standards of education and ongoing nursing research. Nurses need to hold one another accountable for safe patient care and to high standards of practice. Nurses need the ability to practice to their full scope of authority. Boards of Nursing, nursing schools, nursing programs, regulators and accreditors all need to work together to maintain the highest standards of nursing education. We need to be collaborative, creative and innovative to protect the safety of the public and maintain the highest standard with nursing education.



### **C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE**

I have had exposure to the issues related to education and nursing regulation with the Pennsylvania Board and NCSBN. NCSBN is very involved and leading the required collaborative efforts that are necessary between regulators and accreditors. The RN Model rules are an excellent example of representation of this endeavor. The current work involving distance education should be embraced by regulators to meet the IOM initiative for nurses to advance their education. We need to continue to work together to develop the best practice standards and to assist all states with implementation of them. A key part is education and communication; we all need to be respectful to concerns of the individual states as well as support initiatives, goals and national standards to promote evolving scopes of practice.

### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

The members of the NCSBN are de facto people interested in nursing and the promotion of the highest standards of our profession. Therefore, it seems evident that they possess the qualities necessary for a leader. They are committed to the profession, they are interested in shaping the direction and values of our organization and they are bright, caring and dedicated individuals. Many of us certainly qualifies for a leadership post. So why are so few of us running? I think each of us may have our own reasons and perhaps going forward we would like to conduct a survey, as we have done in the past, to assess those reasons, but in the meantime, we may want to implement a few novel strategies to improve participation in our electoral process. I suggest we engage each state board to identify members who may be interested in pursuing a leadership position at the national level. We should then work with the state board to nurture and prepare new leaders, providing education, mentorship and support to promote their involvement in elections and leadership roles. Creating a leadership institute comparable to our research institute to engage 'fellows' who would be interested in developing leadership skills by participating in an ongoing mentorship program would also be an initiative to encourage participation in leadership roles. Finally, I think that we need to empower LSC to assist members interested in running in preparing and organizing their campaigns. Standardizing the process would also create a more equal playing field for candidates. Members could then delineate the information they want to make a decision and determine the process for disseminating that information. Our goals should be to create as non-political a process as possible for our elections. I thank you for your attention and look forward to working together.

## Director-at-Large

### Elizabeth Lund, MSN, RN

Executive Director, Tennessee State Board of Nursing

#### DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.

My regulatory experience began thirty-three years ago when I was appointed executive director of the Tennessee Board of Nursing after nine years in academic nursing. I took the first opportunity to volunteer for an NCSBN Committee, appointed to the Bylaws Committee where I served six years, four as chair. During that tenure, the committee accomplished the first comprehensive revision of the bylaws that positioned NCSBN to more nimbly respond to changing environments, allowing greater participation by members through special committees. Later I chaired the Regulation Subcommittee that examined the existing model of nursing regulation. After considering such models as a federal/national model and "fast" endorsement, the committee proposed a new mutual recognition model, beginning the journey that led to the interstate nurse licensure compact. Later, I chaired the Anniversary Planning Committee which started the tradition of an evening gala event that has served as a cherished model for subsequent anniversary celebrations. I have served on all the subsequent anniversary committees. Other committee service includes the Finance Committee, Awards Panel and co-lead of the executive officer group. More recently, I chaired the Executive Officer Succession Resource committee which produced a flexible online toolkit that has been used successfully by a number of boards to assist with leadership transition. I have volunteered as a mentor for many executive officers. I served as treasurer of the executive committee of the Nurse Licensure Compact Administrators and a member of the e-NLC Workgroup. In 2015, I was honored to be awarded the Meritorious Service Award. Currently, I serve on the NCSBN Board of Directors as a Director-at-Large and serve as liaison to the Standards Development Committee.

#### WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?

##### A. BORDERLESS HEALTH CARE DELIVERY

Partnerships with national and international colleagues heighten our appreciation that we share the common goal to deliver health care more safely and efficiently irrespective of borders. We recognize the value in congruent standards that flow from and are consistent with our overarching statutes and rules. Importantly we share knowledge, experience and resources and gain synergy from our efforts. As nursing regulators we face challenges to occupational licensure itself. It is imperative that we cross both physical and professional borders to make an evidenced case for professional licensing that can meet our common purpose to protect the public.

##### B. REGULATION OF NURSING EDUCATION

With a continuing rise in schools struggling to achieve their mission and boards challenged to regulate from an evidence informed base, it is vital to foster research efforts comparable in quality and usefulness to the landmark NCSBN Simulation Study. I support NCSBN's current nursing education study to identify evidence-based red flags and regulatory quality indicators. The results will provide much needed data to support school approval processes and reduce reliance on NCLEX pass rates as a sole measurement of education quality.

##### C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE

Nursing regulation has an ethical duty to support the provision of care by those qualified at every point along the caregiver continuum when grounded by sound evidence. Studies demonstrate that APRNs provide care equivalent to that of physicians. RNs and LPN/LVNs must be more



effectively utilized to practice to the full scope of their education, harnessing the capabilities of these licensees to participate more fully in improving health outcomes. We must critically examine traditional models and build safe models for our burgeoning population of patients, many of whom would prefer to receive care at home or electronically.

**PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

First, I believe that leadership in NCSBN does not equate with elected office; however, the goal to serve in an elected capacity is facilitated by taking full advantage of the leadership development opportunities available. One opportunity is committee membership. It is encouraging that members wish to participate in committees and my observation is there are ever more qualified members. Members report that it is frustrating to desire to serve and not be selected for limited slots on committees. These committees provide leadership opportunities that serve as a foundation for elected office. I suggest developing an open ended leadership inventory of members to form a database of willing members and their expertise. The inventory database has potential to level the playing field between new members seeking opportunity and those experienced leaders whose expertise is well known. Members would be encouraged to register in the database and these interested volunteers could form an identified group for leadership promotion activities. The inventory database would serve as a resource to match qualified applicants when leadership opportunities arise. Being elected to and serving on the Board of Directors is an honor. Experience in a broad array of NCSBN activities, committees as well as attendance and participation in meetings and conferences, provides invaluable leadership preparation and opportunity.

## Director-at-Large

### Mark Majek, MA, PHR, SHRM-CP

Director, Operations, Texas Board of Nursing

#### DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.

Special Services Division Group, 1994; Delegate Assembly Page, 1995-2000; Licensure Verification Task Force, 1995-1997; Licensure Verification Task Force, Chair, 1996-1997; Information System Users Group, 1998-1999; Phase II User Group Nursys, 1999-2000; Nursys Advisory Panel, 2000-2001; NCSBN Board of Directors, Area III Director, 2001-2005; Member Board Leadership Development Advisory Panel, 2006-2007; Finance Committee, 2008-2011; Leadership Succession Committee, 2012-2015; and, Bylaws Committee, Chair, 2015-2017.

#### Professional Organizations:

Society for Human Resource Management

Texas State Human Resources Association

Texas Small Agency Task Force, Chair

#### Community Involvement:

Marbridge Foundation, Volunteer

Knights of Columbus Council 10209, Austin, Texas

#### WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?

##### A. BORDERLESS HEALTH CARE DELIVERY

As barriers to borderless health care delivery dissipate, the question of quality must be addressed as to market access, regulation, standards, and information security. This is one area where regulation is lagging due to the rapid advances in telehealth and technology. As regulators, we are addressing some of the issues with the eNLC and NURSUS. The driver for borderless health care delivery will be how nurses are prepared to cross borders with their knowledge and experience and how we hold nurses accountable and protect all citizens. This could be addressed by the NCLEX or other national nursing examinations, which drive nursing education.

##### B. REGULATION OF NURSING EDUCATION

There is tension regarding the oversight of nursing education between boards of nursing and policy makers. It is a tug-o-war of quality versus quantity and the pendulum swings between the two depending on costs and NCLEX pass rates. Finding a balance will be important as the complexity of nursing practice increases and is reflected in the NCLEX. There is a "caveat emptor" system in place for most health care disciplines, when it comes pass rates. Nursing Regulators must continue to provide evidence of the importance of quality factors which impact NCLEX pass rates and are vital to public protection.

##### C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE

The role of boards of nursing is to seek out partnerships with health care associations, schools of nursing, public organizations and policy makers to forge common ground based on research and health care outcomes. We should focus on all levels of nursing and the NCSBN should be leading in research on how the appropriate expansion of scopes of practice would benefit citizens and drive down the cost of health care. As contentious as this may be, boards of nursing



are key partners in the success of defining and pushing the envelope on this issue and need to be at the table as these discussions take place.

**PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

Develop a formal mentorship program that creates a pool of seasoned NCSBN members such as current and former directors, committee chairs, and executive officers who can mentor prospective leaders on a one-to-one basis for up to one year. This program should also include the resources to allow prospective leaders to attend one delegate assembly and one board of directors meeting to be exposed to the dynamics and environment of the NCSBN. You must understand the NCSBN culture to be a successful leader in the organization and this strategy could form a cornerstone in building a stronger succession plan.



## Director-at-Large

### Lori Scheidt, MBA-HCM

Executive Director, Missouri State Board of Nursing

#### DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.

Lori Scheidt is the Executive Director of the Missouri State Board of Nursing, a position she has held since 2001. Prior to that, she served as the Board's Licensure Director and has performed almost every position within the board office during vacancies. Ms. Scheidt earned an Associate in Arts from Columbia College in 1997, a Bachelor of Science in Computer Information Management from William Woods University in 2000 and a MBA in Health care Management from Western Governors University in 2012. Ms. Scheidt is finishing her first two-year term on the NCSBN Board as a Director at Large. Prior NCSBN service:

Vice Chair, Nurse Licensure Compact Administrators 2012-2016

Fraud Detection Committee - Chair – 2015

Enhanced NLC Legislative Strategy Team 2015

Member Board Agreement Review Committee – Chair - 2013

Discipline Effective Practices Subcommittee – 2014-2015

Nurse Licensure Models Committee - 2011-2012

Awards Panel - 2004-2006

CORE Committee- 2005

Nursys Advisory Panel - 2003-2004

Test Service Technical Subcommittee - 2001-2002

Examination Committee - 1997-2000

NCLEX Evaluation Task Force - 1996

Committee for Special Projects (CAT) – 1995

IT/Operations Conference - Speaker – 2014, 2013, 2012, 2007

NCSBN Mid- Year Meeting – Speaker – 2016, 2015, 2013, 2011

NCSBN Annual Meeting – Speaker – 2015, 2013

NLCA Meeting –Speaker – 2016

#### AWARDS:

NCSBN Outstanding Contribution Award – 2001

Missouri Board of Nursing awarded the NCSBN Regulatory Achievement Award – 2012

Missouri Governor's Award for Quality and Productivity for significant improvements in nursing investigations – 2004

#### WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?

##### A. BORDERLESS HEALTH CARE DELIVERY (100 WORDS OR LESS)

NCSBN has built a solid foundation to move ahead of the regulation curve in this area by committing significant resources to enact the enhanced nurse licensure compact in all states.



Their presence in Washington, DC and strong alliances with key stakeholders will serve the organization and its' members well. NCSBN's strategic initiative to champion regulatory solutions to address borderless health care delivery requires us to be well-informed about technology, how that interacts with our regulatory model, and how we may need to adapt our regulatory framework without sacrificing our public protection mission.

## **B. REGULATION OF NURSING EDUCATION (100 WORDS OR LESS)**

NCSBN has invested in committee work and research that addresses the regulation of nursing education programs. The NCSBN National Stimulation Study provided critical information for an expert panel to make evidence-based recommendations for simulation in prelicensure nursing programs. Without a doubt, nurses need and demand flexible educational systems that promote seamless academic progression. Member boards struggle with faculty shortages, evaluating the effectiveness of online education, and lack of appropriate clinical facilities. NCSBN must continue to embark on relevant research to provide the evidence member boards need to make sound regulations. Changes in the health care system and practice environments require changes in education. We have to adapt to this evolving and complex health care system with a careful balance of flexibility and regulations that allow the profession to evolve while protecting the public.

## **C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE (100 WORDS OR LESS)**

The patchwork of varying scope of practice and borderless health care make it difficult for patients, practitioners, employers and payers to navigate. To further complicate matters, boards of nursing are creatures of statute and can only enforce state laws, as they exist. NCSBN has worked with key organizations to develop the APRN consensus model. The consensus model work rightly focuses on citing research on the safe, cost-effective, high-quality care delivered by APRNs and how the model will benefit public safety. NCSBN needs to continue seek solutions that are rooted in evidence and keep the spotlight on patient safety.

## **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

I remember when I was new to the board of nursing and the NCSBN and can understand how overwhelming it may be to balance your duties to your own board with your desire to participate on a national level. I think the NCSBN Orientation Roadmap is a good start, followed by joining the knowledge networks tailored to your subject matter expertise or job role. By joining the knowledge networks, you will be informed of conference calls so you can participate in the various networking opportunities and collaborate with your peers. I have learned so much by just talking to my peers and finding out how they do things, what has worked, what hasn't and hearing different perspectives. It also allows you to develop relationships. Attending NCSBN-offered meetings is another way to develop relationships and learn from others. There is also a wealth of online courses available on the learning extension site, but it may be hard to figure out where to start. Having a guide of courses tailored by role or expertise could be helpful. The next logical step is to volunteer to serve on committees or provide input to committee work (even if you aren't a committee member). The famous quote, "None of us is as good as all of us." is so very true. The NCSBN has a leadership assessment tool and self-inventory of competencies that can be helpful to identify your strengths and opportunities. I believe it is helpful to participate before you lead. To be a leader, you need to realize you can make a difference, you can grow, and you need your colleagues. It takes all of us to make this organization and our work successful.

## Director-at-Large

### Sharyl Toscano, PhD, MS, RN-CPN

RN Member, Alaska Board of Nursing

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

I have been a RN for 24 years. I have worked in Massachusetts, Hawaii, Vermont and now Alaska. I was appointed to the Alaska BON on 3/1/2015; I have served as Vice Chair and Chair of that Board. I am serving my second term on the NCSBN CORE Committee. My RN experience currently focuses on inpatient pediatrics, low level PICU, and level II NICU. Alaska Native Medical Center exist as an urban hub providing specialty services and trauma care to rural areas throughout Alaska. I serve the Alaska Native Customer Owners. I am committed to strength based; family focused and culturally centered care. I have been a nursing faculty member for 18 years and currently hold the rank of Professor. I have taught in undergraduate and graduate programs. My program of research focuses on Women's Roles, Relationships, and Health. Special projects within my faculty role have focused on undergraduate program evaluation. I currently serve locally on the Narcotic Drug Treatment Center Board and the Winterberry Charter School Board. Although I have trained and practiced as a FNP, I found my heart was at the bedside and my commitment is to the RN role. There are many talented members on the board of directors most often from board staff or APRN roles. I am committed to keeping a national focus on the RN role, believe in BS entry to practice and feel the board of NCSBN should include balanced representation.

#### **WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?**

##### **A. BORDERLESS HEALTH CARE DELIVERY**

I believe nurses should hold a license and/or compact license privilege in the state where the patient is located. In the state of Alaska, patients have unique needs. Patients have suffered where a one size fits all approach has been applied from a state having no knowledge of our population and/or our needs. I do not feel this is unique to Alaska. Alaska has also benefited from the advantages of telehealth specialty services. In a service industry where quality is a hidden factor; regulation is in place to ensure quality and safety.

##### **B. REGULATION OF NURSING EDUCATION**

I feel nursing education has departed from core values. There are so many and to obtain both entry and advanced practice. Quantity rather than quality has been the focus. We need to broaden our focus beyond pass rates. We need to move to BS entry to practice and facilitate bridge program but those bridge programs should not exist as a permanent path to entry. The bridge should be just that, a bridge until the BS entry is realized.

##### **C. THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE**

The APRN role has inadvertently created a ceiling for the RN where the RN role might have naturally expanded. There are clearly things that are APRN roles but not all expanded scopes require APRN certifications. The two are not mutually exclusive. On the other hand nurses are requesting expanded scope in areas that are not nursing. Allowing those expansions gives the consumer a false sense of security where being a nurse is not an added quality factor. Regulators need to keep up with professional practice organizations such that the limits of practice are safety related and not territorial.



---

**PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

I do not know what has been done up to this point so I would suggest beginning with an appreciative inquiry approach and have no preconceived notion regarding the outcome of that inquiry.

## Director-at-Large

### Ellen Watson, MS, APRN, FNP-BC

Chair, Vermont State Board of Nursing

#### DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.

**Regulatory Experience** I was appointed to the Vermont Board of Nursing in 2011 and reappointed in 2017 Chair of the Alternative to Public Discipline Committee since 2013 Vice Chair of the Vermont Board from September 2014 until September 2017 I am now Board Chair, elected September 2017 Serving on the Vermont BON Education Committee I served on the NCSBN APRN Committee that looked into grandfathering of APRNs I served on the Leadership Academy Committee I served as Area IV Director from 8/2015 to 8/2017. In that role, I attended many conferences and other events focused on Regulation. For example, I attended two Tri-Regulator Symposium meetings, Regulation 2030, many NCSBN events and traveled with CEO David Benton to visit our Associate Member in Manitoba last May. I was liaison for the APRN Education Committee that was charged with looking Member Board regulation of APRN programs. (NOTE: I loved this work and would have happily run for a second term, but my real job had a dramatic, but temporary increase in responsibility that made it impossible to adequately fulfill the duties of an NCSBN Board member. Those extra duties are ending and I will be able to do this once again. I feel that one term allowed me to learn all that I need to so that I can be of even greater service.) I love this work. I am in the second year of the IRE Fellowship Program **Other Relevant Experience** I am a Family Nurse Practitioner. I see patients in a Primary Care Clinic for half of my work week and teach at the University of Vermont during the other half. I serve on the Graduate Education Committee and participated in the preparation for accreditation visits for our new DNP Program, as well as re-accreditation of our undergraduate program, ADN to BSN Program and Clinical Nurse Leader Program. I serve on the Green Mountain Care Board Primary Care Advisory Committee Have been a member and chaired many other organizations over the years, in jobs, membership organizations and in the general community Opportunity is missed by most people because it is dressed in overalls and looks like work. Thomas Edison

#### WHAT IS YOUR PERSPECTIVE REGARDING THE FOLLOWING ISSUES AFFECTING NURSING REGULATION?

##### A. BORDERLESS HEALTH CARE DELIVERY

The goal of borderless health care delivery has become more and more important, as developments in technology and changes in the workforce mandate the need for greater flexibility and dynamic problem solving to meet the needs of an aging population with complex chronic illnesses that demand new models of care delivery. Team-based care is required to meet the needs of so many and to achieve the best outcomes. And team members can be in the office, or the city or the state next door.

##### B. REGULATION OF NURSING EDUCATION

Nurse regulators have a unique perspective and a singular primary purpose. We work to protect the public and ensure that nurses, from their initial education and licensure, to their continuing education and renewals are safe and professional. Nursing education programs are evaluated and re-evaluated periodically, in the hope of ensuring high standards in nursing education. This accreditation work may well lead to enhanced public protection, but without the eyes of the regulator also looking into programs, the foundation of any nurse could be deficient. This is a key component of nursing regulation, in my opinion.



### **THE ROLE OF REGULATION IN EVOLVING SCOPES OF PRACTICE (100 WORDS OR LESS)**

It is essential that regulators stay current with the evolution of all aspects of practice. The IOM Report on the Future of Nursing, the IHI Chronic Care Model and Initiatives along with other robust and forward thinking organizations have promoted the idea that everyone in health care needs to rise to the challenge of working at the top level that their licensure allows. This will provide for improved access to care as well as some degree of cost containment by using teams of caregivers with differing skill sets to provide comprehensive health care. Regulators need to be able to reframe Statute and Rules to allow this to happen and to appreciate the questions and issues that are sure to arise. We need fresh perspective and new eyes to assure that scopes of practice and regulations truly offer the opportunity for right touch regulation that protects the public and allows for growth.

### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

Leadership and learning are indispensable to each other said John F. Kennedy, in Dallas, on the day he died. We need to provide more opportunities for the membership to learn about leadership and to practice being a leader. I believe that people will never gravitate toward leadership positions unless they feel qualified and competent to take on the task. Many people are gifted with natural leadership abilities, but they often need to learn how to harness them and use them in various situations. Sometimes, they just need to be made aware of the talents they have. I served on Leadership Academy Committee. And while I don't feel committed to the plan or curriculum that was put forth from that group, I like the idea of a leadership academy for the NCSBN membership. This sort of program would need to be self-paced, on-line, not duplicative of existing leadership training and promoted to both Board Executive Officers and staff and to Board members. I think an important task of any activity to increase participation in NCSBN leadership is to make it more accessible. The idea of taking on a leadership position in this organization can be challenging and even frightening. Perhaps mentors could be offered. A leadership online journal might be a way to make stories of NCSBN leadership journeys available and the process less daunting. I would love to work on this type of a project.

# Leadership Succession Committee

## Area I Member

### Susan Engle, DNP, MSN, PHN

Nursing Education Consultant, California Board of Registered Nursing

#### DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.

I hold a Doctor of Nursing Practice Healthcare Systems Leadership degree with Distinction from Chamberlain University, College of Nursing (2016), Masters of Science in Nursing and a Bachelors of Science Degree from California State University, Dominguez Hills. I am a Nursing Education Consultant for the California Board of Registered Nursing. I was Associate Dean, Director of pre-licensure RN program and professor at Napa Valley College. Prior to academia, I held leadership positions that included clinical nursing director, manager, supervisor and charge nurse. I am a member of Sigma Theta Tau, California American Nurses Association, Association of Clinical Nurse Leaders. I was a member of the Nursing Education work group that developed the proposed regulations for nurse practitioners.

#### PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.

Many strategies are cited in the literature that could be used to increase participation in the leadership of the organization. Some strategies include application of leadership styles to influence potential leaders, communicating positively about the leadership position, and role modeling. Role modeling is one strategy that I have employed in my role as a nursing education consultant, Associate Dean, director of a pre-licensure nursing program, professor, and Clinical Nursing Director.

When role modeling, leaders need to exhibit leadership skills, knowledge, abilities, and attitudes. These leadership skills or competencies include effective communication methods, conflict management, integrity including trust, and flexibility. These skills are essential for an effective leader to influence future leaders.

My role modeling as a leader has influenced many of my colleagues to assume leadership positions. Recently, I attended a White Coat Ceremony for a colleague of mine who is completing their Master's degree with an emphasis as a Clinical Nurse Leader. The student in the graduate degree program was a student that I taught in the pre-licensure nursing program.

As a nursing education consultant, role modeling is used with every encounter such as speaking with constituents, program directors, or board members.

As a member of the Leadership Succession Committee, role modeling will be important to retain and recruit leaders.

#### WHY DO YOU WANT TO SERVE IN THE ROLE YOU ARE APPLYING FOR?

I want to serve in the role on the Leadership Succession Committee (LSC). The LSC committee members are charged to assist the National Council State Boards of Nursing (NCSBN) to ensure that the mission of the council is met. In addition, to ensure that there are leaders to carry on the NCSBN mission. The NCSBN mission is to provide education, service, and research through collaborative leadership to promote evidence-based regulatory excellence for patient safety and public protection (Adopted by Delegate Assembly 2010).

As a member of the LSC, I will be able to demonstrate effective communication, leadership, critical thinking and public policy. The skills, attitudes, and abilities that I possess have been gained through my academic degree progression, my leadership positions held in both clinical



practice and academia and as a Nursing Education Consultant for the California Board of Registered Nursing. I possess many of the leadership competencies addressed in the Self-Inventory: Leadership Competencies. I aspire to learn more about the NCSBN and how I can assist in protecting the public in relationship to the mission statement. I am willing to take on new opportunities that will influence my professional trajectory as a Registered Nurse.

Thank you for considering me to be elected to serve as an Area I member of the Leadership Succession Committee for a one-year term FY19. I look forward to serving on the Leadership Succession Committee.

WITHDRAWN



## Area II Member

### Lori Glenn, DNP, CNM, RN

Board Member, Michigan Board of Nursing

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

Lori Glenn has been a member of the Michigan Board of Nursing since 2017. She is an associate clinical professor of nursing at the University of Detroit Mercy, where she has served as chair of the Second Degree Option BSN program since 2013. In that role she has educated prelicensure students and developed programs that enhance NCLEX success. Dr. Glenn has been active at the both the college and university levels, as member and chair of several bodies that contribute to decision making about leadership roles at the University. These include the university faculty assembly, promotion and tenure committee, and faculty/dean search committees. Dr. Glenn has also played an active role in regional organizations committed to improving the nursing care of mothers and neonates. She has been consulted to provide expertise on legislation surrounding the licensure of non-nurse midwives in the State of Michigan. Dr. Glenn also practices part time as a Certified Nurse Midwife in Flint, Michigan, where she has contributed to establishing a robust midwifery practice and enhancing the hospital quality and safety.

#### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

The participation in the leadership of this organization would be enhanced if leaders continue to reach out and illustrate the importance of contributing to the future of NCSBN. As a new member, I was so impressed with the history and accomplishments of the organization over the past 40 years, I was inspired to apply for this position. Perhaps sharing the 40 year presentation that was shown at the Mid-Year meeting with members across the country, and enhance this with personal stories from those leaders who have made an impact would inspire others. I recommend continuation the email campaign to attract new leaders. Tony Graham's video and presentation at the Mid-Year meeting were also great strategies. Coming from a board that is populated with busy people, reaching out to members using alternative attendance through online meetings would give others greater flexibility to participate.

#### **WHY DO YOU WANT TO SERVE IN THE ROLE YOU ARE APPLYING FOR?**

Over the past 40 years, the NCSBN has grown into a powerful organization that contributes significantly to the profession of nursing. I have been dedicated to educating pre-licensure nurses for 10 years, including leading a successful effort to enhance NCLEX preparation. I would welcome the opportunity to have a greater impact though selecting leaders who will contribute to unifying and enhancing the regulation and licensing of nurses. As new nurses come into the profession, we are required to be nimble in our response to their learning needs and novice abilities in practice. Bridging the gap between nurse education and regulation is vital to developing nurses who are first and foremost safe, providing quality care and yet staying committed to nursing in a challenging health care environment. Advanced practice nursing is facing issues with resistance from medicine who continues attempts to marginalize and restrict practice without evidence that care inferior. Regulation of APRNs is more important than ever, to ensure quality, address disciplinary issues, and demonstrate their abilities and worth. As regulation evolves, and we face chaotic times in health care, it is vital to have leaders that can protect our current status and guide us toward advancing the nursing profession. Not only do leaders need to be well versed in the laws, rules, and policies relevant to the profession, they must be able to speak to the issues articulately, effectively, and with passion. As I continue to develop my knowledge and understanding of the many aspects of the Michigan Board of



Nursing and NCSBN, I feel my 31 years in nursing, 25 in nurse midwifery, and 10 in nursing education I will provide a vital perspective on the many challenges facing the nursing profession that will inform the leadership needs of the organization.

## Area II Member

### Melissa Hanson, MSN, RN

Associate Director for Compliance, North Dakota Board of Nursing

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

I have been an RN since 1993 (almost 25 years). I have hospital nursing experience in the areas of Neonatal Intensive Care, Dialysis, Diabetes Education, and Case Management. I received a Master's Degree in Nursing Management in 2006. With this degree I taught nursing at a BSN nursing program for 9 years. During these years of teaching, I also worked, during school breaks, at a Walk-In Clinic, and as a contracted Health Coach. This varied experience has provided me with knowledge of hospital nursing, clinic nursing, health care reimbursement, case management and discharge planning, as well as experience in academia.

I have 8 years of experience in nursing regulation. I first became involved with the North Dakota Board of Nursing in 2010 when I was accepted as a member of the Nursing Practice Committee. I served on this committee from 2010 to July 2014. In July 2014, I was appointed by the Governor of North Dakota to serve as an RN Board Member which included service as chair of the Nursing Education Committee. I served in this role until July 2015 when I was hired as Board staff. I have been the Associate Director for Compliance since July 2015 (2 years). This has provided me with various opportunities to see nursing regulation in action in the areas of nursing practice, nursing education, and now compliance/discipline.

My community experience includes service on several statewide committees. These include: 3 years (2011-2014) as a member of the North Dakota Partners in Nursing Gerontology Consortium (including Co-chair of the Education Committee for 3 years); 1 year of service (July 2016- Nov. 2017) on the North Dakota Center for Nursing 2017 Annual Conference Planning Committee; and 2 years and continuing participation (2015- present) in the North Dakota Reducing Pharmaceutical Narcotics Task Force.

#### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

First, I would like to applaud the newest strategy that the Leadership Succession Committee has already been working on- to take a closer look at those who are currently engaged, those who are actively participating in NCSBN meetings, conferences, programs, and committees and then encouraging those that have been actively involved to consider applying for a leadership role. This is a great start!

An additional strategy that would increase the pool of participants would be to increase opportunities for NCSBN members to participate. In addition to attendance at Mid-Year and Annual meeting, to provide a greater number of opportunities for people to share their talents and abilities on committees, project groups, taskforces, or research groups. The more people we can get to participate in these opportunities, the more we will see people's talents shine. In addition, this participation can increase leadership self-confidence, communication skills, and networking opportunities. It will also be important to incorporate, either formally or informally, mentorship into this strategy. For many people, getting involved in a committee, project group, taskforce, or research group can be intimidating. Especially on a national level, like with NCSBN. Often you may be working or participating with members who have amazing credentials and loads of experience. But every member has gifts, talents, knowledge, and experience to bring to the table. Having some sort of mentorship within these opportunities can make the experience less intimidating, and again allow all members to feel comfortable providing their own valuable insight.



---

**WHY DO YOU WANT TO SERVE IN THE ROLE YOU ARE APPLYING FOR?**

I have had the opportunity to serve on LSC for almost 2 years now. It has been a great experience. I have been able to work with many amazingly talented people from all around the nation. This role has provided me with opportunities to develop and increase my own leadership skills. It had provided me with countless opportunities to observe how successful leaders behave, how they engage others, and how they successfully communicate. What better way to learn! It has also increased my awareness of the importance of leadership succession planning- to ensure the future success of your organization. The future of any organization relies on its ability to build and grow leaders. When we improve the leadership skills and abilities of NCSBN members, this also improves their leadership in their own home state. It is a win-win! The collaboration and teamwork opportunities that NCSBN offers to its members are invaluable. North Dakota has found our collaboration with NCSBN and the resources provided to be highly valuable to our regulatory work in our state. Leadership Succession Committee encourages teamwork, the sharing of ideas, and problem solving. I hope to continue to serve NCSBN in the role of Leadership Succession Committee Area II Member, to contribute my knowledge and skills and to continue to develop my leadership abilities.

## Area III Member

### Sandra Culpepper

LPN Board Member, Mississippi Board of Nursing

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

Professional, Regulatory, and Community Experience

Member of the Mississippi Board of nursing

Licensed Practical Nurse- Educated at Pearl River Community College

Member of the Mississippi Licensed Practical Nurses Association- Secretary of Board

Employed at Pearl River County Hospital and Nursing Home as an Educator for Certified Nurse Aides

Professional Experiences working in LTC units, Acute Care, ED, Post-Operative Care, Nurse Aide Educator for Pearl River Community College, and A Psych/Disabled Persons Community Homes.

Currently serve on the Administrative Code Committee, the Practice Committee, and Compliance Committee at the Mississippi Board of Nursing.

Former member of the Office of Nursing Workforce Committee that has now been completed and is flourishing under the MBON.

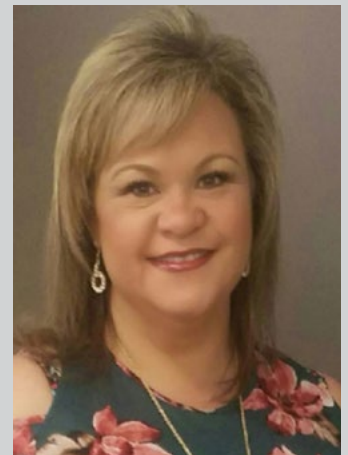
The first LPN to chair a committee for the MBON in regards to the feasibility of transferring authority of LPN. Educational Programs to the MBON with great success and to begin on July 1, 2018.

Actively involves in and assist with hosting an Annual Paint the Town Pink Event raising funds for breast cancer patients/survivors for the last 6 years. I serve my community by volunteering as a Baseball Commissioner to the local youth sports league.

I continue to participate in mission trips to the Dominican Republic providing health care services to the residents of Barahona and to Haitian Refugees located in the mountains. I volunteer as a High School Band/Color guard parent to assist with fund raising, traveling assignments, keeper of teenage girls lipsticks, and as well as keeping the students in check with their behavior.

#### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

Strategy for Increasing Participation in Leadership Roles. I believe that to bring people together and provide a positive experience will help facilitate more participation within NCSBN. I would first begin by using a light, fun team building exercise that allows for questions in a relaxed environment because tend to be more open minded when they feel free to express thoughts and concerns in more of a light manner. By doing this it allows our partners at NCSBN to address any concerns, fears of obligation, and general apprehension some members may have related to time constraints, or the role they would be asked to fulfill. I truly believe in empowering a group to be informed with the ability to critically think in a health care environment that is constantly evolving and changing. We have to be able to have those that are able to critically think to address issues in as many areas as possible to keep up with this ever changing health care environment to provide regulation that goes above and beyond. I firmly believe by following this strategy, NCSBN will find the best and brightest in Nursing as well as meeting the goals of NCSBN.



---

**WHY DO YOU WANT TO SERVE IN THE ROLE YOU ARE APPLYING FOR?**

I feel that it is of utmost importance to continue to provide the best possible care to our clients/patients on every level from medications, treatments, assessments, care plans, but most importantly from the human aspect! I am an advocate for those I am charged to care for and with that you have to have regulation that is crucial in the ability for us to be able to provide all of those things. I thoroughly love the regulation aspect of nursing and how it affects health care across the world. We are all aware of how important regulation is to not only our profession and how it guides our decision making processes but how it will also affect our client/patient outcomes. For me, I would be extremely excited and honored to be able to be a part of a team that will help me to also succeed and become an even stronger leader in regulation with in our nursing practice!

## Area III Member

### Sara Griffith, MSN, RN

Regulation Consultant, North Carolina Board of Nursing

#### **DESCRIBE ALL RELEVANT PROFESSIONAL, REGULATORY, AND COMMUNITY EXPERIENCE.**

I began my professional nursing career about 18 years ago at an 800-bed hospital as a cardiac surgery staff nurse and transitioned into nursing administration for approximately three years. As staff nurse, I was active in shared governance and journey to Magnet status. I completed my Masters Degree in Nursing Education in 2008. I am a current student in the Nursing PhD Program at East Carolina University with a regulatory research focus on substance use disorder in nursing. In 2007, I was elected to NCBON as board member and served the public for 7 ½ years. During my tenure on the Board, I served on a variety of committees which enhanced my knowledge of regulatory functions. I was elected as the Board's Vice-Chair serving for two consecutive years. As Vice-Chair, my role included Chair of Board Governance which oversees the Board's processes for conducting business in congruence with Mission, Vision, and Values. As board member, I was appointed to serve on the NIRSC for two terms and then was selected to serve on CORE. I am currently in my second term on the CORE Committee. In 2014, I transitioned from serving the public as a board member to board staff. My current responsibilities as a Regulation Consultant are conducting investigations, interpretation of NC Nursing Practice Act and collaborating with other agencies to meet the mandate of public protection. I focus, primarily, on investigating nurses in advanced practice roles. I am active on multiple board staff committees such as Board Orientation Education and Succession Planning, research, quality, and staff engagement and appreciation. My service to the community extends outside of nursing with my involvement in Girl Scouts as a leader and treasurer, management of club soccer teams, and volunteering to prepare and provide meals with Brown Bag Ministries.

#### **PLEASE DESCRIBE A STRATEGY OR ACTIVITY TO INCREASE PARTICIPATION IN THE LEADERSHIP OF THE ORGANIZATION.**

Engagement, identification, and mentoring are keys to successfully presenting a slate of candidates for NCSBN's future leadership positions on the Board of Directors and Leadership Succession Committee (LSC). NCSBN currently has 11 standing committees with a wide range of expertise and leadership experience on each committee. The engagement of committee members in open discussions about their future goals is imperative to implementing continual succession planning and sustainability of the organization.

A strategy for increasing participation in leadership position could be accomplished by requesting time on committee agendas to discuss positions opening within the next year, qualifications for the positions, responding to questions, and encouraging individuals to apply. Additionally, first time attendees at NCSBN conferences should be identified prior to the meeting, contacted through email, and information provided about leadership opportunities within the organization. The targeting of first-time attendees would engage members to consider leadership opportunities, retain their passion for nursing regulation, and provide experiential diversity to the slate of candidates. Exit-interviews with board members and LSC members completing terms to discuss accomplishments, benefits, and advise for future leaders could be added to the current Leadership Engagement calls.

#### **WHY DO YOU WANT TO SERVE IN THE ROLE YOU ARE APPLYING FOR?**

Through continual engagement in NCSBN conferences, offered NCSBN conference calls, and service on NCSBN committees, I have seen the growth of the organization in meeting the mission and strategic initiatives. Being an active participant in pursuing the mission, growing with the organization, and engaging in the strategic plan of NCSBN, would meet personal and professional goals while enhancing my jurisdictional responsibilities and commitments. I thrive



on the challenge of helping people recognize their leadership attributes and abilities through encouraging, motivating, and eliciting interest. I am a firm believer in mentoring and coaching roles (formal and informal). I have had mentors that believed in my ability and planted seeds to assist me in identification and pursuit of goals. Sometimes that seed can be planted related to one's leadership expertise, qualities, and strengths that makes the difference in pursuing a formal leadership role. Rosalynn Carter stated "A leader takes people where they want to go. A great leader takes people where they don't necessarily want to go, but ought to be." The sustainability of NCSBN leadership is vital in ensuring the mission of NCSBN is met while supporting the mission of every member board within the organization. Through my experiences with NCSBN committee work, I have developed a strong understanding of the mission and strategic plan of NCSBN. I am committed to the work of NCSBN and of the NCBON. Serving on the Leadership Succession Committee will continue to develop me as a leader while actively engaging the membership to consider being placed on the ballot for either the BOD or LSC.



# Report of the NCLEX® Examination Committee (NEC)

## Committee Recommendations to the Delegate Assembly:

### 1. Adopt the proposed 2019 NCLEX-RN® Test Plan.

#### Rationale:

The NEC reviewed and accepted the report of findings from the 2017 RN Practice Analysis: *Linking the NCLEX-RN® Examination to Practice* (NCSBN, 2018) as the basis for recommending revisions to the 2016 NCLEX-RN® Test Plan to the Delegate Assembly. Empirical evidence from the practice analysis, feedback from the members boards and legal counsel, and the professional judgment of the NEC provide support for the recommendation to the Delegate Assembly to adopt the proposed 2019 NCLEX-RN® Test Plan.

#### Fiscal Impact:

Incorporated into the fiscal year 2018 (FY18) budget.

## Background

As a standing committee of NCSBN, the NEC is charged with advising the NCSBN Board of Directors (BOD) on matters related to the NCLEX process, including examination item development, security, administration and quality assurance to ensure consistency with the boards of nursing/regulatory bodies' (BONs/RBs) need for examinations. In order to accomplish this, the committee monitors the NCLEX-RN® and NCLEX-PN® Examination process to ensure policies, procedures and standards utilized by the program meet and/or exceed guidelines proposed by the testing and measurement profession. The NEC recommends test plans to the Delegate Assembly.

Additionally, the committee oversees the activities of the NCLEX Item Review Subcommittee (NIRSC), which plays a critical role in the item development and review processes. Individual NEC members act as chairs of the subcommittee on a rotating basis. Highlights of the activities of the NEC and NIRSC activities follow.

## FY18 Highlights and Accomplishments

The following lists the highlights and accomplishments in fulfilling the NEC charge for FY18.

FY18 Charge:

1. Advise the BOD on matters related to the NCLEX examination process, including examination item development, security, administration and quality assurance to ensure consistency with the member board's need for examinations.
2. Develop NCLEX prototype items that use technology enhanced item types focused on measuring clinical decision making/judgement.
3. Recommend test plans to the Delegate Assembly.

### Technical Advisory Committee (TAC)

The TAC is composed of NCSBN and Pearson VUE psychometric staff, along with a selected group of leading experts in the testing and measurement field. The committee reviews and conducts psychometric research to provide empirical support for the use of the NCLEX as a valid measurement of initial nursing licensure, as well as to investigate possible future enhancements to the examination program.

Several new research projects were completed in FY18 and focused on studies related to the Next Generation NCLEX (NGN).

## Members

### NCLEX® Examination Committee

Betsy Houchen, JD, MS, RN, Ohio, Area II, Chair

Shirley Brekken, MS, RN, Minnesota, Area II

Anne Coghlan, MScN, RN, Ontario, Associate Member – Ex-Officio

Joy Ingwersen, MSN, RN, CNE, Oregon, Area I

Cynthia Johansen, MAL, MSc, British Columbia RN, Associate Member – Ex-Officio

Lisa Renee Johnson, MSN/Ed, RN, LPN, Florida, Area III

Kimberly Miller, RN, MC, BSN, Minnesota, Area II

Deborah Swartz, MSN, RN, Vermont, Area IV

Rhigel "Jay" Tan, DNP, APRN, RN, PMHNP, GNP, ANP Nevada, Area I

Crystal Tillman, DNP, RN, CPNP, North Carolina, Area III

### NCLEX® Item Review Subcommittee

Janzie Allmacher, MSN, RN, CEN, ACNS-BC, Virgin Islands, Area IV

Kathleen S. Ashe, MSN, RN, CNE, Massachusetts, Area IV

Tracey Blalock, MSN, MBA, RN, NEA-BC, Georgia, Area III

Tammy Claussen, MSN, RN, CNE, Arkansas, Area III

Teresa Corrado, LPN, Washington, Area I

Ann Michele Coughlin, MSN, MBA, RN, Pennsylvania, Area IV

Diana O. Forst, MSBC, RNC, PCCN, OCN, Chemo, Florida, Area III

Becky Gladis, LPN, Minnesota, Area II

Ruth Ann Go, MEd, RN, North Carolina, Area III

Myra Goldman, MSN, RN, Kentucky, Area III

Steven Higginson, MSN, Utah, Area I

Georgina R. Howard, MPA, RN, NE-BC, New York, Area IV

Kristin Husher, MSN, RN, Vermont, Area IV

Keva S. Jackson-McCoy, MSN, RN,  
Maryland, Area IV

Miriah L. Kidwell, MBA, RN,  
Kansas, Area II

Marilyn Krasowski, EdD, MSN, RN,  
Minnesota, Area II

June McLachlan, DNP, FNP-BC,  
PHN, APRN, RN, Minnesota,  
Area II

Teresita McNabb, MSHSA, RN,  
NE-A, CLNC, FACHE,  
Louisiana RN, Area III

Tammie Napoleon, DNP,  
APRN-RX, PPCNP-BC, Hawaii,  
Area I

Lewis L. Perkins, DNP, APRN,  
GNP-BC, NEA-BC, Kentucky,  
Area III

Catherine Prato-Lefkowitz, PhD,  
MSN, RN, CNE, Nevada, Area I  
Sherry Richardson, RN, CMSRN,  
Tennessee, Area III

Darlene (Yolonda) Schulz, LPN,  
Montana, Area I

Pamela Trantham, RN, CI,  
North Carolina, Area III

#### Staff

Philip Dickison, PhD, RN,  
Chief Officer, Operations  
& Examinations

Jennifer Gallagher, Director,  
Business Operations,  
Examinations

Chelsea Kelley, Senior Manager,  
Operations & Examinations

Doyoung Kim, PhD, Senior  
Psychometrician, Examinations

Betty Sanders, MBA, PMP, CAE,  
Test Development Manager,  
Examinations

Anne Sayre, Operations  
Manager, Examinations

Kristin Singer, MSN, RN,  
RN Test Development  
Associate, Examinations

Aly Brenton, MSN, RN, CNL,  
RN Test Development  
Associate, Examinations

#### Meeting Dates

- Oct. 16, 2017 (NCLEX  
Examination Committee  
Business Meeting)
- Dec. 11–13, 2017 (NCLEX Item  
Review Subcommittee Meeting)
- Jan. 8, 2018 (NCLEX Examination  
Committee Business Meeting)

- Application of Assessment Engineering Design Principles to the Measurement of Clinical Decision Making in Nursing;
- Examining Test-taking Effort on the NGN Item Field Test;
- Setting the Stage for Setting the Standard: A Research Proposal for the Next-Gen NCLEX; and
- Pretesting and Dimensionality Assessment of New Prototype Items.

#### NCSBN Examinations Department Internship Program

In 2018, NCSBN sponsored its sixth summer internship program for advanced doctoral students in educational measurement and related fields. The internship lasted eight weeks in June and July 2018 and was awarded to one advanced-level measurement graduate student. The selected intern participated in research under the guidance of NCSBN psychometrics staff and acquired practical experience working on licensure and certification exams. In addition, the intern worked on research projects that were presented to Examinations staff at the conclusion of the internship.

The goal of this internship is to provide practical experience with operational computerized adaptive testing (CAT) programs to measurement students. The intern worked with testing professionals to learn how the NCLEX exams are developed and administered, gained knowledge of CAT subjects, and discussed current measurement topics. In addition, the intern conducted research projects directly pertaining to issues encountered in operational CAT programs and NGN.

#### Registered Nurse (RN) and Practical Nurse (PN) Continuous Practice Analysis Studies

NCSBN began administering the 2018 RN and PN Continuous Practice Analysis online survey instruments in February 2018. Two forms of the electronic survey instrument were administered to both RN and PN samples.

The two survey forms contained demographic questions and job task statements relevant to entry-level nursing practice. Invitations were sent via email and reminder emails were sent to nonresponders in the first, second and fourth weeks of the administration period. Newly licensed RNs and PNs, defined as individuals who have passed the NCLEX-RN or NCLEX-PN 12 months or fewer prior to the survey data collection, were included in the survey sample. The duration of each data collection period was eight weeks. After the eight weeks of survey administration, datasets from each survey form were combined and demographic frequency analyses, as well as average rating analyses were completed. Results were comparable to previous practice analysis studies.

#### 2019 NCLEX-RN® Test Plan

The final report of the 2017 NCLEX-RN Practice Analysis study is complete. Following the analysis of survey results, the draft *2019 NCLEX-RN Test Plan* was developed and forwarded to NCSBN member boards and regulatory bodies in February 2018 for review and feedback. Subsequently, the draft document was presented to the NCSBN BOD in July 2018.

The draft *2019 NCLEX-RN Test Plan* will be presented to the membership of NCSBN during its Annual Meeting in August 2018 for review and approval. A strikethrough copy, a clean copy and the timeline for implementation of the *2019 NCLEX-RN Test Plan* are included in Attachments A, B and C respectively.

#### PN Practice Analysis and Knowledge Skills and Ability (KSA) Study

The triennial NCLEX-PN Practice Analysis and Knowledge, Skills and Abilities (KSA) studies are currently underway. In November 2017, a panel of subject matter experts (SMEs) met to develop a comprehensive list of entry-level licensed practical/vocational nurse (LPN/VN) activity statements that form the basis of the *2018 NCLEX-PN® Practice Analysis* and subsequent development of the *2020 NCLEX-PN® Test Plan*. Launched in spring 2018, the

NCLEX-PN Practice Analysis survey requested feedback from newly licensed nurses regarding the importance and frequency of the activity statements as it relates to client safety and decreasing client complications.

Simultaneously, the development and subsequent launch of the NCLEX-PN KSA survey is in progress. In December 2017, a separate SME panel met to develop a list of knowledge statements relevant to entry-level LPN/VN practice. The KSA survey requested newly licensed nurses as well as educators and supervisors who work with entry-level nurses to respond as it related to the importance of the knowledge statements in the delivery of entry-level LPN/VN care. Results obtained from the KSA study will be used to inform item development for the 2020 NCLEX-PN Test Plan.

### NCLEX® Alternate Item Types

The committee consistently reviews the present and future of the NCLEX with an eye toward innovations that would maintain the examination's premier status in licensure.

### NCLEX® Test Center Enhancements

Pearson VUE will open 25 new Pearson Professional Centers (PPCs) in the U.S. and Canada in 2018. In addition, Pearson VUE will expand the number of seats at eight test centers during 2018.

### Evaluated and Monitored NCLEX® Examination Policies

The committee reviews the NCSBN BOD examination-related policies as well as the NEC policies annually and updates them as necessary.

## MONITORED CRITICAL ASPECTS OF EXAMINATION DEVELOPMENT

### Conducted NEC and NIRSC Sessions

To ensure consistency regarding the manner in which NCLEX items are reviewed before becoming operational, members of the NEC continue to chair NIRSC meetings. The committee and the subcommittee: (1) reviewed RN and PN operational and pretest items; and (2) provided direction regarding RN and PN multiple-choice and alternate format items. As an additional quality assurance measure, the subcommittee evaluates the accuracy of a random sample of all validations for pretest and master pool items scheduled for review.

Assistance from the subcommittee continues to reduce the NEC's item review workload, facilitating its efforts toward achieving defined goals. As the item pools continue to grow, review of operational items is critical to ensure that the item pools reflect current entry-level nursing practice. At this time, the number of volunteers serving on the subcommittee is 24, with representation from all four NCSBN geographic areas. Orientation to the subcommittee occurs at each meeting and is offered as needed on a quarterly basis.

### Monitored Item Production

Under the direction of the NEC, RN and PN pretest items were written and reviewed by NCLEX Item Development Panels. NCLEX Item Development Panels' productivity can be seen in Tables 1 and 2. As part of the contractual requirements with the test service, items that use alternate formats (i.e., any format other than multiple-choice) have been developed and deployed in item pools. Information about items using alternate formats has been made available to BON/RBs and candidates in the NCLEX Candidate Bulletin, candidate tutorial and on the NCSBN website.

- March 19–21, 2018 (NCLEX Item Review Subcommittee Meeting)
- April 9–10, 2018 (NCLEX Examination Committee Business Meeting)
- June 11, 2018 (NCLEX Examination Committee WebEx)
- June 18–20, 2018 (NCLEX Item Review Subcommittee Meeting)
- Aug. 20, 2018 (NCLEX Examination Committee WebEx)
- July 30–Aug. 1, 2018 (NCLEX Item Review Subcommittee Meeting)
- Sept. 17–19, 2018 (NCLEX Item Review Subcommittee Meeting)

### Relationship to Strategic Plan

#### Strategic Initiative D

Pioneer competency assessments to support the future of health care and the advancement of regulatory excellence.

#### Strategic Objective D1

Enhance precision of the measurement of NCLEX candidates through the use of state-of-the-art technologies and unfolding scoring models.

#### Strategic Objective D2

Investigate use of NCSBN's exam resources to support the work of the regulatory boards and educational institutions.

### Attachments

- A. Proposed 2019 NCLEX-RN® Test Plan – Strikethrough Copy
- B. Proposed 2019 NCLEX-RN® Test Plan – Clean Copy
- C. Timeline for Implementation of the 2019 NCLEX-RN® Test Plan
- D. Annual Report of Pearson VUE for the NCLEX

## NCSBN Item Development Sessions Held At Pearson VUE

**Table 1. RN Item Development Productivity Comparison**

Year	Writing Sessions	Item Writers	Items Written	Review Sessions	Items Reviewed
April 12 – March 13	4	45	1579	6	2970
April 13 – March 14	6	60	2047	7	4306
April 14 – March 15	4	40	1266	4	2700
April 15 – March 16	3	39	1688	4	2500
April 16 – March 17	5	49	2250	4	3024
April 17 – March 18	4	39	1785	4	3615

**Table 2. PN Item Development Productivity Comparison**

Year	Writing Sessions	Item Writers	Items Written	Review Sessions	Items Reviewed
April 12 – March 13	6	70	2570	12	5481
April 13 – March 14	6	57	1861	6	4343
April 14 – March 15	4	38	1367	4	2700
April 15 – March 16	4	40	1159	4	1875
April 16 – March 17	4	39	1821	4	2308
April 17 – March 18	4	40	1926	4	2431

Pearson VUE continues to work to improve item development sessions and increase the quality and quantity of the NCLEX items.

### Monitored Item Sensitivity Review

NCLEX Pretest Item Sensitivity Review procedures are designed to eliminate item wording that could be elitist, stereotypical, have different meanings for different ethnic or geographic groups or have an inappropriate tone. Review panels are composed of members who represent the diversity of NCLEX candidates. Prior to pretesting, items are reviewed by sensitivity panels and any items identified by the group are referred to the NEC for final disposition.

### Evaluated Item Development Process and Progress

The NEC evaluated reports provided at each meeting on item development sessions conducted by the test service. NCLEX staff continues to oversee each panel. Overall, panelists and NCLEX staff in attendance have rated item development sessions favorably.

### Monitored Development of Operational NCLEX® Item Pools

NCSBN Examinations staff monitored the configuration of RN and PN operational item pools. The process of configuring operational item pools involves a few critical variables outlined in the NCLEX test plan; however, the quality control checks performed afterward are based upon both content and psychometric variables. The resulting operational item pools were evaluated extensively with regard to these variables and were found to be within operational specifications.

To ensure that operational item pools and the item selection algorithm were functioning together as expected, simulated examinations were evaluated. Using these simulated examinations, the functioning of the algorithm was scrutinized with regard to the distribution of items by test plan content area. It was concluded that the operational item pools and the item selection algorithm were acting in concert to produce exams that were within NCSBN specifications and were comparable to exams drawn from previous NCLEX item pool deployments. These conclusions were reinforced by replicating the analyses using actual candidate data. The committee will continue to monitor performance of the NCLEX through these and other psychometric reports and analyses.

## **BON/RB Review of Items**

BONs/RBs are provided opportunities to conduct reviews of NCLEX items twice a year. Based on this review, representatives may refer items to the NEC for review for one of the following reasons: not entry-level practice, not consistent with the Nursing Practice Act/Administrative Rules or for other reasons. In October 2017 and January 2018, the committee reviewed the items referred from the April 2017 BON/RB Review. Additionally, in April 2018, items were reviewed from the October 2017 BON/RB Review. The committee provided direction on the resolution of each referred item. The NEC encourages each BON/RB to take advantage of the semi-annual opportunities to review NCLEX items.

The October 2017 review consisted of 21 BONs/RBs (12 U.S. and nine Canadian), an increase from 13 BONs/RBs during the October 2016 review. The April 2017 review consisted of 18 BONs/RBs (10 U.S. and eight Canadian), which is consistent with the 18 BONs during the April 2016 review. For the April 2018 review, there are 14 BONs/RBs (six U.S. and eight Canadian) scheduled to participate.

## **Item-related Case Reports**

Electronically filed case reports may be submitted at PPCs when candidates question item content. Pearson VUE and NCSBN staff continue to investigate each case and report their findings to the NEC for decisions related to retention of the item.

## **MONITOR EXAMINATION ADMINISTRATION**

### **Monitored Procedures for Candidate Tracking: Candidate Matching Algorithm**

The committee continued to monitor the status and effectiveness of the candidate-matching algorithm. On a semi-annual basis, Pearson VUE conducts a check for duplicate candidate records on all candidates that have tested within the last six months.

### **Monitored the Security Related to Publication and Administration of the NCLEX®**

The NEC continues to proactively examine security, and has developed and implemented formal evaluation procedures to identify and correct potential breaches of security. NCSBN and its testing vendor, Pearson VUE, provide mechanisms and opportunities for individuals to inform NCSBN about possible examination eligibility and administration violations. In addition, NCSBN works directly with two third-party security firms to conduct extensive open source web patrol services. Patrolling consists of monitoring websites, social media discussion forums, online study services/programs and peer-to-peer nursing networks that may contain proprietary examination material/information and/or provide an environment for any possible threats to the examination.

NCSBN also executed a secret shopper program to audit the PPCs where the NCLEX is administered. This program provides NCSBN staff with firsthand candidate experience throughout the entire testing process, including at the PPC, and illuminates the strengths and weaknesses of the PPC examination delivery channel security to ensure NCSBN's established procedural/security measures are being consistently followed. NCSBN, Pearson VUE and the NEC are committed to vigilance in ensuring the security of the NCLEX.

### **Compliance with the 30-/45-Day Scheduling Rule for Domestic PPCs**

The NEC monitors compliance with the 30-/45-day scheduling rule. For the period of Jan. 1, 2017 to Dec. 31, 2017, Pearson VUE reported zero capacity violations. Pearson VUE has a dedicated department that continues to analyze center utilization levels in order to project future testing volumes and meet the testing needs of all of their testing clients. As an early indicator of center usage, Pearson VUE reports to NCSBN staff on a weekly basis when sites exceed 80 percent capacity levels.

### **Responded to BON/RB Inquiries Regarding NCLEX® Administration**

As part of its activities, the committee and the NCSBN Examinations department staff

responded to BON/RB questions and concerns regarding administration of the NCLEX. More specific information regarding the performance of the NCLEX test service provider, Pearson VUE, can be found in the Annual Report of Pearson VUE for the National Council Licensure Examinations (NCLEX), available in Attachment D of this report.

### **Administered NCLEX® at International Sites**

The international test centers meet the same security specifications and follow the same administration procedures as the professional centers located in BON/RB jurisdictions. Please see Attachment D of this report for the 2017 candidate volumes and pass rates for the international testing centers.

## **EDUCATE STAKEHOLDERS**

### **NCLEX® Presentations and Publications**

Active involvement with measurement and regulatory organizations not only helps NCSBN share expertise on best testing practices worldwide, but also allows NCSBN to move ahead in psychometric testing solutions through the collective strength of internal and external stakeholders. Furthermore, collaborating on psychometric testing issues with external communities allows NCSBN to remain at the forefront of the testing industry.

NCSBN presented three sessions at the 2018 Association of Test Publishers (ATP) Innovations in Testing Conference in San Antonio entitled “Structured Item Development for Enhancing Credentialing Programs,” “Is Remote Proctoring Appropriate for High Stakes Certification and Licensure Test?” and “Psychometric Approaches to Investigate Cheating Behaviors in Admissions and Licensure Exams” with testing industry colleagues. These sessions were jointly presented with colleagues from Graduate Management Admission Council (GMAC), National Conference of Bar Examiners, Microsoft, Linux Foundation and Chartered Financial Analyst (CFA) Institute. The ATP is an organization representing providers of tests, assessment tools and services. Its annual and regional conferences provide venues where researchers and practitioners come together to improve practice and advance the field of testing and measurement.

Staff also co-presented one session with industry colleagues entitled “Using Graphic Visualization to Communicate Data to Your Stakeholders” at the Institute on Credentialing Excellence (ICE) Exchange Conference in New Orleans. ICE is a professional membership association that provides education, networking and other resources for organizations that serve the credentialing industry.

NCSBN Examinations staff presented the following research projects at the 2018 American Educational Research Association (AERA) and National Council of Measurement in Education (NCME) Annual Meetings in New York City: “Relative Diagnostic Profile: A New Framework for Subscore Reporting,” “Design and Analyze the Computerized Adaptive Testing with the Graph Theory,” “Exploring the Score Report of Computerized Adaptive Testing Program” and “Automated Detection of Enemy Items Using Latent Semantic Analysis.”

Staff also co-presented six sessions with Pearson VUE staff entitled “Measuring Clinical Judgment in Nursing: Integrating Technology Enhanced Items,” “Defining New Item Types for a Clinical Judgment Construct,” “Readability Measures for Multiple-Choice and Innovative Items,” “Evaluating Scoring Models to Align With Proposed Cognitive Constructs Underlying Item Content,” “Using Signal-Detection Theory to Enhance IRT Methods: A Clinical Judgment Example” and “Moving a Traditional Assessment into the Next Generation: Exploring the Road Ahead.” AERA and NCME are prestigious measurement and testing organizations with broad membership bases. These organizations are internationally recognized as the premier psychometric professional associations.

NCSBN Examinations staff published “Projection-based Stopping Rules for Computerized Adaptive Testing in Licensure Testing” in *Applied Psychological Measurement* and “Exploring the Psychometric Properties of Innovative Items in Computerized Adaptive Testing” in *Technology Enhanced Innovative Assessment: Developing, Modeling, and Scoring from an Interdisciplinary Perspective*.



In addition, staff gave the following presentations: “Next Generation NCLEX Overview” at the American Association of Colleges of Nursing (AACN) Baccalaureate Education Conference in Atlanta, the Organization for Associate Degree Nursing (OADN) Board of Directors in Scottsdale, Ariz., the Washington Board of Nursing Board of Directors, in Spokane, Wash., the Wyoming Education Conference in Casper, Wyo., and the Kansas Nurse Educator Conference in Wichita, Kan. “Improving Nursing Care through Better Clinical Judgement: Education and Assessment among Entry-level Practitioners” was presented at the Sigma Theta Tau International (STTI) 44th Biennial Convention in Indianapolis, and “NCSBN Research on NCLEX Examination Redesign and Next Generation NCLEX Update” at the Elsevier Nursing Education Conference in Las Vegas and the ATI National Nurse Educator Summit in Salt Lake City.

To ensure that NCSBN membership has continued involvement in the NCLEX program, and is informed of test development practice, the Examinations department hosted four informational webinars for BON/RBs.

Additionally, as part of the department’s outreach activities, Examination content staff conducted four sponsored NCLEX Regional Workshops. Regional Workshops are presented for the purpose of providing information to educators preparing students to take the NCLEX. NCLEX Regional Workshops were held between March 31, 2017 and April 1, 2018 in the following jurisdictions: Illinois, Kansas, Ohio and Texas. These opportunities assist NCSBN’s Examinations department in educating stakeholders about the examination, as well as recruit for NCSBN item development panels.

### **NCLEX® Manuals**

The NCLEX Member Board Manual (for U.S. BONs) and the NCLEX Administration Manual (for Canadian RBs) contain policies and procedures related to the development and administration of the NCLEX. Once a year, NCSBN updates the NCLEX Manuals to reflect any changes to policies and procedures. Ad hoc changes are also made to the manuals when necessary.

### **NCLEX® Candidate Bulletin and NCLEX Information Flyer**

The candidate bulletin contains procedures and key information specific to candidates preparing to test for the NCLEX. The candidate bulletin is updated on an annual basis and can be obtained in electronic format. The NCLEX Information Flyer provides a brief snapshot of the NCLEX candidate process, rules and identification requirements and is available in an electronic format.

### **NCLEX® Conference**

Historically, the Examinations staff has coordinated and hosted an NCLEX Conference in order to provide BON/RBs, educators and other stakeholders an opportunity to learn about the NCLEX program. The 2017 NCLEX Conference was held in Rosemont, Ill on Sept. 25, 2017, with approximately 350 participants. The 2018 NCLEX Conference is scheduled for Sept. 24 and 25, 2018 in Charlotte, N.C.

### **NCLEX® Program Reports**

NCSBN Examinations staff monitors production of the NCLEX Program Reports as delivered by the vendor. Program reports can be ordered, paid for and downloaded via a web-based system that permits program directors and staff to receive reports quickly and in a more portable, electronic format. The web-based system also allows subscribers to distribute the reports via email to people who need them most – the faculty and staff that design curriculum and teach students. Subscribers may also copy and paste relevant data, including tables and charts, into their own reports and presentations. This is particularly beneficial if the program uses these reports to supplement the academic accreditation process. NCLEX Program Report subscriptions are offered on quarterly, semi-annual and annual bases. In addition, supplemental report data in comma-separated values (CSV) format is an optional offering to accompany NCLEX Program Report subscriptions.

### **NCLEX® Unofficial Quick Results Service**

The member boards, through NCSBN, offer candidates the opportunity to obtain their “unofficial results” (official results are only available from the BONs) through the NCLEX Quick Results Service. A candidate may go online to access their unofficial result two business days after completing their examination. Currently, 48 U.S. BONs participate in offering this service to their candidates. In 2017, 148,295 candidates utilized this service.

### **Future Activities**

- Continue to monitor all administrative, test development and psychometric aspects of the NCLEX program.
- Evaluate all aspects of the NCLEX program and initiate additional quality assurance processes as needed.
- Evaluate NCLEX informational initiatives such as the NCLEX Conference, NCLEX Regional Workshops and other presentations.
- Communicate updates regarding the Next Generation NCLEX project including research outcomes, as well as implications for students, educators, regulators and health care organizations.
- Evaluate ongoing international testing.
- Host the 2018 NCLEX Conference (Sept. 24 and 25, 2018).
- Introduce additional alternate format item types.
- Explore additional item writing strategies for the NCLEX.
- Conduct NCLEX-RN Standard Setting.



## Proposed 2019 NCLEX-RN® Test Plan – Strikethrough Copy

### 1 2019 NCLEX-RN® Test Plan

## 2 National Council Licensure Examination 3 for Registered Nurses

## 4 (NCLEX-RN® EXAMINATION)

### 5 Introduction

6 Entry into the practice of nursing is regulated by the licensing authorities within each of the National  
7 Council of State Boards of Nursing (NCSBN®) member board jurisdictions (state, commonwealth, and  
8 territorial boards of nursing). To ensure public protection, each jurisdiction requires candidates for  
9 licensure to meet set requirements that include passing an examination that measures the competencies  
10 needed to perform safely and effectively as a newly licensed, entry-level registered nurse. NCSBN develops  
11 a licensure examination, the National Council Licensure Examination for Registered Nurses (NCLEX-RN®),  
12 which is used by member board jurisdictions and most Canadian nursing regulatory bodies, to assist in  
13 making licensure decisions.

14 Several steps occur in the development of the NCLEX-RN Test Plan. The first step is conducting a practice  
15 analysis that is used to collect data on the current practice of the entry-level nurse (*Report of Findings from*  
16 *the 2017 RN Practice Analysis: Linking the NCLEX-RN® Examination to Practice*, NCSBN, 2018). Twelve  
17 thousand newly licensed registered nurses are asked about the frequency and importance of performing  
18 nursing care activities. Nursing care activities are then analyzed in relation to the frequency of performance,  
19 impact on maintaining client safety, and client care settings where the activities are performed. This  
20 analysis guides the development of a framework for entry-level nursing practice that incorporates specific  
21 client needs as well as processes fundamental to the practice of nursing. The second step is the development  
22 of the NCLEX-RN Test Plan, which guides the selection of content and behaviors to be tested.

23 The NCLEX-RN Test Plan provides a concise summary of the content and scope of the licensing  
24 examination. It serves as a guide for examination development as well as candidate preparation. The  
25 NCLEX® examination assesses the knowledge, skills and abilities that are essential for the entry-level nurse  
26 to use in order to meet the needs of clients requiring the promotion, maintenance or restoration of health.  
27 The following sections describe beliefs about people and nursing that are integral to the examination,  
28 cognitive abilities that will be tested in the examination and specific components of the NCLEX-RN Test  
29 Plan.

### 30 Beliefs

31 Beliefs about people and nursing underlie the NCLEX-RN Test Plan. People are finite beings with varying  
32 capacities to function in society. They are unique individuals who have defined systems of daily living  
33 reflecting their values, motives and lifestyles. People have the right to make decisions regarding their health  
34 care needs and to participate in meeting those needs. The profession of nursing makes a unique  
35 contribution in helping clients (individual, family or group, including significant others and populations)  
36 achieve an optimal level of health in a variety of settings. For the purpose of the NCLEX Examination, a  
37 client is defined as the individual, family, or group which includes significant others and populations.

38

Nursing is both an art and a science, founded on a professional body of knowledge that integrates concepts from the liberal arts and the biological, physical, psychological and social sciences. It is a learned profession based on knowledge of the human condition across the life span and the relationships of an individual with others and within the environment. Nursing is a dynamic, continually evolving discipline that employs critical thinking to integrate increasingly complex knowledge, skills, technologies, and client care activities into evidence-based nursing practice. The goal of nursing for client care is preventing illness and potential complications; protecting, promoting, restoring, and facilitating comfort and health and dignity in dying.

The registered nurse provides a unique, comprehensive assessment of the health status of the client. ~~The registered nurse applies, applying~~ principles of ethics, client safety, health promotion and the nursing process ~~to develop and implement, the nurse then develops and implements~~ an explicit plan of care ~~that reflects considering~~ unique cultural and spiritual client preferences, the applicable standard of care and legal ~~considerations~~ instructions. The nurse assists clients to promote health, cope with health problems, adapt to and/or recover from the effects of disease or injury, and support the right to a dignified death. The registered nurse is accountable for abiding by all applicable member board jurisdiction statutes and regulations/rules related to nursing practice.

## Classification of Cognitive Levels

Bloom's taxonomy for the cognitive domain is used as a basis for writing and coding items for the examination (Bloom, et al., 1956; Anderson & Krathwohl, 2001). Since the practice of nursing requires application of knowledge, skills and abilities, the majority of items are written at the application or higher levels of cognitive ability, which requires more complex thought processing.

## Test Plan Structure

The framework of Client Needs was selected for the examination because it provides a universal structure for defining entry-level nursing actions and competencies, and focuses on clients in all settings.

## Client Needs

The content of the NCLEX-RN Test Plan is organized into four major Client Needs categories. Two of the four categories are divided into subcategories:

### Safe and Effective Care Environment

- Management of Care
- Safety and Infection Control

### Health Promotion and Maintenance

### Psychosocial Integrity

### Physiological Integrity

- Basic Care and Comfort
- Pharmacological and Parenteral Therapies
- Reduction of Risk Potential
- Physiological Adaptation

## Integrated Processes

The following processes are fundamental to the practice of nursing and are integrated throughout the Client Needs categories and subcategories:

- *Nursing Process* – a scientific, clinical reasoning approach to client care that includes assessment, analysis, planning, implementation and evaluation.
- *Caring* – interaction of the nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the nurse provides encouragement, hope, support and compassion to help achieve desired outcomes.
- *Communication and Documentation* – verbal and nonverbal interactions between the nurse and the client, the client’s significant others and the other members of the health care team. Events and activities associated with client care are recorded in written and/or electronic records that demonstrate adherence to the standards of practice and accountability in the provision of care.
- *Teaching/Learning* – facilitation of the acquisition of knowledge, skills and attitudes promoting a change in behavior.
- *Culture and Spirituality* – interaction of the nurse and the client (individual, family or group, including significant others and populations) which recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care and legal instructions.

## Distribution of Content

The percentage of test questions assigned to each Client Needs category and subcategory of the NCLEX-RN Test Plan is based on the results of the *Report of Findings from the 2017 RN Practice Analysis: Linking the NCLEX-RN® Examination to Practice* (NCSBN, 2018), and expert judgment provided by members of the NCLEX Examination Committee.

### Client Needs

### Percentage of Items From Each Category/Subcategory

#### Safe and Effective Care Environment

- Management of Care 17-23%
- Safety and Infection Control 9-15%

#### Health Promotion And Maintenance

6-12%

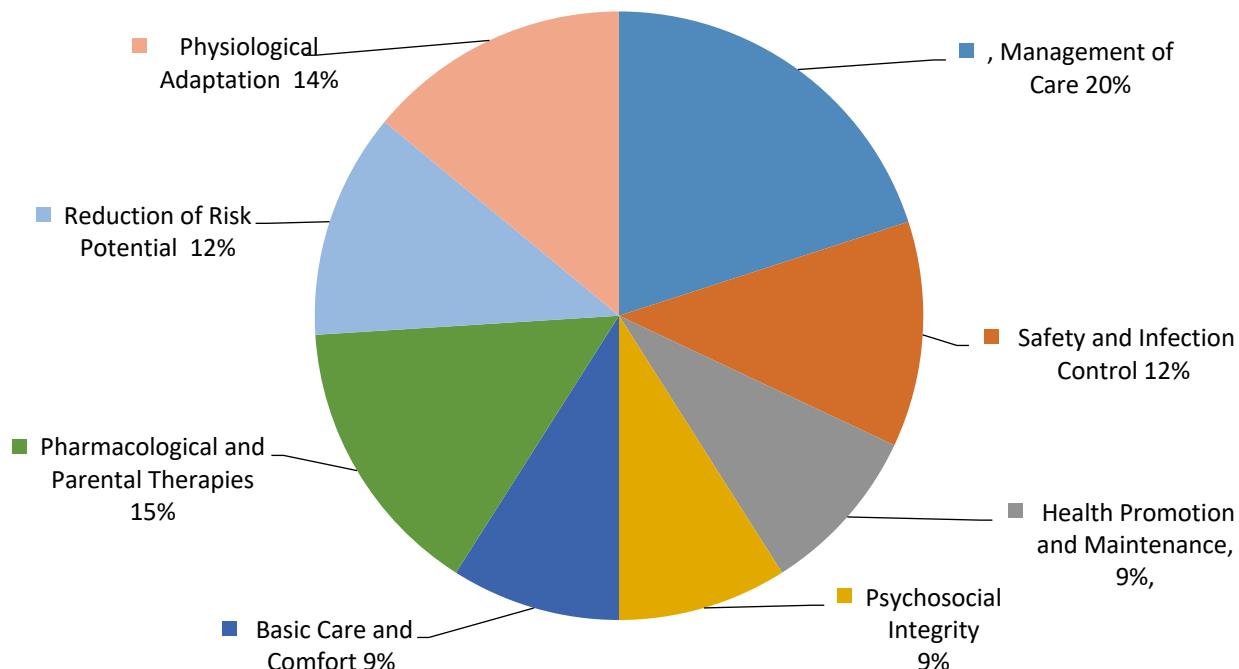
#### Psychosocial Integrity

6-12%

#### Physiological Integrity

- Basic Care and Comfort 6-12%
- Pharmacological and Parenteral Therapies 12-18%
- Reduction of Risk Potential 9-15%
- Physiological Adaptation 11-17%

## Distribution of Content for the NCLEX-RN® Test Plan



NCLEX-RN examinations are administrated adaptively in variable length format to target candidate-specific ability. To accommodate possible variations in test length, content area distributions of the individual examinations may differ up to  $\pm 3\%$  in each category.

## Overview of Content

All content categories and subcategories reflect client needs across the life span in a variety of settings.

### Safe and Effective Care Environment

The nurse promotes achievement of client outcomes by providing and directing nursing care that enhances the care delivery setting in order to protect clients and health care personnel.

- *Management of Care* – providing and directing nursing care that enhances the care delivery setting to protect clients and health care personnel.

Related content includes but is **not limited** to:

- |   |   |
|---|---|
| ■ Advance Directives/Self-Determination/Life Planning | ■ Continuity of Care                            |
| ■ Advocacy  | ■ Establishing Priorities                       |
| ■ Assignment, Delegation and Supervision              | ■ Ethical Practice                              |
| ■ Case Management                                     | ■ Informed Consent                              |
| ■ Client Rights                                       | ■ Information Technology                        |
| ■ Collaboration with Interdisciplinary Team           | ■ Legal Rights and Responsibilities             |
| ■ Concepts of Management                              | ■ Performance Improvement (Quality Improvement) |
| ■ Confidentiality/ Information Security               | ■ Referrals                                     |

- 120 ■ *Safety and Infection Control* – protecting clients and health care personnel from health and  
121 environmental hazards.
- 122 Related content includes but is **not limited** to:
- Accident/Error/Injury Prevention
  - Emergency Response Plan
  - Ergonomic Principles
  - Handling Hazardous and Infectious Materials
  - Home Safety
  - Reporting of Incident/Event/Irregular Occurrence/Variance
  - Safe Use of Equipment
  - Security Plan
  - Standard Precautions/Transmission-Based Precautions/Surgical Asepsis
  - Use of Restraints/Safety Devices

### 123 **Health Promotion and Maintenance**

124 The nurse provides and directs nursing care of the client that incorporates the knowledge of expected  
125 growth and development ~~principles~~; prevention and early detection of health problems and strategies to  
126 achieve optimal health.

127 Related content includes but is **not limited** to:

- Aging Process
- Ante/Intra/Postpartum and Newborn Care
- Developmental Stages and Transitions
- Health Promotion/Disease Prevention
- Health Screening
- High Risk Behaviors
- Lifestyle Choices
- Self-Care
- Techniques of Physical Assessment

### 128 **Psychosocial Integrity**

129 The nurse provides and directs nursing care that promotes and supports the emotional, mental and social  
130 well-being of the client experiencing stressful events, as well as clients with acute or chronic mental illness.

131 Related content includes but is **not limited** to:

- Abuse/Neglect
- Behavioral Interventions
- ~~Chemical and Other Dependencies/Substance Use Disorder~~
- Coping Mechanisms
- Crisis Intervention
- Cultural Awareness/Cultural Influences on Health
- End of Life Care
- Family Dynamics
- Grief and Loss
- Mental Health Concepts
- Religious and Spiritual Influences on Health
- Sensory/Perceptual Alterations
- Stress Management
- Substance Use and Other Disorders and Dependencies
- Support Systems
- Therapeutic Communication
- Therapeutic Environment

132

133 **Physiological Integrity**

134 The nurse promotes physical health and wellness by providing care and comfort, reducing client risk  
135 potential and managing health alterations.  
136

- 137 ■ *Basic Care and Comfort* - providing comfort and assistance in the performance of activities of daily  
138 living.

139 Related content includes but is **not limited** to:

- |   |                                |
|---|--------------------------------|
| ■ Assistive Devices                         | ■ Nutrition and Oral Hydration |
| ■ Elimination                               | ■ Personal Hygiene             |
| ■ Mobility/Immobility                       | ■ Rest and Sleep               |
| ■ Non-Pharmacological Comfort Interventions |                                |

- 140 ■ *Pharmacological and Parenteral Therapies* - providing care related to the administration of  
141 medications and parenteral therapies.

142 Related content includes but is **not limited** to:

- |  |                                    |
|--|------------------------------------|
| ■ Adverse Effects/Contraindications/ Side Effects/Interactions | ■ Expected Actions/Outcomes        |
| ■ Blood and Blood Products                                     | ■ Medication Administration        |
| ■ Central Venous Access Devices                                | ■ Parenteral/Intravenous Therapies |
| ■ Dosage Calculation   | ■ Pharmacological Pain Management  |
|  | ■ Total Parenteral Nutrition       |

143

- 144 ■ *Reduction of Risk Potential* - reducing the likelihood that clients will develop complications or  
145 health problems related to existing conditions, treatments or procedures.

146 Related content includes but is **not limited** to:

- |  |   |
|--|---|
| ■ Changes/Abnormalities in Vital Signs                                   | ■ Potential for Complications from Surgical Procedures and Health Alterations |
| ■ Diagnostic Tests   | ■ System Specific Assessments   |
| ■ Laboratory Values  | ■ Therapeutic Procedures  |
| ■ Potential for Alterations in Body Systems                              |   |
| ■ Potential for Complications of Diagnostic Tests/Treatments/ Procedures |   |

147

- 148 ■ *Physiological Adaptation* - managing and providing care for clients with acute, chronic or life  
149 threatening physical health conditions.

150 Related content includes but is **not limited** to:

- |                                    |                                    |
|------------------------------------|------------------------------------|
| ■ Alterations in Body Systems      | ■ Medical Emergencies              |
| ■ Fluid and Electrolyte Imbalances | ■ Pathophysiology                  |
| ■ Hemodynamics                     | ■ Unexpected Response to Therapies |
| ■ Illness Management               |                                    |

---

## Administration of the NCLEX-RN® Examination

The NCLEX-RN Examination is administered to candidates by computerized adaptive testing (CAT). CAT is a method of delivering examinations that uses computer technology and measurement theory. With CAT, each candidate's examination is unique because it is assembled interactively as the examination proceeds. Computer technology selects items to administer that match the candidate's ability. The items, which are stored in a large item pool, have been classified by test plan category and level of difficulty. After the candidate answers an item, the computer calculates an ability estimate based on all of the previous answers the candidate selected. The next item administered is chosen to measure the candidate's ability in the appropriate test plan category. This process is repeated for each item, creating an examination tailored to the candidate's knowledge and skills while fulfilling all NCLEX-RN Test Plan requirements. The examination continues with items selected and administered in this way until a pass or fail decision is made.

All registered nurse candidates must answer a minimum of 75 items. The maximum number of items that a registered nurse candidate may answer is 265 during the allotted six-hour time period. The maximum six-hour time limit to complete the examination includes the tutorial, sample questions and all breaks. Candidates may be administered multiple choice items as well as items written in [alternate formats](#). These formats may include but are not limited to multiple response, fill-in-the-blank calculation, ordered response, and/or hot spots. All item types may include multimedia such as charts, tables, graphics, sound, and video. All items go through an extensive review process before being used as items on the examination.

More information about the NCLEX examination, including CAT methodology, items, the candidate bulletin, and Web tutorials can be found on the NCSBN website: <http://www.ncsbn.org>.

## Examination Security and Confidentiality

Any candidate that violates test center regulations or rules, or engages in irregular behavior, misconduct and/or does not follow a test center administrator's warning to discontinue inappropriate behavior may be dismissed from the test center. Additionally, exam results may be withheld or cancelled and the licensing board may take other disciplinary action such as denial of a license and/or disqualifying the candidate from future registrations for licensure. Refer to the current candidate bulletin for more information.

Candidates should be aware and understand that the disclosure of any examination materials including the nature or content of examination items, before, during or after the examination is a violation of law. Violations of confidentiality and/or candidates' rules can result in criminal prosecution or civil liability and/or disciplinary actions by the licensing agency including the denial of licensure. Disclosure of examination materials includes but is not limited to discussing examination items with faculty, friends, family, or others.

---

## Bibliography

- Anderson, L. W., & Krathwohl, D. R. (eds). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Addison Wesley Longman, Inc.
- Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I. Cognitive Domain*. New York: David McKay.
- National Council of State Boards of Nursing. (2018). *Report of findings from the 2017 RN practice analysis: Linking the NCLEX-RN® examination to practice*. Chicago: Author.
- National Council of State Boards of Nursing. (2012). *NCSBN Model Rules*. Chicago: Author.
- National Council of State Boards of Nursing. (2012). *NCSBN Model Act*. Chicago: Author.



## Proposed 2019 NCLEX-RN® Test Plan – Clean Copy

### 1 2019 NCLEX-RN® Test Plan

## 2 National Council Licensure Examination 3 for Registered Nurses

## 4 (NCLEX-RN® EXAMINATION)

### 5 Introduction

6 Entry into the practice of nursing is regulated by the licensing authorities within each of the National  
7 Council of State Boards of Nursing (NCSBN®) member board jurisdictions (state, commonwealth, and  
8 territorial boards of nursing). To ensure public protection, each jurisdiction requires candidates for  
9 licensure to meet set requirements that include passing an examination that measures the competencies  
10 needed to perform safely and effectively as a newly licensed, entry-level registered nurse. NCSBN develops  
11 a licensure examination, the National Council Licensure Examination for Registered Nurses (NCLEX-RN®),  
12 which is used by member board jurisdictions and most Canadian nursing regulatory bodies, to assist in  
13 making licensure decisions.

14 Several steps occur in the development of the NCLEX-RN Test Plan. The first step is conducting a practice  
15 analysis that is used to collect data on the current practice of the entry-level nurse (*Report of Findings from*  
16 *the 2017 RN Practice Analysis: Linking the NCLEX-RN® Examination to Practice*, NCSBN, 2018). Twelve  
17 thousand newly licensed registered nurses are asked about the frequency and importance of performing  
18 nursing care activities. Nursing care activities are then analyzed in relation to the frequency of performance,  
19 impact on maintaining client safety, and client care settings where the activities are performed. This  
20 analysis guides the development of a framework for entry-level nursing practice that incorporates specific  
21 client needs as well as processes fundamental to the practice of nursing. The second step is the development  
22 of the NCLEX-RN Test Plan, which guides the selection of content and behaviors to be tested.

23 The NCLEX-RN Test Plan provides a concise summary of the content and scope of the licensing  
24 examination. It serves as a guide for examination development as well as candidate preparation. The  
25 NCLEX® examination assesses the knowledge, skills and abilities that are essential for the entry-level nurse  
26 to use in order to meet the needs of clients requiring the promotion, maintenance or restoration of health.  
27 The following sections describe beliefs about people and nursing that are integral to the examination,  
28 cognitive abilities that will be tested in the examination and specific components of the NCLEX-RN Test  
29 Plan.

### 30 Beliefs

31 Beliefs about people and nursing underlie the NCLEX-RN Test Plan. People are finite beings with varying  
32 capacities to function in society. They are unique individuals who have defined systems of daily living  
33 reflecting their values, motives and lifestyles. People have the right to make decisions regarding their health  
34 care needs and to participate in meeting those needs. The profession of nursing makes a unique  
35 contribution in helping clients (individual, family or group, including significant others and populations)  
36 achieve an optimal level of health in a variety of settings. For the purpose of the NCLEX Examination, a  
37 client is defined as the individual, family, or group which includes significant others and populations.

38

Nursing is both an art and a science, founded on a professional body of knowledge that integrates concepts from the liberal arts and the biological, physical, psychological and social sciences. It is a learned profession based on knowledge of the human condition across the life span and the relationships of an individual with others and within the environment. Nursing is a dynamic, continually evolving discipline that employs critical thinking to integrate increasingly complex knowledge, skills, technologies, and client care activities into evidence-based nursing practice. The goal of nursing for client care is preventing illness and potential complications; protecting, promoting, restoring, and facilitating comfort and health and dignity in dying.

The registered nurse provides a unique, comprehensive assessment of the health status of the client. The registered nurse applies principles of ethics, client safety, health promotion and the nursing process to develop and implement an explicit plan of care that reflects unique cultural and spiritual client preferences, the applicable standard of care and legal considerations. The nurse assists clients to promote health, cope with health problems, adapt to and/or recover from the effects of disease or injury, and support the right to a dignified death. The registered nurse is accountable for abiding by all applicable member board jurisdiction statutes and regulations/rules related to nursing practice.

## Classification of Cognitive Levels

Bloom's taxonomy for the cognitive domain is used as a basis for writing and coding items for the examination (Bloom, et al., 1956; Anderson & Krathwohl, 2001). Since the practice of nursing requires application of knowledge, skills and abilities, the majority of items are written at the application or higher levels of cognitive ability, which requires more complex thought processing.

## Test Plan Structure

The framework of Client Needs was selected for the examination because it provides a universal structure for defining entry-level nursing actions and competencies, and focuses on clients in all settings.

## Client Needs

The content of the NCLEX-RN Test Plan is organized into four major Client Needs categories. Two of the four categories are divided into subcategories:

### Safe and Effective Care Environment

- Management of Care
- Safety and Infection Control

### Health Promotion and Maintenance

### Psychosocial Integrity

### Physiological Integrity

- Basic Care and Comfort
- Pharmacological and Parenteral Therapies
- Reduction of Risk Potential
- Physiological Adaptation

## Integrated Processes

The following processes are fundamental to the practice of nursing and are integrated throughout the Client Needs categories and subcategories:

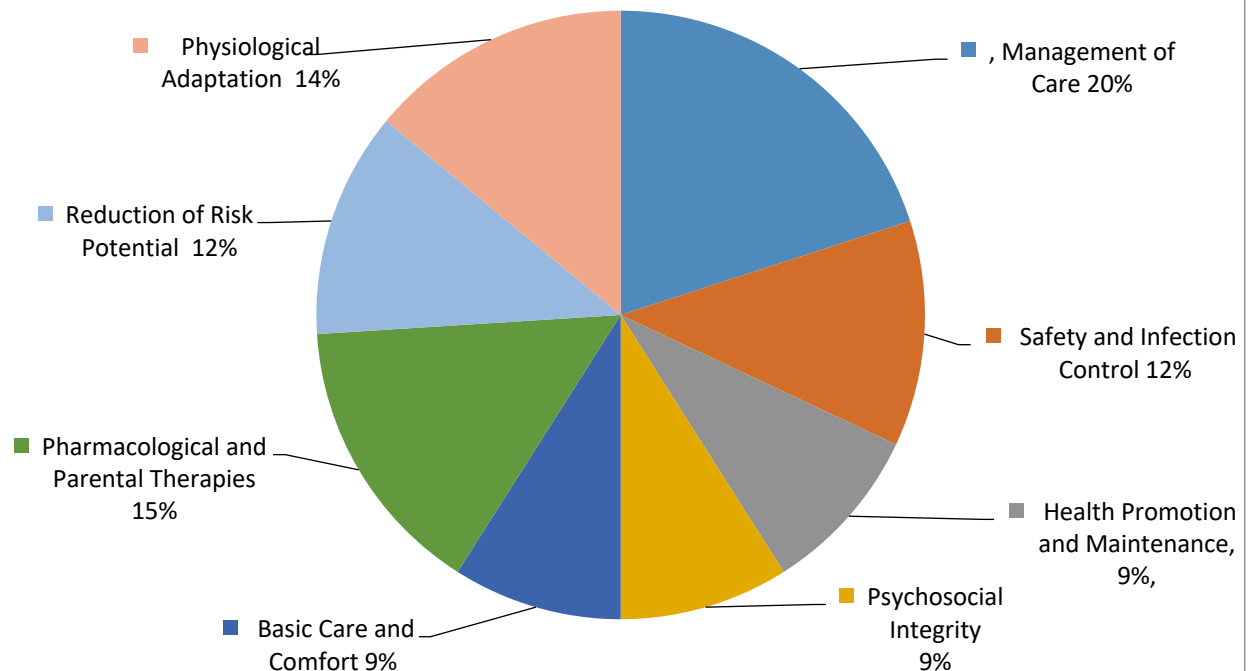
- *Nursing Process* – a scientific, clinical reasoning approach to client care that includes assessment, analysis, planning, implementation and evaluation.
- *Caring* – interaction of the nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the nurse provides encouragement, hope, support and compassion to help achieve desired outcomes.
- *Communication and Documentation* – verbal and nonverbal interactions between the nurse and the client, the client’s significant others and the other members of the health care team. Events and activities associated with client care are recorded in written and/or electronic records that demonstrate adherence to the standards of practice and accountability in the provision of care.
- *Teaching/Learning* – facilitation of the acquisition of knowledge, skills and attitudes promoting a change in behavior.
- *Culture and Spirituality* – interaction of the nurse and the client (individual, family or group, including significant others and populations) which recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care and legal instructions.

## Distribution of Content

The percentage of test questions assigned to each Client Needs category and subcategory of the NCLEX-RN Test Plan is based on the results of the *Report of Findings from the 2017 RN Practice Analysis: Linking the NCLEX-RN® Examination to Practice* (NCSBN, 2018), and expert judgment provided by members of the NCLEX Examination Committee.

Client Needs	Percentage of Items From Each Category/Subcategory
<b>Safe and Effective Care Environment</b>	
▪ Management of Care	17-23%
▪ Safety and Infection Control	9-15%
<b>Health Promotion And Maintenance</b>	6-12%
<b>Psychosocial Integrity</b>	6-12%
<b>Physiological Integrity</b>	
▪ Basic Care and Comfort	6-12%
▪ Pharmacological and Parenteral Therapies	12-18%
▪ Reduction of Risk Potential	9-15%
▪ Physiological Adaptation	11-17%

## Distribution of Content for the NCLEX-RN® Test Plan



NCLEX-RN examinations are administrated adaptively in variable length format to target candidate-specific ability. To accommodate possible variations in test length, content area distributions of the individual examinations may differ up to  $\pm 3\%$  in each category.

### Overview of Content

All content categories and subcategories reflect client needs across the life span in a variety of settings.

#### Safe and Effective Care Environment

The nurse promotes achievement of client outcomes by providing and directing nursing care that enhances the care delivery setting in order to protect clients and health care personnel.

- *Management of Care* – providing and directing nursing care that enhances the care delivery setting to protect clients and health care personnel.

Related content includes but is **not limited** to:

- |   |   |
|---|---|
| ■ Advance Directives/Self-Determination/Life Planning | ■ Continuity of Care                            |
| ■ Advocacy  | ■ Establishing Priorities                       |
| ■ Assignment, Delegation and Supervision              | ■ Ethical Practice                              |
| ■ Case Management                                     | ■ Informed Consent                              |
| ■ Client Rights                                       | ■ Information Technology                        |
| ■ Collaboration with Interdisciplinary Team           | ■ Legal Rights and Responsibilities             |
| ■ Concepts of Management                              | ■ Performance Improvement (Quality Improvement) |
| ■ Confidentiality/ Information Security               | ■ Referrals                                     |

- 119     ■ *Safety and Infection Control* – protecting clients and health care personnel from health and  
120     environmental hazards.
- 121     Related content includes but is **not limited to**:
- |   |  |
|---|--|
| ■ Accident/Error/Injury Prevention            | ■ Reporting of Incident/Event/Irregular Occurrence/Variance            |
| ■ Emergency Response Plan                     | ■ Safe Use of Equipment  |
| ■ Ergonomic Principles                        | ■ Security Plan  |
| ■ Handling Hazardous and Infectious Materials | ■ Standard Precautions/Transmission-Based Precautions/Surgical Asepsis |
| ■ Home Safety                                 | ■ Use of Restraints/Safety Devices                                     |

122     **Health Promotion and Maintenance**

123     The nurse provides and directs nursing care of the client that incorporates knowledge of expected growth  
124     and development; prevention and early detection of health problems and strategies to achieve optimal  
125     health.

126     Related content includes but is **not limited to**:

- |  |                                     |
|--|-------------------------------------|
| ■ Aging Process                          | ■ Health Screening                  |
| ■ Ante/Intra/Postpartum and Newborn Care | ■ High Risk Behaviors               |
| ■ Developmental Stages and Transitions   | ■ Lifestyle Choices                 |
| ■ Health Promotion/Disease Prevention    | ■ Self-Care                         |
|  | ■ Techniques of Physical Assessment |

127     **Psychosocial Integrity**

128     The nurse provides and directs nursing care that promotes and supports the emotional, mental and social  
129     well-being of the client experiencing stressful events, as well as clients with acute or chronic mental illness.

130     Related content includes but is **not limited to**:

- |  |  |
|--|--|
| ■ Abuse/Neglect                                    | ■ Mental Health Concepts                             |
| ■ Behavioral Interventions                         | ■ Religious and Spiritual Influences on Health       |
| ■ Coping Mechanisms                                | ■ Sensory/Perceptual Alterations                     |
| ■ Crisis Intervention                              | ■ Stress Management                                  |
| ■ Cultural Awareness/Cultural Influences on Health | ■ Substance Use and Other Disorders and Dependencies |
| ■ End of Life Care                                 | ■ Support Systems                                    |
| ■ Family Dynamics                                  | ■ Therapeutic Communication                          |
| ■ Grief and Loss                                   | ■ Therapeutic Environment                            |

131  
132

133 **Physiological Integrity**

134 The nurse promotes physical health and wellness by providing care and comfort, reducing client risk  
135 potential and managing health alterations.  
136

- 137 ■ *Basic Care and Comfort* - providing comfort and assistance in the performance of activities of daily  
138 living.

139 Related content includes but is **not limited** to:

- Assistive Devices
- Elimination
- Mobility/Immobility
- Non-Pharmacological Comfort Interventions
- Nutrition and Oral Hydration
- Personal Hygiene
- Rest and Sleep

- 140 ■ *Pharmacological and Parenteral Therapies* - providing care related to the administration of  
141 medications and parenteral therapies.

142 Related content includes but is **not limited** to:

- Adverse Effects/Contraindications/ Side Effects/Interactions
- Blood and Blood Products
- Central Venous Access Devices
- Dosage Calculation
- Expected Actions/Outcomes
- Medication Administration
- Parenteral/Intravenous Therapies
- Pharmacological Pain Management
- Total Parenteral Nutrition

143

- 144 ■ *Reduction of Risk Potential* - reducing the likelihood that clients will develop complications or  
145 health problems related to existing conditions, treatments or procedures.

146 Related content includes but is **not limited** to:

- Changes/Abnormalities in Vital Signs
- Diagnostic Tests
- Laboratory Values
- Potential for Alterations in Body Systems
- Potential for Complications of Diagnostic Tests/Treatments/ Procedures
- Potential for Complications from Surgical Procedures and Health Alterations
- System Specific Assessments
- Therapeutic Procedures

147

- 148 ■ *Physiological Adaptation* - managing and providing care for clients with acute, chronic or life  
149 threatening physical health conditions.

150 Related content includes but is **not limited** to:

- Alterations in Body Systems
- Fluid and Electrolyte Imbalances
- Hemodynamics
- Illness Management
- Medical Emergencies
- Pathophysiology
- Unexpected Response to Therapies

## Administration of the NCLEX-RN® Examination

The NCLEX-RN Examination is administered to candidates by computerized adaptive testing (CAT). CAT is a method of delivering examinations that uses computer technology and measurement theory. With CAT, each candidate's examination is unique because it is assembled interactively as the examination proceeds. Computer technology selects items to administer that match the candidate's ability. The items, which are stored in a large item pool, have been classified by test plan category and level of difficulty. After the candidate answers an item, the computer calculates an ability estimate based on all of the previous answers the candidate selected. The next item administered is chosen to measure the candidate's ability in the appropriate test plan category. This process is repeated for each item, creating an examination tailored to the candidate's knowledge and skills while fulfilling all NCLEX-RN Test Plan requirements. The examination continues with items selected and administered in this way until a pass or fail decision is made.

All registered nurse candidates must answer a minimum of 75 items. The maximum number of items that a registered nurse candidate may answer is 265 during the allotted six-hour time period. The maximum six-hour time limit to complete the examination includes the tutorial, sample questions and all breaks. Candidates may be administered multiple choice items as well as items written in [alternate formats](#). These formats may include but are not limited to multiple response, fill-in-the-blank calculation, ordered response, and/or hot spots. All item types may include multimedia such as charts, tables, graphics, sound, and video. All items go through an extensive review process before being used as items on the examination.

More information about the NCLEX examination, including CAT methodology, items, the candidate bulletin, and Web tutorials can be found on the NCSBN website: <http://www.ncsbn.org>.

## Examination Security and Confidentiality

Any candidate that violates test center regulations or rules, or engages in irregular behavior, misconduct and/or does not follow a test center administrator's warning to discontinue inappropriate behavior may be dismissed from the test center. Additionally, exam results may be withheld or cancelled and the licensing board may take other disciplinary action such as denial of a license and/or disqualifying the candidate from future registrations for licensure. Refer to the current candidate bulletin for more information.

Candidates should be aware and understand that the disclosure of any examination materials including the nature or content of examination items, before, during or after the examination is a violation of law. Violations of confidentiality and/or candidates' rules can result in criminal prosecution or civil liability and/or disciplinary actions by the licensing agency including the denial of licensure. Disclosure of examination materials includes but is not limited to discussing examination items with faculty, friends, family, or others.

---

## Bibliography

- Anderson, L. W., & Krathwohl, D. R. (eds). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Addison Wesley Longman, Inc.
- Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I. Cognitive Domain*. New York: David McKay.
- National Council of State Boards of Nursing. (2018). *Report of findings from the 2017 RN practice analysis: Linking the NCLEX-RN® examination to practice*. Chicago: Author.
- National Council of State Boards of Nursing. (2012). *NCSBN Model Rules*. Chicago: Author.
- National Council of State Boards of Nursing. (2012). *NCSBN Model Act*. Chicago: Author.



---

**Attachment C****Timeline for Implementation of the 2019 NCLEX-RN® Test Plan**

October 2017	NCLEX® Examination Committee reviews 2017 RN Practice Analysis® results and makes recommendations for the proposed 2019 <i>NCLEX-RN Test Plan</i>
January 2018	Proposed 2019 <i>NCLEX-RN Test Plan</i> is sent to Member Boards for feedback
April 2018	NCLEX Examination Committee reviews Member Board feedback on the test plan and submits recommendations to the Delegate Assembly
July 2018	NCSBN Board of Directors review proposed 2019 <i>NCLEX-RN Test Plan</i>
August 2018	Delegate Assembly action is provided
September 2018	Panel of Judges meet to recommend the 2019 NCLEX-RN Passing Standard
December 2018	NCSBN Board of Directors evaluates the 2019 NCLEX-RN Passing Standard
January 2019	The approved 2019 <i>NCLEX-RN Test Plan</i> is published and placed on the NCSBN website
April 1, 2019	Approved 2019 <i>NCLEX-RN Test Plan</i> and the 2019 NCLEX-RN Passing Standard are effective

---

## Attachment D

# Annual Report of Pearson VUE for the National Council Licensure Examinations

National Council of State Boards of Nursing (NCSBN®)

National Council Licensure Examination (NCLEX®)

January–December 2017

### Prepared by:

Pearson VUE

March 9, 2018

### Non-Disclosure and Confidentiality Notice

This document contains confidential information concerning Pearson's services, products, data security procedures, data storage parameters, and data retrieval processes. You are permitted to view and retain this document provided that you disclose no part of the information contained herein to any outside agent or employee, except those agents and employees directly charged with reviewing this information. These agents and employees should be instructed and agree not to disclose this information for any purposes beyond the terms stipulated in the agreement of your company or agency with Pearson.

Copyright © 2018 NCS Pearson, Inc. All rights reserved. The PEARSON logo is a trademark in the U.S. and/or other countries..

## SCOPE OF WORK

Under direction from National Council of State Boards of Nursing (NCSBN), Pearson VUE prepares an annual report for the NCLEX-RN® and NCLEX-PN® examinations.

## EXECUTIVE SUMMARY

This report represents information gained during Pearson VUE's 15th full year of providing test delivery services for the National Council Licensure Examination (NCLEX) program to National Council of State Boards of Nursing, Inc. (NCSBN). This report summarizes the activities of the past year.

This report was prepared by Sarah DuCharme, Kathy Spaltro, John Stahl, and Shu-chuan Kao, with input from other team members.

## PEARSON VUE ORGANIZATIONAL CHANGES

Several staffing changes occurred during the Jan. 1–Dec. 31, 2017 reporting period.

- In February 2017, Jordana Weil became Senior Project Coordinator, Next Generation NCLEX. Jordana had previously held the position of Test Development Analyst for GED Testing Services.
- In March 2017, Ellen Guirl was promoted to Test and Report Editor, NCLEX. Ellen had previously served as Operations Coordinator, NCLEX.
- In March 2017, Kelly McMunn, MSN, RN, was hired as Senior Content Developer, NCLEX. Kelly had previously held the position from 2014 to 2016 and returned following a brief hiatus.
- In March 2017, Gayle Swidler, MSN, RN, was hired as Content Developer, NCLEX. Gayle had previously held this same position from 2006 to 2009.
- In May 2017, Cuketha Hogan was hired as the Operations Coordinator, NCLEX.
- In June 2017, Marie Lindsay, RN, became a Content Development Consultant. Marie had previously held the position of Content Developer, NGN.
- In June 2017, Tess Briones, PhD, RN, a Content Developer for NCLEX, resigned.
- In August 2017, Rachel Baron, MSN, RN, was hired as an NCLEX Content Developer.
- In September 2017, Gina Paveglio, MSN, RN, a Content Developer for NCLEX, resigned.

- 
- In October 2017, Alan Hoogenboom joined the NCLEX team as an Application Developer to support the ongoing Next Generation NCLEX project. With over 20 years of application development experience, he supports the development of software code and scripts that are the foundation for new item development, designs, and formatting, along with prototype development.

## **TEST DEVELOPMENT**

Psychometric and statistical analyses of the NCLEX data continue to be conducted and documented as required. Pearson VUE is continuing to develop multiple choice items as well as items in alternate formats, such as multiple response items, drag-and-drop ordered response items, graphics items, and chart/exhibit items. In addition, Pearson VUE is focusing on newer prototypes for formats related to Next Generation NCLEX exploratory research and development. Pearson VUE continues to focus on producing both the traditional and alternate-format items at targeted difficulty levels and in sufficient quantities to meet its contractual obligations.

## **NCLEX EXAMINATIONS OPERATIONS**

There was no change in passing standard for the NCLEX-RN/PN examinations.

## **MEASUREMENT AND RESEARCH**

The Joint Research Committee (JRC) met twice during 2017.

The JRC met at the NCSBN offices in Chicago on March 24, 2017. In attendance were JRC members Ira Bernstein, Gage Kingsbury, Mark Reckase and Steve Wise; NCSBN staff Doyoung Kim, Xiao Luo and Ada Woo; and Pearson VUE staff Betty Bergstrom and Joseph Betts. JRC guest researchers were also present: Janice Hooper, Alison Cheng, John Mattar and April Zenisky. The meeting was devoted to project updates about the following topics:

- Review of the Next Generation NCLEX Multi-year Research Agenda and Ongoing Research Projects
- Regulation of Nursing Education (Janice Hooper)
- How Adaptive is an Adaptive Test?: Several Indicators of Amount of Adaptivity (Mark Reckase)
- Best Practices and Lessons Learned from the New Version of the CPA Exam (John Mattar)
- Pretesting and Dimensionality Assessment of New Prototype Items (Alison Cheng)
- Setting the Stage for Setting the Standard: A Research Proposal for the Next-Gen NCLEX (April Zenisky)
- NGN Project Status Update (usability studies and Wave II item demo) (Joseph Betts)

The JRC met again at the NCSBN offices on Aug. 25, 2017. In attendance were JRC members Gage Kingsbury, Mark Reckase, and Steve Wise; NCSBN staff Doyoung Kim, Ada Woo, Ren Liu (intern), Fang Peng (intern), Hong Qian, and Xiao Luo; and Pearson VUE staff Betty Bergstrom and Joseph Betts. JRC guest researchers were also present: Janice Hooper, Alison Cheng, and April Zenisky. Guest researcher Okan Bulut submitted a video of his proposal. The JRC received updates on eight ongoing projects:

- Review Next Generation NCLEX Multi-year Research Plan (Ada Woo)
- NGN Validity Framework: An Argument-based Approach (Hong Qian)
- Examining Test Taking Effort on Wave I Item Type Data Collection (Steve Wise)
- Investigating Unidimensionality in Sparse Data from the NCLEX Computerized Adaptive Test (Okan Bulut)
- Parallel Analysis with Large Amounts of Planned Missing (Alison Cheng)
- Automated Detection of Enemy Items Using Latent Semantic Analysis (Fang Peng)
- Relative Diagnostic Profile: A New Framework for Subscore Reporting (Ren Liu)
- Preliminary Results of NGN Wave I Item Type Data Collection (Xiao Luo)

The next JRC meeting will be held at the NCSBN offices in Chicago on March 30, 2018.

---

## PEARSON VUE MEETINGS WITH NATIONAL COUNCIL OF STATE BOARDS OF NURSING

■ Jan. 9–11, 2017	NCLEX Examination Committee Business Meeting
■ Jan. 17, 2017	Next Generation NCLEX Steering Committee Meeting
■ Jan. 31, 2017	Next Generation NCLEX Steering Committee Meeting
■ Feb. 1, 2017	Next Generation NCLEX Executive Meeting
■ Feb. 14, 2017	Next Generation NCLEX Steering Committee Meeting
■ Feb. 28, 2017	Next Generation NCLEX Steering Committee Meeting
■ March 21, 2017	Next Generation NCLEX Steering Committee Meeting
■ March 24, 2017	Joint Research Council Meeting
■ March 30, 2017	Next Generation NCLEX Executive Meeting
■ April 4, 2017	Next Generation NCLEX Steering Committee Meeting
■ April 10–12, 2017	NCLEX Examination Committee Business Meeting
■ April 18, 2017	Next Generation NCLEX Steering Committee Meeting
■ May 2, 2017	Next Generation NCLEX Steering Committee Meeting
■ May 22, 2017	Next Generation NCLEX Steering Committee Meeting
■ June 2, 2017	Next Generation NCLEX Executive Meeting
■ June 6, 2017	Next Generation NCLEX Steering Committee Meeting
■ June 8, 2017	Next Generation NCLEX Executive Meeting
■ June 28, 2017	Next Generation NCLEX Steering Committee Meeting
■ July 11, 2017	Next Generation NCLEX Steering Committee Meeting
■ July 25, 2017	Next Generation NCLEX Steering Committee Meeting
■ Aug. 1, 2017	Next Generation NCLEX Executive Meeting
■ Aug. 7, 2017	NCLEX Examination Committee Business Meeting
■ Aug. 8, 2017	Next Generation NCLEX Steering Committee Meeting
■ Aug. 22, 2017	Next Generation NCLEX Steering Committee Meeting
■ Aug. 24, 2017	Next Generation NCLEX Executive Meeting
■ Sept. 5, 2017	Next Generation NCLEX Steering Committee Meeting
■ Sept. 20, 2017	Next Generation NCLEX Steering Committee Meeting
■ Sept. 28, 2017	Next Generation NCLEX Executive Meeting
■ Oct. 5, 2017	Next Generation NCLEX Steering Committee Meeting
■ Oct. 16, 2017	NCLEX Examination Committee Business Meeting
■ Oct. 19, 2017	Next Generation NCLEX Steering Committee Meeting
■ Nov. 2, 2017	Next Generation NCLEX Steering Committee Meeting
■ Nov. 14, 2017	Next Generation NCLEX Steering Committee Meeting
■ Nov. 28, 2017	Next Generation NCLEX Steering Committee Meeting
■ Dec. 12, 2017	Next Generation NCLEX Steering Committee Meeting

---

## RECURRING MEETINGS AND CONFERENCE CALLS

- Jason Schwartz and Jennifer Gallagher met in person biweekly in addition to conducting calls and other meetings on an as-needed basis.
- Marianne Griffin and Anne Sayre met biweekly regarding NCLEX operational matters.
- Marianne Griffin and Jennifer Gallagher met biweekly regarding NCLEX status updates.
- Phil Dickison and Tony Zara met regularly by phone and in person.
- Betty Bergstrom, Joe Betts, Doyoung Kim, and Ada Woo met regularly to discuss research issues.
- Conference calls and face-to-face meetings with Pearson VUE and NCSBN content staff were held periodically as needed.
- Other visits and conference calls were conducted on an as-needed basis.

## SUMMARY OF NCLEX EXAMINATION RESULTS FOR THE 2017 CALENDAR YEAR

Longitudinal summary statistics are provided in Tables 1 to 11. Results can be compared to data from the previous testing year to identify trends in candidate performance and item characteristics over time.

Compared to 2016, the overall candidate volumes were lower for the NCLEX-RN examination (about 0.89 percent) and lower for the NCLEX-PN examination (about 1.28 percent). The RN passing rate for the overall group was 1.74 percentage points higher for 2017 than for 2016, and the passing rate for the reference group was 2.29 percentage points higher for this period compared to 2016. The PN overall passing rate was higher by 0.32 percentage points from 2016, and the PN reference group passing rate was 0.02 percentage points lower than in 2016. These passing rates are consistent with expected variations in passing rates and are heavily influenced by demographic characteristics of the candidate populations and by changes in testing patterns from year to year.

The following points are candidate highlights of the 2017 testing year for the NCLEX-RN examination:

- Overall, 230,510 NCLEX-RN examination candidates tested during 2017, as compared to 232,585 during the 2016 testing year. This represented a decrease of approximately 0.89 percent.
- The candidate population reflected 157,763 first-time, U.S.-educated candidates who tested during 2017, as compared to 157,215 for the 2016 testing year, representing a 0.35 percent increase.
- The overall passing rate was 71.91 percent in 2017, compared to 70.17 percent in 2016. The passing rate for the reference group was 86.85 percent in 2017 and 84.56 percent in 2016.
- Approximately 47.35 percent of the total group and 51.87 percent of the reference group ended their tests after a minimum of 75 items were administered in 2017. This was slightly higher than in the 2016 testing year, in which 44.61 percent of the total group and 48.76 percent of the reference group took minimum-length exams.
- The percentage of maximum-length test takers was 15.48 percent for the total group and 13.76 percent for the reference group in 2017. This was slightly lower than last year's figures of 17.36 percent for the total group and 15.56 percent for the reference group.
- The average time needed to take the NCLEX-RN examination during the 2017 testing period was 2.63 hours for the overall group and 2.32 hours for the reference group (slightly shorter than last year's average times of 2.69 hours and 2.38 hours, respectively).
- A total of 58.04 percent of the candidates chose to take a break during their examinations in 2017 (compared to 60.77 percent last year).
- Overall, 3.36 percent of the total group and 1.52 percent of the reference group ran out of time before completing the test in 2017. These percentages of candidates timing out were lower for the total group and for the reference group than the corresponding percentages for candidates during the 2016 testing year (3.52 percent and 1.58 percent, respectively).
- In general, the NCLEX-RN examination summary statistics for the 2017 testing period indicated patterns that were similar to those observed for the 2016 testing period. These results provided continued evidence that the administration of the NCLEX-RN examination is psychometrically sound.

---

The following points are candidate highlights of the 2017 testing year for the NCLEX-PN examination:

- Overall, 63,724 PN candidates tested in 2017, as compared to 64,552 PN candidates tested during 2016. This represented a decrease of approximately 1.28 percent.
- The candidate population reflected 46,955 first-time, U.S.-educated candidates who tested in 2017, as compared to 47,349 for the 2016 testing year (a decrease of approximately 0.83 percent).
- The overall passing rate was 70.90 percent in 2017 compared to 70.58 percent in 2016, and the reference group passing rate was 83.67 percent in 2017, as compared to 83.69 percent in 2016.
- There were 48.95 percent of the total group and 54.12 percent of the reference group who ended their tests after a minimum of 85 items were administered in 2017. These figures were slightly higher than those from the 2016 testing year, in which 48.93 percent of the total group and 53.84 percent of the reference group took minimum-length exams.
- The percentage of maximum-length test takers was 19.61 percent for the total group and 16.93 percent for the reference group in 2017. These figures were slightly lower for the total group and for the reference group than last year's percentages (20.10 percent for the total group and 17.69 percent for the reference group).
- The average time needed to take the NCLEX-PN examination during the 2017 testing period was 2.48 hours for the overall group and 2.26 hours for the reference group (slightly longer for the total group and for the reference group than last year's times of 2.45 and 2.23 hours, respectively).
- A total of 59.70 percent of the candidates chose to take a break during their examinations in 2017 (compared to 61.05 percent last year).
- Overall, 3.20 percent of the total group and 1.71 percent of the reference group ran out of time before completing the test in 2017. These percentages were slightly higher than last year's figures of 3.00 percent for the total group and 1.54 percent for the reference group.
- In general, the NCLEX-PN examination summary statistics for the 2017 testing period indicated patterns that were similar to those observed for the 2016 testing period. These results provided continued evidence that the administration of the NCLEX-PN examination is psychometrically sound.

The NCLEX-RN examination has been used as the Registered Nurse licensing examination throughout Canada, except for the province of Quebec, since Jan. 4, 2015. The examination is offered in English and in Canadian French. The following are highlights of the 2017 testing year for Canadian candidates taking the English version of the NCLEX-RN examination:

- Overall, 13,932 RN candidates tested in 2017, as compared to 12,502 RN candidates tested during 2016. This represented an increase of approximately 11.44 percent.
- The candidate population reflected 9,636 first-time, Canadian-educated candidates who tested in 2017, as compared to 9,282 for the 2016 testing year (an increase of approximately 3.81 percent).
- The overall passing rate was 74.00 percent in 2017 compared to 76.27 percent in 2016, and the first-time, Canadian-educated group passing rate was 82.20 percent in 2017, as compared to 80.20 percent in 2016.
- There were 47.20 percent of the total group and 52.53 percent of the first-time, Canadian-educated group who ended their tests after a minimum of 75 items were administered in 2017. These figures were lower than those from the 2016 testing year, in which 48.75 percent of the total group and 53.10 percent of the reference group took minimum-length exams.
- The percentage of maximum-length test takers was 16.41 percent for the total group and 14.30 percent for the first-time, Canadian-educated group in 2017. These figures were higher for the total group and for the first-time, Canadian-educated group than last year's percentages (15.37 percent for the total group and 13.14 percent for the first-time, Canadian-educated group).
- The average time needed to take the NCLEX-RN examination during the 2017 testing period was 2.63 hours for the overall group and 2.38 hours for the first-time, Canadian-educated group (slightly longer for the total group and identical for the first-time, Canadian-educated group compared to last year's times of 2.60 and 2.38 hours, respectively).

- 
- A total of 57.18 percent of the candidates chose to take a break during their examinations in 2017 (compared to 59.32 percent last year).
  - Overall, 2.94 percent of the total group and 1.76 percent of the first-time, Canadian-educated group ran out of time before completing the test in 2017. These percentages were slightly lower than last year's figure of 2.97 percent for the total group and lower than last year's figure of 1.95 percent for the first-time, Canadian-educated group.
  - In general, the NCLEX-RN Canadian English examination summary statistics for the 2017 testing period indicated patterns that were similar to those observed for the 2016 testing period. These results provided continued evidence that the administration of the NCLEX-RN English examination is psychometrically sound.
  - 98.75 percent of the Canadian examinations were taken in English.

**Table 1. Longitudinal Technical Summary for the NCLEX-RN Examination: Group Statistics for 2017 Testing Year**

Statistic	Jan 17–Mar 17		Apr 17–Jun 17		Jul 17–Sep 17		Oct 17–Dec 17		Cumulative 2017	
	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED
Number Testing	58,044	42,060	72,894	54,557	66,251	46,820	33,321	14,326	230,510	157,763
Percent Passing	73.12	86.75	75.58	88.94	73.86	86.70	57.90	79.71	71.91	86.85
Avg. # Items Taken	122.90	117.02	123.64	117.85	129.36	122.47	130.69	121.21	126.12	119.30
% Taking Min # Items	48.85	53.03	48.40	52.13	46.31	50.85	44.49	50.86	47.35	51.87
% Taking Max # Items	14.31	12.96	14.70	13.24	17.10	15.15	16.03	13.53	15.48	13.76
Avg. Test Time (hours)	2.56	2.29	2.50	2.21	2.69	2.41	2.94	2.50	2.63	2.32
% Taking Break	57.67	49.18	54.13	45.38	58.10	49.81	67.15	54.31	58.04	48.52
% Timing Out	2.99	1.40	2.75	1.12	3.67	1.87	4.70	2.21	3.36	1.52

**Table 2. Longitudinal Technical Summary for the NCLEX-RN Examination: Group Statistics for 2016 Testing Year**

Statistic	Jan 16–Mar 16		Apr 15–Jun 16		Jul 16–Sep 16		Oct 16–Dec 16		Cumulative 2016	
	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED
Number Testing	59,648	42,542	70,361	51,865	69,659	49,178	32,917	13,630	232,585	157,215
Percent Passing	70.45	83.59	74.12	87.44	72.56	84.38	56.14	77.31	70.17	84.56
Avg. # Items Taken	130.75	125.78	127.08	120.59	128.93	123.73	141.88	131.94	130.67	123.96
% Taking Min # Items	44.57	47.62	46.82	50.71	44.91	48.79	39.35	44.79	44.61	48.76
% Taking Max # Items	17.37	16.21	16.17	14.45	16.62	15.32	21.47	18.61	17.36	15.56
Avg. Test Time (hours)	2.77	2.50	2.50	2.19	2.63	2.39	3.11	2.66	2.69	2.38
% Taking Break	62.30	54.91	54.68	45.82	60.33	53.12	71.95	60.12	60.77	51.80
% Timing Out	3.68	1.83	2.79	1.04	2.89	1.55	6.15	2.95	3.52	1.58

**Table 3. Longitudinal Technical Summary for the NCLEX-RN Examination: Item Statistics for 2017 Testing Year\***

Operational Item Statistics										
Statistic	Jan 17–Mar 17		Apr 17–Jun 17		Jul 17–Sep 1		Oct 17–Dec 17		Cumulative 2017	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Point-Biserial	0.20	0.08	0.20	0.09	0.20	0.08	0.19	0.08	N/A	N/A
Avg. Item Time (secs.)	75.47	30.21	71.36	22.78	74.63	25.41	79.90	27.33	N/A	N/A
Pretest Item Statistics										
# of Items	785		1,022		873		293		2,973	
Avg. Sample Size	541		538		511		526		530	
Mean Point-Biserial	0.08		0.09		0.08		0.13		0.09	
Mean P value	0.62		0.63		0.60		0.67		0.62	
Mean Item Difficulty	-0.42		-0.41		-0.25		-0.72		-0.40	
SD Item Difficulty	2.11		2.01		1.94		1.79		1.99	
Total Number Flagged	316		336		292		83		1,027	
Percent Items Flagged	40.25		32.88		33.45		28.33		34.54	

\*Data do not include research and retest items.



**Table 4. Longitudinal Technical Summary for the NCLEX-RN Examination: Item Statistics for 2016 Testing Year\***

Operational Item Statistics										
Statistic	Jan 16–Mar 16		Apr 16–Jun 16		Jul 16–Sep 16		Oct 16–Dec 16		Cumulative 2016	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Point-Biserial	0.20	0.08	0.20	0.09	0.20	0.08	0.19	0.08	N/A	N/A
Avg. Item Time (secs.)	75.21	25.59	70.87	25.17	73.72	28.04	80.41	32.44	N/A	N/A
Pretest Item Statistics										
# of Items	613		785		888		284		2,570	
Avg. Sample Size	663		605		559		477		589	
Mean Point-Biserial	0.08		0.08		0.08		0.11		0.08	
Mean P value	0.62		0.63		0.58		0.62		0.61	
Mean Item Difficulty	-0.46		-0.51		-0.12		-0.46		-0.36	
SD Item Difficulty	1.90		1.98		1.91		1.71		1.91	
Total Number Flagged	251		310		374		103		1,038	
Percent Items Flagged	40.95		39.49		42.12		36.27		40.39	

\*Data do not include research and retest items.

**Table 5. Longitudinal Technical Summary for the NCLEX-PN Examination: Group Statistics for 2017 Testing Year**

Statistic	Jan 17–Mar 17		Apr 17–Jun 17		Jul 17–Sep 17		Oct 17–Dec 17		Cumulative 2017	
	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED
Number Testing	15,302	11,392	14,375	10,050	20,463	16,295	13,584	9,218	63,724	46,955
Percent Passing	70.59	82.84	67.62	82.64	76.19	86.30	66.73	81.17	70.90	83.67
Avg. # Items Taken	120.53	116.08	123.43	116.85	119.19	115.28	123.42	117.90	121.37	116.32
% Taking Min # Items	49.71	54.32	46.32	53.35	51.53	55.03	46.98	53.10	48.95	54.12
% Taking Max # Items	18.77	16.33	20.81	17.47	18.54	16.45	20.90	17.91	19.61	16.93
Avg. Test Time (hours)	2.47	2.26	2.54	2.27	2.37	2.19	2.60	2.36	2.48	2.26
% Taking Break	61.49	53.96	62.05	52.52	53.87	47.01	63.99	55.12	59.70	51.47
% Timing Out	3.35	1.99	3.53	1.71	2.53	1.31	3.69	2.07	3.20	1.71

**Table 6. Longitudinal Technical Summary for the NCLEX-PN Examination: Group Statistics for 2016 Testing Year**

Statistic	Jan 16–Mar 16		Apr 16–Jun 16		Jul 16–Sep 16		Oct 16–Dec 16		Cumulative 2016	
	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED	Overall	1st Time U.S. ED
Number Testing	15,065	10,793	14,868	10,141	21,007	17,055	13,612	9,360	64,552	47,349
Percent Passing	68.66	82.60	67.18	83.20	77.20	86.60	66.18	80.19	70.58	83.69
Avg. # Items Taken	123.60	119.36	120.47	114.15	118.85	115.45	124.77	119.53	121.58	116.87
% Taking Min # Items	47.04	51.57	50.50	56.69	52.37	56.02	43.98	49.41	48.93	53.84
% Taking Max # Items	21.37	19.29	19.14	15.78	19.10	17.38	21.30	18.50	20.10	17.69
Avg. Test Time (hours)	2.55	2.33	2.44	2.16	2.28	2.11	2.63	2.40	2.45	2.23
% Taking Break	63.07	55.33	60.50	50.41	55.21	48.96	68.42	60.56	61.05	53.02
% Timing Out	3.23	1.97	3.13	1.35	2.10	0.95	3.97	2.30	3.00	1.54

**Table 7. Longitudinal Technical Summary for the NCLEX-PN Examination: Item Statistics for 2017 Testing Year\***

Operational Item Statistics										
Statistic	Jan 17–Mar 17		Apr 17–Jun 17		Jul 17–Sep 17		Oct 17–Dec 17		Cumulative 2017	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Point-Biserial	0.21	0.08	0.20	0.08	0.21	0.09	0.20	0.08	N/A	N/A
Avg. Item Time (secs.)	73.10	30.41	71.78	23.44	70.48	26.36	75.06	25.24	N/A	N/A
Pretest Item Statistics										
# of Items	475		471		708		398		2,052	
Avg. Sample Size	581		533		530		551		547	
Mean Point-Biserial	0.12		0.11		0.11		0.12		0.11	
Mean P value	0.54		0.54		0.56		0.55		0.55	
Mean Item Difficulty	-0.02		0.02		-0.15		-0.13		-0.08	
SD Item Difficulty	1.75		1.78		1.84		1.74		1.79	
Total Number Flagged	158		135		201		96		590	
Percent Items Flagged	33.26		28.66		28.39		24.12		28.75	

\*Data do not include research and retest items.

**Table 8. Longitudinal Technical Summary for the NCLEX-PN Examination: Item Statistics for 2016 Testing Year\***

Operational Item Statistics										
Statistic	Jan 16–Mar 16		Apr 16–Jun 16		Jul 16–Sep 16		Oct 16–Dec 16		Cumulative 2016	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Point-Biserial	0.21	0.09	0.21	0.08	0.21	0.09	0.20	0.08	N/A	N/A
Avg. Item Time (secs.)	70.76	21.79	70.99	24.45	68.25	23.35	72.58	22.07	N/A	N/A
Pretest Item Statistics										
# of Items	626		460		893		398		2,377	
Avg. Sample Size	423		470		477		522		469	
Mean Point-Biserial	0.11		0.12		0.1		0.13		0.11	
Mean P value	0.55		0.58		0.55		0.53		0.55	
Mean Item Difficulty	-0.10		-0.26		-0.08		-0.06		-0.12	
SD Item Difficulty	1.77		1.67		1.86		1.84		1.80	
Total Number Flagged	210		157		341		141		849	
Percent Items Flagged	33.55		34.13		38.19		35.43		35.72	

\*Data do not include research and retest items.

**Table 9: Longitudinal Summary of NCLEX-RN-1 Examinations Delivered in the 2017 Testing Year\***

Jurisdiction	Jan 17–Mar 17		Apr 17–Jun 17		Jul 17–Sep 17		Oct 17–Dec 17		Total	
	English	French	English	French	English	French	English	French	English	French
Alberta	492	0	556	0	515	0	260	0	1,823	0
British Columbia	497	0	673	0	616	0	423	0	2,209	0
Ontario	1,060	3	1,959	11	2,612	16	1,411	11	7,042	41
Manitoba	72	0	178	0	185	0	227	0	662	0
New Brunswick	55	18	161	43	154	45	71	29	441	135
Newfoundland and Labrador	8	0	125	0	80	0	44	0	257	0

Table 9: Longitudinal Summary of NCLEX-RN-1 Examinations Delivered in the 2017 Testing Year*										
Northwest Territories and Nunavut	2	0	21	0	2	0	3	0	28	0
Nova Scotia	58	0	189	0	172	0	133	0	552	0
Prince Edward Island	18	0	63	0	11	0	7	0	99	0
Saskatchewan	106	0	236	0	319	0	158	0	819	0
<b>Total</b>	<b>2,368</b>	<b>21</b>	<b>4,161</b>	<b>54</b>	<b>4,666</b>	<b>61</b>	<b>2,737</b>	<b>40</b>	<b>13,932</b>	<b>176</b>

Table 10. Longitudinal Technical Summary for the Canadian NCLEX-RN Examination: Group Statistics for 2017 Testing Year										
Statistic	Jan 17–Mar 17		Apr 17–Jun 17		Jul 17–Sep 17		Oct 17–Dec 17		Cumulative 2017	
	Overall	1st Time CA ED	Overall	1st Time CA ED	Overall	1st Time CA ED	Overall	1st Time CA ED	Overall	1st Time CA ED
Number Testing	2,368	1,466	4,161	3,062	4,666	3,577	2,737	1,531	13,932	9,636
Percent Passing	73.90	82.13	75.94	85.24	75.03	80.65	69.38	79.82	74.00	82.20
Avg. # Items Taken	129.31	118.72	121.87	113.16	134.49	130.47	124.25	113.52	127.83	120.49
% Taking Min # Items	47.38	54.57	49.56	55.09	44.13	47.47	48.67	57.28	47.20	52.53
% Taking Max # Items	16.05	12.96	13.99	11.23	19.35	18.56	15.38	11.76	16.41	14.30
Avg. Test Time (hours)	2.73	2.41	2.49	2.20	2.70	2.52	2.64	2.36	2.63	2.38
% Taking Break	61.36	52.86	54.05	45.56	57.67	52.11	57.51	47.68	57.18	49.44
% Timing Out	3.72	2.18	2.38	1.31	3.06	1.87	2.92	2.02	2.94	1.76

Table 11. Longitudinal Technical Summary for the Canadian NCLEX-RN Examination: Group Statistics for 2016 Testing Year										
Statistic	Jan 16–Mar 16		Apr 16–Jun 16		Jul 16–Sep 16		Oct 16–Dec 16		Cumulative 201	
	Overall	1st Time CA ED	Overall	1st Time CA ED	Overall	1st Time CA ED	Overall	1st Time CA ED	Overall	1st Time CA ED
Number Testing	2,202	1,483	3,479	2,751	4,286	3,527	2,535	1,521	12,502	9,282
Percent Passing	75.02	80.65	79.39	83.24	75.43	78.17	74.48	78.96	76.27	80.20
Avg. # Items Taken	127.35	120.22	122.01	116.91	122.36	118.78	132.63	122.31	125.22	119.03
% Taking Min # Items	47.28	52.80	51.51	55.4	49.44	51.77	45.09	52.33	48.75	53.10
% Taking Max # Items	15.94	13.69	14.23	12.54	14.07	12.87	18.62	14.33	15.37	13.14
Avg. Test Time (hours)	2.77	2.51	2.46	2.24	2.50	2.38	2.79	2.53	2.60	2.38
% Taking Break	63.35	57.59	54.53	48.09	58.00	54.61	64.62	56.87	59.32	53.52
% Timing Out	3.36	1.96	2.62	1.53	2.31	1.67	4.22	3.35	2.97	1.95

## INTERNATIONAL TESTING UPDATE

Pearson VUE has a total of 257 Pearson Professional Centers (PPCs) in the United States and 28 PPCs internationally in Australia, Canada, England, Hong Kong, India, Japan, Mexico, Philippines and Taiwan. One of these 28 international PPCs is located in Puerto Rico, a part of the United States classified as international for testing purposes only. Therefore, the total number of test centers globally is 285.

Represented in the following tables are international volume by member board, country of education, test center and pass/fail rate, respectively.

Table 12. NCLEX International Test Center Volume by Member Board, 1/1/17-12/31/17<sup>1,2</sup>

Member Board	Total	Melbourne, Australia	Sydney, Australia	Edmonton, Canada	Montreal, Canada	Ottawa, Canada	Toronto, Canada	Toronto (West), Canada	Burnaby, Canada	Hamilton, Canada	Surrey, Canada	London, Canada	Calgary, Canada	Winnipeg, Canada	Halifax, Canada	Saskatoon, Canada	Hong Kong, Hong Kong	Bangalore, India	Chennai, India	Hyderabad, India	Mumbai, India	New Delhi, India	Chiyoda-ku, Japan	Osaka-shi, Japan	Mexico City, Mexico	Manila, Philippines	Guaynabo, Puerto Rico	Taipei, Taiwan	London, United Kingdom	
Alabama	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	
Alaska	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	
Arizona	63	1	6	0	1	0	3	1	0	0	3	0	2	0	0	0	1	1	0	0	0	0	1	0	0	30	0	2	11	
California-RN	64	1	0	2	0	0	0	1	1	0	2	1	2	0	0	0	0	0	0	0	0	5	4	0	0	29	1	8	7	
California-VN	11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	7	0	0	0		
Colorado	197	1	1	0	1	0	1	1	1	0	0	0	2	0	0	0	8	0	17	0	29	8	0	0	0	89	32	0	6	
Connecticut	64	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	1	2	1	0	8	12	1	0	0	26	8	1	1	
Delaware	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0		
District of Columbia	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	4	1	1	
Florida	229	1	1	3	1	3	3	2	2	2	0	1	3	2	0	2	4	4	0	0	10	6	0	0	0	143	14	0	22	
Georgia	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	5		
Guam	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0		
Hawaii	59	0	0	0	0	0	1	0	1	0	0	0	1	1	0	0	3	0	0	0	0	0	1	1	1	45	1	0	3	
Idaho	6	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	
Illinois	1,376	0	0	11	5	0	12	17	3	3	3	1	5	3	6	1	13	46	33	6	31	10	0	1	2	1,141	1	0	22	
Indiana	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	
Iowa	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Kansas	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0	0	0	
Maine	3	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maryland	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Massachusetts	44	0	2	0	1	1	1	1	0	0	1	0	0	1	0	0	3	0	0	0	3	6	0	0	0	18	0	1	5	
Michigan	108	1	0	2	1	3	6	10	0	3	0	3	0	1	1	1	1	3	1	1	0	4	0	0	2	45	1	0	18	
Minnesota	274	2	1	12	9	5	26	37	6	8	12	7	20	13	8	4	3	1	1	3	18	2	0	0	0	50	0	0	26	

Table 12. NCLEX International Test Center Volume by Member Board, 1/1/17-12/31/17 <sup>1,2</sup>

Member Board	Total	Melbourne, Australia	Sydney, Australia	Edmonton, Canada	Montreal, Canada	Ottawa, Canada	Toronto, Canada	Toronto (West), Canada	Burnaby, Canada	Hamilton, Canada	Surrey, Canada	London, Canada	Calgary, Canada	Winnipeg, Canada	Halifax, Canada	Saskatoon, Canada	Hong Kong, Hong Kong	Bangalore, India	Chennai, India	Hyderabad, India	Mumbai, India	New Delhi, India	Chiyoda-ku, Japan	Osaka-shi, Japan	Mexico City, Mexico	Manila, Philippines	Guaynabo, Puerto Rico	Taipei, Taiwan	London, United Kingdom
Missouri	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	1	0	3
Montana	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Nevada	33	0	1	0	2	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	25	0	0	0
New Jersey	13	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	2	1	0	0	0	7	0	0	0
New Mexico	824	1	3	5	1	0	7	5	0	0	2	1	5	6	0	5	14	3	13	1	195	64	0	0	0	471	0	2	20
New York	2,138	5	17	10	10	3	29	26	10	17	11	3	9	13	1	5	170	19	17	3	8	23	165	557	0	638	88	201	80
North Carolina	22	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	1	0	0	3	0	1	0	10	1	0	2
North Dakota	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Mariana Islands	1,535	0	2	12	2	1	6	7	3	0	0	2	7	8	3	2	24	6	0	0	9	15	3	3	1	1,408	0	3	8
Ohio	9	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	1
Oregon	36	0	1	1	2	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	1	0	0	23	1	0	2
Pennsylvania	16	0	0	1	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	8	1	0
South Dakota	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tennessee	5	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0
Texas	1,253	2	5	4	3	3	5	3	1	3	2	0	2	4	5	2	25	14	39	0	91	44	2	0	3	924	6	2	59
Utah	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Vermont	8	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Virgin Islands	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0
Virginia	17	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	10	0	0	2
Washington	96	0	3	4	1	2	0	0	10	1	30	1	4	1	2	2	1	1	0	0	1	0	1	0	1	26	1	0	3
West Virginia-PN	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
West Virginia-RN	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

Table 12. NCLEX International Test Center Volume by Member Board, 1/1/17-12/31/17 <sup>1,2</sup>

Member Board	Total	Melbourne, Australia	Sydney, Australia	Edmonton, Canada	Montreal, Canada	Ottawa, Canada	Toronto, Canada	Toronto (West), Canada	Burnaby, Canada	Hamilton, Canada	Surrey, Canada	London, Canada	Calgary, Canada	Winnipeg, Canada	Halifax, Canada	Saskatoon, Canada	Hong Kong, Hong Kong	Bangalore, India	Chennai, India	Hyderabad, India	Mumbai, India	New Delhi, India	Chiyoda-ku, Japan	Osaka-shi, Japan	Mexico City, Mexico	Manila, Philippines	Guaynabo, Puerto Rico	Taipei, Taiwan	London, United Kingdom
Wisconsin	5	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0
Wyoming	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>8,603</b>	<b>16</b>	<b>48</b>	<b>68</b>	<b>48</b>	<b>21</b>	<b>107</b>	<b>116</b>	<b>39</b>	<b>43</b>	<b>72</b>	<b>20</b>	<b>65</b>	<b>55</b>	<b>27</b>	<b>29</b>	<b>273</b>	<b>100</b>	<b>123</b>	<b>15</b>	<b>406</b>	<b>205</b>	<b>188</b>	<b>564</b>	<b>11</b>	<b>5,225</b>	<b>188</b>	<b>222</b>	<b>309</b>

<sup>1</sup> Only member boards with international test center candidate data are represented.

<sup>2</sup> Canadian candidates seeking licensure/registration in a Canadian jurisdiction are not included.

Table 13: NCLEX International Test Center Volume by Country of Education, 1/1/17-12/31/17<sup>3</sup>

Country of Education	Total	Melbourne, Australia	Sydney, Australia	Edmonton, Canada	Montreal, Canada	Ottawa, Canada	Toronto, Canada	Toronto (West), Canada	Burnaby, Canada	Hamilton, Canada	Surrey, Canada	London, Canada	Calgary, Canada	Winnipeg, Canada	Halifax, Canada	Saskatoon, Canada	Hong Kong, Hong Kong	Bangalore, India	Chennai, India	Hyderabad, India	Mumbai, India	New Delhi, India	Chiyoda-ku, Japan	Osaka-shi, Japan	Mexico City, Mexico	Manila, Philippines	Guaynabo, Puerto Rico	Taipei, Taiwan	London, United Kingdom
Antigua and Barbuda	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Australia	19	5	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Belgium	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Belize	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Botswana	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cameroon	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canada	248	0	0	12	24	10	37	47	12	18	21	9	29	11	8	5	0	0	0	0	0	1	0	0	0	1	0	0	3
China	72	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	53	0	0	0	0	0	1	0	0	0	0	15	0
Dominica	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Egypt	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Table 13: NCLEX International Test Center Volume by Country of Education, 1/1/17–12/31/17<sup>3</sup>

Country of Education	Total	Melbourne, Australia	Sydney, Australia	Edmonton, Canada	Montreal, Canada	Ottawa, Canada	Toronto, Canada	Toronto (West), Canada	Burnaby, Canada	Hamilton, Canada	Surrey, Canada	London, Canada	Calgary, Canada	Winnipeg, Canada	Halifax, Canada	Saskatoon, Canada	Hong Kong, Hong Kong	Bangalore, India	Chennai, India	Hyderabad, India	Mumbai, India	New Delhi, India	Chiyoda-ku, Japan	Osaka-shi, Japan	Mexico City, Mexico	Manila, Philippines	Guaynabo, Puerto Rico	Taipei, Taiwan	London, United Kingdom	
Ethiopia	44	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	0	
Finland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Germany	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Ghana	46	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	31	1	0	0	0	1	0	0	3	
Haiti	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hong Kong	8	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	
Hungary	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
India	341	1	0	14	3	2	5	20	1	8	15	2	3	9	4	4	0	84	57	6	33	51	0	0	0	0	0	0	0	19
Iran	6	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	
Ireland	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Israel	14	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	11	
Italy	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Jamaica	18	0	0	1	0	0	1	3	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	4	
Japan	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3	0	0	0	0	0	
Jordan	34	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	22	8	0	0	0	0	0	0	0	1	
Kenya	278	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	3	211	14	0	0	0	0	0	0	3	
Korea, North	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	
Korea, South	911	1	5	0	0	0	3	0	6	2	4	1	0	0	0	0	73	0	0	4	0	0	0	0	0	10	0	85	18	
Lebanon	6	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	1	
Malawi	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
Malaysia	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	2	2	

Table 13: NCLEX International Test Center Volume by Country of Education, 1/1/17–12/31/17<sup>3</sup>

Country of Education	Total	Melbourne, Australia	Sydney, Australia	Edmonton, Canada	Montreal, Canada	Ottawa, Canada	Toronto, Canada	Toronto (West), Canada	Burnaby, Canada	Hamilton, Canada	Surrey, Canada	London, Canada	Calgary, Canada	Winnipeg, Canada	Halifax, Canada	Saskatoon, Canada	Hong Kong, Hong Kong	Bangalore, India	Chennai, India	Hyderabad, India	Mumbai, India	New Delhi, India	Chiyoda-ku, Japan	Osaka-shi, Japan	Mexico City, Mexico	Manila, Philippines	Guaynabo, Puerto Rico	Taipei, Taiwan	London, United Kingdom
Mexico	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
Montserrat	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Nepal	55	0	0	0	0	0	0	1	0	2	1	0	0	0	0	0	0	1	0	0	0	47	0	0	0	0	0	0	3
Netherlands	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
New Zealand	5	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nigeria	166	0	1	0	0	0	1	2	0	0	0	0	0	0	2	0	1	13	5	1	0	27	0	0	0	95	0	0	15
Pakistan	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Palestine, State of	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Philippines	5,705	4	21	31	12	5	50	25	14	6	13	2	28	28	12	19	114	10	2	2	27	49	11	6	0	5,098	0	10	106
Portugal	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Puerto Rico	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180	0	0	0
Romania	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Saudi Arabia	17	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	3	0	0	10
Singapore	6	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0
South Africa	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	4
Spain	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
St. Vincent and Grenadines	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Sweden	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Taiwan	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	0



**Table 13: NCLEX International Test Center Volume by Country of Education, 1/1/17–12/31/17<sup>3</sup>**

Country of Education	Total	Melbourne, Australia	Sydney, Australia	Edmonton, Canada	Montreal, Canada	Ottawa, Canada	Toronto, Canada	Toronto (West), Canada	Burnaby, Canada	Hamilton, Canada	Surrey, Canada	London, Canada	Calgary, Canada	Winnipeg, Canada	Halifax, Canada	Saskatoon, Canada	Hong Kong, Hong Kong	Bangalore, India	Chennai, India	Hyderabad, India	Mumbai, India	New Delhi, India	Chiyoda-ku, Japan	Osaka-shi, Japan	Mexico City, Mexico	Manila, Philippines	Guaynabo, Puerto Rico	Taipei, Taiwan	London, United Kingdom
Thailand	32	0	2	0	0	0	1	0	2	0	0	0	0	0	0	0	18	0	0	0	0	0	1	0	0	3	0	5	0
Trinidad & Tobago	10	0	0	0	0	0	2	6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Uganda	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
Ukraine	4	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
United Arab Emirates	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	50	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	46
United States	107	1	1	4	8	1	0	2	3	1	16	4	3	6	1	1	1	0	0	0	1	2	16	2	0	10	3	4	16
Uzbekistan	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Virgin Islands	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Zambia	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	4	0	0	0	0	0	0	0	0
Zimbabwe	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	10	0	0	0	0	0	0	0	2
<b>Total</b>	<b>8,603</b>	<b>16</b>	<b>48</b>	<b>68</b>	<b>48</b>	<b>21</b>	<b>107</b>	<b>116</b>	<b>39</b>	<b>43</b>	<b>72</b>	<b>20</b>	<b>65</b>	<b>55</b>	<b>27</b>	<b>29</b>	<b>273</b>	<b>100</b>	<b>123</b>	<b>15</b>	<b>406</b>	<b>205</b>	<b>188</b>	<b>564</b>	<b>11</b>	<b>5,225</b>	<b>188</b>	<b>222</b>	<b>309</b>

<sup>3</sup> Canadian candidates seeking licensure/registration in a Canadian jurisdiction are not included.

**Table 14. NCLEX International Volume by Testing Center, 1/1/17–12/31/17<sup>4</sup>**

Site ID	City	Country	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
67712	Melbourne	Australia	16	1	1	1	2	2	1	1	1	2	0	2	2
50482	Sydney	Australia	48	3	6	5	4	2	4	7	4	1	4	6	2
50486	Burnaby	Canada	39	5	3	1	2	5	5	4	6	2	2	2	2
63110	Edmonton	Canada	68	4	5	4	10	6	5	7	6	12	3	2	4
50485	Montreal	Canada	48	1	3	2	3	6	7	2	9	5	0	6	4
57935	Ottawa	Canada	21	2	2	2	2	3	1	2	1	2	2	0	2
50484	Toronto	Canada	107	7	10	10	11	12	10	7	4	8	7	13	8
57936	Toronto (West)	Canada	116	5	9	13	11	8	11	9	8	9	10	12	11
69818	Hamilton	Canada	43	3	3	8	6	4	2	4	7	2	1	1	2
69825	Surrey	Canada	72	1	10	5	3	4	7	10	5	5	8	3	11
69826	London	Canada	20	3	2	2	0	5	1	2	1	0	0	2	2
69827	Calgary	Canada	65	2	6	10	5	11	2	8	2	1	10	5	3
69828	Winnipeg	Canada	55	3	4	3	3	5	8	6	6	5	2	3	7
69829	Halifax	Canada	27	1	5	2	6	0	1	0	3	1	2	6	0
69830	Saskatoon	Canada	29	1	2	2	3	3	2	3	1	2	5	3	2
50493	Hong Kong	Hong Kong	273	22	21	32	18	27	32	22	15	12	23	26	23
50497	Bangalore	India	100	9	9	12	6	5	4	11	7	6	10	8	13
50498	Chennai	India	123	7	8	6	14	15	5	11	13	13	3	15	13
50495	Delhi	India	205	3	4	11	9	45	28	10	14	24	15	10	32
50496	Hyderabad	India	15	0	0	0	2	1	1	2	1	2	4	0	2
50494	Mumbai	India	406	22	34	36	43	63	33	22	20	34	39	37	23
50500	Chiyoda-ku	Japan	188	12	21	16	19	13	25	12	12	15	10	19	14
57585	Osaka-shi	Japan	564	34	34	57	52	47	50	45	43	65	40	41	56
50503	Mexico City	Mexico	11	2	2	1	1	0	1	0	0	2	1	0	1
54555	Manila	Philippines	5,225	290	369	399	369	393	479	405	487	497	521	493	523
47108	Guaynabo	Puerto Rico	188	13	23	12	15	16	12	15	27	11	13	16	15
50506	Taipei	Taiwan	222	17	16	31	15	23	20	15	18	22	11	13	21
50140	London	United Kingdom	309	11	21	32	23	27	34	28	30	32	25	16	30
<b>Total</b>			<b>8,603</b>	<b>484</b>	<b>633</b>	<b>715</b>	<b>657</b>	<b>751</b>	<b>791</b>	<b>670</b>	<b>751</b>	<b>792</b>	<b>771</b>	<b>760</b>	<b>828</b>

<sup>4</sup> Canadian candidates seeking licensure/registration in a Canadian jurisdiction are not included.

**Table 15: NCLEX International Volume by Pass/Fail Rate, 1/1/17–12/31/17<sup>s</sup>**

Site ID	City	Country	Total Taken	Total Passed	Total Exams Delivered / Total Pass (Pass Rate)											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
67712	Melbourne	Australia	16	9	1/1 (100.00%)	1/0 (0.00%)	1/1 (100.00%)	2/1 (50.00%)	2/0 (0.00%)	1/1 (100.00%)	1/1 (100.00%)	1/1 (100.00%)	2/1 (50.00%)	0/0 (0.00%)	2/2 (100.00%)	2/0 (0.00%)
50482	Sydney	Australia	48	17	3/1 (33.33%)	6/1 (16.67%)	5/1 (20.00%)	4/2 (50.00%)	2/0 (0.00%)	4/3 (75.00%)	7/3 (42.86%)	4/2 (50.00%)	1/0 (0.00%)	4/1 (25.00%)	6/3 (50.00%)	2/0 (0.00%)
50486	Burnaby	Canada	39	22	5/2 (40.00%)	3/1 (33.33%)	1/0 (0.00%)	2/0 (0.00%)	5/3 (60.00%)	5/3 (60.00%)	4/3 (75.00%)	6/5 (83.33%)	2/1 (50.00%)	2/1 (50.00%)	2/1 (50.00%)	2/2 (100.00%)
63110	Edmonton	Canada	68	32	4/2 (50.00%)	5/2 (40.00%)	4/2 (50.00%)	10/6 (60.00%)	6/2 (33.33%)	5/2 (40.00%)	7/5 (71.43%)	6/2 (33.33%)	12/5 (41.67%)	3/1 (33.33%)	2/1 (50.00%)	4/2 (50.00%)
50485	Montreal	Canada	48	25	1/1 (100.00%)	3/0 (0.00%)	2/0 (0.00%)	3/3 (100.00%)	6/3 (50.00%)	7/3 (42.86%)	2/1 (50.00%)	9/7 (77.78%)	5/3 (60.00%)	0/0 (0.00%)	6/3 (50.00%)	4/1 (25.00%)
57935	Ottawa	Canada	21	7	2/1 (50.00%)	2/1 (50.00%)	2/1 (50.00%)	2/1 (50.00%)	3/0 (0.00%)	1/1 (100.00%)	2/1 (50.00%)	1/0 (0.00%)	2/0 (0.00%)	2/1 (50.00%)	0/0 (0.00%)	2/0 (0.00%)
50484	Toronto	Canada	107	57	7/2 (28.57%)	10/5 (50.00%)	10/5 (50.00%)	11/4 (36.36%)	12/4 (33.33%)	10/5 (50.00%)	7/5 (71.43%)	4/4 (100.00%)	8/4 (50.00%)	7/6 (85.71%)	13/7 (53.85%)	8/6 (75.00%)
57936	Toronto (West)	Canada	116	55	5/2 (40.00%)	9/2 (22.22%)	13/6 (46.15%)	11/6 (54.55%)	8/3 (37.50%)	11/5 (45.45%)	9/3 (33.33%)	8/5 (62.50%)	9/5 (55.56%)	10/4 (40.00%)	12/9 (75.00%)	11/5 (45.45%)
69818	Hamilton	Canada	43	21	3/3 (100.00%)	3/0 (0.00%)	8/5 (62.50%)	6/1 (16.67%)	4/1 (25.00%)	2/0 (0.00%)	4/3 (75.00%)	7/3 (42.86%)	2/2 (100.00%)	1/1 (100.00%)	1/1 (100.00%)	2/1 (50.00%)
69825	Surrey	Canada	72	45	1/1 (100.00%)	10/8 (80.00%)	5/5 (100.00%)	3/1 (33.33%)	4/2 (50.00%)	7/3 (42.86%)	10/6 (60.00%)	5/3 (60.00%)	5/4 (80.00%)	8/3 (37.50%)	3/2 (66.67%)	11/7 (63.64%)
69826	London	Canada	20	13	3/1 (33.33%)	2/2 (100.00%)	2/2 (100.00%)	0/0 (0.00%)	5/3 (60.00%)	1/1 (100.00%)	2/0 (0.00%)	1/1 (100.00%)	0/0 (0.00%)	0/0 (0.00%)	2/1 (50.00%)	2/2 (100.00%)
69827	Calgary	Canada	65	31	2/1 (50.00%)	6/1 (16.67%)	10/9 (90.00%)	5/4 (80.00%)	11/4 (36.36%)	2/1 (50.00%)	8/3 (37.50%)	2/1 (50.00%)	1/0 (0.00%)	10/2 (20.00%)	5/4 (80.00%)	3/1 (33.33%)
69828	Winnipeg	Canada	55	31	3/2 (66.67%)	4/1 (25.00%)	3/2 (66.67%)	3/1 (33.33%)	5/3 (60.00%)	8/2 (25.00%)	6/3 (50.00%)	6/4 (66.67%)	5/3 (60.00%)	2/2 (100.00%)	3/3 (100.00%)	7/5 (71.43%)
69829	Halifax	Canada	27	20	1/1 (100.00%)	5/5 (100.00%)	2/2 (100.00%)	6/2 (33.33%)	0/0 (0.00%)	1/0 (0.00%)	0/0 (0.00%)	3/1 (33.33%)	1/1 (100.00%)	2/2 (100.00%)	6/6 (100.00%)	0/0 (0.00%)
69830	Saskatoon	Canada	29	15	1/0 (0.00%)	2/1 (50.00%)	2/1 (50.00%)	3/1 (33.33%)	3/2 (66.67%)	2/1 (50.00%)	3/2 (66.67%)	1/1 (100.00%)	2/2 (100.00%)	5/3 (60.00%)	3/1 (33.33%)	2/0 (0.00%)
50493	Hong Kong	Hong Kong	273	112	22/8 (36.36%)	21/7 (33.33%)	32/11 (34.38%)	18/6 (33.33%)	27/9 (33.33%)	32/19 (59.38%)	22/7 (31.82%)	15/4 (26.67%)	12/6 (50.00%)	23/13 (56.52%)	26/12 (46.15%)	23/10 (43.48%)
50497	Bangalore	India	100	32	9/1 (11.11%)	9/2 (22.22%)	12/5 (41.67%)	6/0 (0.00%)	5/0 (0.00%)	4/1 (25.00%)	11/3 (27.27%)	7/3 (42.86%)	6/2 (33.33%)	10/6 (60.00%)	8/4 (50.00%)	13/5 (38.46%)

**Table 15: NCLEX International Volume by Pass/Fail Rate, 1/1/17–12/31/17<sup>5</sup>**

Site ID	City	Country	Total Taken	Total Passed	Total Exams Delivered / Total Pass (Pass Rate)											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
50498	Chennai	India	123	57	7/1 (14.29%)	8/7 (87.50%)	6/3 (50.00%)	14/6 (42.86%)	15/6 (40.00%)	5/2 (40.00%)	11/5 (45.45%)	13/7 (53.85%)	13/6 (46.15%)	3/3 (100.00%)	15/7 (46.67%)	13/4 (30.77%)
50496	Hyderabad	India	15	8	0/0 (0.00%)	0/0 (0.00%)	0/0 (0.00%)	2/2 (100.00%)	1/0 (0.00%)	1/1 (100.00%)	2/1 (50.00%)	1/0 (0.00%)	2/1 (50.00%)	4/2 (50.00%)	0/0 (0.00%)	2/1 (50.00%)
50494	Mumbai	India	406	201	22/13 (59.09%)	34/18 (52.94%)	36/21 (58.33%)	43/14 (32.56%)	63/23 (36.51%)	33/11 (33.33%)	22/10 (45.45%)	20/15 (75.00%)	34/14 (41.18%)	39/23 (58.97%)	37/21 (56.76%)	23/18 (78.26%)
50500	Chiyoda-ku	Japan	188	77	12/5 (41.67%)	21/7 (33.33%)	16/7 (43.75%)	19/8 (42.11%)	13/6 (46.15%)	25/11 (44.00%)	12/3 (25.00%)	12/4 (33.33%)	15/5 (33.33%)	10/6 (60.00%)	19/8 (42.11%)	14/7 (50.00%)
57585	Osaka-shi	Japan	564	241	34/12 (35.29%)	34/14 (41.18%)	57/21 (36.84%)	52/23 (44.23%)	47/22 (46.81%)	50/24 (48.00%)	45/11 (24.44%)	43/15 (34.88%)	65/28 (43.08%)	40/19 (47.50%)	41/20 (48.78%)	56/32 (57.14%)
50503	Mexico City	Mexico	11	8	2/2 (100.00%)	2/1 (50.00%)	1/0 (0.00%)	1/1 (100.00%)	0/0 (0.00%)	1/1 (100.00%)	0/0 (0.00%)	0/0 (0.00%)	2/1 (50.00%)	1/1 (100.00%)	0/0 (0.00%)	1/1 (100.00%)
54555	Manila	Philippines	5,225	2,518	290/126 (43.45%)	369/168 (45.53%)	399/178 (44.61%)	369/152 (41.19%)	393/174 (44.27%)	479/221 (46.14%)	405/183 (45.19%)	487/248 (50.92%)	497/230 (46.28%)	521/291 (55.85%)	493/266 (53.96%)	523/281 (53.73%)
47108	Guaynabo	Puerto Rico	188	37	13/3 (23.08%)	23/2 (8.70%)	12/4 (33.33%)	15/3 (20.00%)	16/6 (37.50%)	12/2 (16.67%)	15/5 (33.33%)	27/5 (18.52%)	11/1 (9.09%)	13/0 (0.00%)	16/2 (12.50%)	15/4 (26.67%)
50506	Taipei	Taiwan	222	69	17/6 (35.29%)	16/6 (37.50%)	31/6 (19.35%)	15/5 (33.33%)	23/7 (30.43%)	20/5 (25.00%)	15/3 (20.00%)	18/6 (33.33%)	22/7 (31.82%)	11/5 (45.45%)	13/7 (53.85%)	21/6 (28.57%)
50140	London	United Kingdom	309	138	11/5 (45.45%)	21/7 (33.33%)	32/20 (62.50%)	23/6 (26.09%)	27/7 (25.93%)	34/14 (41.18%)	28/14 (50.00%)	30/14 (46.67%)	32/13 (40.63%)	25/12 (48.00%)	16/9 (56.25%)	30/17 (56.67%)
		<b>Total</b>	<b>8,398</b>	<b>3,898</b>	<b>481/203 (42.20%)</b>	<b>629/269 (42.77%)</b>	<b>704/318 (45.17%)</b>	<b>648/259 (39.97%)</b>	<b>706/290 (41.08%)</b>	<b>763/343 (44.95%)</b>	<b>660/284 (43.03%)</b>	<b>737/361 (48.98%)</b>	<b>768/345 (44.92%)</b>	<b>756/408 (53.97%)</b>	<b>750/400 (53.33%)</b>	<b>796/418 (52.51%)</b>

<sup>5</sup> Canadian candidates seeking licensure/registration in a Canadian jurisdiction are not included.

# Report of the 40th Anniversary Committee

## Background

In fiscal year 2018 (FY18) the Board of Directors (BOD) charged the 40th Anniversary Committee with identifying and proposing sequenced content and celebration activities in relation to the 40th Anniversary of the National Council of State Boards of Nursing (NCSBN).

On Aug. 15–17, 2018, the NCSBN Annual Meeting and 40th Anniversary celebration will be held in Minneapolis. Celebratory activities were launched at the Midyear Meeting in March 2018. These activities included a welcome reception with music and décor that provided a look back to 1978, and a photo booth for members to take pictures and send congratulatory messages to NCSBN. The meeting culminated with a presentation by NCSBN CEO David Benton, connecting the past, present and future of NCSBN. NCSBN staff continued to develop the Global Nursing Regulatory Atlas, including the production of two commercials to promote the tool. The atlas is designed to be a web-based resource that will facilitate dialogue and collaboration among nurse regulators.

## FY18 Highlights and Accomplishments

- Confirmed speakers and content for the 2018 Annual Meeting education sessions.
- NCSBN meetings confirmed the Orchestra Hall in Minneapolis for the Annual Meeting opening reception.
- The BOD approved a donation to The Foundation of the National Student Nurses' Association, Inc. (FNSNA) in the amount of \$140,000 in honor of the 40th Anniversary.
- The BOD approved funding to support the attendance of 10 international nursing regulators to the annual meeting.
- A team of staff continued development of the front-end user experience for the Global Nursing Regulatory Atlas, which will be used to capture regulatory details from other countries.
- Interactive Services and Marketing & Communications staff developed two commercials to generate awareness and excitement about the atlas.
- The BOD approved a perpetual plaque to be displayed in the NCSBN office to honor NCSBN's founders.
- The BOD passed a motion to present former Minnesota Board of Nursing Executive Officer Joyce Schowalter with the Founders Award.
- Finalized 40th Anniversary celebratory activities launched at the 2018 Midyear Meeting.

## Members

Demetrius Chapman, MPH,  
MSN(R), APRN, New Mexico,  
Area I

Julia L. George, MSN, RN, FRE,  
North Carolina, Area III

Libby Lund, MSN, RN,  
Tennessee, Area III

Stacey Pfenning, DNP, APRN, FNP,  
North Dakota, Area II

## Staff

Alicia Byrd, Director,  
Member Relations

## Meeting Dates

- July 31, 2017 (Conference Call)
- Nov. 27, 2017 (Conference Call)

## Relationship to Strategic Plan

N/A

## Attachments

None

## Members

Kristin K. Benton, MSN, RN,  
Texas, Area III

Robin A. Lewis, EdD, MSN,  
APRN, FNP-BC, West Virginia RN,  
Area II

Ann Mann, MN, RN,  
Nova Scotia PN, Associate Member  
Cynthia York, DNP, RN, CGRN, FRE,  
Louisiana RN, Area III

## Staff

Alicia Byrd, Director,  
Member Relations

## Meeting Dates

- Nov. 6, 2017 (conference call)
- April 4, 2018

## Relationship to Strategic Plan

N/A

## Attachments

A. 2018 Awards Brochure

# Report of the Awards Committee

## Background

The NCSBN Awards Program recognizes and celebrates outstanding achievements of members and significant contributions to nursing regulation. Award recipients are selected through a blind review process based on the strength of the nomination with respect to the award criteria. This process is facilitated annually by the Awards Committee.

An honoree was selected as an award recipient in the following award categories: R. Louise McManus, Regulatory Achievement, Exceptional Contribution and Distinguished Achievement. The Distinguished Achievement award recognizes individuals and organizations who are not members and whose accomplishments support the NCSBN mission and vision.

Seven executive officers who have reached milestones in their careers as nurse regulators will receive the Executive Officer Recognition Award the morning of Thursday, Aug. 16, 2018. Members completing their Institute of Regulatory Excellence (IRE) Fellowships will be recognized during the awards ceremony. There are no member organizations celebrating a centennial this year.

NCSBN President Katherine Thomas will host the awards ceremony followed by a dinner and dancing at the 40th anniversary Annual Meeting in Minneapolis. As an additional part of the celebratory activities, a luncheon honoring the organization's founders will be held on Wednesday, Aug. 15, 2018. During this luncheon, former Minnesota Board of Nursing Executive Director Joyce Schowalter will be presented with the Founders Award.

To commemorate the organization's 40th anniversary a color scheme to emulate the ruby, which is symbolic of 40 years was used as the theme for the Awards Program.

## AWARD RECIPIENTS

### R. Louise McManus Award

Gloria Damgaard, MS, RN, FRE, Executive Director, South Dakota Board of Nursing

### Regulatory Achievement Award

College of Nurses of Ontario, Anne Coghlan, MScN, RN, Executive Director and Chief Executive Officer

### Exceptional Contribution Award

- Lois Hoell, MS, MBA, RN, Commission Member, Washington State Nursing Care Quality Assurance Commission
- Suellen Masek, MSN, RN, CNOR, Commission Member, Washington State Nursing Care Quality Assurance Commission

### Distinguished Achievement Award

- Gregory Y. Harris, JD, Former Board Member, Arizona State Board of Nursing and Partner, Lewis, Roca Rothgerber Christie LLP
- Deb Soholt, MS, RN, Former Board Member, South Dakota Board of Nursing, South Dakota State Senator, and Director of Women's Health, Avera Medical Group

### Founders Award

Former Minnesota Board of Nursing Executive Director Joyce Schowalter, MEd, RN, will be presented with the NCSBN Founders Award during the annual meeting Founders Luncheon. Schowalter served as the executive officer from 1973 until 1999. Following the establishment of NCSBN, she was elected to the organization's first board of directors, as Area II Member, and later to the offices of vice president and president. During her tenure she served on and chaired

many committees and planning groups. In 2008, Schowalter co-authored the retrospective book, *The First 25 Years: 1978-2003*. A perpetual plaque will be unveiled during the luncheon in recognition of the Founders Award recipients, to be displayed in the NCSBN office.

### **Executive Officer Recognition Award**

#### **Five Years**

- Kathleen Weinberg, MSN, RN, Executive Director, Iowa Board of Nursing
- Karen C. Lyon, PhD, RN, ACNS, NEA, Executive Director, Louisiana State Board of Nursing
- Jennifer Breton, RN, LPN, Executive Director, College of Licensed Practical Nurses of Manitoba
- Lynn Power, MN, RN, Executive Director, Association of Registered Nurses of Newfoundland and Labrador
- Lynsay Nair, LPN, Executive Director, Saskatchewan Association of Licensed Practical Nurses

#### **10 Years**

- Julia L. George, MSN, RN, FRE, Executive Director, North Carolina Board of Nursing

#### **20 Years**

- Paula Meyer, MSN, RN, FRE, Executive Director, Washington State Nursing Care Quality Assurance Commission

### **Fiscal Year 2018 (FY18) Highlights and Accomplishments**

- Refined the awards nomination template to provide guidance to award nominators in completing the narrative form and addressing the specific award criteria.
- Developed a web presence to promote the program, displaying videos of the 2017 award recipients.
- Created a sample nomination form and a "frequently asked questions" document that focused on the nomination process to serve as guidance to members in completing the narrative.
- Collaborated with Marketing & Communications to promote the Awards Program on the Midyear Meeting mobile app.
- Developed a promotional flyer that was included in the 2018 Midyear Meeting materials.
- Designed weekly email communications highlighting the various award categories, eligibility and criteria that were sent to the membership for the duration of the nomination period.
- Collaborated with Marketing & Communications to send an e-push announcement to the membership to promote the launch of the Awards Program.
- Acknowledged executive officers who have achieved years of service milestones to be presented with the Executive Officer Recognition Award.
- Identified that there would be no recipients of the Centennial Award in 2018.
- Reviewed all award nominations to ensure compliance with the blind review process.
- Supported the process of the Awards Committee in conducting a blind review of the award nominations and selecting the recipients.
- Reported to the Board of Directors, the Awards Committee's selections for the 2018 award recipients at the May meeting.

- Managed the process to send official notification to all 2018 award recipients, and facilitated the logistics and correspondence for the award recipients leading up the 2018 Annual Meeting Awards Ceremony.



---

Attachment A  
**2018 Awards Brochure**





*National Council of State Boards of Nursing*

## *Mission*

NCSBN provides education, service and research through collaborative leadership to promote evidence-based regulatory excellence for patient safety and public protection.

## *Vision*

Advance regulatory excellence worldwide. The NCSBN awards will be announced at the 2018 Annual Meeting to recognize the outstanding achievements of the membership. The awards are designed to celebrate significant contributions to nursing regulation.

Our goal is not only to recognize the successes of our peers, but also to learn what key factors contributed to this success. We encourage all members to participate.

## *N*omination Procedure and Entry Format

Please carefully read the eligibility requirements and criteria listed for each award. Only entries that meet all the requirements and criteria will be considered.

**Electronic submission of all nomination materials is required.**

- Entries must be submitted in one complete email; partial entries will not be considered. All entries must be emailed no later than **March 16, 2018** to **[awards@ncsbn.org](mailto:awards@ncsbn.org)**.
- Members may nominate themselves or others.
- Two letters of support are required. Entries must include one letter of support from the executive officer or designee.
- If the executive officer or designee is the nominee or nominator listed on the cover page, one letter of support should be from another member regulatory agency or a representative from an external regulatory agency in lieu of a letter from the executive officer.
- For the Regulatory Achievement Award, entries must include one letter of support from another member regulatory agency or a representative from an external regulatory agency.
- Entries must be typed and submitted on the respective award template.
- Entries must be accompanied by the official awards program cover page. Your narrative should be between 1,000–1,500 words and in size 10 pt. Arial font, as is standard with the provided template.

*If you have questions about the Awards Program,  
email [awards@ncsbn.org](mailto:awards@ncsbn.org).*

---

## *Awards Review and Selection*

- To ensure a fair and equitable review and selection process, each individual nomination is subjected to a blind review by each Awards Committee member. The committee makes the final decision about all award recipients.
- Awards Committee members are not permitted to nominate award recipients, participate in the nomination process or write letters of support during their tenure on the Awards Committee.
- Awards Committee members recuse themselves from both the blind review and the final decisions for the award recipient(s) in categories where a member from their particular jurisdiction is nominated, or in cases where they feel that they cannot be objective about the nominee.
- Entries are evaluated using uniform guidelines for each award category.
- Awards may not necessarily be given in each category, specifically in cases where no nomination meets the specific criteria.
- Award recipients will be notified following the May Board of Directors meeting and will be honored at the Annual Meeting.
- The Awards Committee can recommend that a nominee be given an award that is different from the award for which he/she was originally nominated. If this decision were made, the nominator will be contacted to determine if he/she is agreeable to having the nominee be given a different award.







## *Founders Award*

The founders of the National Council of State Boards of Nursing (NCSBN) exhibited courage and vision in 1977 when they voted to form a task force to study the reorganization of the ANA Council of State Boards of Nursing. This action resulted in NCSBN evolving as “an organization of stature, strengthening the images of boards of nursing as state government agencies concerned with protecting the public health, safety and welfare, and fostering within our profession an increased respect and recognition of this crucial role” (Mildred Schmidt, NCSBN president 1979-1981).

### **Description of Award**

This prestigious award is given only upon occasion that an individual with ethics, integrity and sincerity has demonstrated the highest regard for the ideals and beliefs upon which NCSBN was founded.

### **Eligibility**

The award is not eligible for nomination, it is given by the Board of Directors to an individual who has:

- Demonstrated courage and vision for innovation in regulation to enhance the health, safety and welfare of the public;
- Shown exemplary and sustained commitment to excellence in nursing regulation;
- Sponsored the development of significant regulatory policy at the national and international level;
- Evidenced a profound regard for the mission, vision and values of NCSBN; and
- Fostered interprofessional regulatory collaboration nationally and internationally; and
- Facilitated the cogent and insightful advancement of evidence-based regulation.

### **Award Cycle**

Determined by the Board of Directors

### **Number of Recipients**

One

---

## *R. Louise McManus Award*

R. Louise McManus (1896-1993) is widely recognized as a major figure in furthering the professionalism of nursing. She worked tirelessly to produce a standardized national approach to nursing licensure. As a patient advocate, she developed the Patient Bill of Rights adopted by the Joint Commission in Accreditation of Hospitals.

### **Eligibility**

An individual who is a member

### **Description of Award**

The R. Louise McManus Award is the most prestigious award. Individuals nominated for this award shall have made sustained and significant contributions through the highest commitment and dedication to the mission and vision of NCSBN.

### **Criteria for Selection**

- Active leadership in NCSBN
- Substantial contributions to the improvement of nursing regulation
- Impacts public policy and development to enhance the health and well-being of individuals and the community
- Contributions to the mission of NCSBN over a significant period of time

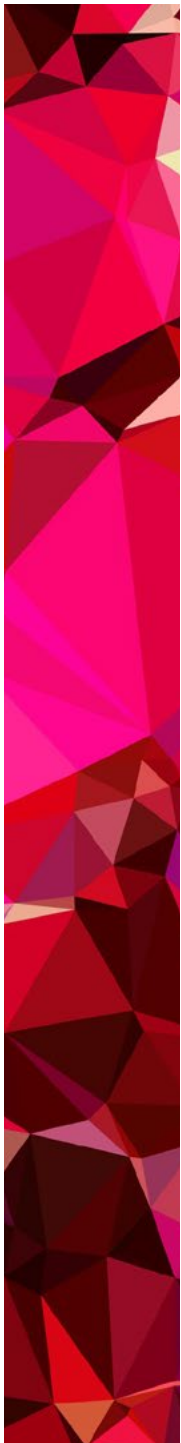
### **Award Cycle**

Annually as applicable

### **Number of Recipients**

One





## *Meritorious Service Award*

### **Eligibility**

An individual who is a member

### **Description of Award**

The Meritorious Service Award is granted to a member for significant contributions to the mission and vision of NCSBN.

### **Criteria for Selection**

- Significant promotion of the mission and vision of NCSBN
- Positive impact on the contributions of NCSBN
- Demonstrated support of NCSBN's mission

### **Award Cycle**

Annually as applicable

### **Number of Recipients**

One

## *Exceptional Contribution Award*

### **Eligibility**

A member who is not a president or executive officer

### **Description of Award**

The Exceptional Contribution Award is granted for significant contribution by a member who is not a president or executive officer.

### **Criteria for Selection**

- Significant contributions to NCSBN activities
- Demonstrated support of NCSBN's mission

### **Award Cycle**

Annually as applicable

### **Number of Recipients**

Unlimited



## *Elaine Ellibee Award*

Elaine Ellibee (1924-2012) chaired the special task force that ultimately led to the founding of NCSBN and served as its first president from 1978-1979. As a registered nurse, Ellibee contributed greatly to nursing education and leadership at the local, state and national levels. She strongly believed in the importance of public protection, superior patient care and continuing education for nursing leaders.

### **Eligibility**

Service as a member president within the past two years

### **Description of Award**

The Elaine Ellibee Award is granted to a member who has served as a president and who has made significant contributions to NCSBN.

### **Criteria for Selection**

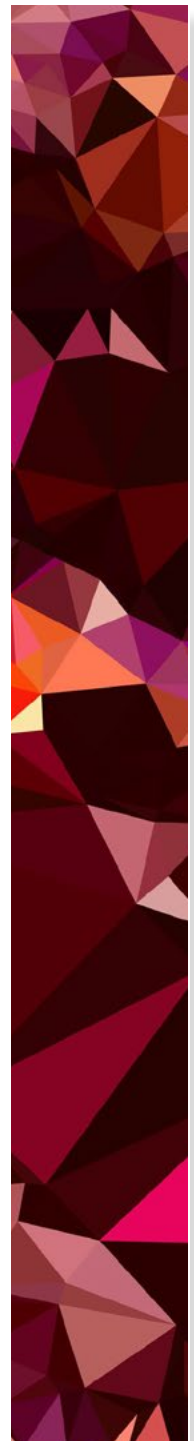
- Demonstrated leadership at the local level as the president
- Demonstrated leadership in making significant contributions to NCSBN

### **Award Cycle**

Annually as applicable

### **Number of Recipients**

One







## *Regulatory Achievement Award*

### **Eligibility**

A member board or associate member

### **Description of Award**

The Regulatory Achievement Award recognizes the member board or associate member that has made an identifiable, significant contribution to the mission and vision of NCSBN in promoting public policy related to the safe and effective practice of nursing in the interest of public welfare.

### **Criteria for Selection**

- Active participation in NCSBN activities (include list of specific activities in the nomination narrative)
- Effective leadership in the development, implementation and maintenance of licensing and regulatory policies
- Active collaborative relationships among the member board or associate member, NCSBN, the public and other member boards or associate members
- Demonstrated advancement of the NCSBN mission

### **Award Cycle**

Annually as applicable

### **Number of Recipients**

One

---

## *D*istinguished Achievement Award

### Eligibility

An individual or organization that is not a current member. No other award captures the significance of the contribution. May be given posthumously.

### Criteria for Selection

- Accomplishment/achievement is supportive to NCSBN's mission and vision.
- Long and lasting contribution or one major accomplishment that impacts the NCSBN mission and vision.

### Award Cycle

Annually as applicable

### Number of Recipients

Unlimited

## *E*xecutive Officer Recognition Award

The award is given in five-year increments to individuals serving in the Executive Officer role. **No nomination is necessary for the Executive Officer Recognition Award as it is presented to Executive Officers based on his or her years of service in five-year increments.**

### Description of Award

The Executive Officer Recognition Award was established to recognize individuals who have made contributions to nursing regulation as an Executive Officer.

### Award Cycle

Annually as applicable

### Number of Recipients

As applicable





## *Past NCSBN Award Recipients*

### **FOUNDERS AWARD**

- 2017 – Thomas G. Abram
- 2015 – Kathy Apple

### **R. LOUISE MCMANUS AWARD**

- 2017 – Mary Blubaugh
- 2016 – Julia L. George
- 2015 – Rula Harb
- 2014 – Myra Broadway
- 2013 – Betsy Houchen
- 2012 – Sandra Evans
- 2011 – Kathy Malloch
- 2009 – Faith Fields
- 2008 – Shirley Brekken
- 2007 – Polly Johnson
- 2006 – Laura Poe
- 2005 – Barbara Morvant
- 2004 – Joey Ridenour
- 2003 – Sharon M. Weisenbeck
- 2002 – Katherine Thomas
- 2001 – Charlie Dickson
- 1999 – Donna Dorsey
- 1998 – Jennifer Bosma
  - Elaine Ellibee
  - Marcia M. Rachel
- 1997 – Jean Caron
- 1996 – Joan Bouchard
- 1995 – Corinne F. Dorsey
- 1992 – Renatta S. Loquist
- 1989 – Marianna Bacigalupo
- 1986 – Joyce Schowalter
- 1983 – Mildred Schmidt

### **MERITORIOUS SERVICE AWARD**

- 2017 – Linda D. Burhans
- 2016 – Lori Scheidt
- 2015 – Elizabeth Lund
- 2014 – Gloria Damgaard
- 2013 – Constance Kalanek
- 2012 – Debra Scott
- 2011 – Julia George
- 2010 – Ann L. O'Sullivan
- 2009 – Sheila Exstrom
- 2008 – Sandra Evans
- 2007 – Mark Majek
- 2005 – Marcia Hobbs
- 2004 – Ruth Ann Terry
- 2001 – Shirley Brekken
- 2000 – Margaret Howard
- 1999 – Katherine Thomas
- 1998 – Helen P. Keefe
  - Gertrude Malone
- 1997 – Sister Teresa Harris
  - Helen Kelley
- 1996 – Tom O'Brien
- 1995 – Gail M. McGuill
- 1994 – Billie Haynes
- 1993 – Charlie Dickson
- 1991 – Sharon M. Weisenbeck
- 1990 – Sister Lucie Leonard
- 1988 – Merlyn Mary Maillian
- 1987 – Eileen Dvorak

### **REGULATORY ACHIEVEMENT AWARD**

- 2017 – Minnesota Board of Nursing
- 2016 – West Virginia State Board of Examiners for Licensed Practical Nurses

- 2015 – Washington State Nursing Care  
Quality Assurance Commission
- 2014 – Nevada State Board of Nursing
- 2013 – North Dakota Board of Nursing
- 2012 – Missouri State Board of Nursing
- 2011 – Virginia Board of Nursing
- 2010 – Texas Board of Nursing
- 2009 – Ohio Board of Nursing
- 2008 – Kentucky Board of Nursing
- 2007 – Massachusetts Board of  
Registration in Nursing
- 2006 – Louisiana State Board of Nursing
- 2005 – Idaho Board of Nursing
- 2003 – North Carolina Board of Nursing
- 2002 – West Virginia State Board of  
Examiners for Licensed  
Practical Nurses
- 2001 – Alabama Board of Nursing

#### **ELAINE ELLIBEE AWARD**

- 2017 – Valerie J. Fuller
- 2016 – Susan Odom
- 2015 – Deborah Haagenson
- 2013 – Linda R. Rounds

#### **EXCEPTIONAL CONTRIBUTION AWARD**

- 2017 – Nathan Goldman  
Mindy Schaffner,  
Catherine C. Woodard
- 2016 – Rene Cronquist  
Rhonda Taylor
- 2015 – Janice Hooper
- 2014 – Ann L. O'Sullivan
- 2013 – Susan L. Woods
- 2012 – Julia Gould  
Sue Petula

- 2011 – Judith Personett  
Mary Beth Thomas
- 2010 – Valerie Smith  
Sue Tedford
- 2009 – Nancy Murphy
- 2008 – Lisa Emrich  
Barbara Newman  
Calvina Thomas
- 2007 – Peggy Fishburn
- 2005 – William Fred Knight
- 2004 – Janette Pucci
- 2003 – Sandra MacKenzie
- 2002 – Cora Clay
- 2001 – Julie Gould  
Lori Scheidt  
Ruth Lindgren

#### **DISTINGUISHED ACHIEVEMENT AWARD**

- 2015 – Patricia "Tish" Smyer
- 2013 – Lorinda Inman

#### **THE FOLLOWING AWARDS ARE NO LONGER PRESENTED:**

#### **EXCEPTIONAL LEADERSHIP AWARD**

- 2011 – Lisa Klenke
- 2010 – Catherine Giessel
- 2007 – Judith Hiner
- 2006 – Karen Gilpin
- 2005 – Robin Vogt
- 2004 – Christine Alichnie
- 2003 – Cookie Bible
- 2002 – Richard Sheehan
- 2001 – June Bell

#### **NCSBN 30TH ANNIVERSARY SPECIAL AWARD**

- 2008 – Joey Ridenour  
Sharon Weisenbeck Malin  
Mildred S. Schmidt

#### **NCSBN SPECIAL AWARD**

- 2008 – Thomas G. Abram
- 2004 – Robert Waters
- 2002 – Patricia Benner

#### **SILVER ACHIEVEMENT AWARD**

- 2000 – Nancy Wilson
- 1998 – Joyce Schowalter

#### **MEMBER BOARD AWARD**

- 2000 – Arkansas Board of Nursing
- 1998 – Utah State Board of Nursing
- 1997 – Nebraska Board of Nursing
- 1994 – Alaska Board of Nursing
- 1993 – Virginia Board of Nursing
- 1991 – Wisconsin Board of Nursing
- 1990 – Texas Board of Nurse Examiners
- 1988 – Minnesota Board of Nursing
- 1987 – Kentucky Board of Nursing



**NCSBN**

*Leading in Nursing Regulation*

111 E. Wacker Drive, Suite 2900

Chicago, IL 60601-4277

312.525.3600

[www.ncsbn.org](http://www.ncsbn.org)

11/17

## Members

Vicki Allen, RN, CLNC, Idaho,  
Area I, Chair

Mary Sue Gorski, PhD, RN,  
Washington, Area I

Sara A. Griffith, MSN, RN,  
North Carolina, Area III

Ann Oertwich, PhD, RN, Nebraska,  
Area II

Stacey Pfenning, DNP, APRN, FNP,  
North Dakota, Area II

Julie Sabo, PhD, APRN, RN, CNS,  
Minnesota, Area II

Paula Schenk, MPH, RN, Kentucky,  
Area III

Margaret A. Sheaffer, JD, RN,  
Pennsylvania, Area IV

Brett B. Thompson, JD,  
Mississippi, Area III

Sharyl Toscano, PhD, MS, RN-CPN,  
Alaska, Area I

Adrian Guerrero, CPM, Kansas,  
Area II, Board Liaison

Theodore H. Poister, PhD,  
MPA, Consultant

## Staff

Maryann Alexander, PhD, RN,  
FAAN, Chief Officer,  
Nursing Regulation

Hannah Snyder, MA, Coordinator,  
Policy, Nursing Regulation

## Meeting Dates

- Nov. 2–3, 2017
- Dec. 7–8, 2017 (small group)
- Jan. 11–12, 2018

## Relationship to Strategic Plan (if applicable)

### Strategic Initiative E

Promote Evidence-based  
Regulation

### Strategic Objective E2

Develop Board of Nursing  
Performance Measurement Data

## Attachment

None

# Report of the Commitment to Ongoing Regulatory Excellence (CORE) Committee

## Background

CORE was developed in 1998 as a comparative performance measurement and benchmarking process for boards of nursing (BONs). Its purpose is to track the effectiveness and efficiency of nursing regulation nationally, as well as on an individual BON level, to assist BONs in improving program performance and providing accountability to higher levels of authority and the public.

The CORE project incorporates surveys of BONs, as well as three external stakeholder groups: (1) employers, (2) nursing education programs and (3) nurses, and three internal data sources: (1) Nursys®, (3) Member Board Profiles and (3) NCLEX® examination data. Data have been collected through the CORE process seven times – fiscal year 2002 (FY02), FY04, FY07, FY09, FY12, FY14 and FY16.

In FY12, the CORE Committee redesigned the entire process with the purpose of providing highly valued and useful performance information to BONs. In order to accomplish this, the CORE Committee developed a logic model as their framework. The logic model takes the four pillars of nursing regulation, which are identified as practice, education, licensure and discipline and logically maps out how the different resources, activities, outputs and outcomes all lead to consumers receiving safe and competent care from nursing.

## FY18 Highlights and Accomplishments

The CORE Committee started FY18 focusing on the uniform performance data measures for the NLC (charge 4). It soon became apparent that in creating those measures, the stakeholder surveys would need to be redesigned in order to accommodate more questions without increasing the length of the survey. Throughout FY18 the CORE Committee worked to continually improve the survey and reporting process.

### Charge 1: Pilot the developed CORE portal to ensure completeness

In FY17, the committee designed a portal for members that would create customized CORE reports with the support of the NCSBN IT team. The portal incorporates data from BONs and stakeholder survey responses, as well as reporting data from Nursys and NCLEX. Users can review BON measures by selecting comparisons between compact and non-compact states, by board structure, NCSBN area and size of board (by nurse population). The portal reports not only minimizes reporting time to each BON, but also allow boards to select specific measures to examine.

### Charge 2: Identify and define performance competencies for key positions within Board governance and operations and incorporate into the CORE project

The CORE Committee collected job descriptions and job posting information in FY17, and reviewed the information received in order to find commonalities between boards. However, given the executive officer (EO) competency process with consultant, Dr. Stephanie Ferguson, the committee decided to defer the development of board/staff competencies in order to ensure that all competencies are developed in a uniform manner and format.

### Charge 3: Redesign the BON survey questions about full-time employees (FTEs) and budget to 1) ensure accuracy of reporting on BON efficiency measures; 2) ensure comparability across boards, regardless of structure; and 3) reflect all aspects of BON functioning and resource utilization.

A small group met to discuss the comparability of survey questions and responses in December 2018. This group recommended eliminating questions that received minimal responses and reorganized the surveys and questions to limit survey fatigue. The larger committee adopted and edited these recommendations for the survey distribution in FY18.



**Charge 4:** Finalize the uniform performance data measures for the Nurse Licensure Compact (NLC) (carryover from FY17)

The full committee reviewed each stakeholder survey and created NLC questions tailored to each stakeholder's role in the NLC. Committee members brought perspectives as members of each stakeholder group (nurse educator, employer, nurse, BON) to ensure the clarity and comparability of these measures. These questions will be incorporated into the FY18 NLC surveys.

## **Future Activities**

Committee recommendations to the Board of Directors for additional work or research

1. Under guidance and using the same template as the EO competencies, allow small groups to convene from key positions within boards to create specific competencies for their roles.
2. Conduct the current surveys, but continue to work on improvement of the survey questions and ways data can be collected without being a burden on boards.
3. It is recommended that boards consider targeted surveys in order to enhance the accuracy of results:
  - Nurse survey sent via email following application/renewal or other BON interaction
  - Educator survey distributed following initial approval, survey visit, etc.
  - Employer survey distributed following an interaction with the BON

## Members

Gloria Damgaard, MS, RN, FRE,  
South Dakota, Area II,  
Treasurer, Chair

Gayle Bellamy, North Carolina,  
Area III

Lois E. Hoell, MS, MBA, RN,  
Washington, Area I

Karen C. Lyon, PhD, MBA, APRN,  
NEA, Louisiana RN, Area III

Shan Montgomery, MBA,  
Mississippi, Area III

Lorena M. Silva, DNP, MSN-L,  
MBA, RN, Massachusetts, Area IV

Randolph L. Smith, MA, Kentucky,  
Area III

## Staff

Robert Clayborne, MBA, CPA,  
CGMA, Chief Financial Officer

## Meeting Dates

- Nov. 28, 2017
- Jan. 31, 2018 (Conference Call)
- April 26, 2018
- July 31, 2018

## Attachment

- A. Report of the Independent Auditors FY17

# Report of the Finance Committee

## Background

The Finance Committee advises the Board of Directors (BOD) on the overall direction and control of the finances of the organization. It reviews and recommends a budget to the BOD, monitors income, expenditures and program activities against projections, and presents quarterly financial statements to the BOD.

The Finance Committee oversees the financial reporting process, the systems of internal accounting and financial controls, the performance and independence of the auditors and the annual independent audit of NCSBN financial statements. It recommends to the BOD the appointment of a firm to serve as auditors.

The Finance Committee makes recommendations to the BOD with respect to investment policy and assures that the organization maintains adequate insurance coverage.

## Fiscal Year 2018 (FY18) Highlights and Accomplishments

- Reviewed and discussed with management and the organization's independent accountant, the NCSBN audited financial statements as of and for the fiscal year ending Sept. 30, 2017. With and without management present, the committee discussed and reviewed the results of the independent accountant's examination of the internal controls and the financial statements. Based on the review and discussions referred to above, the Finance Committee recommended to the BOD that the financial statements and the Report of the Auditors be accepted and provided to the membership.
- Reviewed and discussed with management and the organization's independent accountant, the auditor's report on the NCSBN 403(b) defined contribution retirement plan, for the year ending June 30, 2017. The Finance Committee recommended that the BOD accept the auditor's report.
- Reviewed and discussed the long-range financial reserve forecast.
- Reviewed and discussed the financial statements and supporting schedules quarterly, and made recommendations that the reports be accepted by the BOD.
- Reviewed and discussed the performance of NCSBN investments with NCSBN staff and the organization's investment consultant, AndCo Consulting, quarterly. Informed the BOD that the current investment policy and strategy appear to be appropriate for NCSBN.
- The Finance Committee interviewed candidates and selected a company to manage the NCSBN mid-cap stock investment allocation.

## Future Activities

- There are no recommendations to the BOD. The purpose of this report is for information only.
- At a future meeting (scheduled for July 31, 2018) the committee will review the budget proposal for the fiscal year beginning Oct. 1, 2018.



## Report of the Independent Auditors FY17

### Independent Auditor's Report

To the Board of Directors  
National Council of State  
Boards of Nursing, Inc.

We have audited the accompanying financial statements of National Council of State Boards of Nursing, Inc. (NCSBN), which comprise the statement of financial position as of September 30, 2017 and 2016 and the related statements of activities and cash flows for the years then ended, and the related notes to the financial statements.

#### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### ***Auditor's Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

---

To the Board of Directors  
National Council of State  
Boards of Nursing, Inc.

***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of National Council of State Boards of Nursing, Inc. as of September 30, 2017 and 2016 and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

*Plante & Moran, PLLC*

December 4, 2017

# National Council of State Boards of Nursing, Inc.

## Statement of Financial Position

	September 30, 2017	September 30, 2016
<b>Assets</b>		
Cash and cash equivalents	\$ 37,145,321	\$ 34,842,723
Accounts receivable	1,252,564	372,046
Due from test vendor	9,148,183	9,227,403
Accrued investment income	406,607	421,337
Prepaid expenses	1,045,527	1,377,824
Investments	194,909,728	177,871,533
Property and equipment - Net	1,988,747	2,859,275
Intangible asset - Net	156,250	281,250
Cash held for others	1,494,472	1,902,745
Total assets	<b>\$ 247,547,399</b>	<b>\$ 229,156,136</b>
<b>Liabilities and Net Assets</b>		
<b>Liabilities</b>		
Accounts payable	\$ 2,299,241	\$ 785,361
Accrued payroll, payroll taxes, and compensated absences	847,623	799,481
Due to test vendor	17,763,212	13,482,475
Deferred revenue	50,172	76,274
Grants payable	1,022,499	1,222,282
Deferred rent credits	980,055	1,146,637
Cash held for others	1,494,472	1,902,745
Total liabilities	24,457,274	19,415,255
<b>Unrestricted Net Assets</b>	<b>223,090,125</b>	<b>209,740,881</b>
Total liabilities and net assets	<b>\$ 247,547,399</b>	<b>\$ 229,156,136</b>

# National Council of State Boards of Nursing, Inc.

## Statement of Activities

	Year Ended	
	September 30, 2017	September 30, 2016
<b>Revenue</b>		
Examination fees	\$ 66,164,580	\$ 66,225,765
Other program services income	12,699,357	11,462,871
Net realized and unrealized gain on investments	12,053,636	10,120,396
Interest and dividend income	5,383,531	4,767,101
Total revenue	96,301,104	92,576,133
<b>Expenses</b>		
Program services:		
Nurse competence	56,889,469	54,640,000
Nurse practice and regulatory outcome Information	11,487,659	9,268,738
	10,372,445	9,859,513
Total program services	78,749,573	73,768,251
Support services - Management and general	4,202,287	3,912,307
Total expenses	82,951,860	77,680,558
<b>Net Increase</b>	13,349,244	14,895,575
<b>Unrestricted Net Assets</b>		
Beginning of year	209,740,881	194,845,306
End of year	<u><u>\$ 223,090,125</u></u>	<u><u>\$ 209,740,881</u></u>

# National Council of State Boards of Nursing, Inc.

## Statement of Cash Flows

	Year Ended	
	September 30, 2017	September 30, 2016
<b>Cash Flows from Operating Activities</b>		
Increase in unrestricted net assets	\$ 13,349,244	\$ 14,895,575
Adjustments to reconcile increase in unrestricted net assets to net cash provided by operating activities:		
Depreciation and amortization	1,386,894	1,776,248
Net realized and unrealized gain on investments	(12,053,636)	(10,120,396)
(Increase) decrease in assets:		
Accounts receivable	(880,518)	(165,022)
Due from test vendor	79,220	152,913
Accrued investment income	14,730	23,595
Prepaid expenses	332,297	407,443
Increase (decrease) in liabilities:		
Accounts payable	1,513,880	(283,465)
Accrued payroll, payroll taxes, and compensated absences	48,142	71,189
Due to test vendor	4,280,737	(397,887)
Deferred revenue	(26,102)	76,274
Grants payable	(199,783)	135,832
Deferred rent credits	(166,582)	(149,495)
Net cash provided by operating activities	7,678,523	6,422,804
<b>Cash Flows from Investing Activities</b>		
Purchases of property and equipment	(391,366)	(315,902)
Purchases of investments	(28,907,412)	(32,214,956)
Proceeds on sale of investments	23,922,853	27,806,990
Net cash used in investing activities	(5,375,925)	(4,723,868)
<b>Net Increase in Cash</b>	2,302,598	1,698,936
<b>Cash - Beginning of year</b>	34,842,723	33,143,787
<b>Cash - End of year</b>	<b>\$ 37,145,321</b>	<b>\$ 34,842,723</b>

---

# National Council of State Boards of Nursing, Inc.

---

## Notes to Financial Statements September 30, 2017 and 2016

### Note 1 - Description of the Organization

National Council of State Boards of Nursing, Inc. (NCSBN) is a not-for-profit corporation organized under the statutes of the Commonwealth of Pennsylvania. The primary purpose of NCSBN is to serve as a charitable and educational organization through which state boards of nursing act on matters of common interest and concern to promote safe and effective nursing practice in the interest of protecting public health and welfare, including the development of licensing examinations in nursing.

The program services of NCSBN are defined as follows:

**Nurse Competence** - Assist member boards in their role in the evaluation of initial and ongoing nurse competence.

**Nurse Practice and Regulatory Outcome** - Assist member boards to implement strategies to promote regulatory effectiveness to fulfill their public protection role. Analyze the changing healthcare environment to develop state and national strategies to impact public policy and regulation affecting public protection.

**Information** - Develop information technology solutions valued and utilized by member boards to enhance regulatory efficiency.

### Note 2 - Summary of Significant Accounting Policies

**Method of Accounting** - The accompanying financial statements have been prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America (GAAP).

**Basis of Presentation** - NCSBN is required to report information regarding its financial position and activities according to three classes of net assets: unrestricted net assets, temporarily restricted net assets, and permanently restricted net assets. Net assets are generally reported as unrestricted unless assets are received from donors with explicit stipulations that limit the use of the assets. NCSBN does not have any temporarily or permanently restricted net assets.

**Revenue Recognition** - Revenue from National Council Licensure Examination (NCLEX) fees is recognized upon exam registration since NCSBN's earnings process is complete at that point. The NCLEX exam is primarily administered in the United States. Approximately 5 percent of examination fee revenue is related to NCLEX in Canada. NCSBN has an agreement with Pearson VUE to administer the examinations and the obligation to provide the examination becomes Pearson VUE's responsibility upon registration.

---

# National Council of State Boards of Nursing, Inc.

---

## Notes to Financial Statements September 30, 2017 and 2016

### Note 2 - Summary of Significant Accounting Policies (Continued)

Other program services income includes revenue from member dues, e-learning online courses, licensure verification fees, publication sales, fee for sale of software application license, and royalty fees from the National Nurse Aide Assessment Program (NNAAP) and Medication Aide Certification Examination (MACE). Revenue is recognized when earned. Member dues are recognized over the membership period, licensure verification fees are earned when reports are requested, and publication sales are recognized when sold.

**Cash Held for Others** - Cash held for others represents cash held for one of its member boards. NCSBN serves as a fiscal agent for one of its member boards and pays program expenses on behalf of the member board. Cash held for others also includes cash held for the National Licensure Compact Administrators (NLCA).

**Accounts Receivable** - Accounts receivable represent amounts owed to NCSBN for services dealing with board membership fees, meeting fees, online course revenue, and fee for sale of software application license. An allowance for doubtful accounts was not considered necessary as management believes all receivables are collectible.

**Investments** - NCSBN assets are invested in various securities, including United States government securities, corporate debt instruments, and unit investment trust securities. Investment securities, in general, are exposed to various risks, such as interest rate risk, credit risk, and overall market volatility. NCSBN invests in securities with contractual cash flows, such as asset-backed securities, collateralized mortgage obligations, and commercial mortgage-backed securities. The value, liquidity, and related income of these securities are sensitive to changes in economic conditions, including real estate value and delinquencies or defaults, or both, and may be adversely affected by shifts in the market's perception of the issuers and changes in interest rates. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and those changes could materially affect the amounts reported in the financial statements.

Investments of NCSBN are reported at fair value. The fair value of a financial instrument is the amount that would be received to sell that asset (or paid to transfer a liability) in an orderly transaction between market participants at the measurement date (the exit price).

Purchases and sales of the investments are reflected on a trade-date basis.

Dividend income is recorded on the ex-dividend date. Interest income is recorded on the accrual basis.

---

## National Council of State Boards of Nursing, Inc.

---

### Notes to Financial Statements September 30, 2017 and 2016

#### Note 2 - Summary of Significant Accounting Policies (Continued)

**Financial Instruments** - NCSBN's financial instruments consist of cash, accounts receivable, due from test vendor, investments, accounts payable, accrued payroll, due to test vendor, and grants payable. Investments are carried at fair value as disclosed in Note 5. For the remaining financial instruments, the carrying value is a reasonable estimate of fair value because of the short-term nature of the financial instruments.

**Due from Test Vendor** - NCSBN has contracted with Pearson VUE to administer and deliver nurse licensure examinations. Pearson VUE uses a tier-based volume pricing schedule to determine its fee price to provide the examination. Base price fees before calculating discounts are paid to Pearson VUE for administered exams during the year. Volume discounts are accrued during the year. Due from test vendor include amounts due from Pearson VUE for accrued volume discounts.

**Property and Equipment** - Property and equipment are carried at cost. Major additions are capitalized while replacements, maintenance, and repairs which do not improve or extend the lives of the respective assets are expensed currently. Depreciation is computed using the straight-line method over the following estimated useful lives:

Furniture and equipment	5 - 7 years
Course development costs	2 - 5 years
Computer hardware and software	3 - 7 years
Leasehold improvements	Useful life or life of lease

**Intangible Asset** - The intangible asset represents the purchase of the intellectual property rights for the nurse aid certification examination and the medication aid certification examination for the National Nurse Aide Assessment Program. The investment is carried at cost and amortization is computed using the straight-line method over a 10-year period. Amortization expense for the years ended September 30, 2017 and 2016 was \$125,000 each year.

	2017	2016
Intellectual property	\$ 1,250,000	\$ 1,250,000
Less accumulated amortization	(1,093,750)	(968,750)
Total	<u>\$ 156,250</u>	<u>\$ 281,250</u>



---

## National Council of State Boards of Nursing, Inc.

---

### Notes to Financial Statements September 30, 2017 and 2016

#### Note 2 - Summary of Significant Accounting Policies (Continued)

**Due to Test Vendor** - NCSBN accrues a base price fee for each candidate for whom a completed candidate application to take NCLEX is processed by Pearson VUE. At the end of each month, NCSBN pays an amount equal to the base price multiplied by the number of candidates to whom the examinations were administered during the preceding month.

Due to test vendor includes accrued amounts totaling \$10,135,866 as of September 30, 2017 and \$8,852,395 as of September 30, 2016 for registered candidates who, as of year end, had not taken the exam. Also included is the amount payable to Pearson VUE for administered exams that had not been paid at the end of the year.

**Deferred Revenue** - Deferred revenue consisted of meeting and member fees totaling \$50,172 and \$76,274 as of September 30, 2017 and 2016, respectively.

**Grants Payable** - Grants payable represent nurse practice and regulatory outcome research grants that are generally available for periods of one to two years. NCSBN awarded four grants ranging in amounts from \$183,000 to \$300,000 during the current year.

As of September 30, 2017 and 2016, the amount remaining to be paid on grants awarded is as follows:

	2017	2016
Grants awarded in the current year	\$ 565,037	\$ 850,685
Grants awarded in the prior year	457,462	371,597
Total	<u>\$ 1,022,499</u>	<u>\$ 1,222,282</u>

**Deferred Rent Credits** - Deferred rent credits were established in conjunction with taking possession of new leased office space in 2003. The landlord abated a portion of the monthly rent and made cash disbursements to NCSBN in connection with the lease. These amounts are amortized to reduce rent expense over the term of the lease period ending on January 31, 2013. The term of the lease was extended for the period beginning on February 1, 2013 and ending on April 30, 2022. The landlord agreed to reimburse NCSBN for tenant improvement costs related to the lease extension. These amounts will be amortized to reduce rent expense over the term of the lease period ending on April 30, 2022.

---

## National Council of State Boards of Nursing, Inc.

---

### Notes to Financial Statements September 30, 2017 and 2016

#### Note 2 - Summary of Significant Accounting Policies (Continued)

**Functional Allocation of Expenses** - The costs of providing the program and support services have been reported on a functional basis in the statement of activities. Indirect costs have been allocated between the various programs and support services based on estimates, as determined by management. Although the methods of allocation used are considered reasonable, other methods could be used that would produce a different amount.

**Statement of Cash Flows** - For the purpose of the statement of cash flows, NCSBN considers all marketable securities as investments. Cash includes only monies held on deposit at banking institutions and petty cash. It does not include cash held for others.

**Use of Estimates** - The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses and other changes in net assets during the reporting period. Actual results could differ from those estimates.

**Subsequent Events** - NCSBN has evaluated subsequent events through December 4, 2017, which is the date the financial statements were available to be issued.

**Upcoming Accounting Changes** - The Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-14, *Not-for-Profit Entities (Topic 958): Presentation of Financial Statements of Not-for-Profit Entities*, in August 2016. ASU No. 2016-14 requires significant changes to the financial reporting model of organizations that follow FASB not-for-profit rules, including changing from three classes of net assets to two classes: net assets with donor restrictions and net assets without donor restrictions. The ASU will also require changes in the way certain information is aggregated and reported by NCSBN, including required disclosures about the liquidity and availability of resources. The new standard is effective for NCSBN's year ending September 30, 2019 and thereafter and must be applied on a retrospective basis. NCSBN is currently gathering the appropriate information to implement those disclosure changes in a timely manner.

---

## **National Council of State Boards of Nursing, Inc.**

---

### **Notes to Financial Statements September 30, 2017 and 2016**

#### **Note 2 - Summary of Significant Accounting Policies (Continued)**

In May 2014, the Financial Accounting Standards Board issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which will supersede the current revenue recognition requirements in Topic 605, *Revenue Recognition*. The ASU is based on the principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The ASU also requires additional disclosure about the nature, amount, timing, and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. The new guidance will be effective for NCSBN's year ending September 30, 2020. The ASU permits application of the new revenue recognition guidance to be applied using one of two retrospective application methods. Management is currently evaluating the contracts in place to determine the full impact this standard will have and plans to complete this evaluation by the end of 2018.

In February 2016, the Financial Accounting Standards Board issued ASU No. 2016-02, *Leases*, which will supersede the current lease requirements in ASC 840. The ASU requires lessees to recognize a right-of-use asset and related lease liability for all leases, with a limited exception for short-term leases. Leases will be classified as either finance or operating, with the classification affecting the pattern of expense recognition in the statement of operations. Currently, leases are classified as either capital or operating, with only capital leases recognized on the statement of financial position. The reporting of lease-related expenses in the statements of activities and cash flows will be generally consistent with the current guidance. The new lease guidance will be effective for NCSBN's year ending September 30, 2021 and will be applied using a modified retrospective transition method to the beginning of the earliest period presented. The effect of applying the new lease guidance on the financial statements is expected to increase long-term assets and long-term liabilities on the statement of financial position. The changes in net assets are not expected to be significant as recognition and measurement of expenses and cash flows for leases will be substantially the same under the new standard.

#### **Note 3 - Income Tax**

NCSBN is exempt from income tax under provisions of Internal Revenue Code Section 501(c)(3).

---

## National Council of State Boards of Nursing, Inc.

---

### Notes to Financial Statements September 30, 2017 and 2016

#### Note 4 - Cash Concentrations

The cash balance as of September 30, 2017 and 2016 consisted of the following:

	2017	2016
JPMorgan Chase:		
Checking account	\$ 6,386,414	\$ 319,851
Savings account	14,864,575	18,817,988
Harris Bank - Money market account	15,426,343	15,334,433
Credit card merchant accounts	467,536	370,184
Petty cash	453	267
Total	<u>\$ 37,145,321</u>	<u>\$ 34,842,723</u>

NCSBN maintains cash balances at various financial institutions. NCSBN has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk on cash.

#### Note 5 - Fair Value Measurements

Accounting standards require certain assets and liabilities be reported at fair value in the financial statements and provide a framework for establishing that fair value. The framework for determining fair value is based on a hierarchy that prioritizes the inputs and valuation techniques used to measure fair value.

The following tables present information about NCSBN's assets measured at fair value on a recurring basis at September 30, 2017 and 2016 and the valuation techniques used by NCSBN to determine those fair values.

Fair values determined by Level 1 inputs use quoted prices in active markets for identical assets that NCSBN has the ability to access.

Fair values determined by Level 2 inputs use other inputs that are observable, either directly or indirectly. These Level 2 inputs include quoted prices for similar assets in active markets and other inputs such as interest rates and yield curves that are observable at commonly quoted intervals.

Level 3 inputs are unobservable inputs, including inputs that are available in situations where there is little, if any, market activity for the related asset. These Level 3 fair value measurements are based primarily on management's own estimates using models, discounted cash flow methodologies, or similar techniques taking into account the characteristics of the asset.

---

## **National Council of State Boards of Nursing, Inc.**

---

### **Notes to Financial Statements September 30, 2017 and 2016**

#### **Note 5 - Fair Value Measurements (Continued)**

Net asset value - Shares or interests in investment companies at year end whereby the fair value of the investment held is estimated based on the net asset value per share (or its equivalent) of the investment company.

In instances whereby inputs used to measure fair value fall into different levels in the above fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. NCSBN's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset.

NCSBN's policy is to recognize transfers in and transfers out of Level 1, 2, and 3 fair value classifications as of the beginning of the reporting period. During the years ended September 30, 2017 and 2016, there were no such transfers.

# National Council of State Boards of Nursing, Inc.

## Notes to Financial Statements September 30, 2017 and 2016

### Note 5 - Fair Value Measurements (Continued)

Description	Fair Value Measurements as of Reporting Date Using			
	Fair Values as of September 30, 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fixed income:				
U.S. government obligations:				
U.S. Treasury notes and bonds	\$ 29,714,985	\$ -	\$ 29,714,985	\$ -
Treasury inflation-protected securities	8,068,926	-	8,068,926	-
Government agency obligations:				
Zero coupon bonds	269,754	-	269,754	-
U.S. agency fixed-rate notes and bonds	1,898,423	-	1,898,423	-
Federal Home Loan Mortgage Pool	259,529	-	259,529	-
Federal National Mortgage Association Pool	6,764,348	-	6,764,348	-
Government National Mortgage Association Pool	292,740	-	292,740	-
Other agency loan pool	8,170,589	-	8,170,589	-
Corporate bonds:				
Corporate bonds - Fixed	14,635,680	-	14,635,680	-
Corporate CMO	1,192,983	-	1,192,983	-
Corporate ABS	4,205,499	-	4,205,499	-
Collateralized Loan Obligation	12,624	-	12,624	-
Mutual funds:				
Mortgage-backed fixed-income mutual fund	3,743,836	-	3,743,836	-
Developed market institutional fund	10,545,454	10,545,454	-	-
Institutional index fund	60,038,344	60,038,344	-	-
Small-cap Index-Institutional Fund	27,012,657	27,012,657	-	-
American EuroPacific Growth Fund	5,189,257	5,189,257	-	-
Total	182,015,628	\$ 102,785,712	\$ 79,229,916	\$ -
Investments measured at NAV -				
Real estate investment trust	10,517,732			
Total investments at fair value	\$ 192,533,360			

# National Council of State Boards of Nursing, Inc.

## Notes to Financial Statements September 30, 2017 and 2016

### Note 5 - Fair Value Measurements (Continued)

Description	Fair Value Measurements as of Reporting Date Using			
	Fair Values as of September 30, 2016	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fixed income:				
U.S. government obligations:				
U.S. Treasury notes and bonds	\$ 27,436,222	\$ -	\$ 27,436,222	\$ -
Treasury inflation-protected securities	8,079,695	-	8,079,695	-
Government agency obligations:				
Zero coupon bonds	600,518	-	600,518	-
U.S. agency fixed-rate notes and bonds	2,511,624	-	2,511,624	-
Federal Home Loan Mortgage Pool	384,534	-	384,534	-
Federal National Mortgage Association Pool	5,704,488	-	5,704,488	-
Government National Mortgage Association Pool	385,738	-	385,738	-
Other agency loan pool	9,246,128	-	9,246,128	-
Corporate bonds:				
Corporate bonds - Fixed	15,131,219	-	15,131,219	-
Corporate CMO	1,470,609	-	1,470,609	-
Corporate ABS	4,264,556	-	4,264,556	-
Mutual funds:				
Mortgage-backed fixed-income mutual fund	3,784,893	-	3,784,893	-
Developed market institutional fund	8,836,863	8,836,863	-	-
Institutional index fund	50,633,808	50,633,808	-	-
Small-cap Index-Institutional Fund	23,013,302	23,013,302	-	-
American EuroPacific Growth Fund	4,306,064	4,306,064	-	-
Total	165,790,261	\$ 86,790,037	\$ 79,000,224	\$ -
Investments measured at NAV -				
Real estate investment trust	9,933,294			
Total investments at fair value	\$ 175,723,555			

Not included in the above table is \$2,376,368 and \$2,147,978 in money market accounts as of September 30, 2017 and 2016, respectively.

#### Level 1

**Mutual Funds** - The estimated fair values for NCSBN's marketable mutual funds were based on quoted market prices in an active market.

---

# National Council of State Boards of Nursing, Inc.

---

## Notes to Financial Statements September 30, 2017 and 2016

### Note 5 - Fair Value Measurements (Continued)

#### Level 2

**U.S. Treasury Notes and Bonds, Treasury Inflation-protected Securities Government Agency Obligations, and Corporate Bonds** - Fixed-income securities are valued by benchmarking model-derived prices to quoted market prices and trade data for identical or comparable securities. To the extent that quoted prices are not available, fair value is determined based on a valuation model that includes inputs such as interest rate yield curves and credit spreads. Securities traded in markets that are not considered active are valued based on quoted market prices, broker or dealer quotations, or alternative pricing sources with reasonable levels of price transparency.

**Real Estate Investment Trust** - The estimated fair value of the real estate investment trust was based on net asset value, which is determined by reference to the fund's underlying assets and liabilities. NCSBN has a restricted redemption period of 90 days. NCSBN considers the 90-day period to be redeemable at September 30, 2017.

**International Equity Fund - Limited Liability Company** - The estimated fair value of the international equity fund was based on quoted market prices in an active market.

#### **Investments in Entities that Calculate Net Asset Value per Share**

The investment below is valued at net asset value and there are no unfunded commitments as of September 30, 2017 and 2016.

	Fair Values as of September 30, 2017	Fair Values as of September 30, 2016	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
International equity fund -				
Real estate investment (a)	<u>\$ 10,517,732</u>	<u>\$ 9,933,294</u>	Quarterly	90 days



---

## National Council of State Boards of Nursing, Inc.

---

### Notes to Financial Statements September 30, 2017 and 2016

#### Note 5 - Fair Value Measurements (Continued)

- (a) The real estate investment trust represents an ownership interest in a private equity fund. The real estate investment trust invests in a diversified portfolio of primarily institutional quality real estate assets within the United States. The fund has a long-term investment objective of delivering an 8 percent to 10 percent total return over a market cycle. All portfolio assets are acquired through Clarion Lion Properties Fund Holdings, L.P., a limited partnership. The properties within the portfolio are valued on a quarterly basis to establish market value estimates of the fund's assets for the purpose of establishing the fund's net asset value. Ownership interests and redemptions are calculated based upon net asset value. The values of the properties are established in accordance with the fund's independent property valuation policy. Each property is appraised by third-party appraisal firms identified and supervised by an independent appraisal management firm retained by the investment manager. Shares will be redeemed at the net asset value at the last day of the calendar quarter immediately preceding the redemption date.

#### Note 6 - Property and Equipment

The composition of property and equipment as of September 30, 2017 and 2016 is as follows:

	2017	2016
Property and equipment:		
Furniture and equipment	\$ 2,050,961	\$ 2,004,639
Course development costs	796,881	765,806
Computer hardware and software	22,841,986	22,661,150
Leasehold improvements	1,852,695	1,852,695
Total	27,542,523	27,284,290
Less accumulated depreciation	(25,553,776)	(24,425,015)
Net property and equipment	<u>\$ 1,988,747</u>	<u>\$ 2,859,275</u>

Depreciation was \$1,261,894 and \$1,651,248 for the years ended September 30, 2017 and 2016, respectively. Amortization expense on the intangible asset is not included in the above amount.

---

## National Council of State Boards of Nursing, Inc.

---

### Notes to Financial Statements September 30, 2017 and 2016

#### Note 7 - Operating Lease

In 2011, NCSBN amended its current lease agreement for office space. The term of the lease is extended for the period beginning February 1, 2013 and will expire on April 30, 2022. The following is a summary by year of future minimum lease payments required under the office lease as of September 30, 2017:

Year Ending September 30	Amount
2018	\$ 776,095
2019	795,784
2020	815,473
2021	724,774
2022	428,599
Total	<u>\$ 3,540,725</u>

Rent expense for the years ended September 30, 2017 and 2016 was \$656,426 and \$639,339, respectively. Property taxes and common area maintenance expenses for the years ended September 30, 2017 and 2016 were \$496,611 and \$508,153, respectively.

#### Note 8 - Retirement Plans

NCSBN maintains two retirement plans: a 403(b) defined contribution plan and a 403(b) tax-deferred annuity plan. Participation in the defined contribution plan covers all eligible employees who complete six months of employment. Participation in the tax-deferred annuity plan covers all eligible employees. Contributions to the defined contribution plan are made at 8 percent of participants' compensation. NCSBN's policy is to fund accrued contributions. Retirement plan expense was \$851,247 and \$807,561 for the years ended September 30, 2017 and 2016, respectively.

# Report of the Institute of Regulatory Excellence (IRE) Committee

## Background

The IRE Fellowship program, designed to contribute to the body of science of nursing regulation, is open to board of nursing (BON) members and staff, as well as associate members and staff. Fellows are accepted into the fellowship through a formal application process in which applicants identify an area of interest in nursing regulation. Once admitted to the IRE, the participants conduct and write an integrative literature review, develop and implement a research study or project, and disseminate their results through presentations and/or publication. The initial dissemination of findings is through a poster presentation at the NCSBN Annual Meeting, where participants receive their certificates of completion as a Fellow of Regulatory Excellence (FRE) at the NCSBN Annual Meeting Awards Ceremony. In 2017, as a component of meeting the IRE Committee charges, a decision was made to implement a three-year pilot program in order to facilitate more timely completion of IRE Fellowship requirements. This decision was based on a review of previous IRE evaluations and on participant feedback. Eight new fellows were accepted into the 2018 cohort group in a three-year pilot study.

## Highlights of Fiscal Year 2018 (FY18) Activities

### Charge #1: Select 2018 IRE fellows and approve project proposals and reports.

- Selected nine new IRE fellows in the 2018 cohort group. One of the selected fellows asked to be reconsidered for the 2019 cohort group due to inability to attend the IRE Conference. The eight remaining new IRE fellows are the participants in the three-year pilot program.
- Reviewed and approved project proposals of the 10 members of the 2016 cohort group (class of 2019).
- Conducted the IRE preconference and conference Jan. 23–25, 2018, in San Francisco on the IRE conference theme, *Using Data to Navigate the Future of Nursing*, which was incorporated within the new overall IRE conference theme of trends in nursing education and practice. The committee reviewed the 2018 preconference and conference evaluations, which were very positive. Over the last two years, an additional breakout session was added to the pre-conference; however, comments reflected the fellows' interest in having more time to network with each other and consult with committee members.
- Review and approval of literature reviews, project proposals and final reports are ongoing.

### Charge #2: Continue to conduct an overall evaluation of the components of the IRE Fellowship Program, including the conference themes, with recommendations for change, if needed.

- Reviewed and finalized the three-year pilot program requirements and timeline: Based on comments from a focus group held at the IRE preconference, the timeline for completion of fellowship program requirements and expectations was reviewed and changes made to facilitate success for the participants in transitioning from a four-year timeframe to a three-year timeframe.
- Reviewed and summarized IRE Fellow Data Summary metrics from 2004–2018: Reviewed admissions and retentions by cohort year, member boards that support the IRE Fellowship Program (35 U.S. States and seven Canadian provinces), and categories of IRE Fellowship projects by year.

## Members

Mary Baroni, PhD, RN,  
Washington, Area I  
Committee Chair

Natalie Baker, DNP, RN, CRNP,  
Washington, Area I

Cynthia Bienemy, PhD, RN,  
Louisiana RN, Area III

Christine Penney, PhD, MPA,  
RN, FCCHL, CRNBC,  
Associate Member

Sue Petula, PhD, MSN, RN,  
NEA-BC, FRE, Pennsylvania,  
Area IV

Patricia A. Sharpnack, DNP, RN,  
CNE, NEA-BC, ANEF, Ohio, Area II

Susan S. VanBeuge, DNP, APRN,  
FNP-BC, CNE, FAANP, Nevada,  
Area I

Pamela Zickafoose, EdD, MSN,  
RN, NE-BC, CNE, FRE, Delaware,  
Area IV

## Staff

Linda L. Olson, PhD, RN, NEA-BC,  
FAAN, Senior Program Advisor,  
Nursing Regulation, NCSBN

Lindsey Gross, Coordinator,  
Research, NCSBN

## Meeting Dates

- Oct. 23–24, 2017
- Jan. 9, 2018
- March 19–20, 2018

## Relationship to Strategic Plan

### Strategic Initiative C

- Expand the active engagement and leadership potential of all members.
- Select 2018 IRE fellows and mentor and approve project proposals and reports.
  - Continue to conduct an overall evaluation of the components of the IRE Fellowship Program, including the conference themes, with recommendations for change, if needed.

## Attachments

None

- Revised the IRE Fellowship Program application to provide more specific details for expectations and required deliverables from the selected fellows as well as further clarification on applicants' proposed goals and area of interest in nursing regulation.
- Promote and support IRE Fellowship plans that incorporate group projects or comprehensive integrative literature reviews as program outcomes.
- Added the requirement that fellows complete a dissemination plan that includes presentations and/or publications for discussion at Annual Meeting.
- Organized a plan for IRE committee members to prepare a manuscript for publication on the IRE Fellowship program history, structure and cumulative program outcomes that contribute to nursing regulation.

### **IRE Fellows**

The following Institute of Regulatory Excellence Fellowship program participants will be inducted as Fellows of Regulatory Excellence (FREs) at the 2018 Annual Meeting, pending successful completion of IRE requirements:

- Cathy Dinauer, MSN, RN, Executive Director, Nevada State Board of Nursing
- Ruby R. Jason, MSN, RN, NEA-BC, Executive Director, Oregon State Board of Nursing
- Shelley MacGregor, MBA, RN, RN Consultant, Registration Services, College and Association of Registered Nurses of Alberta
- Melissa W. McDonald, MS-HRD, Chief Human Resources Officer, North Carolina Board of Nursing

### **Future Activities**

The IRE will continue to conduct an overall evaluation and continuous improvement of the IRE Fellowship Program, with emphasis on assessing and monitoring achievement of fellows in the three-year pilot program. The IRE Committee will prepare a manuscript for publication on the history, structure and outcomes of the fellowship program and participants.

# Report of Marijuana Regulatory Guidelines Committee

## Background

Currently, more than 31 jurisdictions (including the District of Columbia), Guam and Puerto Rico and all provinces/territories of Canada allow for the medical use of cannabis. An increasing number of jurisdictions allow for various forms of legal or decriminalized recreational use of cannabis.

There are evolving public health, nursing practice, science, legal, education, ethical and social issues involving the use of either medical or recreational cannabis. Of significance, there is a contradiction between the federal law classifying cannabis as a Schedule I Controlled Substance, while various jurisdiction laws have legalized its use medically or recreationally or both. Historically, this federal classification has prevented open and unlimited research on cannabis. As a result, research on the efficacy of cannabis for treatment of certain medical conditions is limited and lacking. Specifically, the research has not definitively specified indications, dosage, route, safety, side effects and long-term effects of cannabis. This limited research has therefore impeded the education of nurses regarding patient use of cannabis and prevented a clear understanding of the cognitive impact of cannabis use by individuals. Nonetheless, nurses are responsible for nursing practice that is informed by current evidence and demonstrates competence.

The federal and state governments' divergent laws and perspectives, as well as the dearth of scientific research on cannabis' usefulness for many of the medical qualifying conditions noted in state medical laws cause complicated regulatory issues for boards of nursing (BONs). The Board of Directors (BOD), in 2016, determined that a NCSBN committee be created to assist BONs in managing the many regulatory issues resulting from medical and recreational cannabis.

## Fiscal Year 2018 (FY18) Highlights and Accomplishments

**Charge 1: Develop model guidelines for the APRN authorization of marijuana in patient care.**

**Charge 2: Develop model guidelines for nursing care of patients using marijuana.**

**Charge 3: Develop recommendations for cannabis-specific curriculum content in APRN education programs.**

**Charge 4: Develop recommendations for cannabis-specific curriculum content for pre-licensure education programs.**

**Charges 1-4 were fulfilled by completing the following activities:**

- Education regarding the endocannabinoid system including endocannabinoids, cannabinoid receptors and the enzymes responsible for synthesis and degradation of endocannabinoids
- Online cannabis courses;
- Interview of cannabis experts;
- Attendance at conferences (Cannabis Expertise, Council of State Governments: Growing a Consensus on Marijuana Policy);
- Detailed literature review and assessment of the quality of the scientific studies involving marijuana for medicinal purposes;

## Members

Rene Cronquist, JD, RN,  
Minnesota, Area II, Chair  
Cathy Borris-Hale, MHA, RN,  
District of Columbia, Area IV  
Holly Fischer, JD, Ohio, Area II  
Diana Heywood, MN, RN,  
Manitoba RN, Associate Member  
James (Dusty) Johnston, JD, Texas,  
Area III  
Sherri Sutton-Johnson, MSN, RN,  
Florida, Area III  
Valerie Smith, MS, RN, FRE,  
Arizona, Board Liaison

## Staff

Maureen Cahill, MSN, APN-CNS,  
RN, Senior Policy Advisor  
Kathleen Russell, JD, MN, RN,  
Senior Policy Advisor  
Kent Gowen, MAT,  
Policy Coordinator

## Meeting Dates

- Oct. 17–18, 2016
- Dec. 15–16, 2016
- March 1–2, 2017
- May 3–4, 2017
- June 5–6, 2017 (teleconference)
- Aug. 31–Sept. 1, 2017
- Dec. 13–14, 2017

## Relationship to Strategic Plan (if applicable)

### Strategic Initiative C:

Expand the active engagement and leadership potential of all members.

### Strategic Objective C4

Alert and support members to proactively address contemporary legal, environmental and social issues and challenges that impact nursing regulation.

## Attachments

- A. Medical Marijuana and Nursing Practice: Current legislation, scientific literature review and nursing implications
- B. NCSBN Guidelines for APRNs: Certifying a Medical Marijuana Program Qualifying Condition

- C. NCSBN Recommendations: Cannabis-specific Education Content for APRN Nursing Programs
- D. NCSBN Guidelines for Nurses: Care of a Patient Using Medical Marijuana
- E. NCSBN Recommendations: Cannabis-specific Education Content for Pre-licensure Nursing Programs
- F. NCSBN Guidelines for the Board of Nursing: Complaints Involving a Licensee and Cannabis

- Detailed review of literature regarding cannabis's adverse effects, variable effects, risks and safety considerations;
- Review of federal law regarding cannabis;
- Review of all state legislation and medical marijuana program materials regarding qualifying conditions, certification of qualifying conditions and other specifics;
- Review of all state legislation and medical marijuana program materials regarding designated caregiver provisions for the administration of medical marijuana;
- Survey of nursing programs regarding current marijuana educational content;
- Wrote the paper *Medical Marijuana and Nursing Practice: Current legislation, scientific literature review and nursing implications*;
- Drafted *Journal of Nursing Regulation (JNR)* article *Medical Marijuana and Nursing Practice: Current legislation, scientific literature review and nursing implications* including guidelines below;
- Development of the following guidelines and recommendations
  - *NCSBN Guidelines for APRNs: Certifying a Medical Marijuana Program Qualifying Condition*
  - *NCSBN Recommendations: Cannabis-specific Education Content for APRN Nursing Programs*
  - *NCSBN Guidelines for Nurses: Care of a Patient Using Medical Marijuana*
  - *NCSBN Recommendations: Cannabis-specific Education Content for Prelicensure Nursing Programs*;
- BOD received the paper *Medical Marijuana and Nursing Practice: Current legislation, scientific literature review and nursing implications* at their May 2018 meeting; and
- BOD approved the guidelines as noted above at their May 2018 meeting.

**Charge 5: Develop model guidelines for assessing safeness to practice of licensees who use cannabis.**

**Charge 5 was fulfilled by completing the following activities:**

- Survey of BONs regarding current frequency of complaints involving a licensee and cannabis;
- Review of literature related to the chemical structure of cannabis and its metabolism;
- Review of all state legislation and medical and recreational marijuana program materials;
- Review of literature related to the standards for, and limitations of, current laboratory testing related to cannabis use and impairment;
- Interview of toxicologists;
- Review of right-touch regulation;
- Development of NCSBN Guidelines for the Board of Nursing: Complaints Involving a Licensee and Cannabis; and
- BOD approved the guideline as noted above at their May 2018 meeting.

## ***Medical Marijuana and Nursing Practice: Current Legislation, Scientific Literature Review and Nursing Implications***

Kathleen Russell, JD, MN, RN; Maureen Cahill, MSN, APN-CNS, RN; Kent Gowen, MA;  
Rene Cronquist, JD, RN; Valerie Smith, MS, RN, FRE; Cathy Borris-Hale, MHA, RN; Holly Fischer, JD;  
Diana Heywood, MN, RN; James (Dusty) Johnston, JD; Sherri Sutton-Johnson, MSN, RN

Prior to 1936, cannabis was sold over the counter and used commonly for a variety of illnesses in the U.S. (Marijuana Policy Project, 2014). By 1936, every state had passed a law to restrict possession of cannabis, thus eliminating its availability as an over-the-counter drug. Then in 1970, the Comprehensive Drug Abuse Prevention and Control Act (1970) provided a classification of controlled substances; cannabis was included in the list of Schedule I Controlled Substances, thereby continuing the prohibition of the use of cannabis by prohibiting health care practitioners from prescribing cannabis.

Use of cannabis remained restricted until the first legalization of medical marijuana was approved by voters in California in 1996. Even after the voters' approval, the federal government opposed the proposition and threatened to revoke the prescription-writing abilities of doctors who recommended or prescribed marijuana. It was not until 2000 that a group of physicians challenged this policy and prevailed in court, and a decision was made to allow physicians to recommend—but not prescribe—medical marijuana (Marijuana Policy Project, 2014).

Since then, an increasing cultural acceptance of cannabis has prompted 31 jurisdictions (including the District of Columbia), Guam, Puerto Rico (National Conference of State Legislatures [NCSL], 2017), and all provinces/territories of Canada (Government of Canada, 2016) to pass legislation legalizing medical cannabis. In these laws, the jurisdiction has adopted exemptions legalizing the use of cannabis for medical purposes. An increasing proportion of jurisdictions have also decriminalized and legalized recreational cannabis use.

The use of either medical or recreational cannabis raises evolving public health, nursing practice, science, legal, education, ethical, and social issues. Of significance, there is a contradiction between the federal law classifying cannabis as a Schedule I Controlled Substance and various states legalizing its use medically or recreationally or both. This federal classification has prevented open and unlimited research on cannabis. As a result, research on the efficacy of cannabis for treatment of certain medical conditions is limited and lacking. Specifically, the research has not definitively specified indications, dosage, route, safety, side effects, and long-term effects of cannabis.

Without evidence that is scientifically rigorous, statistically reportable, and based on patient populations, nurses will face increasing challenges concerning medical cannabis. To address the lack of guidelines for nurses when caring for individuals utilizing cannabis, the National Council of State Boards of Nursing Board of Directors appointed members to the Marijuana Regulatory Guidelines Committee. In order to create the requested guidelines and recommendations for education and care, a review of the relevant

---

statistics, legislation, and clinical research on cannabis as a therapeutic agent was required. This report documents this important information.

Importantly, the reader must be aware that cannabis as a therapeutic agent has not been reviewed by the U.S. Food & Drug Administration (FDA) to determine if it is safe or effective and, therefore, is not subject to the quality standards and safety information collection standards that are applicable to most prescription drugs. This report provides a means to inform nurses about the current scientific literature regarding medical use of cannabis as well as areas that currently lack scientific evidence.

The surge of cannabis legislation has outpaced cannabis research. Nurses are left without evidence-based resources when caring for patients who use medical or recreational cannabis products. Research is possible, but only under rigorous oversight from the government. The process for obtaining cannabis for federally funded research purposes is a cumbersome process and unlike any other procedures for drug research.

It was not until 1973 that scientists discovered how cannabis functioned within the body – as a component of the endocannabinoid system. The endocannabinoid system consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids (Mackie, 2008). These cannabinoid receptors are evident throughout the body, embedded in cell membranes thought to promote homeostasis. Endocannabinoids are naturally occurring substances within the body, while phytocannabinoids are plant substances found in cannabis that stimulate cannabinoid receptors.. The most well known of these phytocannabinoids is tetrahydrocannabinol (THC); however cannabidiol (CBD) and cannabinol (CBN) are gaining attention (Pacher, Batkai, & Kunos, 2006).

Notwithstanding the restrictions resulting from the classification of cannabis as a Schedule I Controlled Substance, high-quality clinical evidence has emerged that establishes the efficacy of cannabis for certain therapeutic applications. However, despite studies describing the value of cannabis in the treatment of certain conditions, its safety has not been fully established by large scale, randomized clinical trials. Some safety information does exist for cannabis (Ware et al., 2015), but the current research does not fully encompass all available formulations of cannabis or conditions and populations treated with cannabis. Thus, the current evidence for the efficacy and safety of cannabis and cannabinoids has narrow application. For the majority of qualifying conditions typically included in a jurisdiction's medical marijuana program, sufficient experimental evidence does not exist to reasonably demonstrate the therapeutic efficacy, especially for long-term use. Additionally, there is a lack of evidence regarding the numerous strains and preparations of cannabis available as well as its comparative efficacy to standard medications, dosage, tolerability, and safety. Without additional large-scale clinical studies, cannabis remains a complementary and alternative medicine, a drug of last resort, or salvage therapy. It is the hope of many researchers and medical organizations that future research will be less restricted and therefore allow more scientific evidence to elucidate well-founded dosages, delivery routes, and indications.

Since this paper uses many terms related to cannabis and Medical Marijuana Programs, a list of definitions is included in Table 1.



---

**Table 1. DEFINITIONS OF TERMS USED IN THIS REPORT**

**Authorize** refers to any act of certification, attestation, or other method for a practitioner to affirm that a patient may benefit from medical cannabis. This is explicitly not a prescription.

**Cannabis** - any raw preparation of the leaves or flowers from the plant genus, *Cannabis*. This report uses “cannabis” as a shorthand that also includes cannabinoids.

**Cannabidiol (CBD)** – A major cannabinoid that indirectly antagonizes cannabinoid receptors, which may attenuate the psychoactive effects of tetrahydrocannabinol.

**Cannabinoid** is any chemical compound that acts on cannabinoid receptors. These include endogenous and exogenous cannabinoids.

**Cannabinol (CBN)** – is a cannabinoid more commonly found in aged cannabis as a metabolite of other cannabinoids. It is non-psychoactive.

**Certify** - for the purpose of this report, to certify is the act of confirming that a patient has a qualifying condition. Many jurisdictions use alternative phrases such as ‘attest’ or ‘authorize’, however, 13 of 29 jurisdictions use ‘certify’ language in their statutes.

**Clinical research** - for the purpose of this report, clinical research involves studies that experimentally assign randomized human participants to one or more drug interventions to evaluate the effects on health outcomes. Contrasted with **Preclinical research or studies**, which experimentally or observationally use animal models, cell cultures and/or biochemical assays to determine possible biological effects of an intervention. These studies also include observational studies of human participants that do not control interventions.

**Designated Caregiver** - an individual who is selected by the Medical Marijuana Program qualifying patient and authorized by the Medical Marijuana Program to purchase and/or administer cannabis on their behalf. Also sometimes referred to as an alternate caregiver.

**Dronabinol** is the generic name for synthetic THC. It is the active ingredient in the FDA approved drug, Marinol® (FDA, August 2017).

**Endocannabinoid system** consists of endocannabinoids, cannabinoid receptors and the enzymes responsible for synthesis and degradation of endocannabinoids (Mackie, 2008).

**Marijuana** – Marijuana refers to a cultivated cannabis plant, whether for recreational or medicinal use. The words marijuana and cannabis are often used interchangeably in various lay and scientific literature. These guidelines will primarily use the word “cannabis” as a shorthand that also includes cannabinoids. When referring to medical marijuana program, the guidelines will use the word marijuana as it is often used within program references.

---

**Medical Marijuana Program (MMP)** the official jurisdictional resource for the use of cannabis for medical purposes. Search the jurisdiction’s website or Department of Health for “medical cannabis program or medical marijuana program” (NCSL, 2017).

**Nabilone** is the generic name for a synthetic cannabinoid similar to THC. It is the active ingredient in the FDA approved drug, Cesamet™ (FDA, May 2006).

**Schedule I Controlled Substance** – Defined in the federal Controlled Substances Act, as those substances that have a high potential for abuse; no currently accepted medical use in treatment in the U.S.; a lack of accepted safety for use of the substance under medical supervision.

**Tetrahydrocannabinol (THC)** - one of many cannabinoids found in cannabis; THC is believed to be responsible for most of the characteristic psychoactive effects of cannabis (U.S. Department of Transportation, National Highway Traffic Safety Administration, 2017).

### **Federal and State Legislation**

Over the past few decades, the federal government and individual states have instituted varying legal approaches regarding the availability and dispensing of cannabis for medical purposes.

#### **Federal Legislation and Actions**

The U.S. federal government, through Title 21 United States Code (Comprehensive Drug Abuse Prevention and Control Act, 1970), has the authority to evaluate drugs and other substances. This law was enacted to protect the public, stating: “illegal importation, manufacture, distribution, and possession and improper use of controlled substances have a substantial and detrimental effect on the health and general welfare of the American people.”

Substances classified as Schedule I Controlled Substances are considered to have no accepted medical value and present a high potential for abuse. Cannabis and its derivatives have been classified as Schedule I Controlled Substances since the enactment of the Controlled Substance Act in 1970. This Drug Enforcement Administration (DEA) classification not only prohibits practitioners from prescribing cannabis; it also prohibits most research using cannabis except under rigorous oversight from the National Institute on Drug Abuse

The process for obtaining cannabis for federally funded research purposes is a cumbersome process and unlike any other drug research. Currently, the only legal source of cannabis for research purposes is grown in limited quantities at the University of Mississippi (National Institute on Drug Abuse [NIDA], May 2017). The DEA sets a quota for the amount of cannabis that can be grown for research studies (Drug Enforcement Administration [DEA], 2017). Applications to use this source of cannabis must be made to the FDA, DEA, and National Institute on Drug Abuse (NIDA, March 2017).

Although the use of marijuana pursuant to authorized Medical Marijuana Programs (MMPs) conflicts with federal law and regulations, at present there is no controlling case law holding that Congress

---

intended to preempt the field of regulation of cannabis use under its supremacy powers (*Beck v. City of Wyoming*, 2014; Mikos, 2012).

The federal government's position on prosecuting the use of cannabis that is legal under the law of the applicable jurisdiction has been set out in U.S. Department of Justice (DOJ) position papers. In 2009, the U.S. Attorney General took a position that discouraged federal prosecutors from prosecuting people who distribute or use cannabis for medical purposes in compliance under the law of the applicable jurisdiction (U.S. Department of Justice [DOJ], 2009); further similar guidance was given in 2011, 2013, and 2014 (DOJ, 2011, 2013, 2014). In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement (DOJ, 2018). The 2018 memorandum provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely, the prosecution is to weigh all relevant considerations, including priorities set by the attorneys general, seriousness of the crime, deterrent effect of criminal prosecution, and cumulative impact of particular crimes on the community.

Numerous federal bills have been introduced in recent years in an effort to reschedule cannabis to allow more research, but as of 2017, none of these bills passed the House of Representatives or the Senate (S. 683, 2015; H.R. 1013, 2015; H.R. 715, 2017; H.R. 1227, 2017; H.R. 1841, 2017).

In 2016, congressional representatives called on the DEA to reschedule cannabis (Bernstein, 2016). The FDA requested a scientific and medical evaluation and scheduling recommendation from the Department of Health and Human Services (HHS) (Rosenberg, 2016a). HHS "concluded that marijuana has a high potential for abuse, has no accepted medical use in the United States, and lacks an acceptable level of safety for use even under medical supervision" (DEA, 8/12/16). The DEA denied petitions to reschedule cannabis as a Schedule II Controlled Substance drug (drugs with a currently accepted medical use in treatment in the United States or a currently accepted medical use with severe restrictions due to the high potential for abuse which may lead to severe psychological or physical dependence) or lower, stating that cannabis will remain a Schedule I Controlled Substance because the DEA considers cannabis to have a high potential for abuse with no medical benefit (Rosenberg, 2016b). However, the DEA recognized the lack of scientific study on cannabis and announced a policy change, which expanded the number of DEA registered cannabis manufacturers (Rosenberg, 2016a). This should provide for an increased supply of cannabis for FDA-authorized research purposes. Despite this policy change, the DEA has yet to approve any application to become a licensed producer of cannabis for research (Joseph, 2017). Researchers hoping to study the medical effects of cannabis face a protracted wait time for plant material. The plant material that they do receive contains a substantially lower quantity of cannabinoids than the wide variety of what is available through dispensaries, limiting the applicability of research results (Vergara et al., 2017). This federal bottleneck and low cannabis quality stymie and effectively hinder new and available studies.

### **State Legislation and Actions**

Summarizing the specifics of each jurisdiction's medical marijuana legislation is difficult because there are few commonalities between MMPs (Bestrashniy & Winters, 2015). The practitioner should review the unique characteristics of a jurisdiction's MMP (NCSL, 2017). The relevant statute is most easily located

---

through the jurisdiction's Department of Health and MMP; useful links are provided through the National Council of State Legislatures (NCSL, 2017).

Since the first MMP in California (Compassionate Use Act of 1996), the trend among states is toward legalizing cannabis for medical use (Halperin, 2016). In 15 states, the public initiated the MMP legislation and ratified it by a ballot measure (ProCon.org, 2017). More recently, medical cannabis laws were passed by state legislatures (ProCon.org, 2017).

MMPs include various provisions regarding the process for procuring a certification for the use of cannabis as well as the amount of cannabis distributed to an individual, and legal protections extended to patients, designated caregivers, and health care providers (NCSL, 2017). MMPs each create a list of qualifying conditions for the use of cannabis (NCSL, 2017). MMPs operate on the best available scientific information, which is limited by the restrictions on cannabis research. Therefore, many qualifying conditions were likely included because of promising preclinical research (this includes research on animals and isolated cellular/tissue samples).

Some MMPs require a bona fide health care provider–patient relationship in order to certify a patient as having a qualifying condition. Other MMPs require a preexisting and ongoing relationship between the patient and treating health care provider, while some note that the relationship may not be limited to issuing a written certification for the patient or a consultation simply for that purpose. Additionally, a few MMPs specify that an advanced practice registered nurse (APRN) can certify a qualifying condition (NCSL, 2017). Some MMPs require a specific course or training in order for a provider to participate in certifying an MMP qualifying condition (NCSL, 2017).

Patients with a certification of a qualifying condition must register with local MMP. A registered patient can obtain cannabis from a jurisdiction-authorized cannabis dispensary. Procurement and administration of cannabis for medical purposes is limited to the patient and/or the patient's designated caregiver. The MMP will specify whether designated caregivers are permissible as well as the applicable process for registration as a designated caregiver (NCSL, 2017). In some jurisdictions, the MMP allows an employee of a hospice provider or nursing or medical facility, or a visiting nurse, personal care attendant, or home health aide to act as a designated caregiver for the administration of medical marijuana (NCSL, 2017).

As Table 2 demonstrates, jurisdictional legislation regarding cannabis is an ever-evolving process. This summary is current as of June 2018.

**Table 2. Cannabis Legislation**

Type of Provision	Jurisdictions
Medical Marijuana Program	AK, AR, AZ, CA, CO, CT, DC, DE, FL, HI, IL, LA*, MA, MD, ME, MI, MN, MT, ND, NH, NJ, NM, NV, NY, OH, OR, PA, RI, VT, WA, WV
Allow cannabidiol (CBD) products (often for intractable seizures and often the use is restricted to clinical studies)	AL, GA, IA, IN, KY, MO, MS, NC, OK, SC, TN, TX, UT, VA, WI, WY
Allow APRNs to certify a qualifying condition referred to in medical marijuana statute	HI, ME, MA, MN, NH, NY, VT, WA
No cannabis statutes	ID, KS, NE, SD
Recreational use of cannabis	AK, CA, CO, MA, ME, NV, OR, VT, WA

*Note.* MMP = Medical Marijuana Program; APRN = advanced practice registered nurse.

\* Louisiana lacks the necessary infrastructure to enact its MMP and the state's previous statutory language failed to grant necessary protections to physicians and users. Legislators have yet to decide who will be the legal cultivators for the state and how to regulate pharmacies that will distribute medical cannabis.

Many qualifying conditions (see Table 3) were likely included in MMPs because of promising preclinical research. Some qualifying conditions are likely included in MMPs only because of symptoms they share with better-studied conditions. A few broad qualifying conditions/symptoms, notably chronic pain, neuropathies, and nausea/vomiting, are the most researched and commonly associated with medical cannabis.

**Table 3. Most Common Qualifying Conditions**

Although there are 57 qualifying conditions included among the different jurisdictional laws, the most common qualifying conditions are:

- ALS
- Alzheimer's disease
- Arthritis
- Cachexia
- Cancer
- Crohn's disease and other irritable bowel syndromes
- Epilepsy/seizures
- Glaucoma
- Hepatitis C
- HIV/AIDS
- Nausea
- Neuropathies
- Pain
- Parkinson's disease
- Persistent muscle spasms (including multiple sclerosis)
- Post-traumatic stress disorder
- Sickle cell disease
- Terminal illness

Registered medical marijuana patients in two states cite chronic pain as the primary condition they are treating (81% of Arizona patients and 23% of New Jersey patients) (Arizona Department of Health

---

Registered medical marijuana patients in two states cite chronic pain as the primary condition they are treating (81% of Arizona patients and 23% of New Jersey patients) (Arizona Department of Health Services, 2016; New Jersey Department of Health, 2016). In Colorado, 93% of patients report pain, regardless of whether it is the primary condition being treated (Colorado Department of Public Health & Environment, 2016).

### **Literature Review**

There are many reports and reviews of the medical cannabis literature. The National Academy of Sciences (National Academies, 2017) and the World Health Organization (WHO; Madras, 2015) published the two most prominent and thorough reports. The former relies heavily on published high-quality meta-analyses, particularly that of Whiting and colleagues (2015).

The National Academy of Sciences determined that there is conclusive or substantial evidence that cannabis or cannabinoids are effective for the treatment of chronic pain, chemotherapy-induced nausea and vomiting, and spasticity due to multiple sclerosis (MS). It also reported that evidence exists to support the conclusion that cannabis is effective for “improving short-term sleep outcomes in individuals with sleep disturbance associated with obstructive sleep apnea syndrome, fibromyalgia, chronic pain, and multiple sclerosis” (National Academies, 2017).

The reports published by the National Academy of Sciences and WHO broadly addressed the evidence for the effectiveness of medical cannabis. However, these two reports did not highlight material immediately useful for practicing health care workers, such as dosage, administration, drug interactions, jurisdiction statutes, and evidence supporting jurisdictional qualifying conditions. Without a nuanced examination of the studies that comprise, or were omitted from, the meta-analyses, details relevant to the care of patients with medical cannabis may be overlooked.

### **Gaps in Comprehensive Reviews**

All analyses and reviews have limitations that may include their stated goals, search terms, search resources, and other methodology (Berlin & Golub, 2014). This report combines a systematic search of the literature using a grading methodology with the intent of summarizing the existing evidence for the current qualifying conditions spread across jurisdictions. The methodology adopted for this report aims to avoid the limitations of previous reviews and compile evidence for legally permissible uses of medical cannabis. One example of a limitation is the grouping or collapsing of terminology regarding psychoses. In the cannabis literature, “psychosis” is frequently applied as an umbrella term to include any of the following, together or separately: psychotic episodes, mania, paranoia, schizophrenia, bipolar disorder, and suicidal ideation (National Academies, 2017). Using “psychosis” in such a general manner reduces the ability to make meaningful conclusions and more often results in improper phrasing of conclusions. This imprecise word choice can impart an effect that is not borne out by the research, but feeds the growing body of anecdotal information and misinformation (de Graaf, 2017; Moffat, Jenkins, & Johnson, 2013). Care is taken in this review to explicitly differentiate between causative, correlative, suggestive, conclusive, insufficient, and mixed evidence.

---

## Therapeutic Effects of Cannabis (Literature last updated February 2018)

This review of the literature began by searching all scholarly articles related to cannabis and its derivatives and the qualifying conditions listed by jurisdictions. This search used medical and scientific as well as gray literature sources (sources outside of traditional academic publishing). The first step identified the most recent and most cited meta-analyses and systematic reviews. The identified citations were reviewed and graded. Citations were reviewed in this manner for every article read until the literature had been exhausted. Additional searches in PubMed and the gray literature were carried out using terms relating to qualifying conditions, common symptoms related to qualifying conditions, and words related to cannabis. Recent reviews and meta-analyses provided a reliable network of cited articles that constitute the core literature. After amassing citations, randomized placebo-controlled studies became the focus for review. These particular studies are the most likely to elucidate causality in treatments and are the only trusted source of evidence for clinical interventions.

Each study was evaluated using the GRADE scale (Cochrane Methods Bias, n.d.; “What is GRADE?,” 2012), a tool for assessing the quality of evidence, elucidating high, moderate, low, and very low evidence quality. All randomized experimental studies are initially rated as high quality; and observational studies began at low-quality rating (and thus do not meet the qualifications for inclusion in Table 4). In this assessment, a study loses quality if it has serious risk of bias (from improper blinding of subjects and assessors, nonrandom sorting, patient dropout), confounding factors, imprecision, or inconsistency. Studies gain quality if the data show a large effect or dosage effect, or the study adequately controlled confounding factors.

Table 4 presents the moderate- to high-quality data asserting a positive effect of cannabis for qualifying conditions. The table preferentially displays therapeutic effects. Adverse effects and/or the absence of effect are not included in this table except for when they add perspective to currently debated therapeutic applications. For example, Hallak and colleagues (2010) detected no effect of CBD on schizophrenia symptomology. This is worth noting because CBD is often described as an antipsychotic (Russo & Guy, 2006), though the details and applicability of this effect continue to be researched.

Table 4 groups the studies according to conditions with significant evidence and are preferentially grouped by qualifying condition. The conditions are listed in bold and subcategories are listed in italics. For example, Freeman et al., 2006, has data for Incontinence as a symptom of Multiple Sclerosis.

The studies in Table 4 are not generalizable. The conclusions of the studies can only be applied to the particular symptoms, conditions, and groups that were studied. The Results column notes the condition, symptoms, and sex of the subjects with statistically relevant results. Many of the studies can apply to more than one qualifying condition; when this occurs, those studies are grouped based on the primary qualifying condition of study (i.e., Cachexia instead of HIV).

**Table 4. Top Quality Research****Table Notes:**

1. Brand-name and generic-name drug dosages:  
Sativex® (2.7mg THC, 2.5mg CBD)  
Dronabinol (2.5, 5, or 10mg THC)  
Nabilone (1mg THC)
2. If dose schedule is not mentioned (i.e. daily, twice daily, at bed, MAX in 24hrs.) then the study only assessed a single dose.
3. An effect is considered statistically significant if the p-value is  $\geq 0.05$ . Other significant effects are noted by confidence intervals, effects, and ratios (Page, 2014).
4. If >75% of patients in a study are one sex, then results are applicable to that sex.  
An “\*” denotes that sex proportion of patients are not given.

**Abbreviations Used:**

**NRS** – Numerical Rating Scale **VAS** – Visual Analogue Scale **OR** – Odds Ratio **CI** – Confidence Interval

Study	Drug (Dosage), Delivery	GRADE	Results
<b>Cachexia</b>			
Abrams et al, 2003	Cannabis (3.95% THC three doses daily), smoked and dronabinol (3.93% three doses daily), oromucosal	MODERATE to LOW	Smoked and oral cannabinoids not unsafe for HIV patients in short term. Increased weight by fat (Smoked $p=0.021$ , dronabinol $p=0.004$ ). Results applicable to male patients. N=62
Andries et al, 2014	Dronabinol (2.5mg twice daily), orally	MODERATE to HIGH	Significant weight gain of 1.00kg during dronabinol vs 0.34kg during placebo ( $p=0.03$ ). Results applicable to anorexic female patients. N=25
Haney et al, 2005	Dronabinol (10mg, 20mg and 30mg), orally and cannabis (1.8%, 2.8% and 3.9% THC), smoked	MODERATE to LOW	Cannabis and dronabinol significantly increased caloric intake in the low bioelectrical impedance analysis (BIA) group (10mg and 1.8% THC $p<0.005$ , 30mg and 3.9% $p<0.01$ ) but not in the normal BIA group. Results applicable to male patients. N=29
Haney et al, 2007	Cannabis (2.0%, 3.9% THC four times daily), smoked and dronabinol (5mg, 10mg four times daily), orally	HIGH to MODERATE	Cannabis (3.9% THC) improved ratings of sleep ( $p<0.005$ ) in HIV patients. Dronabinol ( $p=0.008$ ) and cannabis ( $p=0.01$ ) dose dependently increased caloric intake by increasing the number of eating occasions – resulting in improved weight via fat gain. Results applicable to male patients. N=10



Timpone et al, 1997	Dronabinol (2.5mg twice daily), orally	MODERATE to LOW	Megastrol acetate showed greater weight gain than dronabinol (p=0.0001) and combining the two did not lead to additive weight gain in patients with HIV. N=39
---------------------	--	-----------------	---

## Cancer

Johnson et al, 2010	THC:CBD (22mg-32mg/day THC, 20mg-30mg/day CBD), oromucosal	MODERATE to LOW	THC:CBD caused 30% reduction in pain from baseline with patients unresponsive to opioids. THC:CBD patients used a median oral morphine dose that was lower than other treatments. THC:CBD had a significantly improved constipation score. (OR THC:CBD = 2.81, p=0.006) N=177
---------------------	--	-----------------	---

## Chronic Pain

Narang et al, 2008	Dronabinol (10mg and 20mg THC), orally	MODERATE	Total pain relief at 8 hours (TOTPAR) improved (20mg p=0.01, 10mg p=0.05) Evoked pain (ESPID) decreased (20 mg, 10mg p<0.05) Significant reduction of pain over time (baseline vs week 2, p=0.01; week 1 vs week 3, p=0.05; week 2 vs week 4, p=0.05). N=30
--------------------	--	----------	---

## Rheumatoid Arthritis

Blake et al, 2006	Sativex® (Max 6 doses daily), oromucosal	MODERATE to LOW	Improvements in morning pain on movement (p=0.044), morning pain at rest (p=0.018), quality of sleep (p=0.027), Disease Activity Score (DAS28 p=0.002), and pain at present (p=0.016). Results applicable to female patients. N=31
-------------------	--	-----------------	--

## Epilepsy

### Dravet syndrome

Devinsky et al, 2017	CBD (20mg/kg per day), oromucosal	HIGH to MODERATE	CBD decreased the median frequency of convulsive seizures per month (compared to placebo, p=0.01). The Caregiver Global Impression of Change scale showed improvement in 62% of the CBD group (from baseline, p=0.02). The frequency of total seizures of all convulsive types was reduced (p=0.03). N=120
----------------------	-----------------------------------	------------------	--

### Lennox-Gastaut syndrome

Thiele et al, 2018	CBD (20mg/kg per day), orally	HIGH	CBD decreased the median percentage of monthly drop by 43.9% (estimated median difference between placebo p=0.013). Monthly frequency of total
--------------------	-------------------------------	------	--

seizures decreased by a median of 41.2% from baseline with CBD (difference from placebo p=0.0005). N=171

## Fibromyalgia

### Sleep

Ware et al, 2010	Nabilone (0.5mg daily), orally	HIGH	Improved sleep over amitriptyline 10mg (Insomnia Severity Index, adjusted difference = -3.25; CI, -5.26 to -1.24), marginally better on restfulness (difference = 0.48; CI, 0.01– 0.95). Results applicable to female patients. N=29
------------------	--------------------------------	------	--

### Pain

Skrabek et al, 2008	Nabilone (2mg daily), orally	MODERATE to HIGH	Significant decreases in the VAS (p<0.02), Fibromyalgia Impact Questionnaire (p<0.02), and anxiety (p<0.02) at 4 weeks. N=40 *
---------------------	------------------------------	------------------	--

## HIV/AIDS

### Neuropathy

Abrams et al, 2007	Cannabis (3.5% THC), smoked	MODERATE	>30% reduction in pain from baseline (p=0.04). 34% median reduction in chronic neuropathic pain (VAS p= 0.03). >30% reduction in pain was reported by 52% in the cannabis group (comparable to oral drugs used for chronic neuropathic pain). Results applicable to male patients. N=50
--------------------	-----------------------------	----------	---

Ellis et al, 2009	Cannabis (1%-8% THC), smoked	HIGH	Decrease in pain intensity (Descriptor Differential Scale p=0.02). 46% cannabis patients achieved at least 30% pain relief. Results applicable to male patients. N=27
-------------------	------------------------------	------	---

## Multiple Sclerosis

Aragona et al, 2009	Sativex® (average 15 doses daily), oromucosal	MODERATE to LOW	Did not induce psychopathology and did not impair cognition. At dosages higher than those used, interpersonal sensitivity, aggressiveness, and paranoid features might arise. N=17
Collin et al, 2007	Sativex® (Max 48 doses daily), oromucosal	MODERATE	Spasticity improved (NRS p=0.048) and 40% of patients achieved >30% benefit (p=0.014). N=184

Collin et al, 2010	Sativex® (Max 24 doses daily), oromucosal	MODERATE to LOW	In the Per-protocol analysis, 36% achieved at least a 30% improvement in NRS spasticity scores (p=0.04). N=177
Corey-Bloom et al, 2012	Cannabis (4% THC), smoked	HIGH	Significant decrease in modified Ashworth (p=0.001), subjective pain score (p=0.008), and highness (p=0.001). N=30
Vaney et al, 2004	Cannabis extract (2.5mg THC, 0.9mg CBD Max 30mg THC daily), orally	MODERATE	Non-significantly lowered spasm frequency and improved mobility. N=57
Wade et al, 2004	Sativex® (2.5mg–120mg daily), oromucosal	MODERATE to LOW	Spasticity reduced (VAS p=0.001). Improvement in quality of sleep (p=0.047), and Guy's Neurological Disability scale scores (p=0.048). N=160
Wade et al, 2010	Sativex® (N/A), oromucosal	MODERATE to LOW (pooled data)	~1/3 <sup>rd</sup> of patients gain at least a 30% improvement from baseline. A greater proportion of treated patients responded to the treatment (OR=1.62, p=0.0073), treated patients reported greater improvement (OR=1.67, p=0.030). N=666
Zajicek et al, 2003	Cannabis extract (2mg-5mg THC, 1mg-25mg CBD per capsule), orally	HIGH	Improvements in spasticity (Ashworth p=0.01), pain (p=0.002), sleep (p=0.025), and spasms (p=0.038). N=657
Zajicek et al, 2012	Cannabis extract (5mg-25mg THC daily), orally	HIGH to MODERATE	Relief from stiffness after 12 weeks (OR 2.26, p=0.004). Rating scales had significant difference in muscle stiffness, body pain, muscle spasms, sleep quality at week 4 and increasing significance on week 8 for stiffness and body pain, and an increase in significance for spasms in week 12, but a decrease in significance in sleep and body pain (became nonsignificant) in week 12 (all significance values at least p<0.025). N=277

---

### *Neuropathies*

Langford et al, 2013	Sativex® (Max 12 doses daily), oromucosal	MODERATE	At the end of the treatment a statistically significant difference in pain score (NRS p=0.028) and sleep quality (NRS p=0.015). N=339
Turcotte et al, 2015	Nabilone (1mg twice daily), orally	MODERATE to LOW	Significant differences in pain intensity (VAS p=0.01). Patient perceived benefit higher with nabilone and gabapentin (p<0.05). Results applicable to female patients. N=15

### *Incontinence*

Freeman et al, 2006	Cannabis extract (2.5mg THC with 1.25mg CBD or 2.5mg THC. Max 25mg daily), orally	HIGH	Both treatments improved incontinence (cannabis extract, p=0.005; THC, p=0.039). Pad weight reduced in both treatments (p=0.001). N=630
Kavia et al, 2010	Sativex® (MAX 8 doses in 3hrs and 48 doses in 24hrs), oromucosal	MODERATE to LOW	Patients failed to respond to anticholinergics before study. Significant differences in number of episodes of nocturia (p=0.010), bladder capacity (Ordinary Bladder Capacity p=0.001), number of voids/day (p=0.001) total number of voids (p=0.007), impression of change (Patient's Global Impression of Change p=0.005) number of daytime voids (p=0.044). Size of effect was greater for more severely affected subjects. Results applicable to female patients. N=135

### *Chronic Pain*

Rog et al, 2005	Cannabis extract (2.5mg THC with 2.5mg CBD. Max 48 doses daily), oromucosal	HIGH to MODERATE	Improvements in pain (NRS-11, p=0.005; Neuropathic Pain Scale, p=0.044) and sleep disturbances (p=0.003). Treatment effect comparable to tramadol and pregabalin in treatment of peripheral neuropathic pain. Results applicable to female patients. N=66
Svendsen, Jensen, and Bach, 2004	Dronabinol (Max dose 10mg daily), orally	MODERATE	Median spontaneous pain intensity lowered (p=0.02) and pain relief score rose (p=0.035). Number Needed to Treat = 3.5 (poor outcome) for 50% pain relief. N=24

---

## Nausea/Vomiting

Meiri et al, 2007	Dronabinol (2.5mg to 20mg daily), orally	MODERATE to LOW	Nausea absence was significantly greater in active treatment groups ( $p<0.05$ ). Nausea intensity and vomiting/retching lowest with dronabinol. Dronabinol and ondansetron are similarly effective for Chemotherapy Induced Nausea and Vomiting. Combination therapy with dronabinol and ondansetron was not more effective than either agent alone. N=61
Söderpalm et al, 2001	Cannabis (8.4mg and 16.9mg THC), smoked	HIGH to MODERATE	Acute feelings of nausea were reduced (8.4mg $p<0.05$ , 16.9mg $p<0.01$ ) and emesis was also decreased ( $p<0.05$ ). The higher dose of marijuana significantly reduced nausea at 20 min. However, its effects are very modest relative to ondansetron ( $p<0.05$ ). N=13

## Neuropathies

Frank et al, 2008	Nabilone (Maximum 2mg daily), orally	MODERATE to LOW	Dihydrocodeine is a better analgesic than nabilone (VAS $p=0.01$ ). A small number of patients responded well to nabilone. N=96 (33 of the 96 dropped out)
Karst et al, 2003	CT3 (Max 40mg and 80mg daily), orally	MODERATE	Reduced pain 3 hours after intake (VAS $p=0.02$ ). N=21
Nurmikko et al, 2007	Sativex® (Max 48 doses daily), oromucosal	HIGH to MODERATE	Significant decrease in pain (NRS $p=0.004$ ) N=125
Wallace et al, 2007	Cannabis (4%, 8% THC), smoked	HIGH	4% THC produced delayed analgesia (Visual Analogue Scale of Pain Intensity $p=0.027$ ), 8% THC cannabis produced an increase in pain (Visual Analogue Scale of Pain Intensity $p=0.009$ ) after 45 minutes. N=19
Ware & Wang et al, 2010	Cannabis (2.5%, 6%, and 9.4% THC, three times daily), smoked	HIGH	Participants receiving 9.4% reported a lower average daily pain intensity (NRS $p=0.023$ ), improved ability to fall asleep (easier, $p=0.001$ ; faster, $p<0.001$ ; more drowsy, $p=0.003$ ) and improved quality of sleep (less

			wakefulness, $p=0.01$ ). Anxiety and depression were improved with 9.4% (EQ-5D questionnaire $p<0.05$ ). $N=23$
Wilsey et al, 2008	Cannabis (7% THC or 3.5% THC), smoked	HIGH	Decrease in pain (VAS $p=0.02$ ). Equal anti-nociception at every time point with no difference between the doses over time ( $p=0.95$ ). Significant differences in measures of unpleasantness ( $p<0.01$ ) and global impression of change ( $p<0.01$ ). $N=38$
Wilsey et al, 2013	Cannabis (3.53% or 1.29% THC), vaporized	MODERATE to HIGH	1.29% as effective as 3.53% THC in pain relief. Increasing cumulative analgesia over time (180 minutes $p<0.0001$ , 240 minutes $p=0.0004$ , 300 minutes $p=0.0018$ ); analgesia remained stable afterward. Decreased levels of sharpness, burning, aching pain (both doses $p<0.001$ ). 1.29% THC more effective for burning pain ( $p<0.0001$ ); significantly reduced aching more than the 3.53% THC and placebo ( $p<0.0001$ ). $N=39$
<b>Diabetes</b>			
Wallace et al, 2015	Cannabis (1%, 4%, or 7% THC), vaporized	MODERATE	There was a modest reduction in spontaneous pain (% reduction in pain: placebo 61.2%; 1% THC: 66.7%; 4% THC: 70.3% and 7% THC: 65.5%, $p<0.001$ for all). $N=16$
<b>PTSD</b>			
Jetly et al, 2015	Nabilone (0.5mg-3mg at bed), orally	MODERATE	Reduction in nightmares (CAPS Recurring and Distressing Dream scores $p=0.03$ ), improved global impression of change (Clinical Global Impression of Change $p=0.05$ ) and general wellbeing (General Well Being Questionnaire $p=0.04$ ). Results applicable to male patients. $N=10$
<b>Schizophrenia</b>			
Hallak et al, 2010	CBD (300mg or 600mg), orally	MODERATE	Single dose showed no effects on symptomology. $N=28$
<b>Spinal cord injury</b>			
Pooyania et al, 2010	Nabilone (Max 1mg daily), orally	MODERATE to LOW	Decrease in the spasticity (Ashworth "most involved muscle group"

p=0.003) and total Ashworth (p=0.001). N=11

### Tourette Syndrome

Müller-Vahl et al, 2002	THC (5mg, 7.5mg, 10mg), orally	MODERATE to LOW	Significant improvement of self-reported tics (Tourette's Syndrome Symptom List p=0.015) and obsessive compulsive behavior (p=0.041). Objective scores showed improvement in simple motor tics (p=0.026), complex motor tic (p=0.015), all motor tics (Simple and complex motor tics) (p=0.026), and complex vocal tics (p=0.041). Results applicable to male patients. N=12
-------------------------	--------------------------------	-----------------	--

APRNs in jurisdictions where the legislature has given them authority to certify qualifying conditions for medical cannabis or cannabinoids must consider the scientific evidence for the use of cannabis as a therapy.

### Clinical Evidence Supporting Cannabis for Medical Conditions

In general, there is a dearth of randomized clinical trials that compare the effect of cannabis and cannabinoids against other standard medications with clinically proven efficacy and regular use in clinical practice. When and if cannabis/cannabinoids show therapeutic effects, practitioners using evidence-based practice should not consider cannabis as a first- or second-line treatment (Martín-Sánchez, Furukawa, Taylor, & Martin, 2009). When cannabinoids have been compared to standard first-line medical treatments for pain, nausea, and cachexia, cannabinoids underperform against megestrol acetate (Timpone et al., 1997), ondansetron (Meiri et al., 2007; Söderpalm, Schuster, & de Wit, 2001), and dihydrocodeine (Frank, Serpell, Hughes, Matthews, & Kapur, 2008) and show effects comparable to tramadol and pregabalin (Rog, Nurmikko, Friede, & Young, 2005) (Table 4). Along with the small number of clinical trials, cannabis also carries its own set of adverse effects that must be carefully considered, monitored, and recorded (See “Adverse Effects of Cannabis” below). More important is the possibility that patients may forego effective standard medications in favor of cannabis (Abrams, 2016; Pergam et al., 2017). Therefore, the use of cannabis and cannabinoids is best considered for patients who could benefit from complementary use or where currently accepted first- and second-line medications or therapies show no or insufficient effect or demonstrate dangerous adverse events in selected patients (Aggarwal, 2016; Finnerup et al., 2015; Strouse, 2016).

From this review, as indicated in Table 4, moderate- to high-quality evidence is available for effective treatment with cannabis for the following conditions:

- Cachexia
- Chemotherapy-induced nausea and vomiting
- Pain (resulting from cancer or rheumatoid arthritis)
- Chronic pain (resulting from fibromyalgia)
- Neuropathies (resulting from HIV/AIDS, MS, or diabetes)
- Spasticity (from MS or spinal cord injury)

---

However, the evidence supporting the efficacy of cannabinoids for the treatment of these conditions is limited to the populations, symptoms, formulations, dosages, and administration methods noted in Table 4.

The literature review also identified three conditions, included in Table 4, that are supported by a single moderate- to high-quality clinical study:

- Reduction of seizure frequency (Dravet syndrome and Lennox-Gastaut syndrome)
- Reduction of posttraumatic stress disorder (PTSD) nightmares
- Improvement in tics (Tourette syndrome)

The conditions listed above require additional study to verify the findings of the current studies. This report separates the treatment populations involved in the two epilepsy studies. The evidence for CBD as an efficacious add-on therapy is specific to the treatment groups and as such do not represent high-quality evidence for CBD as an effective treatment. The FDA is currently investigating Epidiolex<sup>®</sup>, the specific formulation of CBD used in the two seizure studies, and has approved the formulation for individual Investigational New Drug exemptions (“GW’s Epidiolex<sup>®</sup> Clinical Program,” 2018).

A large number of anecdotal studies and news reports fuel interest in using cannabis for the treatment of PTSD symptoms (Gutierrez & Dubert, 2017) and severe epilepsy (“Medical Marijuana and Epilepsy,” 2017). Many states have implemented cannabis laws expressly for the treatment of epilepsy with CBD (NCSL, 2017). Despite the legislative landscape regarding CBD and epilepsy, more studies are needed to accurately assess the safety and efficacy of cannabis for the treatment of intractable seizures. The American Academy of Pediatrics (Campbell, Phillips, & Manasco, 2017) and the American Epilepsy Society (Filloux, 2015) have made similar calls for further research.

Improvements in other symptomology might be attributed to the more general effects of cannabis—sedation, appetite stimulation and euphoria. Instead of cannabis treating underlying symptoms, these three general effects of cannabis may mask symptoms and increase a subjective sense of well-being, which could improve self-reported quality of life in some patients (Fox, Bain, Glickman, Carroll, & Zajicek, 2004; Greenberg et al., 1994).

### **Qualifying Conditions without Clinical Evidence**

Medical cannabis legislation includes a wide variety of qualifying conditions, some in which cannabis has some scientifically supportable efficacy for symptomology, and some conditions in which there is no clinical evidence of cannabis’ effectiveness. (See Table 5.) MMP qualifying conditions are not held to the same rigor as FDA standards for safety and efficacy. The process for inclusion in a list of qualifying conditions is variable and often not dependent on the literature.



<b>Table 5. QUALIFYING CONDITIONS WITHOUT CLINICAL EVIDENCE</b>	
<b>Qualifying conditions</b> • <b>without cannabis therapeutic scientific evidence</b>	<b>Shared symptom with an evidenced based qualifying condition</b>
Painful peripheral neuropathy, spinal cord injury, spinal cord diseases (Arachnoiditis, Tarlov cysts, Hydromyelia), neurofibromatosis, chronic inflammatory demyelinating polyneuropathy, causalgia, Arnold-Chiari malformation, syringomyelia, complex regional pain syndrome, chronic radiculopathy	Neuropathy
Residual limb pain, Sjogren's syndrome, interstitial cystitis, fibrous dysplasia, fibromyalgia, post laminectomy syndrome, sickle cell disease, arthritis, severe psoriasis, psoriatic arthritis	Pain
Intractable skeletal muscular spasticity, spastic quadriplegia, Tourette syndrome, spinocerebellar ataxia, muscular dystrophy, dystonia, cerebral palsy, Parkinson's disease	Spasticity
Chronic traumatic encephalopathy, myoclonus	Seizures
Cystic fibrosis, anorexia	Wasting
Chronic pancreatitis	Nausea and Vomiting
Nail-patella syndrome	Intraocular Pressure (similar to glaucoma, which is not supported by quality evidence)
Huntington's disease, post-concussion syndrome, myasthenia gravis, lupus, hydrocephalus, mitochondrial disease, autism, decompensated cirrhosis, ulcerative colitis, migraine, Alzheimer's disease, and amyotrophic lateral sclerosis	Diseases with Multiple Shared/Similar Symptoms

A review of all jurisdictional legislation indicates that, of the 31 jurisdictions with some legalized form of cannabis or cannabinoids, just seven cited medical studies in their statutes (Arizona, Delaware, Illinois, Maryland, New Hampshire, New Jersey, Rhode Island) (NCSL, 2017). The only document referenced by Illinois, Maryland, New Hampshire, New Jersey, and Rhode Island was the report published by the Institute of Medicine in 1999 (Joy, Watson, & Benson, 1999). Arizona, California, and Delaware cited one study each in addition to the Institute of Medicine report. For Arizona and Delaware, the studies were related to substance abuse (NCSL, 2017); California cited the collected works of the Center for Medicinal Cannabis Research, which was established by the state of California and is currently operating out of the University of California, San Diego (NCSL, 2017).

Grouping the current qualifying conditions by evidence is difficult. Many qualifying conditions are present in current legislation because they share symptoms with qualifying conditions that do have some scientific evidence. Table 5 highlights qualifying conditions that do not have any scientific evidence to support treatment with cannabis. Cannabis use for conditions without scientific evidence requires serious

---

consideration on the practitioner's part, as cannabis use may actually exacerbate the condition's symptomology.

Qualifying conditions included in MMP statutes may be justified with human clinical evidence, preclinical animal or cellular studies, or no study at all (Madras, 2015; Maust, Bonar, Ilgen, Blow, & Kales, 2016). Practitioners must recognize and differentiate between quality human scientific evidence (Table 4) and preclinical animal or cellular studies. For example, neurodegenerative conditions and those relating to brain trauma, which are included in some jurisdictional qualifying conditions, may be included due to animal or cellular research as well as observational studies (Mechoulam, Panikashvili, & Shohami, 2002).

No human studies have confirmed evidence for neuroprotective, anti-inflammatory, antitumoral, and antibacterial effects of cannabinoids. Some preclinical animal and cellular studies do provide evidence for those effects (Russo, 2011); however, no generalizations can be made to the human population. These studies are largely suggestive for future research.

The FDA recently issued warning letters to four companies for marketing unsubstantiated claims regarding preventing, reversing, or curing cancer; killing/inhibiting cancer cells or tumors; or other similar anticancer claims (U.S. Food & Drug Administration [FDA], November 1, 2017).

### **Effects Of Cannabis That May Influence Treatment Decisions**

Some studies reviewed for this report are not identified as top quality research (due to a study's multiple measures or because they fall outside the scope of qualifying conditions). However, several studies still reveal some medical relevance and important considerations for nurses caring for cannabis-using patients.

#### **Physiologic Effects of Cannabis**

The treatment of certain symptomology with cannabis might be attributed to the more general and well-known effects of cannabis—sedation, appetite stimulation, and euphoria—which may contribute to a subjective sense of well-being instead of cannabis treating underlying symptoms (Joy et al., 1999). This increase in the subjective sense of well-being could improve self-reported quality of life in patients who have difficulty sleeping, chronic pain, and poor appetite (Fox et al., 2004; Wade, Makela, Robson, House, & Bateman, 2004).

A few studies have attempted to demonstrate the efficacy of these general effects as a treatment for neurodegenerative behavioral disturbances and MS sleep disturbances. For diseases that cause irritability and agitation, cannabis is suggested as a method of reducing aggressiveness in patients with inhibited mental function (i.e., Alzheimer's disease, autism, Huntington's disease) (Curtis & Rickards, 2006; Krishnan, Cairns, & Howard, 2009). However, a study of patients with dementia contradicts this claim by demonstrating that THC had no effect on objective scores of agitation, aggression, aberrant motor behavior, or other behavioral disturbances (van Den Elsen et al., 2015). It is clear that the sedative effect of cannabis is not applicable to every condition.

Studies in MS patients indicate THC use may also cause indirect behavioral benefits in the subjective improvement in quality of sleep and a reduction in sleep disturbances (Langford et al., 2013; Rog et al., 2005; Wade et al., 2004). Many of the subjective effects of cannabis are likely attributable to the associated euphoria, which can result in patients being less bothered by their symptoms, even when

---

cannabis does not statistically ameliorate other specific symptomology. This subjective feeling of improvement and less bothersome symptoms may be highly desirable, especially in terms of compassionate care.

### **Adjunctive Use of Cannabis with Opiates, Antidepressants, and Benzodiazepines**

Among cannabis-naïve people (individuals with no or limited exposure to cannabis) who began medical cannabis, data revealed an associated decrease in weekly use across all medication classes, including reductions in use of opiates (−42.88%), antidepressants (−17.64%), mood stabilizers (−33.33%), and benzodiazepines (−38.89%) (Gruber et al., 2016). T-tests of this dataset indicated trends toward, but not attainment of, significant reductions in opiate and antidepressant use. A similar retrospective survey showed that medical cannabis use was associated with a self-reported decrease in opioid use (64% average change), decreased number and adverse effects of medications, and an improved quality of life. These results are applicable to patients on a daily regimen of multiple doses (25% use it two times, 42% use it three to four times, and 20% use it more than five times, but no dosage is given). The authors also show a reported decrease in the use of NSAIDs (from 62% to 21%), antidepressants (from 39% to 14%), and selective serotonin reuptake inhibitors (from 38% to 22%) (Boehnke, Litinas, & Clauw, 2016). More research is necessary to validate these correlational results.

Cannabis use is correlated with better outcomes for individuals with opioid addiction. The severity of opioid withdrawal was lower when patients used dronabinol, and this same research found a higher retention in naltrexone treatment for heroin addiction for cannabis users (Bisaga et al., 2015). A recent study showed that the legalization of medical marijuana was associated with substantial decreases in alcohol use and binge drinking among young adults (Anderson, Hansen, & Rees, 2013) and states with medical cannabis have a 24.8% lower mean annual opioid overdose mortality rate (Bachhuber, Saloner, Cunningham, & Barry, 2014). These data have spurred suggestions that cannabis may be able to serve as an exit drug and reduce the harmful use of other substances (Lucas et al., 2013; Mikuriya, 2004; Reiman, 2009). Currently this evidence is only correlational and no studies show sufficient causal evidence for cannabis as a treatment for opioid addiction or as a substitute for opioids (Walsh et al., 2017).

### **Neurologic Symptoms**

Studies included in Table 4 demonstrate a narrow focus regarding the cannabinoid preparation administered to patients. However, the study by Wade, Robson, House, Makela, and Aram (2003) is important for its active comparison of three formulations of cannabinoid sprays (THC:CBD, THC, and CBD at 2.5mg to 120mg/day) for patients with a neurologic diagnosis. Patients included in this study presented stable symptoms that were unresponsive to standard treatments. These symptoms included neuropathic pain, spasticity, muscle spasms, impaired bladder control, and tremor. The subjective measures showed that THC spray improved scores of pain, spasm, spasm severity and frequency, and appetite; CBD spray improved pain; THC:CBD spray improved spasm severity and frequency and improved sleep. This study suggests that the various cannabinoids have differential effects on neurologic symptoms.

---

## Subjective Measures vs Objective Measures for Spasticity and Pain

Patient reports of improvement by subjective measures are the dominant type of measures used in cannabis studies (Table). The Visual Analog Scale and the Numeric Rating Scale are the measurements used most often. These scales are well established and are used for clinical trials of analgesics. However, objective measures, when appropriate, are seldom used in studies. For some conditions, the focus on subjective measures can lead to possible misrepresentation of the drug's effect on symptomology (Fox et al., 2004; Joy et al., 1999).

Patients on active cannabis treatment, because of placebo effects and the euphoria elicited by cannabis, often report improvements even when no objective improvement is detected. Fox, Bain, Glickman, Carroll, & Zajicek (2004) attempted to detect objective improvement in patients with MS. In this particular study, patients took tablets of THC and the assessors used a tremor index and noted that while patients reported improvements in spasms, there was no statistical improvement on the tremor index (Fox et al., 2004).

Only one other study, carried out by Greenberg and collaborators (1994), utilized objective measures for the primary endpoint of spasticity improvement among MS patients. Patients were given a single dose of smoked cannabis (1.54% THC) and then tested on a dynamic posturographic platform. After administration, tracking errors were higher for MS patients compared to healthy volunteers, and response speed of the patients was lower. The researchers concluded that smoked cannabis worsens posture and balance in MS patients. However, "patients often had the subjective feeling that they were clinically improved, yet postural responses of both normal subjects and patients were adversely affected" (Greenberg et al., 1994).

Cooper, Comer, and Haney (2013) conducted a moderate-quality study that demonstrated significant effects of cannabis and dronabinol on pain sensitivity and tolerance—providing a different perspective on analgesia by use of cannabis. Using the cold pressor test, the researchers found that cannabis and dronabinol decreased pain sensitivity (with 3.56% THC; 20mg), increased pain tolerance (with 1.98% THC; 20mg), and decreased subjective ratings of pain intensity (with 1.98% and 3.56% THC; 20mg). Both cannabis and dronabinol significantly increased the latency to report pain, while dronabinol produced longer-lasting efficacy. The authors concluded that the comparative effects and additional benefit of more lasting efficacy signaled that dronabinol should be used over smoked cannabis. Dronabinol also elicits a significantly lower "good drug effect" (a subjective enjoyment of the drug effects) than cannabis, suggesting that dronabinol may be less likely to be abused than cannabis (Cooper, Comer, & Haney, 2013).

### Adverse Effects of Cannabis

Much of the information in this section is well known in the scientific literature and by health professionals (Joy et al., 1999). Although largely noncontroversial, some results cited are not conclusive and other effects are more probable than proven (Collin et al., 2010). Although preclinical studies cannot simply be translated to practice, potential risks to the patient, however tenuous, should be considered. The following is not an exhaustive list or enumeration of adverse effects but is a collection of effects self-reported during clinical studies, listed in reviews and observational studies, and reported by users.

---

## Described Adverse Effects of Major Cannabinoids

General adverse effects of THC include increased heart rate, increased appetite, sleepiness, dizziness, decreased blood pressure, dry mouth/dry eyes, decreased urination, hallucination, paranoia, anxiety, impaired attention, memory, and psychomotor performance (FDA, 2004).

Federal limits on cannabis research prevent an adequate description of CBD-only product adverse effects. Since no large-scale studies on the adverse effects of CBD have been completed, any description of CBD adverse effects in a specific population cannot be generalized. A moderate- to high-quality study involving adults with schizophrenia and CBD use reported sedative effects (Hallak et al., 2010). In a separate study of adolescents with epilepsy using CBD, “diarrhea, vomiting, fatigue, pyrexia, somnolence, and abnormal results on liver-function tests” were reported (Devinsky et al., 2017).

The adverse effects of cannabis reported by some participants across the studies in Table 4 include fatigue, nausea, asthenia, vertigo (Collin et al., 2010), and suicidal ideation (National Academies, 2017). The risk of suicide and cannabis use is a contentious area of study. Current findings are contradictory and more research is needed to confirm any association between cannabis use and suicide risk while controlling for numerous confounding variables (Walsh et al., 2017). Individuals with a greater risk of psychological disturbances and suicidal ideation should take precautions when utilizing cannabis as a therapeutic (Wilkinson, Radhakrishnan, & D’Souza, 2014).

### Specific patient groups

*Adolescence.* Many studies show a correlation between cannabis use and poor grades, high drop-out rates, lower income, lower percentage of college degree completion, greater need for economic assistance, unemployment, and use of other drugs (Crean, Crane, & Mason, 2011; Madras, 2015). These trends are related to recreational rather than medicinal cannabis use, but multiple confounding factors that may drive these correlations cannot be ignored in a clinical context, especially when clinicians are authorizing the use of compounds that can be abused.

- Users with persistent cannabis dependence showed greater IQ decline than those who never used cannabis. This decline is greatest in users who began using during adolescence (Meier et al., 2012). Early-onset cannabis users show greater structural differences in critical brain regions relating to memory and show a weakened ability to learn (Schuster, Hoeppner, Evins, & Gilman, 2016).
- In young (approximately age 20 and older), educated chronic users, decrements in the ability to learn and remember new information and impairment of verbal recall as well as visual recognition may occur (Schoeler, Kambeitz, Behlke, Murray, & Bhattacharyya, 2016).
- Adults who smoke cannabis regularly during adolescence have impaired neural connectivity involved in functions that require a high degree of integration (e.g., alertness and self-conscious awareness) and learning and memory (Smith et al., 2015; Yücel et al., 2008).

*Fertility.* No clinical studies are available; however, two preclinical studies indicate that interference with endogenous cannabinoids might increase chances of failed embryo implantation (Park, McPartland, & Glass, 2004) and cannabinoids are capable of deregulating spermatogenesis, leading to reduced fertility or infertility (Di Giacomo, De Domenico, Sette, Geremia, & Grimaldi, 2016). These same cannabinoids may even alter sperm function (du Plessis, Agarwal, & Syriac, 2015).

---

*Pregnancy and Neonates.* The meta-analysis conducted by Gunn and colleagues (2016) indicates that exposure to cannabis in utero is associated with an increased risk of decreased birthweight and higher odds of the newborn being placed in a neonatal intensive care unit. The pooled dataset also showed a greater risk of anemia in mothers who had used cannabis during pregnancy. Only one preclinical study assessed the signaling pathways affected by prenatal THC exposure. This preclinical study shows that early exposure in utero disrupts endocannabinoid signaling and results in noticeable rewiring of mice fetal cortical circuitry (Tortoriello et al., 2014).

*Immunocompromised patients.* Cannabis and cannabinoid preparations (gels, tinctures, drops, sprays) can pose a serious risk to immunocompromised patients if not prepared in a sterile environment (National Academies, 2017; Thompson et al., 2017). Many jurisdictions require laboratory testing of cannabis for contaminants (Rough, 2017). The local Department of Health or MMP will provide more information on the quality-assurance practices in a specific jurisdiction.

*Dyskinesia.* It is highly likely that cannabis will exacerbate symptoms of poor balance and posture in patients with dyskinetic disorders (Greenberg et al., 1994; GW Pharmaceuticals, 2015).

*Altered cognition.* Research regarding cognitive deficits is more abundant in healthy adult participants. Insufficient evidence exists for cognitive effects in individuals with conditions that already may affect cognition (Weier & Hall, 2017). The research that does exist suggests that patients who suffer from diseases with neurologic symptomology may show greater cognitive impairment (reviewed in Walsh et al., 2017). This exacerbation of symptoms may decrease the overall effectiveness of cannabis as a therapeutic in such patients (Koppel et al., 2014). Clinical studies have shown that patients with MS who smoke cannabis at least once a month show an increase in cognitive impairment and are twice as likely to be classified as globally cognitively impaired as those who do not use cannabis (Koppel et al., 2014).

Cognitive impairment by cannabis may be dose- and age-dependent (Crean et al., 2011; Solowij & Pesa, 2012). Insufficient clinical data exist on the cognitive impairment of healthy children and adolescents.

*Mania and predisposition to mania.* There is a significant relationship between cannabis use and subsequent exacerbation and onset of bipolar disorder manic symptoms, with a roughly threefold increased risk of new onset of manic symptoms (Gibbs et al., 2015). Individuals with bipolar disorder and a cannabis use disorder also have an increased risk (odds ratio = 1.44) of suicide attempts (Carrà, Bartoli, Crocamo, Brady, & Clerici, 2014). However, these findings are not conclusive for causality.

The observed correlation of cannabis use that precedes or coincides with the manic symptoms of bipolar disorder as well as the association between cannabis use and new-onset manic symptoms and depressive disorders, suggests a tentative causal influence of cannabis on the development of bipolar disorder symptoms (Baethge et al., 2008; Lev-Ran et al., 2014).

*Schizophrenia.* While accumulating evidence suggests a link between cannabis exposure and schizophrenia, no research exists that can conclude that cannabis use causes schizophrenia (Walsh et al., 2017). Research supports a correlation between cannabis abuse and significantly more and earlier psychotic relapses among schizophrenic patients (Linszen, Dingemans, & Lenior, 1994). The literature on cannabis and schizophrenia is scant and spread across low-quality studies and morphologic studies, but a comprehensive overview of cannabis and psychosis, schizophrenia, and schizophreniform disorder can be found in Wilkinson, Radhakrishnan, and D'Souza (2014).

---

*Onset of schizophrenia.* Preliminary evidence suggests cannabis use is associated with an earlier age of onset for schizophrenia among predisposed male patients by an average of 2.7 years (Large, Sharma, Compton, Slade, & Nielssen, 2011). Some propose that individuals predisposed to schizophrenia will experience their first schizophrenic episode earlier if cannabis is used daily in the prodromal phase (Large et al., 2011; Walsh et al., 2017). Cumulative cannabis exposure is associated with an increased rate of onset of psychosis (Kelley et al., 2016).

*Preexisting conditions.* Individuals with asthma, bronchitis, emphysema, or any pulmonary disease should not use inhaled cannabis (Hall & Solowij, 1998; Tashkin, 2013); patients with heart problems, alcohol and other drug dependence, or illnesses that may be exacerbated by cannabis use should not use cannabis (FDA, 2004). Anyone with severe diseases of the liver or kidneys should also take special precaution that the metabolic breakdown of cannabinoids does not worsen their conditions (Ishida et al., 2008; Parfieniuk & Flisiak, 2008).

In patients who suffer from seizures, high concentrations of THC may promote seizures (Katona, 2015; Rosenberg, Tsien, Whalley, & Devinsky, 2015).

Additionally, individuals with a history of suicide attempt or who are at risk for suicide and those with schizophrenia, bipolar disorder, or other psychotic condition should be informed about the risks of cannabis use and be advised to not use cannabis. Individuals with PTSD may experience distinct adverse outcomes if they also develop cannabis use disorder and should be monitored closely (Walsh et al., 2017).

### **Overdose, abuse, dependence, and withdrawal**

*Overdose.* Cannabinoid receptors are effectively absent in the brainstem cardiorespiratory centers (Glass, Faull, & Dragunow, 1997). This is believed to preclude the possibility of a fatal overdose from cannabinoid intake. References to overdose in cannabis research relate to situations in which patients have higher than normal blood concentrations of cannabinoids, usually from overconsumption of edible THC products (Cao, Srisuma, Bronstein, & Hoyte, 2016). These increased concentrations cause prolonged acute and often debilitating psychoses or hyperemesis syndrome. In some cases, these adverse effects can possibly increase the risk of fatalities (Calabria, Degenhardt, Hall, & Lynskey, 2010), although overdose of cannabinoids alone has not been proven to cause fatalities.

*Induced psychosis.* Substance induced psychosis (SIP) is characterized by hallucinations, paranoia, delusions, confusion, and disorientation (American Psychiatric Association, 2013). SIP most frequently results from the ingestion of large doses of THC, which results in SIP episodes that are typically acute and resolve relatively faster than schizophrenic psychotic episodes; therefore, SIP is not diagnostically similar to schizophrenia (Wilkinson et al., 2014).

*Cannabis use disorder.* Cannabis use disorder is defined as a problematic pattern of cannabis use leading to clinically significant impairment or distress; the clinical indications are included in the Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> Edition (DSM-5; American Psychiatric Association, 2013). Long-term cannabis use has the potential to lead to addiction, especially in individuals who are predisposed to addiction; approximately 9% of individuals who try cannabis are at risk for addiction (Lopez-Quintero et al., 2011). This percentage increases to roughly 16% among adult users with a history of adolescent cannabis use and to 25% to 50% among adults who use daily (Caldeira, Arria, O'Grady, Vincent, & Wish, 2008; Hall & Solowij, 1998). Cannabis users who began using in adolescence are

---

approximately two to four times more likely to have symptoms of dependence within 2 years of their initial use when compared to users who started using cannabis as adults (Chen, Storr, & Anthony, 2009). Individuals with persistent negative emotions and psychological distress have a higher risk of abusing cannabis (Moitra, Christopher, Anderson, & Stein, 2015). The reason for this association is not clear, but Moitra, Christopher, Anderson, and Stein assert it is possible that individuals use cannabis as a method of coping with or self-medicating psychological distress. Cannabis use disorder is defined as a problematic pattern of cannabis use leading to clinically significant impairment or distress; the clinical indications are included in the DSM-5.

Special concern exists for individuals who use cannabis to treat symptoms of PTSD. Individuals with PTSD are three times more likely to utilize cannabis (Cougle, Bonn-Miller, Vujanovic, Zvolensky, & Hawkins, 2011) and those who develop cannabis dependence can experience heightened withdrawal symptoms, poorer cessation outcomes, and long-term reduction in the efficacy of traditional PTSD treatments (Walsh et al., 2017).

*Hyperemesis.* Cannabinoid hyperemesis syndrome is a clinical diagnosis typically seen in patients younger than age 50 with a long history of marijuana use (Lu & Agito, 2015). The presentation includes severe, cyclic nausea; vomiting; and compulsively taking extremely hot showers or baths. Other associated nonspecific symptoms are diaphoresis, bloating, abdominal discomfort, flushing, and weight loss. These symptoms are relieved with long, hot showers or baths and cessation of marijuana use (Lu & Agito, 2015).

*Cannabis withdrawal syndrome.* The average amount and duration of cannabis use required to establish dependence and withdrawal are poorly understood (Freeman & Winstock, 2015; Verweij et al., 2010). However, mild withdrawal symptoms have been reported in less than 7 days with a regimen of 20mg THC taken every 3 to 4 hours (Jones, Benowitz, & Herning, 1981). Withdrawal symptoms for cannabis include irritability, nervousness, sleeping difficulties, dysphoria, decreased appetite, restlessness, depressed mood, physical discomfort, strange and vivid dreams, craving, and anxiety (Hesse & Thylstrup, 2013). These symptoms can make cessation difficult (American Psychiatric Association, 2013).

### **Drug-drug interactions**

Cannabinoids have the possibility of altering the metabolic breakdown of certain drugs (Stout & Cimino, 2014). Departures from normal drug metabolism can result in higher or lower than expected plasma levels, which can cause dangerous drug interactions (Lynch & Price, 2007). Information on possible interactions is available for the synthetic cannabinoids dronabinol and nabilone on the Drug Information Portal (National Institutes of Health, 2018). The interactions listed in the Drug Information Portal are not exhaustive and not directly transferable to nonsynthetic cannabinoids. However, many of the listed interactions (broadly reviewed in this section) are probable interactions, as there are not sufficient studies into cannabinoid-drug interactions. Melton (2017) provides an overview of drug interactions with cannabinoids.

Using biochemical information, Yamaori, Kushihara, Yamamoto, and Watanabe (2010) and Yamaori, Ebisawa, Okushima, Yamamoto, and Watanabe (2011) determined that cannabinoids, particularly CBD, competitively inhibit cytochrome P450 (CYP450) isoforms. This interaction could result in dangerous interactions with levodopa, sildenafil, fentanyl, and other drugs metabolized by CYP3A enzymes



---

(specifically, CYP3A4, CYP3A5, CYP3A7) as well as CYP1 enzymes (Yamaori et al., 2010; Yamaori et al., 2011).

THC also inhibits CYP1 enzymes in a competitive manner (Ogu & Maxa, 2000; Zanger & Schwab, 2013). Ogu and Maxa found that CBN, a metabolite of THC, is an effective inhibitor of CYP1A2 and CYP1B1. The authors warn that inhibition of CYP1 enzymes could result in drug interactions with caffeine, clozapine, warfarin, and other drugs. One of the high-quality studies in Table 4 lists specific concerns for concomitant use of CBD with common antiepileptic drugs. CBD increases concentrations of the active metabolite of clobazam through inhibition of CYP2C19, which likely caused some adverse effects in the study population (Thiele et al., 2018). The same authors noted an increase in transaminase levels in patients using CBD and valproate (Thiele et al., 2018).

THC, CBD, and CBN are all present in raw cannabis. Pyrolysis (high temperature heating) is often required to create substantial amounts of the active cannabinoids THC and CBD, but endogenous enzymes are capable of forming active cannabinoids in stored cannabis (Mechoulam & Burstein, 1973). Many formulations of synthetic and isolated cannabinoids contain THC, CBD, or a combination of the two. Drugs that contain THC and synthetic analogues include dronabinol, nabilone, and nabiximols. CBD is present in nabiximols and Epidiolex®. CBN and other cannabinoids may or may not be present in cannabis extracts, depending on manufacturer specifications and specific production methods (Omar, Olivares, Alzaga, & Etxebarria, 2013; Webster & Sarna, 2002).

Nurses must be aware that nonpharmaceutical preparations (including, but not limited to, tinctures, edibles, and raw cannabis) may contain any or none of the cannabinoids listed in this section. Whenever possible, patients should use products with laboratory-confirmed and listed concentrations of cannabinoids.

### **Methods of Administration**

While patients may choose to use any of the following methods of administration, note that the amount of cannabis, onset, and total impact of the effects will vary with each method of administration. In addition, no randomized control studies have sufficiently compared drug activity based on the administration method.

The studies listed in Table 4 show that the most studied methods of administering medical cannabis are smoking and oromucosal sprays. Insufficient evidence exists for vaporized cannabis, edibles, dabbing (superheated vaporization of oils or waxy extracts of cannabis), and other routes of delivery. However, the FDA-approved cannabinoids (dronabinol and nabilone) are administered orally or by an oromucosal route.

Oral administration has delayed effects (Grotenhermen, 2003). Additionally, there is inconsistent absorption into the bloodstream because cannabinoids are hydrophobic. This effect may have benefits for patients wishing to control symptoms over a longer period of time than what can be achieved with a comparable dose via inhalation and oromucosal delivery (Grotenhermen, 2003).

Sublingual and mucosal sprays have a benefit of directly accessing the bloodstream; as a result, oromucosal doses have less dosage variability than smoked cannabis and edibles, but are limited by slower absorption and lower rate of THC delivery to the brain (Karschner et al., 2011). This means that

---

oromucosal routes may be less effective for conditions that require high doses of THC to alleviate chronic symptoms with rapid acute onset.

Smoked and vaporized cannabis has the advantage of rapid absorption into the bloodstream (Grotenhermen, 2003). Vaporization creates fewer pyrolytic compounds that irritate respiratory tissue (Hazekamp, Ruhaak, Zuurman, van Gerven, & Verpoorte, 2006). However, both methods show significant loss of active compounds, with 40% to 46% of THC lost to combustion and an average 35% of THC directly exhaled (Hazekamp et al., 2006; Herning, Hooker, & Jones, 1986).

Butane honey oil (or other oils used for dabbing) (Stockburger, 2016), hashish, and other extracted resins often carry solvent impurities, especially when manufactured by nonprofessionals. Dabbing is a method of superheating small concentrations of cannabis resins on a small metal heating element to produce a vapor for inhalation. Combustion of these products is likely to deliver “significant amounts of toxic degradation products” and these concerns are extended to e-cigarettes that use a similar heating element (Meehan-Atrash, Luo, & Strongin, 2017). These administration methods and formulations should not be considered for medical applications (Stockburger, 2016).

The use of suppositories, injection, transdermal patches, and topical application for the administration of cannabis extracts and cannabinoids has not been studied in a clinical setting (Grotenhermen, 2003).

### **Dosing Considerations**

The only FDA-approved dosing guidelines for cannabinoids are for the drugs dronabinol and nabilone. These two formulations are synthetically derived THC. A consistent trend in dosage can be seen across studies (Table 4). Dosages start at 2.5mg, with 15mg THC established as effective for chemotherapy-induced nausea. Dosages between 2.5mg and 10mg typically show tolerable adverse effects, such as dry mouth and psychoactivity (Whiting et al., 2015). FDA-approved nabilone and dronabinol are the only cannabinoids available through prescription, which can be dispensed through a pharmacist and may be covered by some insurance providers. The FDA provides information about dosages, indications, and interactions of these drugs on their Dockets Management website (FDA, 2004, 2006, August 2017).

Since cannabis cannot be prescribed and therefore authorizing practitioners cannot provide the patient with a specific dosage, dosing schedule, or recommended delivery method, many health care practitioners feel unprepared to educate patients, resulting in practitioners deferring to dispensary staff as the cannabis subject experts (Kondrad & Reid, 2013; Rubin, 2017). It is the patient who will decide on which dispensary to utilize, and the specifics of administration, formulations, and dosages will be available at licensed dispensaries. However, dispensaries vary widely in their product quality, laboratory testing, proper and accurate product labeling, and employee expertise (Haug et al., 2016; Vandrey et al., 2015). A recent analysis of 31 companies selling CBD products found that only about 31% of products were accurately labeled (Bonn-Miller et al., 2017). This same survey found that approximately 21% of products had nonnegligible amounts of other cannabinoids, including THC.

A recent survey showed that self-titration by the patient to the desired effect is the most common strategy for dosing (Hazekamp, Ware, Muller-Vahl, Abrams, & Grotenhermen, 2013). Kowal, Hazekamp, and Grotenhermen (2016) note that because of the large variation in patient responses to cannabis, patients will need to understand they must titrate their personal dosage and establish the minimum efficacious dose and a stable schedule over 1 to 2 weeks. Continual assessment of perceived efficacy and adverse

---

effects is recommended. Full effects should be seen within 2 weeks; if there is no improvement of symptomatology within an additional 2 weeks, consideration of cessation is suggested. If adverse effects become problematic, cessation is warranted. A dosage diary, maintained by the patient or caregiver, can be helpful to keep track of dosages, administration methods, formulations, and scheduling.

As suggested in this report, numerous factors may alter the physiologic effects of cannabis in any given patient. Important considerations for usage and amount include the individual's age, health history, prior experience with cannabis, concurrent medications, the product's cannabinoid concentrations, method of administration, and timing of doses.

Typically, jurisdictions require renewal of medical marijuana registration every year (NCSL, 2017). Some also require certifying practitioners to register with the MMP annually (NCSL, 2017). Details about renewals are provided by the jurisdiction's Department of Health and/or MMP.

### **The Entourage Effect**

The entourage effect is a frequently mentioned attribute of cannabis. The phrase refers to the large number of cannabinoids, and other compounds (such as terpenes/terpenoids, flavonoids, phenols, etc.) present in cannabis that show similar and possible synergistic effects (Russo, 2011).

Working under the assumption that the whole plant is greater than the sum of its parts, cannabis growers have been crossing plants to develop chemovars (chemical variations) that have differential effects. Different varieties are purported to be more “uplifting,” or “relaxing” or increase appetite. Some dispensaries have begun listing and advertising various cannabinoid ratios and providing detailed terpene profiles in certain strains and products (Chen, 2017).

Despite advertising, no experimental study has investigated the claim of synergistic effects beyond preliminary work on THC:CBD formulations (Gupta, 2014). Since no clinical research has substantiated the entourage effect, this report cannot explicitly state that terpenes and other constituent compounds in cannabis in any way affect the therapeutic potential of cannabis (Health Canada, 2013).

### **Price Consideration**

Across all the studies included in this report, beneficial effects of cannabis can only be derived from frequent and continued doses, which may be prohibitively expensive. In the Framework for Legalization in Canada (Health Canada, 2016), the authors noted that “[m]any patients cited the high costs they incur today in purchasing cannabis from licensed producers. ... it is not uncommon for patients to spend hundreds or thousands of dollars each month in order to acquire a sufficient supply of cannabis.” Study participants using nabilone at a 2mg daily dose could expect to pay over \$4,000 (Canadian) for an annual supply in Canada.

A list of the average cost of cannabinoids and whole cannabis is provided in Table 6.

<b>Table 6. COST OF APPROVED CANNABINOIDS (US Dollars)</b> <b>Price ranges collated from: <a href="http://www.goodrx.com">www.goodrx.com</a> , <a href="http://www.webmd.com">www.webmd.com</a>, and <a href="http://www.wellrx.com">www.wellrx.com</a></b>	
<b>Drug Name</b>	<b>Price Averages</b>
Sativex®	A vial with 15 sprays costs \$22 dollars per vial. Average dose of 5 sprays per day yields \$7/day and \$51/week. This price was derived from the 2005 Patented Medicine Prices Review Board of Canada ( <a href="http://www.pmprb-cepmb.gc.ca">www.pmprb-cepmb.gc.ca</a> ) report on Sativex®. <i>Available in Canada, not available in the US (undergoing FDA Fast Track trials).</i>
Cesamet™ (Nabilone) Schedule II Controlled Substance	~\$2,000 for 50/1mg capsules. Wide variance in effective dose per day (2mg to 10mg). Average dose of 2mg per day yields \$80/day. <i>FDA approved - Not covered by Medicare.</i>
Marinol® (dronabinol) Schedule III Controlled Substance	\$140-271.05 for 60/2.5mg capsules, \$150-281.95 for 30/5mg capsules, \$500-1,019.40 for 60/10mg capsules. Average dose of 5-10mg per day yields \$8-16/day without insurance. <i>FDA Approved - Covered by Medicare. Insurance may cover 3-99% of costs.</i>
Medical Cannabis	~\$150-200 for 28 grams as the low end of possible dispensary prices in the United States. (Colorado Department of Revenue, 2015; Hickey 2014; “Is it Cheaper to Buy,” 2016) A starting dose of 5% THC per cannabis cigarette and the goal of 2.5mg absorbed THC requires 0.60g to 1g of cannabis per dose. For pain, this may require four or more doses per day. This regimen could result in \$600 per month for management of pain using smoked cannabis. Patient cultivation regulations may reduce this cost. (This price estimate is approximate for all products sold at medical dispensaries.)

## Nursing Implications

Nurses need practical information to care for the increasing number of patients who utilize cannabis via an MMP as well as the larger population who self-administer cannabis as a treatment for various symptomatology or for recreational purposes. As noted previously, evidence for cannabis use in described conditions is limited by inadequate study and limited legal availability of cannabis for research purposes. Statutory authorization of cannabis use for certain conditions has been influenced by advocacy; as a result, some qualifying conditions are present in statutes without evidence of their effect. Regardless of existing evidence, individuals are using cannabis and nurses will care for these patients. The studies and literature in this report should inform nursing practice that represents the best interests of the patient.

---

## Six Principles of Essential Knowledge

1. *The nurse shall have a working knowledge of the current state of legalization of medical and recreational cannabis use.*

Critical to the care of patients who use cannabis is a working knowledge of the current state of legalization of medical and recreational cannabis use. Knowledge of the federal government prohibitions and any guidance from the federal government allows the nurse to be well informed regarding potential questions about the legality of the use of cannabis as a medical treatment.

Although the use of marijuana pursuant to authorized MMPs conflicts with federal law and regulations, at present there is no controlling case law holding that Congress intended to preempt the field of regulation of cannabis use under its supremacy powers (*Beek v. City of Wyoming*, 2014; Mikos, 2012).

2. *The nurse shall have a working knowledge of the jurisdiction's MMP.*

Rules and statutes for the MMP include specific information for the particular jurisdiction. Each jurisdiction has widely different laws, rules, and regulations regarding medical cannabis. The jurisdiction's MMP or Department of Health will provide the specific details in each jurisdiction (NCSL, 2017). The laws regarding the MMPs are frequently changing. Safe nursing practice includes an awareness of any regulatory changes that may affect their practice.

Usually, a medication is prescribed with a specific dose, route, and frequency. A health care provider, however, cannot prescribe medical cannabis; the provider certifies that the patient has a state qualifying condition. Several jurisdictions identify an APRN as one of the health care providers who can certify that a patient has a qualifying condition. Access to medical cannabis can only be obtained once the patient visits a state-authorized cannabis dispensary with a valid registration to the MMP. The nature of the certification process is different from any other substance recommended to a patient by a health care provider. An MMP's certification process presents a special set of implications (NCSL, 2017). A medical certification is not required for FDA-approved cannabinoids (dronabinol and nabilone) and these medications may be prescribed without registration with an MMP.

Health care practitioners who certify that a patient has a qualifying condition need to consider all aspects of the patient's history, diagnostic information, and mitigating concerns. Precautions should be taken in the consideration of, and decision to, certify patients with a medical cannabis qualifying condition. Since cannabis is a known substance of abuse, sufficient consideration for the potential for addiction must be included in the assessment process. Other safe practice considerations include certification for patients who show a resistance to conventional treatments or for those who may benefit from cannabis as an adjunctive and continued monitoring of the patient after certification and treatment with cannabis.

Additionally, because medical cannabis is not covered by insurance or Medicare, use of medical cannabis may impose a significant financial burden on the patient and due consideration must be given to this potential impact.

Patients that utilize MMPs are frequently debilitated by their condition. Cannabis is most often not delivered by the traditional pill route. For some patients, delivery and administration of cannabis may

---

be an unfamiliar and complicated process that is not possible for the debilitated patient to perform. Therefore, state law and rules may also provide for administration by designated caregivers (i.e., those specifically authorized to assist with the patient's medical use of cannabis). A few states allow an employee of a hospice provider or nursing or medical facility or a visiting nurse, personal care attendant, or home health aide to assist in the qualifying patient's medical use of cannabis (including, but not limited to, California, Massachusetts, Minnesota, and New Hampshire) (NCSL, 2017). These designated caregivers must generally be registered with the state and meet the qualifications and limits of the caregiving statute.

*3. The nurse shall have an understanding of the endocannabinoid system, cannabinoid receptors, cannabinoids and the interactions between them.*

The endocannabinoid system consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids (Mackie, 2008). Discovered in 1973, this system includes a series of cannabinoid receptors throughout the body embedded in cell membranes thought to promote homeostasis. Endocannabinoids are naturally occurring substances within the body, while phytocannabinoids (plant substances that stimulate cannabinoid receptors) are found in cannabis. The most well known of these cannabinoids is THC; however CBD and CBN are gaining interest in therapeutic use (Pacher et al., 2006).

*4. The nurse shall have an understanding of cannabis pharmacology and the research associated with the medical use of cannabis.*

Research related to cannabis use in humans is limited due to government restrictions on research involving cannabis. Therefore, information regarding medicinal use of cannabis must be derived from credible research using randomized placebo-controlled studies. These particular studies are the most likely to elucidate causality in treatments and are the only trusted source of evidence for cannabis as a clinical intervention.

Present available scientific evidence exists for the use of cannabis in specific qualifying conditions. Moderate- to high-quality evidence exists for the following:

- Cachexia
- Chemotherapy-induced nausea and vomiting
- Pain (resulting from cancer or rheumatoid arthritis)
- Chronic pain (resulting from fibromyalgia),
- Neuropathies (resulting from HIV/AIDS, MS, or diabetes)
- Spasticity (from MS or spinal cord injury)

Other important considerations are the adverse effects of cannabis, specifically the risks to various patient groups; concerns regarding abuse, dependence, overdose, and withdrawal; and drug-to-drug interactions.

Most cannabis preparations are not included in FDA drug resources (except nabilone and dronabinol). Patients do not receive a prescription for medical cannabis noting the route and dosage. Nurses must be aware of the general information regarding various methods of administration and the principles of

---

self-titration dosing. The state-authorized cannabis dispensary often gives the patient advice regarding route and dosage, following the self-titration method of dosing.

*5. The nurse shall be able to identify the safety considerations for patient use of cannabis.*

Administration of medical cannabis can only be carried out by the certified patient, or the designated caregivers registered to care for the patient according to the MMP. Health care professionals may administer medical cannabis according to the MMP and facility policy (NCSL, 2017).

Storage considerations include keeping cannabis out of the reach of children, minors, and nonregistered individuals; storing all cannabis products in a locked area; keeping cannabis in the child-resistant packaging from the store; and storing raw cannabis in a cool, dry, place.

Disposal of unused cannabis products should be completed according to the DEA's Disposal Act (DEA, 2014). Generally, one can locate a collection receptacle via the DEA Registration Call Center (800-882-9539).

*6. The nurse shall approach the patient without judgment regarding the patient's choice of treatment or preferences in managing pain and other distressing symptoms.*

The care of patients by nurses in any capacity is grounded in ethical practice, that is, the moral principles that guide one's conduct. Beneficence, nonmaleficence, autonomy, fairness, and loyalty are some of the more common moral principles that guide one's conduct. In addition to personal ethics, nurses are also guided by standards of practice, which are based on professional values, and/or a code of ethics. Awareness of one's own beliefs and attitudes about any therapeutic intervention is vital, as nurses are expected to provide patient care without personal judgment of patients.

Although medical cannabis legislation is evolving and more jurisdictions are adopting MMPs, social acceptance may not be evolving at the same pace. In addition, scientific evidence for cannabis use exists for some but not all conditions. The evolution of legislation, social acceptance, and scientific evidence creates ethically challenging patient care situations.

Ethical decision making regarding a patient's care must include the patient as well as the family, caregivers, and other practitioners involved in the patient's care.

Necessary ethical considerations regarding a patient's treatment with cannabis include, but are not limited to:

- clinical indications, such as diagnosis, history, goals for use of medical marijuana, probability of success, other options for care
- patient's personal preferences based on information of benefits and risks
- attention to decision making by the patient's proxy, parent, or guardian, if the patient is incapacitated in decision making or is a minor
- quality of life based on the patient's subjective viewpoint
- situational context, such as family and other important relationships, economic factors, access to care, and potential harm to others.

---

## Conclusion

Available moderate- to high-quality research, along with state and federal laws regarding the use of cannabis, is a necessary component of knowledge in the nursing care of a patient using cannabis. Without the usual FDA approval of cannabis that identifies precise indications, dosage and efficacy for medications, nurses must have a much more nuanced knowledge while caring for the patient using cannabis. The six principles of essential knowledge listed above create a strong foundation for safe and knowledgeable nursing care of patients using medical or recreational cannabis.

These principles are the foundation for the following model guidelines and recommendations:

- NCSBN Guidelines for APRNs: Certifying a Medical Marijuana Program Qualifying Condition (Attachment B)
- NCSBN Recommendations: Cannabis-Specific Education Content for APRN Nursing Programs (Attachment C)
- NCSBN Guidelines for Nurses: Care of a Patient Using Medical Marijuana (Attachment D)
- NCSBN Recommendations: Cannabis-Specific Education Content for Pre-Licensure Nursing Programs (Attachment E).



---

## REFERENCES

- 29 Legal Medical Marijuana States and DC. (2017, November 30). Retrieved from <https://medicalmarijuana.procon.org/view.resource.php?resourceID=000881>
- Abrams, D. I., Hilton, J. F., Leiser, R. J., Shade, S. B., Elbeik, T. A., Aweeka, F. T., ... & Deeks, S. G. (2003). Short-Term Effects of Cannabinoids in Patients with HIV-1 Infection A Randomized, Placebo-Controlled Clinical Trial. *Annals of internal medicine*, 139(4), 258-266.
- Abrams, D. I., Jay, C. A., Shade, S. B., Vizoso, H., Reda, H., Press, S., ... & Petersen, K. L. (2007). Cannabis in painful HIV-associated sensory neuropathy A randomized placebo-controlled trial. *Neurology*, 68(7), 515-521.
- Abrams, D. I. (2016). Integrating cannabis into clinical cancer care. *Current Oncology*, 23, 8-14.
- Aggarwal, S. K. (2016). Use of cannabinoids in cancer care: palliative care. *Current Oncology*, 23, 33-36.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Anderson, D. M., Hansen, B., & Rees, D. I. (2013). Medical marijuana laws, traffic fatalities, and alcohol consumption. *The Journal of Law and Economics*, 56(2), 333-369.
- Andries, A., Frystyk, J., Flyvbjerg, A., & Støving, R. K. (2014). Dronabinol in severe, enduring anorexia nervosa: a randomized controlled trial. *International Journal of Eating Disorders*, 47(1), 18-23.
- Aragona, M., Onesti, E., Tomassini, V., Conte, A., Gupta, S., Gilio, F., ... & Inghilleri, M. (2009). Psychopathological and cognitive effects of therapeutic cannabinoids in multiple sclerosis: a double-blind, placebo controlled, crossover study. *Clinical neuropharmacology*, 32(1), 41-47.
- Arizona Department of Health Services. (2016). *Arizona Medical Marijuana Program 2016 Fiscal Year-End Report*. Retrieved from <http://azdhs.gov/documents/licensing/medical-marijuana/reports/2016/mm-fy16-year-end-report.pdf>
- Bachhuber, M. A., Saloner, B., Cunningham, C. O., & Barry, C. L. (2014). Medical cannabis laws and opioid analgesic overdose mortality in the United States, 1999-2010. *JAMA internal medicine*, 174(10), 1668-1673.
- Baethge, C., Hennen, J., Khalsa, H. M. K., Salvatore, P., Tohen, M., & Baldessarini, R. J. (2008). Sequencing of substance use and affective morbidity in 166 first-episode bipolar I disorder patients. *Bipolar disorders*, 10(6), 738-741.
- Baker, T., Datta, P., Rewers-Felkins, K., Thompson, H., Kallem, R. R., & Hale, T. W. (2018). Transfer of Inhaled Cannabis Into Human Breast Milk. *Obstetrics & Gynecology*, 131(5), 783-788.
- Beek v. City of Wyoming. (February 6, 2014) (Findlaw, Dist. 145816). Retrieved from <http://caselaw.findlaw.com/mi-supreme-court/1656759.html>
- Berlin, J. A., & Golub, R. M. (2014). Meta-analysis as evidence: building a better pyramid. *Jama*, 312(6), 603-606.

- 
- Bernstein, L. (2016, August 11). U.S. affirms its prohibition on medical marijuana. *The Washington Post*. Retrieved from <https://www.washingtonpost.com/news/to-your-health/wp/2016/08/10/u-s-affirms-its-prohibition-on-medical-marijuana/>
- Bestrashniy, J., & Winters, K. C. (2015). Variability in medical marijuana laws in the United States. *Psychology of addictive behaviors: journal of the Society of Psychologists in Addictive Behaviors*, 29(3), 639-642.
- Bisaga, A., Sullivan, M. A., Glass, A., Mishlen, K., Pavlicova, M., Haney, M., ... & Nunes, E. V. (2015). The effects of dronabinol during detoxification and the initiation of treatment with extended release naltrexone. *Drug and alcohol dependence*, 154, 38-45.
- Blake, D. R., Robson, P., Ho, M., Jubb, R. W., & McCabe, C. S. (2006). Preliminary assessment of the efficacy, tolerability and safety of a cannabis-based medicine (Sativex®) in the treatment of pain caused by rheumatoid arthritis. *Rheumatology*, 45(1), 50-52.
- Boehnke, K F., Litinas, E., Clauw, D.J. (2016). Medical cannabis use is associated with decreased opiate medication use in a retrospective cross-sectional survey of patients with chronic pain. *The Journal of Pain*, 17.6, 739-744.
- Bonn-Miller, M. O., Loflin, M. J., Thomas, B. F., Marcu, J. P., Hyke, T., & Vandrey, R. (2017). Labeling Accuracy of Cannabidiol Extracts Sold Online. *JAMA*, 318(17), 1708-1709.
- British Medical Journal Clinical Evidence. (2012). *What is GRADE?* Retrieved from <http://clinicalevidence.bmj.com/x/set/static/ebm/learn/665072.html>
- Calabria, B., Degenhardt, L., Hall, W., & Lynskey, M. (2010). Does cannabis use increase the risk of death? Systematic review of epidemiological evidence on adverse effects of cannabis use. *Drug and alcohol review*, 29(3), 318-330.
- Caldeira, K. M., Arria, A. M., O'Grady, K. E., Vincent, K. B., & Wish, E. D. (2008). The occurrence of cannabis use disorders and other cannabis-related problems among first-year college students. *Addictive Behaviors*, 33(3), 397-411.
- Campbell, C. T., Phillips, M. S., & Manasco, K. (2017). Cannabinoids in Pediatrics. *The Journal of Pediatric Pharmacology and Therapeutics*, 22(3), 176-185.
- Cao, D., Srisuma, S., Bronstein, A. C., & Hoyte, C. O. (2016). Characterization of edible marijuana product exposures reported to United States poison centers. *Clinical toxicology*, 54(9), 840-846.
- Carrà, G., Bartoli, F., Crocamo, C., Brady, K. T., & Clerici, M. (2014). Attempted suicide in people with co-occurring bipolar and substance use disorders: systematic review and meta-analysis. *Journal of affective disorders*, 167, 125-135.
- Chen, A. (April 20, 2017). Some of the Parts: Is Marijuana's "Entourage Effect" Scientifically Valid? *Scientific American*, April 20, 2017. Retrieved from <https://www.scientificamerican.com/article/some-of-the-parts-is-marijuana-s-ldquo-entourage-effect-rdquo-scientifically-valid/>

- 
- Chen, C. Y., Storr, C. L., & Anthony, J. C. (2009). Early-onset drug use and risk for drug dependence problems. *Addictive behaviors*, 34(3), 319-322.
- Cochrane Methods Bias. (n.d.). *Assessing Risk of Bias in Included Studies*. Retrieved from <http://methods.cochrane.org/bias/assessing-risk-bias-included-studies>
- Collin, C., Davies, P., Mutiboko, I. K., & Ratcliffe, S. (2007). Randomized controlled trial of cannabis-based medicine in spasticity caused by multiple sclerosis. *European Journal of Neurology*, 14(3), 290-296.
- Collin, C., Ehler, E., Waberzinek, G., Alsindi, Z., Davies, P., Powell, K., ... & Zapletalova, O. (2010). A double-blind, randomized, placebo-controlled, parallel-group study of Sativex<sup>®</sup>, in subjects with symptoms of spasticity due to multiple sclerosis. *Neurological research*, 32(5), 451-459.
- Colorado Department of Public Health & Environment. (2016). *Medical Marijuana Registry Program Statistics December 31, 2016*. Retrieved from [https://www.colorado.gov/pacific/sites/default/files/CHED\\_MMR\\_Report\\_December\\_2016.pdf](https://www.colorado.gov/pacific/sites/default/files/CHED_MMR_Report_December_2016.pdf)
- Colorado Department of Revenue. (2015, August 10). "Marijuana Equivalency in Portion and Dosage." Retrieved from [https://www.colorado.gov/pacific/sites/default/files/MED%20Equivalency\\_Final%2008102015.pdf](https://www.colorado.gov/pacific/sites/default/files/MED%20Equivalency_Final%2008102015.pdf)
- Compassionate Access Act, H.R.715, 115<sup>th</sup> Cong. (2017).
- Compassionate Access, Research Expansion, and Respect States Act of 2015, S.683, 114<sup>th</sup> Cong. (2015)
- Compassionate Use Act of 1996, Cal. Health and Safety Code § 11362.5 (1996)
- Comprehensive Drug Abuse Prevention and Control Act, 21 U.S.C. § §801 – 904 (1970).
- Cooper, Z. D., Comer, S. D., & Haney, M. (2013). Comparison of the analgesic effects of dronabinol and smoked marijuana in daily marijuana smokers. *Neuropsychopharmacology*, 38(10), 1984-1992.
- Corey-Bloom, J., Wolfson, T., Gamst, A., Jin, S., Marcotte, T. D., Bentley, H., & Gouaux, B. (2012). Smoked cannabis for spasticity in multiple sclerosis: a randomized, placebo-controlled trial. *Canadian Medical Association Journal*, 184(10), 1143-1150.
- Cogle, J. R., Bonn-Miller, M. O., Vujanovic, A. A., Zvolensky, M. J., & Hawkins, K. A. (2011). Posttraumatic stress disorder and cannabis use in a nationally representative sample. *Psychology of Addictive Behaviors*, 25(3), 554.
- Crean, R. D., Crane, N. A., & Mason, B. J. (2011). An evidence based review of acute and long-term effects of cannabis use on executive cognitive functions. *Journal of addiction medicine*, 5(1), 1.
- Curtis, A., Rickards, H. (2006). Nabilone could treat chorea and irritability in Huntington's disease. *The Journal of neuropsychiatry and clinical neurosciences* 18.4, 553-554.
- De Graaf, M. (2017, January). Marijuana DOES cause schizophrenia and triggers heart attacks, experts say in landmark study that slams most of the drug's medical benefits as 'unproven.' *The Daily Mail*. Retrieved from <http://www.dailymail.co.uk/health/article-4114634/Marijuana-DOES->

---

cause-schizophrenia-triggers-heart-attacks-experts-say-landmark-study-slams-drug-s-medical-benefits-unproven.html

- Devinsky, O., Cross, J. H., Laux, L., Marsh, E., Miller, I., Nabbout, R., & Wright, S. (2017). Trial of cannabidiol for drug-resistant seizures in the dravet syndrome. *New England Journal of Medicine*, 376(21), 2011-2020.
- Di Giacomo, D., De Domenico, E., Sette, C., Geremia, R., & Grimaldi, P. (2016). Type 2 cannabinoid receptor contributes to the physiological regulation of spermatogenesis. *The FASEB Journal*, 30(4), 1453-1463.
- du Plessis, S. S., Agarwal, A., & Syriac, A. (2015). Marijuana, phytocannabinoids, the endocannabinoid system, and male fertility. *Journal of assisted reproduction and genetics*, 32(11), 1575-1588.
- Ellis, R. J., Toperoff, W., Vaida, F., Van Den Brande, G., Gonzales, J., Gouaux, B., ... & Atkinson, J. H. (2009). Smoked medicinal cannabis for neuropathic pain in HIV: a randomized, crossover clinical trial. *Neuropsychopharmacology*, 34(3), 672-680.
- Ending Federal Marijuana Prohibition Act of 2017, H.R.1227, 115<sup>th</sup> Cong. (2017).
- Federal Drug Administration (FDA). (September 2004). Marinol (Dronabinol) Capsules. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
- Federal Drug Administration (FDA). (May 2006). Cesamet (Nabilone) Capsules. Retrieved from [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2006/018677s011lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2006/018677s011lbl.pdf)
- Federal Drug Administration (FDA). (August 2017). Marinol (Dronabinol) Capsules. Retrieved from [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2017/018651s029lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/018651s029lbl.pdf)
- Federal Drug Administration (FDA). (November 1, 2017). FDA warns companies marketing unproven products, derived from marijuana, that claim to treat or cure cancer. Retrieved from <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm583295.htm>
- Filloux, F. M. (2015). Cannabinoids for pediatric epilepsy? Up in smoke or real science?. *Translational pediatrics*, 4(4), 271.
- Finnerup, N. B., Attal, N., Haroutounian, S., McNicol, E., Baron, R., Dworkin, R. H., ... & Kamerman, P. R. (2015). Pharmacotherapy for neuropathic pain in adults: a systematic review and meta-analysis. *The Lancet Neurology*, 14(2), 162-173.
- Fox, P., Bain, P. G., Glickman, S., Carroll, C., & Zajicek, J. (2004). The effect of cannabis on tremor in patients with multiple sclerosis. *Neurology*, 62(7), 1105-1109.
- Frank, B., Serpell, M. G., Hughes, J., Matthews, J. N. S., & Kapur, D. (2008). Comparison of analgesic effects and patient tolerability of nabilone and dihydrocodeine for chronic neuropathic pain: randomised, crossover, double blind study. *Bmj*, 336(7637), 199-201.
- Freeman, R. M., Adekanmi, O., Waterfield, M. R., Waterfield, A. E., Wright, D., & Zajicek, J. (2006). The effect of cannabis on urge incontinence in patients with multiple sclerosis: a multicentre,

---

randomised placebo-controlled trial (CAMS-LUTS). *International Urogynecology Journal*, 17(6), 636-641.

- Freeman, T. P., & Winstock, A. R. (2015). Examining the profile of high-potency cannabis and its association with severity of cannabis dependence. *Psychological medicine*, 45(15), 3181-3189.
- Gibbs, M., Winsper, C., Marwaha, S., Gilbert, E., Broome, M., & Singh, S. P. (2015). Cannabis use and mania symptoms: a systematic review and meta-analysis. *Journal of affective disorders*, 171, 39-47.
- Glass, M., Faull, R. L. M., & Dragunow, M. (1997). Cannabinoid receptors in the human brain: a detailed anatomical and quantitative autoradiographic study in the fetal, neonatal and adult human brain. *Neuroscience*, 77(2), 299-318.
- Government of Canada. (August, 2016). Understanding the New Access to Cannabis for Medical Purposes Regulations. Retrieved from <https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/understanding-new-access-to-cannabis-for-medical-purposes-regulations.html>
- Greenberg, H. S., Werness, S. A., & Pugh, J. E. (1994). Short-term effects of smoking marijuana on balance in patients with Multiple sclerosis and normal volunteers.
- Grotenhermen, F. (2003). Pharmacokinetics and pharmacodynamics of cannabinoids. *Clinical pharmacokinetics*, 42(4), 327-360.
- Gruber, S. A., Sagar, K. A., Dahlgren, M. K., Racine, M. T., Smith, R. T., & Lukas, S. E. (2016). Splendor in the Grass? A Pilot Study Assessing the Impact of Medical Marijuana on Executive Function. *Frontiers in pharmacology*, 7.
- Gunn, J. K. L., Rosales, C. B., Center, K. E., Nuñez, A., Gibson, S. J., Christ, C., & Ehiri, J. E. (2016). Prenatal exposure to cannabis and maternal and child health outcomes: a systematic review and meta-analysis. *BMJ open*, 6(4), e009986.
- Gupta, S. (2014, March 11). Medical marijuana and 'the entourage effect.' Retrieved from <http://www.cnn.com/2014/03/11/health/gupta-marijuana-entourage/index.html>
- Gutierrez, G., & Dubert, M. (2017, November 30). *Marijuana may hold promise in treating veterans with PTSD*. Retrieved from <https://www.nbcnews.com/nightly-news/marijuana-may-hold-promise-treating-veterans-ptsd-n824956>
- GW's Epidiolex® Clinical Program. (2018). Retrieved from <https://www.gwpharm.com/epilepsy-patients-caregivers/patients>
- GW Pharmaceuticals. (2015, April 22). GW Pharmaceuticals Announces New Physician Reports of Epidiolex® Treatment Effect in Children and Young Adults With Treatment-Resistant Epilepsy. *GW Pharmaceuticals*. Retrieved from <http://ir.gwpharm.com/releasedetail.cfm?ReleaseID=908097>
- Hall, W., & Solowij, N. (1998). Adverse effects of cannabis. *The Lancet*, 352(9140), 1611-1616.

- 
- Hallak, J. E., Machado-de-Sousa, J. P., Crippa, J. A. S., Sanches, R. F., Trzesniak, C., Chaves, C., ... & Zuardi, A. W. (2010). Performance of schizophrenic patients in the Stroop Color Word Test and electrodermal responsiveness after acute administration of cannabidiol (CBD). *Revista Brasileira de Psiquiatria*, 32(1), 56-61.
- Halperin, A. (2016, October 29). After the election, marijuana could be legal for recreational or medical use in 29 states. *Los Angeles Times*. Retrieved from <http://www.latimes.com/politics/la-na-pol-marijuana-initiatives-snap-story.html>
- Haney, M., Rabkin, J., Gunderson, E., & Foltin, R. W. (2005). Dronabinol and marijuana in HIV+ marijuana smokers: acute effects on caloric intake and mood. *Psychopharmacology*, 181(1), 170-178.
- Haney, M., Gunderson, E. W., Rabkin, J., Hart, C. L., Vosburg, S. K., Comer, S. D., & Foltin, R. W. (2007). Dronabinol and marijuana in HIV-positive marijuana smokers: caloric intake, mood, and sleep. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 45(5), 545-554.
- Hazekamp, A., Ruhaak, R., Zuurman, L., van Gerven, J., & Verpoorte, R. (2006). Evaluation of a vaporizing device (Volcano®) for the pulmonary administration of tetrahydrocannabinol. *Journal of pharmaceutical sciences*, 95(6), 1308-1317.
- Hazekamp, A., Ware, M. A., Muller-Vahl, K. R., Abrams, D., & Grotenhermen, F. (2013). The medicinal use of cannabis and cannabinoids—an international cross-sectional survey on administration forms. *Journal of psychoactive drugs*, 45(3), 199-210.
- Health Canada. (2013). *Information for Health Care Professionals: Cannabis (marihuana, marijuana) and the cannabinoids*. Ottawa, Ontario: Government of Canada.
- Health Canada. (2016). *A framework for the legalization and regulation of cannabis in Canada* (Publication No. 160248). Ottawa, Ontario: Government of Canada.
- Herning, R. I., Hooker, W. D., & Jones, R. T. (1986). Tetrahydrocannabinol content and differences in marijuana smoking behavior. *Psychopharmacology*, 90(2), 160-162.
- Hesse, M., & Thylstrup, B. (2013). Time-course of the DSM-5 cannabis withdrawal symptoms in poly-substance abusers. *BMC psychiatry*, 13(1), 258.
- Hickey, W. (2014, April 29). *Medical Marijuana is Still the Best Deal on Pot in Colorado*. Retrieved from <https://fivethirtyeight.com/features/medical-marijuana-is-still-the-best-deal-in-colorado/>
- Haug, N. A., Kieschnick, D., Sottile, J. E., Babson, K. A., Vandrey, R., & Bonn-Miller, M. O. (2016). Training and Practices of Cannabis Dispensary Staff. *Cannabis and Cannabinoid Research*, 1(1), 244-251.
- Is It Cheaper to Buy Weed on the Street or at a Dispensary? (2016, February 3). Retrieved from <https://priceonomics.com/the-most-expensive-and-cheapest-cities-to-buy/>
- Ishida, J. H., Peters, M. G., Jin, C., Louie, K., Tan, V., Bacchetti, P., & Terrault, N. A. (2008). Influence of cannabis use on severity of hepatitis C disease. *Clinical gastroenterology and hepatology*, 6(1), 69-75.

- 
- Jaques, S. C., Kingsbury, A., Henschke, P., Chomchai, C., Clews, S., Falconer, J., ... & Oei, J. L. (2014). Cannabis, the pregnant woman and her child: weeding out the myths. *Journal of Perinatology*, 34(6), 417.
- Jetly, R., Heber, A., Fraser, G., & Boisvert, D. (2015). The efficacy of nabilone, a synthetic cannabinoid, in the treatment of PTSD-associated nightmares: a preliminary randomized, double-blind, placebo-controlled cross-over design study. *Psychoneuroendocrinology*, 51, 585-588.
- Johnson, J. R., Burnell-Nugent, M., Lossignol, D., Ganae-Motan, E. D., Potts, R., & Fallon, M. T. (2010). Multicenter, double-blind, randomized, placebo-controlled, parallel-group study of the efficacy, safety, and tolerability of THC: CBD extract and THC extract in patients with intractable cancer-related pain. *Journal of pain and symptom management*, 39(2), 167-179.
- Jones, R. T., Benowitz, N. L., & Herning, R. I. (1981). Clinical relevance of cannabis tolerance and dependence. *The Journal of Clinical Pharmacology*, 21(S1).
- Joy, J. E., Watson, S. J., Benson, J. A. (Eds.). (1999). *Marijuana And Medicine: Assessing The Science Base*. Washington, D.C.: National Academy Press Print.
- Jutras-Aswad, D., DiNieri, J. A., Harkany, T., & Hurd, Y. L. (2009). Neurobiological consequences of maternal cannabis on human fetal development and its neuropsychiatric outcome. *European archives of psychiatry and clinical neuroscience*, 259(7), 395-412.
- Karst, M., Salim, K., Burstein, S., Conrad, I., Hoy, L., & Schneider, U. (2003). Analgesic effect of the synthetic cannabinoid CT-3 on chronic neuropathic pain: a randomized controlled trial. *Jama*, 290(13), 1757-1762.
- Karschner, E. L., Darwin, W. D., McMahon, R. P., Liu, F., Wright, S., Goodwin, R. S., & Huestis, M. A. (2011). Subjective and physiological effects after controlled Sativex® and oral THC administration. *Clinical Pharmacology & Therapeutics*, 89(3), 400-407.
- Katona, I. (2015). Cannabis and endocannabinoid signaling in epilepsy. In *Endocannabinoids* (pp. 285-316). Springer International Publishing.
- Kavia, R. B. C., De Ridder, D., Constantinescu, C. S., Stott, C. G., & Fowler, C. J. (2010). Randomized controlled trial of Sativex® to treat detrusor overactivity in multiple sclerosis. *Multiple Sclerosis Journal*, 16(11), 1349-1359.
- Kelley, M. E., Wan, C. R., Broussard, B., Crisafio, A., Cristofaro, S., Johnson, S., ... & Compton, M. T. (2016). Marijuana use in the immediate 5-year premorbid period is associated with increased risk of onset of schizophrenia and related psychotic disorders. *Schizophrenia research*, 171(1), 62-67.
- Kondrad, E., & Reid, A. (2013). Colorado family physicians' attitudes toward medical marijuana. *The Journal of the American Board of Family Medicine*, 26(1), 52-60.
- Koppel, B. S., Brust, J. C., Fife, T., Bronstein, J., Youssof, S., Gronseth, G., & Gloss, D. (2014). Systematic review: Efficacy and safety of medical marijuana in selected neurologic disorders Report of the Guideline Development Subcommittee of the American Academy of Neurology. *Neurology*, 82(17), 1556-1563.

- 
- Kowal, M. A., Hazekamp, A., & Grotenhermen, F. (2016). Review on clinical studies with cannabis and cannabinoids 2010-2014. *Multiple sclerosis*, 6, 1515.
- Krishnan, S., Cairns, R., Howard, R. (2009). Cannabinoids for the treatment of dementia. The Cochrane Library.
- Langford, R. M., Mares, J., Novotna, A., Vachova, M., Novakova, I., Notcutt, W., & Ratcliffe, S. (2013). A double-blind, randomized, placebo-controlled, parallel-group study of THC/CBD oromucosal spray in combination with the existing treatment regimen, in the relief of central neuropathic pain in patients with multiple sclerosis. *Journal of neurology*, 260(4), 984-997.
- Large, M., Sharma, S., Compton, M. T., Slade, T., & Nielssen, O. (2011). Cannabis use and earlier onset of psychosis: a systematic meta-analysis. *Archives of general psychiatry*, 68(6), 555-561.
- Lev-Ran, S., Roerecke, M., Le Foll, B., George, T. P., McKenzie, K., & Rehm, J. (2014). The association between cannabis use and depression: a systematic review and meta-analysis of longitudinal studies. *Psychological medicine*, 44(4), 797-810.
- Linszen, D. H., Dingemans, P. M., & Lenior, M. E. (1994). Cannabis abuse and the course of recent-onset schizophrenic disorders. *Archives of general psychiatry*, 51(4), 273-279.
- Lopez-Quintero, C., de los Cobos, J. P., Hasin, D. S., Okuda, M., Wang, S., Grant, B. F., & Blanco, C. (2011). Probability and predictors of transition from first use to dependence on nicotine, alcohol, cannabis, and cocaine: Results of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). *Drug and alcohol dependence*, 115(1), 120-130.
- Lu, M. L., & Agito, M. D. (2015). Cannabinoid hyperemesis syndrome: Marijuana is both antiemetic and proemetic. *Cleve Clin J Med*, 82(7), 429-34.
- Lucas, P., Reiman, A., Earleywine, M., McGowan, S. K., Oleson, M., Coward, M. P., & Thomas, B. (2013). Cannabis as a substitute for alcohol and other drugs: A dispensary-based survey of substitution effect in Canadian medical cannabis patients. *Addiction Research & Theory*, 21(5), 435-442.
- Lynch, T., & Price, A. (2007). The effect of cytochrome P450 metabolism on drug response, interactions, and adverse effects. *Am Fam Physician*, 76, 391-6.
- Mackie, K. (2008). Cannabinoid receptors: where they are and what they do. *Journal of Neuroendocrinology*, 20 Suppl 1: 10-4. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2826.2008.01671.x/full>
- Madras, B. (2015). *Update of cannabis and its medical use*. Retrieved from [http://www.who.int/medicines/access/controlled-substances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf)
- Marijuana Policy Project. (2014). Timeline of marijuana reform in the United States. Retrieved from <https://www.mpp.org/federal/>
- Martín-Sánchez, E., Furukawa, T. A., Taylor, J., & Martin, J. L. R. (2009). Systematic review and meta-analysis of cannabis treatment for chronic pain. *Pain medicine*, 10(8), 1353-1368.



- 
- Maust, D. T., Bonar, E. E., Ilgen, M. A., Blow, F. C., & Kales, H. C. (2016). Agitation in Alzheimer disease as a qualifying condition for medical marijuana in the United States. *The American Journal of Geriatric Psychiatry*, 24(11), 1000-1003.
- Mechoulam, R., & Burstein, S. H. (1973). Marijuana: Chemistry, pharmacology, metabolism and Clinical Effects. Contributors-SH Burstein [And Others]. Academic Press.
- Mechoulam, R., Panikashvili, D., & Shohami, E. (2002). Cannabinoids and brain injury: therapeutic implications. *Trends in molecular medicine*, 8(2), 58-61.
- Medical Marijuana and Epilepsy. (2017). Retrieved from <https://www.epilepsy.com/learn/treating-seizures-and-epilepsy/other-treatment-approaches/medical-marijuana-and-epilepsy>
- Meehan-Atrash, J., Luo, W., & Strongin, R. M. (2017). Toxicant Formation in Dabbing: The Terpene Story. *ACS omega*, 2(9), 6112.
- Meier, M. H., Caspi, A., Ambler, A., Harrington, H., Houts, R., Keefe, R. S., ... & Moffitt, T. E. (2012). Persistent cannabis users show neuropsychological decline from childhood to midlife. *Proceedings of the National Academy of Sciences*, 109(40), E2657-E2664.
- Meiri, E., Jhangiani, H., Vredenburg, J. J., Barbato, L. M., Carter, F. J., Yang, H. M., & Baranowski, V. (2007). Efficacy of dronabinol alone and in combination with ondansetron versus ondansetron alone for delayed chemotherapy-induced nausea and vomiting. *Current medical research and opinion*, 23(3), 533-543.
- Melton, S. T. (June, 2017). *Stirring the Pot: Potential Drug Interactions With Marijuana*. Retrieved from [http://www.medscape.com/viewarticle/881059?nlid=115679\\_785&src=WNL\\_mdplsfeat\\_170613\\_mscpedit\\_nurs&uac=226719HZ&spon=24&impID=1367261&faf=1](http://www.medscape.com/viewarticle/881059?nlid=115679_785&src=WNL_mdplsfeat_170613_mscpedit_nurs&uac=226719HZ&spon=24&impID=1367261&faf=1)
- Mikos, R.A. (December 12, 2012). On the Limits of Federal Supremacy: When States Relax (or Abandon) Marijuana Bans. Cato Institute. Policy Analysis, No. 714. Retrieved from <https://object.cato.org/sites/cato.org/files/pubs/pdf/PA714.pdf>
- Mikuriya, T. H. (2004). Cannabis as a substitute for alcohol: a harm-reduction approach. *Journal of Cannabis Therapeutics*, 4(1), 79-93.
- Moitra, E., Christopher, P. P., Anderson, B. J., & Stein, M. D. (2015). Coping-motivated marijuana use correlates with DSM-5 cannabis use disorder and psychological distress among emerging adults. *Psychology of Addictive Behaviors*, 29(3), 627.
- Moffat, B. M., Jenkins, E. K., & Johnson, J. L. (2013). Weeding out the information: an ethnographic approach to exploring how young people make sense of the evidence on cannabis. *Harm reduction journal*, 10(1), 34.
- Müller-Vahl, K. R., Schneider, U., Koblenz, A., Jöbges, M., Kolbe, H., Daldrup, T., & Emrich, H. M. (2002). Treatment of Tourette's syndrome with  $\Delta^9$ -tetrahydrocannabinol (THC): a randomized crossover trial. *Pharmacopsychiatry*, 35(02), 57-61.

- 
- Narang, S., Gibson, D., Wasan, A. D., Ross, E. L., Michna, E., Nedeljkovic, S. S., & Jamison, R. N. (2008). Efficacy of dronabinol as an adjuvant treatment for chronic pain patients on opioid therapy. *The Journal of Pain*, 9(3), 254-264.
- National Academies of Sciences, Engineering, and Medicine (National Academy of Sciences). (2017). *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research*. Washington, D.C.: National Academy Press.
- National Conference of State Legislatures (NCSL). (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>.
- National Institute on Drug Abuse (NIDA). (March 2017). NIDA's Role in Providing Marijuana for Research. Retrieved from <https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuana-research>
- National Institute on Drug Abuse (NIDA). (May 2017). Information on Marijuana Farm Contract. Retrieved from <https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuana-research/information-marijuana-farm-contract>
- New Jersey Department of Health. (2016). *The Department of Health Medicinal Marijuana Program 2016 Annual Report*. Retrieved from [http://www.nj.gov/health/medicalmarijuana/documents/annual\\_report\\_2016.pdf](http://www.nj.gov/health/medicalmarijuana/documents/annual_report_2016.pdf)
- Nurmikko, T. J., Serpell, M. G., Hoggart, B., Toomey, P. J., Morlion, B. J., & Haines, D. (2007). Sativex<sup>®</sup> successfully treats neuropathic pain characterised by allodynia: a randomised, double-blind, placebo-controlled clinical trial. *Pain<sup>®</sup>*, 133(1), 210-220.
- Ogu, C. C., & Maxa, J. L. (2000, October). Drug interactions due to cytochrome P450. In *Baylor University Medical Center. Proceedings* (Vol. 13, No. 4, p. 421). Baylor University Medical Center.
- Omar, J., Olivares, M., Alzaga, M., & Etxebarria, N. (2013). Optimisation and characterisation of marihuana extracts obtained by supercritical fluid extraction and focused ultrasound extraction and retention time locking GC - MS. *Journal of separation science*, 36(8), 1397-1404.
- Page, P. (2014). Beyond statistical significance: clinical interpretation of rehabilitation research literature. *International journal of sports physical therapy*, 9(5), 726.
- Pacher et al. (2006). The endocannabinoid system as an emerging target of pharmacotherapy. *Pharmacological Reviews* 58: 389-462. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2241751/>
- Parfieniuk, A., & Flisiak, R. (2008). Role of cannabinoids in chronic liver diseases. *World journal of gastroenterology: WJG*, 14(40), 6109.
- Park, B., McPartland, J. M., & Glass, M. (2004). Cannabis, cannabinoids and reproduction. *Prostaglandins, leukotrienes and essential fatty acids*, 70(2), 189-197.

- 
- Pergam, S. A., Woodfield, M. C., Lee, C. M., Cheng, G. S., Baker, K. K., Marquis, S. R., & Fann, J. R. (2017). Cannabis use among patients at a comprehensive cancer center in a state with legalized medicinal and recreational use. *Cancer*, 123:22, 4488-4497.
- Pooyania, S., Ethans, K., Szturm, T., Casey, A., & Perry, D. (2010). A randomized, double-blinded, crossover pilot study assessing the effect of nabilone on spasticity in persons with spinal cord injury. *Archives of physical medicine and rehabilitation*, 91(5), 703-707.
- Regulate Marijuana Like Alcohol Act, H.R.1013, 114<sup>th</sup> Cong. (2015)
- Regulate Marijuana Like Alcohol Act, H.R.1841, 115<sup>th</sup> Cong. (2017)
- Reiman, A. (2009). Cannabis as a substitute for alcohol and other drugs. *Harm Reduction Journal*, 6(1), 35.
- Rog, D. J., Nurmikko, T. J., Friede, T., & Young, C. A. (2005). Randomized, controlled trial of cannabis-based medicine in central pain in multiple sclerosis. *Neurology*, 65(6), 812-819.
- Rosenberg, C. (2016a, August 12). *Applications To Become Registered Under the Controlled Substances Act To Manufacture Marijuana To Supply Researchers in the United States*. Retrieved from <https://www.federalregister.gov/documents/2016/08/12/2016-17955/applications-to-become-registered-under-the-controlled-substances-act-to-manufacture-marijuana-to>
- Rosenberg, C. (2016b, August 12). *Denial of Petition To Initiate Proceedings To Reschedule Marijuana*. Retrieved from <https://www.federalregister.gov/documents/2016/08/12/2016-17960/denial-of-petition-to-initiate-proceedings-to-reschedule-marijuana>
- Rosenberg, E. C., Tsien, R. W., Whalley, B. J., & Devinsky, O. (2015). Cannabinoids and epilepsy. *Neurotherapeutics*, 12(4), 747-768.
- Rough, L. (June, 2017). *Leafly's State-by-State Guide to Cannabis Testing Regulations*. Retrieved from <https://www.leafly.com/news/industry/leaflys-state-by-state-guide-to-cannabis-testing-regulations>
- Rubin, R. (2017). Medical Marijuana Is Legal in Most States, but Physicians Have Little Evidence to Guide Them. *Jama*, 317(16), 1611-1613.
- Russo, E. B. (2011). Taming THC: potential cannabis synergy and phytocannabinoid-terpenoid entourage effects. *British journal of pharmacology*, 163(7), 1344-1364.
- Russo, E., & Guy, G. W. (2006). A tale of two cannabinoids: the therapeutic rationale for combining tetrahydrocannabinol and cannabidiol. *Medical hypotheses*, 66(2), 234-246.
- Schoeler, T., Kambeitz, J., Behlke, I., Murray, R., & Bhattacharyya, S. (2016). The effects of cannabis on memory function in users with and without a psychotic disorder: findings from a combined meta-analysis. *Psychological medicine*, 46(01), 177-188.
- Schuster, R. M., Hoepfner, S. S., Evins, A. E., & Gilman, J. M. (2016). Early onset marijuana use is associated with learning inefficiencies. *Neuropsychology*, 30(4), 405.
- Skrabek, R. Q., Galimova, L., Ethans, K., & Perry, D. (2008). Nabilone for the treatment of pain in fibromyalgia. *The Journal of Pain*, 9(2), 164-173.

- 
- Smith, M. J., Cobia, D. J., Reilly, J. L., Gilman, J. M., Roberts, A. G., Alpert, K. I., ... & Csernansky, J. G. (2015). Cannabis-related episodic memory deficits and hippocampal morphological differences in healthy individuals and schizophrenia subjects. *Hippocampus*, 25(9), 1042-1051.
- Söderpalm, A. H., Schuster, A., & de Wit, H. (2001). Antiemetic efficacy of smoked marijuana: subjective and behavioral effects on nausea induced by syrup of ipecac. *Pharmacology Biochemistry and Behavior*, 69(3), 343-350.
- Solowij, N., & Pesa, N. (2012). Cannabis and cognition: short and long-term effects. *Marijuana and madness*, 2, 91-102.
- Stockburger, S. (2016). Forms of administration of cannabis and their efficacy. *Journal of Pain Management*, 9(4), 381.
- Stout, S. M., & Cimino, N. M. (2014). Exogenous cannabinoids as substrates, inhibitors, and inducers of human drug metabolizing enzymes: a systematic review. *Drug metabolism reviews*, 46(1), 86-95.
- Strouse, T. B. (2016). Cannabinoids in Medical Practice. *Alternative & Complementary Therapies*, 22(2).
- Svendsen, K. B., Jensen, T. S., & Bach, F. W. (2004). Does the cannabinoid dronabinol reduce central pain in multiple sclerosis? Randomised double blind placebo controlled crossover trial. *Bmj*, 329(7460), 253.
- Tashkin, D. P. (2013). Effects of marijuana smoking on the lung. *Annals of the American Thoracic Society*, 10(3), 239-247.
- Thiele, E. A., Marsh, E. D., French, J. A., Mazurkiewicz-Beldzinska, M., Benbadis, S. R., Joshi, C., ... & Gunning, B. (2018). Cannabidiol in patients with seizures associated with Lennox-Gastaut syndrome (GWPCARE4): a randomised, double-blind, placebo-controlled phase 3 trial. *The Lancet*, 391(10125), 1085-1096.
- Thompson, G. R., Tuscano, J. M., Dennis, M., Singapuri, A., Libertini, S., Gaudino, R., ... & Engelthaler, D. M. (2017). A microbiome assessment of medical marijuana. *Clinical Microbiology and Infection*, 23(4), 269-270.
- Timpone, J. G., Wright, D. J., Li, N., Egorin, M. J., Enama, M. E., Mayers, J., & Galetto, G. (1997). The safety and pharmacokinetics of single-agent and combination therapy with megestrol acetate and dronabinol for the treatment of HIV wasting syndrome. *AIDS research and human retroviruses*, 13(4), 305-315.
- Tortoriello, G., Morris, C. V., Alpar, A., Fuzik, J., Shirran, S. L., Calvigioni, D., ... & Courtney, M. (2014). Miswiring the brain:  $\Delta^9$ -tetrahydrocannabinol disrupts cortical development by inducing an SCG10/stathmin-2 degradation pathway. *The EMBO journal*, 33(7), 668-685.
- Turcotte, D., Doupe, M., Torabi, M., Gomori, A., Ethans, K., Esfahani, F., ... & Namaka, M. (2015). Nabilone as an adjunctive to gabapentin for multiple sclerosis-induced neuropathic pain: a randomized controlled trial. *Pain Medicine*, 16(1), 149-159.
- U.S. Department of Justice, Drug Enforcement Administration (DEA). (November 8, 2017). Established Aggregate Production Quotas for Schedule I and II Controlled Substances and Assessment of

- 
- Annual Needs for the List I Chemicals Ephedrine, Pseudoephedrine, and Phenylpropanolamine for 2018. 82 FR 51873. Retrieved from <https://www.federalregister.gov/documents/2017/11/08/2017-24306/established-aggregate-production-quotas-for-schedule-i-and-ii-controlled-substances-and-assessment>
- U.S. Department of Justice, Office of Public Affairs (DOJ). (October 19, 2009). *Attorney General Announces Formal Medical Marijuana Guidelines*. Retrieved October 4, 2017 from <https://www.justice.gov/opa/pr/attorney-general-announces-formal-medical-marijuana-guidelines>
- U.S. Department of Justice, Office of Deputy Attorney General (DOJ). (June 29, 2011). Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use. Retrieved from <https://www.justice.gov/sites/default/files/oip/legacy/2014/07/23/dag-guidance-2011-for-medical-marijuana-use.pdf>
- U.S. Department of Justice, Office of Deputy Attorney General (DOJ). (August 29, 2013). Guidance Regarding Marijuana Enforcement. Retrieved from <https://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>
- U.S. Department of Justice, Office of Deputy Attorney General (DOJ). (February 14, 2013). Guidance Regarding Marijuana Related Financial Crimes. Retrieved from <https://www.justice.gov/sites/default/files/usao-wdwa/legacy/2014/02/14/DAG%20Memo%20-%20Guidance%20Regarding%20Marijuana%20Related%20Financial%20Crimes%202%2014%2014%20%282%29.pdf>
- U.S. Department of Justice, Drug Enforcement Administration (DEA). (2014). Disposal Act: General Public Fact Sheet. Retrieved from [https://www.deadiversion.usdoj.gov/drug\\_disposal/fact\\_sheets/disposal\\_public.pdf](https://www.deadiversion.usdoj.gov/drug_disposal/fact_sheets/disposal_public.pdf)
- U.S. Department of Justice, Drug Enforcement Administration (DEA). (8/12/16). 81 FR 53687
- U.S. Department of Justice, Office of Executive Office for United States Attorneys (DOJ). (October 28, 2014). Policy Statement Regarding Marijuana Issues in Indian Country. Retrieved from <https://www.justice.gov/sites/default/files/tribal/pages/attachments/2014/12/11/policystatementregardingmarijuanaissuesinindiancountry2.pdf>
- U.S. Department of Justice, Office of the Attorney General. (January 4, 2018). Marijuana Enforcement. Retrieved from <https://www.justice.gov/opa/press-release/file/1022196/download>
- U.S. Department of Transportation. National Highway Traffic Safety Administration (NHTSA). (2017). Marijuana-Impaired Driving A Report to Congress. Retrieved from <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-driving-report-to-congress.pdf>
- U.S. National Library of Medicine, National Institutes of Health. (2018). Drug Information Portal: Quick Access to Quality Drug Information. Retrieved from <https://druginfo.nlm.nih.gov/drugportal/>
- Van Den Elsen, G. A., Ahmed, A. I., Verkes, R. J., Kramers, C., Feuth, T., Rosenberg, P. B., ... & Rikkert, M. G. O. (2015). Tetrahydrocannabinol for neuropsychiatric symptoms in dementia A randomized controlled trial. *Neurology*, 84(23), 2338-2346.

- 
- Vandrey, R., Raber, J. C., Raber, M. E., Douglass, B., Miller, C., & Bonn-Miller, M. O. (2015). Cannabinoid dose and label accuracy in edible medical cannabis products. *Jama*, 313(24), 2491-2493.
- Vaney, C., Heinzel-Gutenbrunner, M., Jobin, P., Tschopp, F., Gattlen, B., Hagen, U., ... & Reif, M. (2004). Efficacy, safety and tolerability of an orally administered cannabis extract in the treatment of spasticity in patients with multiple sclerosis: a randomized, double-blind, placebo-controlled, crossover study. *Multiple Sclerosis*, 10(4), 417-424.
- Vergara, D., Bidwell, L. C., Gaudino, R., Torres, A., Du, G., Ruthenburg, T. C., ... & Kane, N. C. (2017). Compromised External Validity: Federally Produced Cannabis Does Not Reflect Legal Markets. *Scientific reports*, 7, 46528.
- Verweij, K. J., Zietsch, B. P., Lynskey, M. T., Medland, S. E., Neale, M. C., Martin, N. G., ... & Vink, J. M. (2010). Genetic and environmental influences on cannabis use initiation and problematic use: a meta - analysis of twin studies. *Addiction*, 105(3), 417-430.
- Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. (2014). Adverse health effects of marijuana use. *New England Journal of Medicine*, 370(23), 2219-2227.
- Volkow, N. D., Swanson, J. M., Evins, A. E., DeLisi, L. E., Meier, M. H., Gonzalez, R., ... & Baler, R. (2016). Effects of cannabis use on human behavior, including cognition, motivation, and psychosis: a review. *JAMA psychiatry*, 73(3), 292-297.
- Wade, D. T., Robson, P., House, H., Makela, P., & Aram, J. (2003). A preliminary controlled study to determine whether whole-plant cannabis extracts can improve intractable neurogenic symptoms. *Clinical rehabilitation*, 17(1), 21-29.
- Wade, D. T., Makela, P., Robson, P., House, H., & Bateman, C. (2004). Do cannabis-based medicinal extracts have general or specific effects on symptoms in multiple sclerosis? A double-blind, randomized, placebo-controlled study on 160 patients. *Multiple Sclerosis Journal*, 10(4), 434-441.
- Wade, D. T., Collin, C., Stott, C., & Duncombe, P. (2010). Meta-analysis of the efficacy and safety of Sativex® (nabiximols), on spasticity in people with multiple sclerosis. *Multiple Sclerosis Journal*, 16(6), 707-714.
- Wallace, M., Schulteis, G., Atkinson, J. H., Wolfson, T., Lazzaretto, D., Bentley, H., ... & Abramson, I. (2007). Dose-dependent effects of smoked cannabis on capsaicin-induced pain and hyperalgesia in healthy volunteers. *The Journal of the American Society of Anesthesiologists*, 107(5), 785-796.
- Wallace, M. S., Marcotte, T. D., Umlauf, A., Gouaux, B., & Atkinson, J. H. (2015). Efficacy of inhaled cannabis on painful diabetic neuropathy. *The Journal of Pain*, 16(7), 616-627.
- Walsh, Z., Gonzalez, R., Crosby, K., Thiessen, M. S., Carroll, C., & Bonn-Miller, M. O. (2017). Medical cannabis and mental health: A guided systematic review. *Clinical psychology review*, 51, 15-29.
- Ware, M. A., Fitzcharles, M. A., Joseph, L., & Shir, Y. (2010). The effects of nabilone on sleep in fibromyalgia: results of a randomized controlled trial. *Anesthesia & Analgesia*, 110(2), 604-610.

- 
- Ware, M. A., Wang, T., Shapiro, S., Collet, J. P., Boulanger, A., Esdaile, J. M., ... & O'Connell, C. (2015). Cannabis for the management of pain: assessment of safety study (COMPASS). *The Journal of Pain*, 16(12), 1233-1242.
- Ware, M. A., Wang, T., Shapiro, S., Robinson, A., Ducruet, T., Huynh, T., ... & Collet, J. P. (2010). Smoked cannabis for chronic neuropathic pain: a randomized controlled trial. *Canadian Medical Association Journal*, 182(14), E694-E701.
- Webster, G. B., & Sarna, L. P. (2002). U.S. Patent No. 6,403,126. Washington, DC: U.S. Patent and Trademark Office.
- Weier, M., & Hall, W. (2017). The Use of Cannabinoids in Treating Dementia. *Current Neurology and Neuroscience Reports*, 17(8), 56.
- Whiting, P. F., Wolff, R. F., Deshpande, S., Di Nisio, M., Duffy, S., Hernandez, A. V., ... & Schmidtkofer, S. (2015). Cannabinoids for medical use: a systematic review and meta-analysis. *Jama*, 313(24), 2456-2473.
- Wilkinson, S. T., Radhakrishnan, R., & D'Souza, D. C. (2014). Impact of cannabis use on the development of psychotic disorders. *Current addiction reports*, 1(2), 115-128.
- Wilsey, B., Marcotte, T., Tsodikov, A., Millman, J., Bentley, H., Gouaux, B., & Fishman, S. (2008). A randomized, placebo-controlled, crossover trial of cannabis cigarettes in neuropathic pain. *The Journal of Pain*, 9(6), 506-521.
- Wilsey, B., Marcotte, T., Deutsch, R., Gouaux, B., Sakai, S., & Donaghe, H. (2013). Low-dose vaporized cannabis significantly improves neuropathic pain. *The Journal of Pain*, 14(2), 136-148.
- Yamaori, S., Kushiara, M., Yamamoto, I., & Watanabe, K. (2010). Characterization of major phytocannabinoids, cannabidiol and cannabinol, as isoform-selective and potent inhibitors of human CYP1 enzymes. *Biochemical pharmacology*, 79(11), 1691-1698.
- Yamaori, S., Ebisawa, J., Okushima, Y., Yamamoto, I., & Watanabe, K. (2011). Potent inhibition of human cytochrome P450 3A isoforms by cannabidiol: role of phenolic hydroxyl groups in the resorcinol moiety. *Life sciences*, 88(15), 730-736.
- Yücel, M., Solowij, N., Respondek, C., Whittle, S., Fornito, A., Pantelis, C., & Lubman, D. I. (2008). Regional brain abnormalities associated with long-term heavy cannabis use. *Archives of general psychiatry*, 65(6), 694-701.
- Zajicek, J., Fox, P., Sanders, H., Wright, D., Vickery, J., Nunn, A., ... & UK MS research group. (2003). Cannabinoids for treatment of spasticity and other symptoms related to multiple sclerosis (CAMS study): multicentre randomised placebo-controlled trial. *The lancet*, 362(9395), 1517-1526.
- Zajicek, J. P., Hobart, J. C., Slade, A., Barnes, D., Mattison, P. G., & MUSEC Research Group. (2012). Multiple sclerosis and extract of cannabis: results of the MUSEC trial. *Journal of Neurology, Neurosurgery & Psychiatry*, 83(11), 1125-1132.

---

Zanger, U. M., & Schwab, M. (2013). Cytochrome P450 enzymes in drug metabolism: regulation of gene expression, enzyme activities, and impact of genetic variation. *Pharmacology & therapeutics*, 138(1), 103-141.



## NCSBN Guidelines for APRNs: Certifying a Medical Marijuana Program Qualifying Condition

### Purpose of the guidelines

Over 31 jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical use. Several NCSBN associate member jurisdictions also have legalized cannabis for medical use.\* Each medical marijuana program has unique characteristics. In the United States, cannabis is a Schedule I Controlled Substance. Therefore, medical cannabis is unlike most other therapeutics in that providers cannot prescribe cannabis, nor can pharmacies dispense cannabis. However, applicable jurisdiction statutes and rules provide for the manufacture, distribution, and use of cannabis for medical purposes.

These guidelines provide advanced practice registered nurses (APRNs) with principles of safe and knowledgeable practice to promote patient safety when certifying a medical marijuana qualifying condition.

### Definitions

**Cannabis.** Any raw preparation of the leaves or flowers from the plant genus *Cannabis*. This report uses “cannabis” as a shorthand that also includes cannabinoids.

**Cannabidiol (CBD).** A major cannabinoid that indirectly antagonizes cannabinoid receptors, which may attenuate the psychoactive effects of tetrahydrocannabinol.

**Cannabinoid.** Any chemical compound that acts on cannabinoid receptors. These include endogenous and exogenous cannabinoids.

**Cannabinol (CBN).** A cannabinoid more commonly found in aged cannabis as a metabolite of other cannabinoids. It is nonpsychoactive.

**Certify.** The act of confirming that a patient has a qualifying condition. Many jurisdictions use alternative phrases such as “attest” or “authorize”; however, 13 of 29 jurisdictions use “certify” language in their statutes.

**Clinical research.** An activity that involves studies that experimentally assign randomized human participants to one or more drug interventions to evaluate the effects on health outcomes.

**Designated caregiver.** An individual who is selected by the Medical Marijuana Program qualifying patient and authorized by the Medical Marijuana Program to purchase and/or administer cannabis on the patient’s behalf. Also sometimes referred to as an “alternate caregiver.”

---

\* In Australia, cannabis for medical use is federally legal, with states allowed to implement as they see fit. Although Bermuda has not legislated use of marijuana, its Supreme Court ruled that citizens could apply for personal licenses to possess cannabis for medical use. Cannabis for medical use is federally legal in all provinces of Canada. In New Zealand, physicians may prescribe CBD and cannabis-based products.

---

**Dronabinol.** The generic name for synthetic tetrahydrocannabinol. It is the active ingredient in the U.S. Food & Drug Administration (FDA)-approved drug Marinol®.

**Endocannabinoid system.** A system that consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.

**Marijuana.** A cultivated cannabis plant, whether for recreational or medicinal use. The words “marijuana” and “cannabis” are often used interchangeably in various lay and scientific literature. These guidelines will primarily use the word “cannabis.” When referring to a medical marijuana program, the guidelines will use the word “marijuana,” as it is often used within program references.

**Medical Marijuana Program (MMP).** The official jurisdictional resource for the use of cannabis for medical purposes. Search the jurisdiction’s website or Department of Health for “medical cannabis program” or “medical marijuana program.”<sup>1</sup>

**Nabilone.** The generic name for a synthetic cannabinoid similar to tetrahydrocannabinol. It is the active ingredient<sup>1</sup> in the FDA-approved drug Cesamet™.

**Schedule I Controlled Substance.** Defined in the federal Controlled Substances Act<sup>2</sup> as those substances that have a high potential for abuse; no currently accepted medical use in treatment in the United States; and a lack of accepted safety for use of the substance under medical supervision.

**Tetrahydrocannabinol (THC).** One of many cannabinoids found in cannabis. THC is the primary substance responsible for most of the characteristic psychoactive effects of cannabis.<sup>3</sup>

## **Evidence-Based Guidelines APRN Responsibilities**

### **Essential Knowledge**

1. The APRN shall have a working knowledge of the current state of legalization of medical and recreational cannabis use.
  - *The Drug Enforcement Agency (DEA) classifies cannabis as a Schedule I Controlled Substance. This classification not only prohibits practitioners from prescribing cannabis, it also prohibits most research using cannabis, except under rigorous oversight from the government.*<sup>4</sup>
  - *The process for obtaining cannabis for federally funded research purposes is a cumbersome process and unlike any other drug research. Currently, the only legal source of cannabis for research purposes is grown in limited quantities at the University of Mississippi.*<sup>5</sup> *The DEA sets a quota for the amount of cannabis that can be grown for research studies.*<sup>6</sup> *Applications to use this source of cannabis must be made to the U.S. Food & Drug Administration (FDA), DEA, and National Institute on Drug Abuse.*<sup>7</sup>
  - *Over 31 jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical purposes. In these laws, the jurisdiction has adopted exemptions legalizing the use of cannabis for medical purposes. Although the use of marijuana pursuant to authorized medical marijuana programs (MMPs) conflicts with federal law and regulations, at present there is no controlling case law holding that Congress intended to preempt the field of regulation of cannabis use under its supremacy powers.*<sup>8</sup>
  - *An increasing proportion of jurisdictions have also decriminalized or legalized recreational cannabis use.*<sup>9</sup>
  - *The federal government’s position on prosecuting the use of cannabis that is legal under applicable jurisdiction law has been set out in U.S. Department of Justice position papers. In 2009, the U.S.*

---

*Attorney General took a position that discourages federal prosecutors from prosecuting people who distribute or use cannabis for medical purposes in compliance with applicable jurisdiction law; further similar guidance was given in 2011, 2013, and 2014.<sup>10</sup> In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement. The 2018 memorandum<sup>11</sup> provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely, the prosecution is to weigh all relevant considerations, including priorities set by the attorneys general, seriousness of the crime, deterrent effect of criminal prosecution, and cumulative impact of particular crimes on the community.*

2. The APRN shall have a working knowledge of the jurisdiction's MMP.
  - *MMPs are defined and described within the statute and rules of the specific jurisdiction. The relevant statute or rules are most easily located through the jurisdiction's Department of Health and MMP.<sup>12</sup> Laws and rules regarding MMPs are an evolving process. Always confirm use of the most recent versions.*
  - *A health care provider does not prescribe cannabis.*
  - *The MMP will specify the qualifying conditions and the certifying process as well as the type of health care provider who can certify a qualifying condition.<sup>13</sup>*
  - *Specific MMP statutes define the bona fide health care provider– patient relationship necessary for authorization to certify a patient as having a qualifying condition. Some statutes require a preexisting and ongoing relationship with the patient as a treating health care provider; others note that the relationship may not be limited to issuing a written certification for the patient or a consultation simply for that purpose.<sup>14</sup> Verification of the existence of the required provider-patient relationship and documentation of the certification within the jurisdiction's MMP is essential.*
  - *The MMP will specify whether an APRN can certify a qualifying condition and whether a specific course or training is required in order to participate in certifying an MMP qualifying condition.<sup>15</sup>*
  - *After the qualifying condition is certified, the patient registers with the MMP. Once registered, the patient can obtain cannabis from a jurisdiction-authorized cannabis dispensary.*
  - *Procurement and administration of cannabis for medical purposes is limited to the patient and/or the patient's designated caregiver. The MMPs will specify whether designated caregivers are permissible as well as the applicable process for registration as a designated caregiver.<sup>16</sup>*
  - *In some jurisdictions, the MMP allows an employee of a hospice provider or nursing or medical facility, or a visiting nurse, personal care attendant, or home health aide to act as a designated caregiver for the administration of medical marijuana.<sup>17</sup>*
3. The APRN shall have an understanding of the endocannabinoid system, cannabinoid receptors, cannabinoids and the interactions between them.
  - *The endocannabinoid system consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.<sup>18</sup>*
  - *Discovered in 1973, this system includes a series of cannabinoid receptors throughout the body embedded in cell membranes that, when stimulated by endocannabinoids, are thought to promote homeostasis.<sup>19</sup>*
  - *Endocannabinoids are naturally occurring substances within the body, while phytocannabinoids (plant substances that stimulate cannabinoid receptors) are found in cannabis.<sup>20</sup>*
  - *The most well known of these cannabinoids is tetrahydrocannabinol (THC); however, cannabidiol (CBD) and cannabitol (CBN) are gaining interest in therapeutic use.<sup>21</sup>*

- 
4. The APRN shall have an understanding of cannabis pharmacology and the research associated with the medical use of cannabis.

*Due to government restrictions on research involving cannabis, the surge of legislation has outpaced research, leaving nurses with few resources when caring for patients who use medical cannabis. Therefore, information regarding medicinal use of cannabis must be derived from moderate- to high-quality evidence using randomized placebo-controlled studies. These particular studies are the most likely to elucidate causality in treatments and are the only trusted source of evidence for cannabis as a clinical intervention. Research on cannabis is an evolving body of work. As with any scientific literature, it is important to rely on the most recent high-quality evidence.*

- a. Current scientific evidence exists for the use of cannabis for the following qualifying conditions:
- *Moderate- to high-quality evidence exists for*
    - *cachexia*
    - *chemotherapy-induced nausea and vomiting*
    - *pain (resulting from cancer or rheumatoid arthritis)*
    - *chronic pain (resulting from fibromyalgia)*
    - *neuropathies (resulting from HIV/AIDS, multiple sclerosis [MS], or diabetes)*
    - *spasticity (from MS or spinal cord injury)<sup>22</sup>*
  - *No human studies have confirmed evidence for neuroprotective, anti-inflammatory, antitumoral, and antibacterial effects of cannabinoids. Some preclinical animal and cellular studies do provide evidence for those effects; however, no generalizations can be made to the human population.<sup>23</sup>*
  - *The treatment of some symptomology might be attributed to the more general and well-known effects of cannabis. Cannabis is a known sedative, appetite stimulant, and euphoriant. Instead of cannabis treating underlying symptoms, these three effects of cannabis may only mask symptoms and increase a subjective sense of well-being, which could improve self-reported quality of life in patients that have difficulty sleeping, chronic pain, or poor appetite.<sup>24</sup>*
- b. Adverse effects of cannabis are influenced by the patient's condition and current medications
- *The patient's propensity for the following may be exacerbated by cannabis: increased heart rate, increased appetite, sleepiness, dizziness, decreased blood pressure, dry mouth/dry eyes, decreased urination, hallucination, paranoia, anxiety, impaired attention, memory, and psychomotor performance.<sup>25</sup>*
  - *Some participants report fatigue, suicidal ideation, nausea, asthenia, and vertigo as adverse effects of cannabis.<sup>26</sup>*
  - *People with asthma, bronchitis, and emphysema should be cautioned not to use smoked cannabis. People with cardiac disease, alcohol or other drug dependence, or whose illnesses may be exacerbated by cannabis use should be cautioned.<sup>27</sup>*
  - *Cognitive impairment by cannabis may be dose- and age-dependent.<sup>28</sup>*
  - *It is highly likely that cannabis will exacerbate symptoms of poor balance and posture in patients with dyskinetic disorders. Similarly, cannabis may worsen mental faculties in conditions that cause cognitive deficits. Patients who suffer from diseases with neurologic symptomology may show greater cognitive impairment.<sup>29</sup>*
  - *Higher-than-normal blood concentrations of cannabinoids, usually from overconsumption of edible cannabis product, can cause prolonged and often debilitating psychoses or hyperemesis syndrome.<sup>30</sup>*
  - *Cannabinoid receptors are effectively absent in the brainstem cardiorespiratory centers. This is believed to preclude the possibility of a fatal overdose from cannabinoid intake.<sup>31</sup>*

- 
- *Cannabis use disorder is defined as a problematic pattern of cannabis use leading to clinically significant impairment or distress; the clinical indications are included in the DSM-5.*<sup>32</sup>
  - *Cannabis withdrawal syndrome has been identified as a syndrome seen in some patients whose cannabis use has been heavy and prolonged (i.e., usually daily or almost daily use over a period of at least a few months). The withdrawal syndrome has varying symptomatology, including insomnia, loss of appetite, physical symptoms, and restlessness initially, irritability/anger, then vivid and unpleasant dreams after a week.*<sup>33</sup>
- c. Variable effects of cannabis are dependent on type of product and route of administration
- *The only reliably studied method for the administration of nonsynthetic cannabinoids is smoked cannabis. Insufficient evidence exists for vaporized cannabis, edibles, dabbing, etc. However, FDA-approved synthetic THC drugs (dronabinol and nabilone) are administered orally or by an oromucosal route.*<sup>34</sup>
  - *Edible cannabis products may have delayed effects.*<sup>35</sup>
  - *Therapeutic topical applications of cannabis have not been reliably studied. Tinctures have a wide range of possible applications (oromucosal, food additive, tea, etc.) and not all methods of administration have been reliably researched. Patients must be aware that concentrations may vary from those listed and to purchase these formulations from a reliable dispensary.*<sup>36</sup>
  - *Sublingual and mucosal sprays have the benefit of directly accessing the bloodstream. Oromucosal doses have less dosage variability than smoked cannabis and edibles, but are limited by slower absorption and lower rate of THC delivery to the brain.*<sup>37</sup>
  - *Smoked and vaporized cannabis has the advantage of rapid absorption into the bloodstream. Vaporization creates fewer pyrolytic compounds that irritate respiratory tissue. However, both methods show significant loss of active compounds lost to combustion and exhalation.*<sup>38</sup>
  - *Routes of administration other than oral, oromucosal, smoked, or vaporized have not been studied in a clinical setting.*
  - *Butane honey oil (or other oils used for superheated vaporization known as “dabbing”),<sup>39</sup> hashish, and other solvent-extracted resins often carry impurities, especially when manufactured by nonprofessionals. These methods of administration have not been adequately studied in a clinical setting.*
- d. Principles of dosage titration
- *Since medical cannabis is not an FDA drug, there is no recommended dosage.*
  - *There is a wide variability of cannabis concentration in different cannabis preparations. Due to this wide variability, principles of dosage titration (start low, go slow) and evaluation of specific effect are beneficial.*
  - *Patients will need to titrate their dosage to establish an efficacious and stable dosing schedule over 1 to 2 weeks.*<sup>40</sup>
  - *Continual patient assessment of perceived efficacy and adverse effects is recommended. Useful strategies include tracking dose, symptoms, relief, and adverse effects in a journal for review with the authorizing practitioner.*
- e. Risks to particular groups of patients
- *Adolescence. Many studies show a correlation between cannabis use and poor grades, high dropout rates, lower income, lower percentage of college degree completion, greater need for economic assistance, unemployment, and use of other drugs.*<sup>41</sup> *Although these trends are related to recreational rather than cannabis for medical use, the trends cannot be ignored but should be balanced with the benefits of cannabis for medical use.*

- 
- *Fertility. Two preclinical studies indicate that interference with endogenous cannabinoids might increase chances of failed embryo implantation<sup>42</sup> and cannabinoids are capable of dysregulating hormones, which in turn can affect spermatogenesis.<sup>43</sup>*
  - *Neonate. Presently there are no reliable data for neurodevelopmental outcomes with early exposure to cannabis in neonatal life, through either breastfeeding or secondhand inhalation.<sup>44,45,46</sup>*
  - *Cannabis can be a drug of abuse and precautions should be taken to minimize the risk of misuse and abuse.*
  - *Individuals with a risk of suicide or history of suicide attempt, schizophrenia, bipolar disorder, or other psychotic condition should be cautioned that cannabis use might exacerbate existing psychoses.<sup>47</sup>*
5. The APRN shall be able to recognize signs and symptoms of cannabis use disorder and cannabis withdrawal syndrome.
- *Cannabis use disorder is defined as a problematic pattern of cannabis use leading to clinically significant impairment or distress; the clinical indications are included in the DSM-5.<sup>48</sup>*
  - *Cannabis withdrawal syndrome has been identified as a syndrome seen in some patients whose cannabis use has been heavy and prolonged (i.e., usually daily or almost daily use over a period of at least a few months). The withdrawal syndrome has varying symptomatology, including insomnia, loss of appetite, physical symptoms, and restlessness initially, then irritability/anger, vivid and unpleasant dreams after a week.<sup>49</sup>*
6. The APRN shall have an understanding of the safety considerations for patient use of cannabis.
- *Administration of cannabis for medical use can only be carried out by the certified patient and/or designated caregivers registered to care for the patient.*
  - *Cannabinoids have the possibility of altering the metabolic breakdown of certain drugs. Departures from normal drug metabolism can result in higher or lower than expected plasma levels, which can cause dangerous drug interactions.<sup>50</sup> Information on possible interactions is available for the synthetic cannabinoids dronabinol and nabilone on the Drug Information Portal.<sup>51</sup> The interactions listed in the Drug Information Portal are not exhaustive and not directly transferable to nonsynthetic cannabinoids. Many of the listed interactions are probable interactions, as there are not sufficient studies into cannabinoid interactions.*
  - *Storage considerations include:*
    - *keeping cannabis out of the reach of children, minors, and nonregistered individuals*
    - *storing all cannabis products in a locked area*
    - *keeping cannabis in the original child-resistant packaging*
    - *storing raw cannabis in a cool, dry, place*
    - *following labeling guidelines for storage and expiration dates*
  - *Disposal of unused cannabis products should be completed according to the DEA's Disposal Act.<sup>52</sup> Generally, one can locate a collection receptacle via the DEA registration Call Center (800-882-9539).*

#### **Clinical Encounter and Identification of a Qualifying Condition**

1. The APRN shall perform a clinical assessment within the framework of a professional provider/patient relationship during an in-person encounter, including a complete assessment of the patient and a review of diagnostic information in order to identify whether the patient has a condition specified in the MMP.

---

*An in-person encounter is the appropriate setting for a comprehensive and systematic assessment as a foundation for decision making related to the patient's condition and whether the condition meets the qualifying conditions in the particular MMP.*

2. The APRN shall review the patient's current treatment for the qualifying condition and the response to that treatment.

*Safe practice includes review of treatment history for the qualifying condition and the effectiveness of the past and current treatment.*

3. The APRN shall complete a thorough medication reconciliation as well as a review of the jurisdiction's prescription drug monitoring program.

*Safe practice includes a thorough review of the medication history, including any potential drug precautions or interactions with cannabis.*

4. The APRN shall review the patient's mental health, alcohol, and substance use history and if present, seek a consultation or referral for that use.

*Cannabis can be a drug of abuse and precautions should be taken to minimize the risk of misuse and abuse.<sup>53</sup> Additionally, individuals with a risk of suicide or history of suicide attempt, schizophrenia, bipolar disorder, or other psychotic condition should be cautioned that cannabis use may exacerbate existing psychoses.<sup>54</sup>*

5. The APRN shall gather specific historical and current information regarding the patient's experience with cannabis and discuss the patient's values, preferences, needs, and knowledge related to cannabis use.

*Although there is a growing cultural acceptance of cannabis for medical indications, it has long been known as an illegal substance. The negotiation of patient-centered, culturally appropriate, evidence-based goals and modalities of care is necessary in nursing care, especially when discussing medical marijuana as a treatment option.*

6. The decision to certify the MMP qualifying condition is not to be predicated on the existence of a qualifying condition alone. The APRN shall consider the available scientific evidence for the specific qualifying condition prior to certifying the qualifying condition including:

- *present scientific evidence for cannabis use with the specific qualifying condition*
- *adverse effects according to the patient's clinical presentation*
- *variable effects of cannabis*
- *principles of dose titration*
- *risks to particular groups of patients, such as those of childbearing age, pregnant, neonates, adolescents, and individuals at risk for substance abuse*

7. The APRN shall determine the ongoing monitoring and evaluation of the patient.

*Active participation via ongoing monitoring, patient diaries, follow-up appointments, and evaluation of effects and response to medical marijuana is advisable.*

---

### **Informed and Shared Decision Making**

1. The APRN shall provide information to the patient and family members/caregivers regarding:
  - *scientific evidence for cannabis for the qualifying condition*
  - *adverse effects of cannabis use based on the patient's condition and current medications*
  - *variable effects of cannabis*
  - *lack of cannabis product standardization*
  - *principles of dosage titration*
  - *safety considerations for the use of cannabis*
  - *individualized goals of medical marijuana therapy*
    - *Disclose to the patient that the current evidence regarding the medical use of cannabis is largely based on case reports and observational studies. The patient's response to cannabis may be different. Until more clinical evidence is collected, it is difficult to predict how cannabis will affect the patient.*
    - *Medical marijuana is not covered by health insurance and costs can vary depending on the frequency of dosage.*
  - *requirements for ongoing monitoring and evaluation*
    - *Recommendations include active patient participation in ongoing monitoring via patient diary/journal, follow-up appointments, and evaluation of effects and response to cannabis.*
2. Together, the APRN and the patient shall make the decision whether or not to proceed with certifying the qualifying condition.

*When all reasonable options have been discussed, and the patient understands the possible outcomes of each option, it is the patient's right to choose the course of care.*

### **Documentation and Communication**

1. The APRN shall document the patient assessment, reasoning underlying the therapeutic use of cannabis for the qualifying condition, goals of therapy, means to monitor and evaluate response, and education provided to the patient.

*Essential documentation for good clinical communication should specifically include the evidence base for any practice decisions, treatment goals, and patient education.*
2. The APRN shall communicate the patient's plan of care for use of medical marijuana to other health team members.

*Clear, complete, and accurate documentation in a health record ensures that all those involved in a patient's care have access to information upon which to plan and evaluate their interventions.*

### **Ethical Considerations**

1. In addition to ethical responsibilities under the jurisdictional law, the APRN shall approach the patient without judgment regarding the patient's choice of treatment or preferences in managing pain and other distressing symptoms.

*Awareness of one's own beliefs and attitudes about any therapeutic intervention is vital, as nurses are expected to provide patient care without personal judgment of patients.*



- 
2. The APRN shall take all appropriate steps to ensure that the APRN is not placed in a position where there is or may be an actual conflict, or potential conflict of interest between the APRN and a cannabis dispensary or cultivation center.

*A conflict of interest exists when a nurse's personal interests or concerns are or may be perceived as inconsistent with the best interest of the patient (e.g., when an APRN recommends a treatment in which the APRN has a financial stake).*

3. The APRN shall not certify a MMP qualifying condition for oneself or a family member.

*An emerging conflict of interest in the medical field is when practitioners treat their own family members. The emotional attachment to the patient may cause a practitioner's judgment to be compromised.*

#### Special Considerations

- Follow specific employer policies and procedures, terms of the collaborative agreement, standard care arrangement, and facility policy and procedures regarding certifying a qualifying condition.

*Always check with the facility, collaborative agreement, and local Department of Health or MMP for more information on the statutes of your jurisdiction when caring for a patient who can legally use cannabis for medical purposes.<sup>55</sup>*

#### References

- 1 National Conference of State Legislatures (NCSL). (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 2 Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.
- 3 U.S. Department of Transportation. National Highway Traffic Safety Administration (NHTSA). (2107). Marijuana-Impaired Driving A Report to Congress. Retrieved from <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-drivingreport-to-congress.pdf>
- 4 Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.
- 5 National Institute on Drug Abuse (NIDA). (May 2017). Information on Marijuana Farm Contract. Retrieved from <https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuanaresearch/information-marijuana-farm-contract>
- 6 U.S. Department of Justice, Drug Enforcement Administration (DEA). (November 8, 2017). Established Aggregate Production Quotas for Schedule I and II Controlled Substances and Assessment of Annual Needs for the List I Chemicals Ephedrine, Pseudoephedrine, and Phenylpropanolamine for 2018. 82 FR 51873. Retrieved from <https://www.federalregister.gov/documents/2017/11/08/2017-24306/established-aggregate-productionquotas-for-schedule-i-and-ii-controlled-substances-and-assessment>
- 7 NIDA. (March 2017). NIDA's Role in Providing Marijuana for Research. Retrieved from <https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuana-research>
- 8 Mikos. R.A. (December 12, 2012). On the Limits of Federal Supremacy: When States Relax (or Abandon) Marijuana Bans. Cato Institute. Policy Analysis, No. 714. Retrieved from <https://object.cato.org/sites/cato.org/files/pubs/pdf/PA714.pdf>; Beek v. City of Wyoming. (February 6, 2014) (Findlaw, Dist. 145816). Retrieved from <http://caselaw.findlaw.com/mi-supreme-court/1656759.html>
- 9 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 10 U.S. Department of Justice, Office of Public Affairs (DOJ). (October 19, 2009). Attorney General Announces Formal Medical Marijuana Guidelines. Retrieved from <https://www.justice.gov/opa/pr/attorney-general-announces-formal-medical-marijuana-guidelines>; DOJ. (June 29, 2011). Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use. Retrieved from <https://www.justice.gov/sites/default/files/oip/legacy/2014/07/23/dag-guidance-2011-for-medical-marijuana-use.pdf>; DOJ. (August 29, 2013). Guidance Regarding Marijuana Enforcement. Retrieved from <https://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>; DOJ. (February 14, 2013). Guidance Regarding Marijuana Related Financial Crimes. Retrieved from <https://www.justice.gov/sites/default/files/usao-dwa/legacy/2014/02/14/DAG%20Memo%20-%20Guidance%20Regarding%20Marijuana%20Related%20Financial%20Crimes%202%2014%2014%20%282%29.pdf>; DOJ.

- (October 28, 2014). Policy Statement Regarding Marijuana Issues in Indian Country. Retrieved from <https://www.justice.gov/sites/default/files/tribal/pages/attachments/2014/12/11/policystatementregardingmarijuanaissuesinindiancountry2.pdf>
- 11 DOJ. (January 4, 2018). Marijuana Enforcement. Retrieved from <https://www.justice.gov/opa/press-release/file/1022196/download>
  - 12 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
  - 13 Ibid.
  - 14 Ibid.
  - 15 Ibid.
  - 16 Ibid.
  - 17 Ibid.
  - 18 Mackie K. Cannabinoid receptors: where they are and what they do. *J Neuroendocrinol* 2008; 20 Suppl 1: 10-4. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2826.2008.01671.x/full>
  - 19 Ibid.
  - 20 Ibid.
  - 21 Pacher et al. The endocannabinoid system as an emerging target of pharmacotherapy. *Pharmacological Reviews* 2006; 58: 389-462. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2241751/>
  - 22 National Academies of Sciences, Engineering, and Medicine (National Academies of Sciences). (2017). *The Health Effects of Cannabis and Cannabinoids: The Current Jurisdiction of Evidence and Recommendations for Research*. Washington, D.C.: National Academy Press; Madras, B. (2015). *Update of cannabis and its medical use*. Retrieved from [http://www.who.int/medicines/access/controlled-substances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf)
  - 23 Ibid.
  - 24 Joy, J. E., Watson, S. J., Benson, J. A. (Eds.). (1999). *Marijuana and Medicine: Assessing the Science Base*. Washington, D.C.: National Academy Press Print; Fox, P., Bain, P. G., Glickman, S., Carroll, C., & Zajicek, J. (2004). The effect of cannabis on tremor in patients with multiple sclerosis. *Neurology*, 62(7), 1105-1109; Greenberg, H. S., Werness, S. A., & Pugh, J. E. (1994). Short-term effects of smoking marijuana on balance in patients with multiple sclerosis and normal volunteers.
  - 25 FDA. (September 2004). *Marinol® (Dronabinol) Capsules*. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
  - 26 Collin, C., Ehler, E., Waberzinek, G., Alsindi, Z., Davies, P., Powell, K., ... & Zapletalova, O. (2010). A double-blind, randomized, placebo- controlled, parallel-group study of Sativex, in subjects with symptoms of spasticity due to multiple sclerosis. *Neurological research*, 32(5), 451-459; National Academies of Sciences. (2017). *The Health Effects of Cannabis and Cannabinoids: The Current Jurisdiction of Evidence and Recommendations for Research*. Washington, D.C.: National Academy Press; Madras, B. (2015). *Update of cannabis and its medical use*. Retrieved from [http://www.who.int/medicines/access/controlled-substances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf)
  - 27 Hall, W., & Solowij, N. (1998). Adverse effects of cannabis. *The Lancet*, 352(9140), 1611-1616; Tashkin, D. P. (2013). Effects of marijuana smoking on the lung. *Annals of the American Thoracic Society*, 10(3), 239-247; Federal Drug Administration (FDA). (September 2004). *Marinol® (Dronabinol) Capsules*. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
  - 28 Crean, R. D., Crane, N. A., & Mason, B. J. (2011). An evidence based review of acute and long-term effects of cannabis use on executive cognitive functions. *Journal of addiction medicine*, 5(1), 1; Solowij, N., & Pesa, N. (2012). Cannabis and cognition: short and long-term effects. *Marijuana and madness*, 2, 91-102.
  - 29 Koppel, B. S., Brust, J. C., Fife, T., Bronstein, J., Youssof, S., Gronseth, G., & Gloss, D. (2014). Systematic review: Efficacy and safety of medical marijuana in selected neurologic disorders Report of the Guideline Development Subcommittee of the American Academy of Neurology. *Neurology*, 82(17), 1556-1563.
  - 30 Calabria, B., Degenhardt, L., Hall, W., & Lynskey, M. (2010). Does cannabis use increase the risk of death? Systematic review of epidemiological evidence on adverse effects of cannabis use. *Drug and alcohol review*, 29(3), 318-330.
  - 31 Glass, M., Faull, R. L. M., & Dragunow, M. (1997). Cannabinoid receptors in the human brain: a detailed anatomical and quantitative autoradiographic study in the fetal, neonatal and adult human brain. *Neuroscience*, 77(2), 299-318.
  - 32 American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
  - 33 Hesse, M., & Thylstrup, B. (2013). Time-course of the DSM-5 cannabis withdrawal symptoms in poly-substance abusers. *BMC psychiatry*, 13(1), 258; American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author; Budney, A. J., Moore, B. A., Vandrey, R. G., & Hughes, J. R. (2003). The time course and significance of cannabis withdrawal. *Journal of abnormal psychology*, 112(3), 393.
  - 34 FDA. (September 2004). *Marinol® (Dronabinol) Capsules*. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>; FDA. (May 2006). *Cesamet™ (Nabilone) Capsules*. Retrieved from [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2006/018677s011lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2006/018677s011lbl.pdf)

- 35 Grotenhermen, F. (2003). Pharmacokinetics and pharmacodynamics of cannabinoids. *Clinical pharmacokinetics*, 42(4), 327-360.
- 36 Haug, N. A., Kieschnick, D., Sottile, J. E., Babson, K. A., Vandrey, R., & Bonn-Miller, M. O. (2016). Training and Practices of Cannabis Dispensary Staff. *Cannabis and Cannabinoid Research*, 1(1), 244-251; Verweij, K. J., Zietsch, B. P., Lynskey, M. T., Medland, S. E., Neale, M. C., Martin, N. G., ... & Vink, J. M. (2010). Genetic and environmental influences on cannabis use initiation and problematic use: a meta-analysis of twin studies. *Addiction*, 105(3), 417-430.
- 37 Karschner, E. L., Darwin, W. D., McMahon, R. P., Liu, F., Wright, S., Goodwin, R. S., & Huestis, M. A. (2011). Subjective and physiological effects after controlled Sativex and oral THC administration. *Clinical Pharmacology & Therapeutics*, 89(3), 400-407.
- 38 Hazekamp, A., Ruhaak, R., Zuurman, L., van Gerven, J., & Verpoorte, R. (2006). Evaluation of a vaporizing device (Volcano®) for the pulmonary administration of tetrahydrocannabinol. *Journal of pharmaceutical sciences*, 95(6), 1308-1317; Herning, R. I., Hooker, W. D., & Jones, R. T. (1986). Tetrahydrocannabinol content and differences in marijuana smoking behavior. *Psychopharmacology*, 90(2), 160-162.
- 39 Stockburger, S. (2016). Forms of administration of cannabis and their efficacy. *Journal of Pain Management*, 9(4), 381.
- 40 Hazekamp, A., Ware, M. A., Muller-Vahl, K. R., Abrams, D., & Grotenhermen, F. (2013). The medicinal use of cannabis and cannabinoids—an international cross-sectional survey on administration forms. *Journal of psychoactive drugs*, 45(3), 199-210; Kowal, M. A., Hazekamp, A., & Grotenhermen, F. (2016). Review on clinical studies with cannabis and cannabinoids 2010-2014. *Multiple sclerosis*, 6, 1515.
- 41 Madras, B. (2015). Update of cannabis and its medical use. Retrieved from [http://www.who.int/medicines/access/controlledsubstances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlledsubstances/6_2_cannabis_update.pdf); Crean, R. D., Crane, N. A., & Mason, B. J. (2011). An evidence based review of acute and longterm effects of cannabis use on executive cognitive functions. *Journal of addiction medicine*, 5(1), 1.
- 42 Park, B., McPartland, J. M., & Glass, M. (2004). Cannabis, cannabinoids and reproduction. *Prostaglandins, leukotrienes and essential fatty acids*, 70(2), 189-197.
- 43 du Plessis, S. S., Agarwal, A., & Syriac, A. (2015). Marijuana, phytocannabinoids, the endocannabinoid system, and male fertility. *Journal of assisted reproduction and genetics*, 32(11), 1575-1588.
- 44 Jaques, S. C., Kingsbury, A., Henshcke, P., Chomchai, C., Clews, S., Falconer, J., ... & Oei, J. L. (2014). Cannabis, the pregnant woman and her child: Weeding out the myths. *Journal of Perinatology*, 34(6), 417.
- 45 Jutras-Aswad, D., DiNieri, J. A., Harkany, T., & Hurd, Y. L. (2009). Neurobiological consequences of maternal cannabis on human fetal development and its neuropsychiatric outcome. *European Archives of Psychiatry and Clinical Neuroscience*, 259(7), 395-412.
- 46 Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. (2014). Adverse health effects of marijuana use. *New England Journal of Medicine*, 370(23), 2219-2227.
- 47 Wilkinson, S. T., Radhakrishnan, R., & D'Souza, D. C. (2014). Impact of cannabis use on the development of psychotic disorders. *Current addiction reports*, 1(2), 115-128.
- 48 American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- 49 Hesse, M., & Thylstrup, B. (2013). Time-course of the DSM-5 cannabis withdrawal symptoms in poly-substance abusers. *BMC psychiatry*, 13(1), 258; American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author; Budney, A. J., Moore, B. A., Vandrey, R. G., & Hughes, J. R. (2003). The time course and significance of cannabis withdrawal. *Journal of abnormal psychology*, 112(3), 393.
- 50 Lynch, T., & Price, A. (2007). The effect of cytochrome P450 metabolism on drug response, interactions, and adverse effects. *Am Fam Physician*, 76, 391-6.
- 51 U.S. National Library of Medicine, National Institutes of Health. (2018). Drug Information Portal: Quick Access to Quality Drug Information. Retrieved from <https://druginfo.nlm.nih.gov/drugportal/52> DEA. (2014). Disposal Act: General Public Fact Sheet. Retrieved from [https://www.deadiversion.usdoj.gov/drug\\_disposal/fact\\_sheets/disposal\\_public.pdf](https://www.deadiversion.usdoj.gov/drug_disposal/fact_sheets/disposal_public.pdf)
- 53 Lopez-Quintero, C., de los Cobos, J. P., Hasin, D. S., Okuda, M., Wang, S., Grant, B. F., & Blanco, C. (2011). Probability and predictors of transition from first use to dependence on nicotine, alcohol, cannabis, and cocaine: Results of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). *Drug and alcohol dependence*, 115(1), 120-130.
- 54 Wilkinson, S. T., Radhakrishnan, R., & D'Souza, D. C. (2014). Impact of cannabis use on the development of psychotic disorders. *Current addiction reports*, 1(2), 115-128.
- 55 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>

## NCSBN Recommendations: Cannabis-specific Education Content for APRN Nursing Programs

### Purpose of the guidelines

Over 31 jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical use. Several NCSBN associate member jurisdictions also have legalized cannabis for medical use.\* Each medical marijuana program has unique characteristics. In the United States, cannabis is a Schedule I Controlled Substance. Therefore, medical cannabis is unlike most other therapeutics in that providers cannot prescribe cannabis, nor can pharmacies dispense cannabis. However, applicable jurisdiction statutes and rules provide for the manufacture, distribution, and use of cannabis for medical purposes.

These guidelines provide advanced practice registered nurses (APRNs) with principles of safe and knowledgeable practice to promote patient safety when certifying a medical marijuana program qualifying condition for a specific patient.

### Definitions

*Cannabis.* Any raw preparation of the leaves or flowers from the plant genus *Cannabis*. This report uses “cannabis” as a shorthand that also includes cannabinoids.

*Cannabidiol (CBD).* A major cannabinoid that indirectly antagonizes cannabinoid receptors, which may attenuate the psychoactive effects of tetrahydrocannabinol.

*Cannabinoid.* Any chemical compound that acts on cannabinoid receptors. These include endogenous and exogenous cannabinoids.

*Cannabinol (CBN).* A cannabinoid more commonly found in aged cannabis as a metabolite of other cannabinoids. It is nonpsychoactive.

*Certify.* The act of confirming that a patient has a qualifying condition. Many jurisdictions use alternative phrases such as “attest” or “authorize”; however, 13 of 29 jurisdictions use “certify” language in their statutes.

*Clinical research.* An activity that involves studies that experimentally assign randomized human participants to one or more drug interventions to evaluate the effects on health outcomes.

*Designated caregiver.* An individual who is selected by the Medical Marijuana Program qualifying patient and authorized by the Medical Marijuana Program to purchase and/or administer cannabis on the patient’s behalf. Also sometimes referred to as an “alternate caregiver.”

---

\* In Australia, cannabis for medical use is federally legal, with states allowed to implement as they see fit. Although Bermuda has not legislated use of marijuana, its Supreme Court ruled that citizens could apply for personal licenses to possess cannabis for medical use. Cannabis for medical use is federally legal in all provinces of Canada. In New Zealand, physicians may prescribe CBD and cannabis-based products.

---

*Dronabinol.* The generic name for synthetic tetrahydrocannabinol. It is the active ingredient in the U.S. Food & Drug Administration (FDA)-approved drug Marinol®.

*Endocannabinoid system.* A system that consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.

*Marijuana.* A cultivated cannabis plant, whether for recreational or medicinal use. The words “marijuana” and “cannabis” are often used interchangeably in various lay and scientific literature. These guidelines will primarily use the word “cannabis.” When referring to a medical marijuana program, the guidelines will use the word “marijuana,” as it is often used within program references.

*Medical Marijuana Program (MMP).* The official jurisdictional resource for the use of cannabis for medical purposes. Search the jurisdiction’s website or Department of Health for “medical cannabis program” or “medical marijuana program.”<sup>1</sup>

*Nabilone.* The generic name for a synthetic cannabinoid similar to tetrahydrocannabinol. It is the active ingredient<sup>2</sup> in the FDA-approved drug Cesamet™.

*Schedule I Controlled Substance.* Defined in the federal Controlled Substances Act<sup>2</sup> as those substances that have a high potential for abuse; no currently accepted medical use in treatment in the United States; and a lack of accepted safety for use of the substance under medical supervision.

*Tetrahydrocannabinol (THC).* One of many cannabinoids found in cannabis. THC is the primary substance responsible for most of the characteristic psychoactive effects of cannabis.<sup>3</sup>

## **Recommendations for Content**

1. The APRN student shall have a working knowledge of the current state of legalization of medical and recreational cannabis use.
  - *The Drug Enforcement Agency (DEA) classifies cannabis as a Schedule I Controlled Substance. This classification not only prohibits practitioners from prescribing cannabis, it also prohibits most research using cannabis except under rigorous oversight from the government.*<sup>4</sup>
  - *The process for obtaining cannabis for federally funded research purposes is cumbersome. Currently, the only legal source of cannabis for research purposes is grown in limited quantities at the University of Mississippi.*<sup>5</sup> *The DEA sets an annual quota for cannabis grown for research purposes.*<sup>6</sup> *Applications to use this source of cannabis must be made to the FDA, DEA, and National Institute on Drug Abuse.*<sup>7</sup>
  - *Over 31 jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical purposes. In these laws, the jurisdiction has adopted exemptions legalizing the use of cannabis for medical purposes. Although the use of marijuana pursuant to authorized MMPs conflicts with federal law and regulations, at present there is no controlling case law holding that Congress intended to preempt the field of regulation of cannabis use under its supremacy powers.*<sup>8</sup>
  - *An increasing proportion of jurisdictions have also decriminalized or legalized recreational cannabis use.*<sup>9</sup>
  - *Accordingly, the federal government’s position on prosecuting the use of cannabis that is legal under applicable jurisdiction law has been set out in U.S. Department of Justice position papers. In 2009, the U.S. Attorney General took a position that discourages federal prosecutors from*

---

*prosecuting people who distribute or use cannabis for medical purposes in compliance with applicable jurisdiction law; further similar guidance was given in 2011, 2013, and 2014.<sup>10</sup> In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement. The 2018 memorandum<sup>11</sup> provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely, the prosecution is to weigh all relevant considerations, including priorities set by the attorneys general, seriousness of the crime, deterrent effect of criminal prosecution, and cumulative impact of particular crimes on the community.*

2. The APRN student shall have working knowledge of the principles of an MMP.

- *MMPs are defined and described within the statute and rules of the specific jurisdiction. The relevant statute or rules are most easily located through the jurisdiction's Department of Health and MMP.<sup>12</sup> Laws and rules regarding MMPs are an evolving process. Always confirm use of the most recent versions.*
- *A health care provider does not prescribe cannabis.*
- *The MMP will specify the qualifying conditions and the certifying process as well as the type of health care provider who can certify a qualifying condition.<sup>13</sup>*
- *Specific MMP statutes define the bona fide health care provider–patient relationship necessary for authorization to certify a patient as having a qualifying condition. Some statutes require a preexisting and ongoing relationship with the patient as a treating health care provider; others note that the relationship may not be limited to issuing a written certification for the patient or a consultation simply for that purpose.<sup>14</sup> Verification of the existence of the required provider–patient relationship and documentation of the certification within the jurisdiction's MMP are essential.*
- *The MMP will specify whether an APRN can certify a qualifying condition and whether a specific course or training is required in order to participate in certifying an MMP qualifying condition.<sup>15</sup>*
- *After the qualifying condition is certified, the patient registers with the MMP. Once registered, the patient can obtain cannabis from a jurisdiction-authorized cannabis dispensary.*
- *Procurement and administration of cannabis for medical purposes are limited to the patient and/or the patient's designated caregiver. The MMPs will specify whether designated caregivers are permissible as well as the applicable process for registration as a designated caregiver.<sup>16</sup>*
- *In some jurisdictions, the MMP allows an employee of a hospice provider or nursing or medical facility, or a visiting nurse, personal care attendant, or home health aide to act as a designated caregiver for the administration of medical marijuana.<sup>17</sup>*

3. The APRN student shall have an understanding of the endocannabinoid system, cannabinoid receptors, cannabinoids, and the interactions between them.

- *The endocannabinoid system consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.<sup>18</sup>*
- *Discovered in 1973, this system includes a series of cannabinoid receptors throughout the body embedded in cell membranes that, when stimulated by endocannabinoids, are thought to promote homeostasis.<sup>19</sup>*
- *Endocannabinoids are naturally occurring substances within the body, while phytocannabinoids (plant substances that stimulate cannabinoid receptors) are found in cannabis.<sup>20</sup>*
- *The most well known of these cannabinoids is tetrahydrocannabinol (THC); however, cannabidiol (CBD) and cannabinol (CBN) are gaining interest in therapeutic use.<sup>21</sup>*

---

4. The APRN student shall have an understanding of cannabis pharmacology and the research associated with the medical use of cannabis.

*Due to government restrictions on research involving cannabis, the surge of legislation has outpaced research, leaving nurses with few resources when caring for patients who use medical cannabis. Therefore, information regarding medicinal use of cannabis must be derived from moderate- to high-quality evidence using randomized placebo-controlled studies. These particular studies are the most likely to elucidate causality in treatments and are the only trusted source of evidence for cannabis as a clinical intervention. Research on cannabis is an evolving body of work. As with any scientific literature, it is important to rely on the most recent high-quality evidence.*

a. Current scientific evidence exists for the use of cannabis for the following qualifying conditions

- *Moderate- to high-quality evidence exists for*
  - *cachexia*
  - *chemotherapy-induced nausea and vomiting*
  - *pain (resulting from cancer or rheumatoid arthritis)*
  - *chronic pain (resulting from fibromyalgia),*
  - *neuropathies (resulting from HIV/AIDS, multiple sclerosis [MS], or diabetes)*
  - *spasticity (from MS or spinal cord injury).<sup>22</sup>*
- *No human studies have confirmed evidence for neuroprotective, anti-inflammatory, antitumoral, and antibacterial effects of cannabinoids. Some preclinical animal and cellular studies do provide evidence for those effects; however, no generalizations can be made to the human population.<sup>23</sup>*
- *The treatment of some symptomology might be attributed to the more general and well-known effects of cannabis. Cannabis is a known sedative, appetite stimulant, and euphoriant. Instead of cannabis treating underlying symptoms, these three cannabis effects may only mask symptoms and increase a subjective sense of well-being, which could improve self-reported quality of life in patients who have difficulty sleeping, chronic pain, or poor appetite.<sup>24</sup>*

b. Adverse effects of cannabis are influenced by the patient's condition and current medications

- *The patient's propensity for the following may be exacerbated by cannabis: increased heart rate, increased appetite, sleepiness, dizziness, decreased blood pressure, dry mouth/dry eyes, decreased urination, hallucination, paranoia, anxiety, impaired attention, memory, and psychomotor performance.<sup>25</sup>*
- *Some participants report fatigue, suicidal ideation, nausea, asthenia, and vertigo as adverse effects of cannabis.<sup>26</sup>*
- *Cannabis may exacerbate symptoms associated with asthma, bronchitis, and emphysema; cardiac disease; and alcohol or other drug dependence. Additionally, people with cardiac disease or alcohol or other drug dependence, or whose illnesses may be exacerbated by cannabis use should be cautioned.<sup>27</sup>*
- *Cognitive impairment by cannabis may be dose- and age-dependent.<sup>28</sup>*
- *It is highly likely that cannabis will exacerbate symptoms of poor balance and posture in patients with dyskinetic disorders. Similarly, cannabis may worsen mental faculties in conditions that cause cognitive deficits. Patients who suffer from diseases with neurologic symptomology may show greater cognitive impairment.<sup>29</sup>*

- *Higher than normal blood concentrations of cannabinoids, usually from overconsumption of edible cannabis product can cause prolonged and often debilitating psychoses or hyperemesis syndrome.*<sup>30</sup>
- *Cannabinoid receptors are effectively absent in the brainstem cardiorespiratory centers. This is believed to preclude the possibility of a fatal overdose from cannabinoid intake.*<sup>31</sup>
- *Cannabis can be a drug of abuse. Cannabis use disorder is defined as a problematic pattern of cannabis use leading to clinically significant impairment or distress; the clinical indications are included in the DSM-5.*<sup>32</sup>
- *Cannabis withdrawal syndrome has been identified as a syndrome seen in some patients whose cannabis use has been heavy and prolonged (i.e., usually daily or almost daily use over a period of at least a few months). The withdrawal syndrome has varying symptomatology, including insomnia, loss of appetite, physical symptoms, and restlessness initially, then irritability/anger, vivid and unpleasant dreams after a week.*<sup>33</sup>

c. Variable effects of cannabis are dependent on type of product and route of administration

- *The only reliably studied method for the administration of nonsynthetic cannabinoids is smoked cannabis. Insufficient evidence exists for vaporized cannabis, edibles, dabbing, etc. However, FDA-approved synthetic THC drugs (dronabinol and nabilone) are administered orally or by an oromucosal route.*<sup>34</sup>
- *Edible cannabis products may have delayed effects.*<sup>35</sup>
- *Therapeutic topical applications of cannabis have not been reliably studied. Tinctures have a wide range of possible applications (oromucosal, food additive, tea, etc.) and not all methods of administration have been reliably researched. Patients must be aware that concentrations may vary from those listed and to purchase these formulations from a reliable dispensary.*<sup>36</sup>
- *Sublingual and mucosal sprays have the benefit of directly accessing the bloodstream. Oromucosal doses have less dosage variability than smoked cannabis and edibles, but are limited by slower absorption and lower rate of THC delivery to the brain.*<sup>37</sup>
- *Smoked and vaporized cannabis has the advantage of rapid absorption into the bloodstream. Vaporization creates fewer pyrolytic compounds that irritate respiratory tissue. However, both methods show significant loss of active compounds lost to combustion and exhalation.*<sup>38</sup>
- *Routes of administration other than oral, oromucosal, smoked, or vaporized have not been studied in a clinical setting.*
- *Butane honey oil (or other oils used for superheated vaporization known as “dabbing”),<sup>39</sup> hashish, and other solvent-extracted resins often carry impurities, especially when manufactured by nonprofessionals. These methods of administration have not been adequately studied in a clinical setting.*

d. Principles of dosage titration

- *Since medical cannabis is not an FDA drug, there is no recommended dosage.*
- *There is a wide variability of cannabis concentration in different cannabis preparations. Due to this wide variability, principles of dosage titration (start low, go slow) and evaluation of specific effect are beneficial.*
- *Patients will need to titrate their dosage to establish an efficacious and stable dosing schedule over 1 to 2 weeks.*<sup>40</sup>
- *Continual patient assessment of perceived efficacy and adverse effects is recommended. Useful strategies include tracking dose, symptoms, relief, and adverse effects in a journal for review with the authorizing practitioner.*



- *FDA-approved synthetic THC drugs (dronabinol and nabilone) are administered orally or by an oromucosal route with a specific dosage.*

e. Risks to particular groups of patients such as those of childbearing age, adolescence and individuals at risk of substance abuse

- *Adolescence. Many studies show a correlation between cannabis use and poor grades, high dropout rates, lower income, lower percentage of college degree completion, greater need for economic assistance, unemployment, and use of other drugs. Although these trends are related to recreational rather than medicinal cannabis use, the trends cannot be ignored but should be balanced with the benefits of cannabis for medical use.<sup>41</sup>*
- *Fertility. Two preclinical studies indicate that interference with endogenous cannabinoids might increase chances of failed embryo implantation<sup>42</sup> and cannabinoids are capable of dysregulating hormones, which in turn can affect spermatogenesis.<sup>43</sup>*
- *Neonate. Presently there are no reliable data for neurodevelopmental outcomes with early exposure to cannabis in neonatal life, or through either breastfeeding or secondhand inhalation.<sup>44,45,46</sup>*
- *Cannabis can be a drug of abuse and precautions should be taken to minimize the risk of misuse and abuse.*
- *Cannabis use may exacerbate existing psychoses in those with a risk of suicide or history of suicide attempt, schizophrenia, bipolar disorder, or other psychotic conditions.<sup>47</sup>*

5. The APRN student shall be able to recognize signs and symptoms of cannabis use disorder and cannabis withdrawal syndrome.

- *Cannabis use disorder is defined as a problematic pattern of cannabis use leading to clinically significant impairment or distress; the clinical indications are included in the DSM-5.<sup>48</sup>*
- *Cannabis withdrawal syndrome has been identified as a syndrome seen in some patients whose cannabis use has been heavy and prolonged (i.e., usually daily or almost daily use over a period of at least a few months). The withdrawal syndrome has varying symptomatology, including insomnia, loss of appetite, physical symptoms, and restlessness initially, then irritability/anger, vivid and unpleasant dreams after a week.<sup>49</sup>*

6. The APRN student shall be able to identify the safety considerations for patient use of cannabis.

- *Administration of cannabis for medical use can only be carried out by the certified patient and/or designated caregivers registered to care for the patient.*
- *Cannabinoids have the possibility of altering the metabolic breakdown of certain drugs. Departures from normal drug metabolism can result in higher or lower than expected plasma levels, which can cause dangerous drug interactions.<sup>50</sup> Information on possible interactions is available for the synthetic cannabinoids dronabinol and nabilone on the Drug Information Portal.<sup>51</sup> The interactions listed in the Drug Information Portal are not exhaustive and not directly transferable to nonsynthetic cannabinoids. Many of the listed interactions are probable interactions, as there are not sufficient studies into cannabinoid interactions.*
- *Cannabis storage considerations include:*
  - *keeping cannabis out of the reach of children, minors, and nonregistered individuals*
  - *storing all cannabis products in a locked area*
  - *keeping cannabis in the child-resistant packaging from the store*
  - *storing raw cannabis in a cool, dry, place*
  - *following labeling guidelines for storage and expiration dates*

- 
- *Disposal of unused cannabis products should be completed according to the DEA's Disposal Act.<sup>52</sup> Generally, one can locate a collection receptacle via the DEA Registration Call Center (800-882-9539).*

7. The APRN student shall be aware of medical marijuana administration considerations.

- *A nurse shall not administer cannabis to a patient unless specifically authorized by jurisdictional law.<sup>53</sup>*
- *Instances in which the nurse may administer cannabis or synthetic THC to a patient.*
- *Administration of FDA-approved synthetic THC drugs (dronabinol and nabilone) per facility formulary and policy*
- *As a registered MMP designated caregiver*
  - *The majority of jurisdictions allow a designated caregiver to assist a patient with the medical use of cannabis.*
  - *These designated caregivers must meet specific qualifications and be registered with the MMP and must not practice outside of the limits of the caregiving statute.<sup>54</sup>*
  - *Some jurisdictions allow an employee of a hospice provider or nursing, or medical facility, or a visiting nurse, to assist in the administration of medical marijuana.<sup>55</sup>*
  - *Check the most current MMP statute or rules.<sup>56</sup>*
  - *Check facility policy regarding medical marijuana administration.*

8. The APRN student shall be aware of the ethical considerations related to the care of a patient using medical marijuana.

- *In addition to ethical responsibilities under the jurisdictional law, the APRN shall approach the patient without judgment regarding the patient's choice of treatment or preferences in managing pain and other distressing symptoms. Awareness of one's own beliefs and attitudes about any therapeutic intervention is vital, as nurses are expected to provide patient care without personal judgment of patients.*
- *The APRN shall take all appropriate steps to ensure that the APRN is not placed in a position where there is or may be an actual conflict, or potential conflict of interest between the APRN and a cannabis dispensary or cultivation center. A conflict of interest exists when a nurse's personal interests or concerns are or may be perceived as inconsistent with the best interest of the patient (e.g., when an APRN recommends a treatment in which the APRN has a financial stake).*
- *The APRN shall not certify an MMP qualifying condition for oneself or a family member. An emerging conflict of interest in the medical field is when practitioners treat their own family members. The emotional attachment to the patient may cause the practitioner's judgment to be compromised.*

9. The APRN student shall follow specific employer policies and procedures, terms of the collaborative agreement, standard care arrangement, and facility policy and procedures regarding certifying a qualifying condition.

*Always check with the facility, collaborative agreement, and local Department of Health or MMP for more information on the statutes of your jurisdiction when caring for a patient who can legally use cannabis for medical purposes.<sup>57</sup>*

---

## References

- 1 National Conference of State Legislatures (NCSL). (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 2 Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.
- 3 U.S. Department of Transportation. National Highway Traffic Safety Administration (NHTSA). (2107). Marijuana-Impaired Driving A Report to Congress. Retrieved from <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-drivingreport-to-congress.pdf>
- 4 Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.
- 5 National Institute on Drug Abuse (NIDA). (May 2017). Information on Marijuana Farm Contract. Retrieved from <https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuanaresearch/information-marijuana-farm-contract>
- 6 U.S. Department of Justice, Drug Enforcement Administration (DEA). (November 8, 2017). Established Aggregate Production Quotas for Schedule I and II Controlled Substances and Assessment of Annual Needs for the List I Chemicals Ephedrine, Pseudoephedrine, and Phenylpropanolamine for 2018. 82 FR 51873. Retrieved from <https://www.federalregister.gov/documents/2017/11/08/2017-24306/established-aggregate-production-quotas-for-schedule-i-and-ii-controlled-substances-and-assessment>
- 7 NIDA. (March 2017). NIDA's Role in Providing Marijuana for Research. Retrieved from <https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuana-research>
- 8 Mikos. R.A. (December 12, 2012). On the Limits of Federal Supremacy: When States Relax (or Abandon) Marijuana Bans. Cato Institute. Policy Analysis, No. 714. Retrieved from <https://object.cato.org/sites/cato.org/files/pubs/pdf/PA714.pdf>; *Beek v. City of Wyoming*. (February 6, 2014) (Findlaw, Dist. 145816). Retrieved from <http://caselaw.findlaw.com/mi-supreme-court/1656759.html>
- 9 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 10 U.S. Department of Justice, Office of Public Affairs (DOJ). (October 19, 2009). Attorney General Announces Formal Medical Marijuana Guidelines. Retrieved from <https://www.justice.gov/opa/pr/attorney-general-announces-formal-medical-marijuana-guidelines>; DOJ. (June 29, 2011). Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use. Retrieved from <https://www.justice.gov/sites/default/files/oip/legacy/2014/07/23/dag-guidance-2011-for-medical-marijuana-use.pdf>; DOJ. (August 29, 2013). Guidance Regarding Marijuana Enforcement. Retrieved from <https://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>; DOJ. (February 14, 2013). Guidance Regarding Marijuana Related Financial Crimes. Retrieved from <https://www.justice.gov/sites/default/files/usao-wdwa/legacy/2014/02/14/DAG%20Memo%20-%20Guidance%20Regarding%20Marijuana%20Related%20Financial%20Crimes%202%2014%2014%20282%29.pdf>; DOJ. (October 28, 2014). Policy Statement Regarding Marijuana Issues in Indian Country. Retrieved from <https://www.justice.gov/sites/default/files/tribal/pages/attachments/2014/12/11/policystatementregardingmarijuanaissuesinindiancountry2.pdf>
- 11 DOJ. (January 4, 2018). Marijuana Enforcement. Retrieved from <https://www.justice.gov/opa/press-release/file/1022196/download>
- 12 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 13 Ibid.
- 14 Ibid.
- 15 Ibid.
- 16 Ibid.
- 17 Ibid.
- 18 Mackie K. Cannabinoid receptors: where they are and what they do. *J Neuroendocrinol* 2008; 20 Suppl 1: 10-4. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2826.2008.01671.x/full>
- 19 Ibid.
- 20 Ibid.
- 21 Pachter et al. The endocannabinoid system as an emerging target of pharmacotherapy. *Pharmacological Reviews* 2006; 58: 389-462. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2241751/> 22 National Academies of Sciences, Engineering, and Medicine (National Academies of Sciences). (2017). *The Health Effects of Cannabis and Cannabinoids: The Current Jurisdiction of Evidence and Recommendations for Research*. Washington, D.C.: National Academy Press; Madras, B. (2015). Update of cannabis and its medical use. Retrieved from [http://www.who.int/medicines/access/controlled-substances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf)
- 23 Ibid.
- 24 Joy, J. E., Watson, S. J., Benson, J. A. (Eds.). (1999). *Marijuana and Medicine: Assessing the Science Base*. Washington, D.C.: National Academy Press Print; Fox, P., Bain, P. G., Glickman, S., Carroll, C., & Zajicek, J. (2004). The effect of cannabis on

- tremor in patients with multiple sclerosis. *Neurology*, 62(7), 1105-1109; Greenberg, H. S., Werness, S. A., & Pugh, J. E. (1994). Short-term effects of smoking marijuana on balance in patients with multiple sclerosis and normal volunteers.
- 25 FDA. (September 2004). Marinol® (Dronabinol) Capsules. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
- 26 Collin, C., Ehler, E., Waberszinek, G., Alsindi, Z., Davies, P., Powell, K., ... & Zapletalova, O. (2010). A double-blind, randomized, placebo-controlled, parallel-group study of Sativex, in subjects with symptoms of spasticity due to multiple sclerosis. *Neurological research*, 32(5), 451-459; National Academies of Sciences. (2017). *The Health Effects of Cannabis and Cannabinoids: The Current Jurisdiction of Evidence and Recommendations for Research*. Washington, D.C.: National Academy Press; Madras, B. (2015). *Update of cannabis and its medical use*. Retrieved from [http://www.who.int/medicines/access/controlled-substances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf)
- 27 Hall, W., & Solowij, N. (1998). Adverse effects of cannabis. *The Lancet*, 352(9140), 1611-1616; Tashkin, D. P. (2013). Effects of marijuana smoking on the lung. *Annals of the American Thoracic Society*, 10(3), 239-247; Federal Drug Administration (FDA). (September 2004). Marinol® (Dronabinol) Capsules. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
- 28 Crean, R. D., Crane, N. A., & Mason, B. J. (2011). An evidence based review of acute and long-term effects of cannabis use on executive cognitive functions. *Journal of addiction medicine*, 5(1), 1; Solowij, N., & Pesa, N. (2012). Cannabis and cognition: short and long-term effects. *Marijuana and madness*, 2, 91-102.
- 29 Koppel, B. S., Brust, J. C., Fife, T., Bronstein, J., Yousoff, S., Gronseth, G., & Gloss, D. (2014). Systematic review: Efficacy and safety of medical marijuana in selected neurologic disorders Report of the Guideline Development Subcommittee of the American Academy of Neurology. *Neurology*, 82(17), 1556-1563.
- 30 Calabria, B., Degenhardt, L., Hall, W., & Lynskey, M. (2010). Does cannabis use increase the risk of death? Systematic review of epidemiological evidence on adverse effects of cannabis use. *Drug and alcohol review*, 29(3), 318-330.
- 31 Glass, M., Faull, R. L. M., & Dragunow, M. (1997). Cannabinoid receptors in the human brain: a detailed anatomical and quantitative autoradiographic study in the fetal, neonatal and adult human brain. *Neuroscience*, 77(2), 299-318.
- 32 American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- 33 Hesse, M., & Thylstrup, B. (2013). Time-course of the DSM-5 cannabis withdrawal symptoms in poly-substance abusers. *BMC psychiatry*, 13(1), 258; American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author; Budney, A. J., Moore, B. A., Vandrey, R. G., & Hughes, J. R. (2003). The time course and significance of cannabis withdrawal. *Journal of abnormal psychology*, 112(3), 393.
- 34 FDA. (September 2004). Marinol® (Dronabinol) Capsules. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>; FDA. (May 2006). Cesamet™ (Nabilone) Capsules. Retrieved from [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2006/018677s011lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2006/018677s011lbl.pdf)
- 35 Grotenhermen, F. (2003). Pharmacokinetics and pharmacodynamics of cannabinoids. *Clinical pharmacokinetics*, 42(4), 327-360.
- 36 Haug, N. A., Kieschnick, D., Sottile, J. E., Babson, K. A., Vandrey, R., & Bonn-Miller, M. O. (2016). Training and Practices of Cannabis Dispensary Staff. *Cannabis and Cannabinoid Research*, 1(1), 244-251; Verweij, K. J., Zietsch, B. P., Lynskey, M. T., Medland, S. E., Neale, M. C., Martin, N. G., ... & Vink, J. M. (2010). Genetic and environmental influences on cannabis use initiation and problematic use: a meta-analysis of twin studies. *Addiction*, 105(3), 417-430.
- 37 Karschner, E. L., Darwin, W. D., McMahon, R. P., Liu, F., Wright, S., Goodwin, R. S., & Huestis, M. A. (2011). Subjective and physiological effects after controlled Sativex and oral THC administration. *Clinical Pharmacology & Therapeutics*, 89(3), 400-407.
- 38 Hazekamp, A., Ruhaak, R., Zuurman, L., van Gerven, J., & Verpoorte, R. (2006). Evaluation of a vaporizing device (Volcano®) for the pulmonary administration of tetrahydrocannabinol. *Journal of pharmaceutical sciences*, 95(6), 1308-1317; Herring, R. I., Hooker, W. D., & Jones, R. T. (1986). Tetrahydrocannabinol content and differences in marijuana smoking behavior. *Psychopharmacology*, 90(2), 160-162.
- 39 Stockburger, S. (2016). Forms of administration of cannabis and their efficacy. *Journal of Pain Management*, 9(4), 381
- 40 Hazekamp, A., Ware, M. A., Muller-Vahl, K. R., Abrams, D., & Grotenhermen, F. (2013). The medicinal use of cannabis and cannabinoids—an international cross-sectional survey on administration forms. *Journal of psychoactive drugs*, 45(3), 199-210; Kowal, M. A., Hazekamp, A., & Grotenhermen, F. (2016). Review on clinical studies with cannabis and cannabinoids 2010-2014. *Multiple sclerosis*, 6, 1515.
- 41 Madras, B. (2015). *Update of cannabis and its medical use*. Retrieved from [http://www.who.int/medicines/access/controlledsubstances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlledsubstances/6_2_cannabis_update.pdf); Crean, R. D., Crane, N. A., & Mason, B. J. (2011). An evidence based review of acute and longterm effects of cannabis use on executive cognitive functions. *Journal of addiction medicine*, 5(1), 1.
- 42 Park, B., McPartland, J. M., & Glass, M. (2004). Cannabis, cannabinoids and reproduction. *Prostaglandins, leukotrienes and essential fatty acids*, 70(2), 189-197.

- 
- 43 du Plessis, S. S., Agarwal, A., & Syriac, A. (2015). Marijuana, phytocannabinoids, the endocannabinoid system, and male fertility. *Journal of assisted reproduction and genetics*, 32(11), 1575-1588.
- 44 Jaques, S. C., Kingsbury, A., Henshcke, P., Chomchai, C., Clews, S., Falconer, J., ... & Oei, J. L. (2014). Cannabis, the pregnant woman and her child: Weeding out the myths. *Journal of Perinatology*, 34(6), 417.
- 45 Jutras-Aswad, D., DiNieri, J. A., Harkany, T., & Hurd, Y. L. (2009). Neurobiological consequences of maternal cannabis on human fetal development and its neuropsychiatric outcome. *European Archives of Psychiatry and Clinical Neuroscience*, 259(7), 395-412.
- 46 Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. (2014). Adverse health effects of marijuana use. *New England Journal of Medicine*, 370(23), 2219-2227.
- 47 Wilkinson, S. T., Radhakrishnan, R., & D'Souza, D. C. (2014). Impact of cannabis use on the development of psychotic disorders. *Current addiction reports*, 1(2), 115-128.
- 48 American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- 49 Hesse, M., & Thylstrup, B. (2013). Time-course of the DSM-5 cannabis withdrawal symptoms in poly-substance abusers. *BMC psychiatry*, 13(1), 258; American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author; Budney, A. J., Moore, B. A., Vandrey, R. G., & Hughes, J. R. (2003). The time course and significance of cannabis withdrawal. *Journal of abnormal psychology*, 112(3), 393.
- 50 Lynch, T., & Price, A. (2007). The effect of cytochrome P450 metabolism on drug response, interactions, and adverse effects. *Am Fam Physician*, 76, 391-6.
- 51 U.S. National Library of Medicine, National Institutes of Health. (2018). Drug Information Portal: Quick Access to Quality Drug Information. Retrieved from <https://druginfo.nlm.nih.gov/drugportal/>
- 52 DEA. (2014). Disposal Act: General Public Fact Sheet. Retrieved from [https://www.deadiversion.usdoj.gov/drug\\_disposal/fact\\_sheets/disposal\\_public.pdf](https://www.deadiversion.usdoj.gov/drug_disposal/fact_sheets/disposal_public.pdf)
- 53 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 54 Ibid.
- 55 Ibid.
- 56 Ibid.
- 57 Ibid.

## NCSBN Guidelines for Nurses: Care of a Patient Using Medical Marijuana

### Purpose of the guidelines

Over 31 jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical use. Several NCSBN associate member jurisdictions also have legalized cannabis for medical use.\* Each medical marijuana program has unique characteristics. In the United States, cannabis is a Schedule I Controlled Substance. Therefore, medical cannabis is unlike most other therapeutics in that providers cannot prescribe cannabis, nor can pharmacies dispense cannabis. However, applicable jurisdiction statutes and rules provide for the manufacture, distribution, and use of cannabis for medical purposes.

These guidelines provide nurses with principles of safe and knowledgeable practice to promote patient safety when caring for patients taking medical marijuana.

### Definitions

*Cannabis*. Any raw preparation of the leaves or flowers from the plant genus *Cannabis*. This report uses “cannabis” as a shorthand that also includes cannabinoids.

*Cannabidiol (CBD)*. A major cannabinoid that indirectly antagonizes cannabinoid receptors, which may attenuate the psychoactive effects of tetrahydrocannabinol.

*Cannabinoid*. Any chemical compound that acts on cannabinoid receptors. These include endogenous and exogenous cannabinoids.

*Cannabinol (CBN)*. A cannabinoid more commonly found in aged cannabis as a metabolite of other cannabinoids. It is nonpsychoactive.

*Certify*. The act of confirming that a patient has a qualifying condition. Many jurisdictions use alternative phrases such as “attest” or “authorize”; however, 13 of 29 jurisdictions use “certify” language in their statutes.

*Clinical research*. An activity that involves studies that experimentally assign randomized human participants to one or more drug interventions to evaluate the effects on health outcomes.

*Designated caregiver*. An individual who is selected by the Medical Marijuana Program qualifying patient and authorized by the Medical Marijuana Program to purchase and/or administer cannabis on the patient’s behalf. Also sometimes referred to as an “alternate caregiver.”

---

\* In Australia, cannabis for medical use is federally legal, with states allowed to implement as they see fit. Although Bermuda has not legislated use of marijuana, its Supreme Court ruled that citizens could apply for personal licenses to possess cannabis for medical use. Cannabis for medical use is federally legal in all provinces of Canada. In New Zealand, physicians may prescribe CBD and cannabis-based products.

---

*Dronabinol*. The generic name for synthetic tetrahydrocannabinol. It is the active ingredient in the U.S. Food & Drug Administration (FDA)-approved drug Marinol®.

*Endocannabinoid system*. A system that consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.

*Marijuana*. A cultivated cannabis plant, whether for recreational or medicinal use. The words “marijuana” and “cannabis” are often used interchangeably in various lay and scientific literature. These guidelines will primarily use the word “cannabis.” When referring to a medical marijuana program, the guidelines will use the word “marijuana,” as it is often used within program references.

*Medical Marijuana Program (MMP)*. The official jurisdictional resource for the use of cannabis for medical purposes. Search the jurisdiction’s website or Department of Health for “medical cannabis program” or “medical marijuana program.”<sup>1</sup>

*Nabilone*. The generic name for a synthetic cannabinoid similar to tetrahydrocannabinol. It is the active ingredient<sup>3</sup> in the FDA-approved drug Cesamet™.

*Schedule I Controlled Substance*. Defined in the federal Controlled Substances Act<sup>2</sup> as those substances that have a high potential for abuse; no currently accepted medical use in treatment in the United States; and a lack of accepted safety for use of the substance under medical supervision.

*Tetrahydrocannabinol (THC)*. One of many cannabinoids found in cannabis. THC is the primary substance responsible for most of the characteristic psychoactive effects of cannabis.<sup>3</sup>

## **Evidence-Based Guidelines Safe Nursing Practice and Responsibilities**

### **Essential Knowledge**

1. The nurse shall have a working knowledge of the current state of legalization of medical and recreational cannabis use.

- *The Drug Enforcement Agency (DEA) classifies cannabis as a Schedule I Controlled Substance. This classification not only prohibits practitioners from prescribing cannabis, it also prohibits most research using cannabis.*<sup>4</sup>
- *The process for obtaining cannabis for federally funded research purposes is cumbersome. Currently, the only legal source of cannabis for research purposes is grown in limited quantities at the University of Mississippi.*<sup>5</sup> *The DEA sets an annual quota for cannabis grown for research purposes.*<sup>6</sup>
- *Over 31 jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical purposes. In these laws, the jurisdiction has adopted exemptions legalizing the use of cannabis for medical purposes. Although the use of marijuana pursuant to authorized MMPs conflicts with federal law and regulations, at present there is no controlling case law holding that Congress intended to preempt the field of regulation of cannabis use under its supremacy powers.*<sup>7</sup>
- *An increasing proportion of jurisdictions have also decriminalized or legalized recreational cannabis use.*<sup>8</sup>
- *The federal government’s position on prosecuting the use of cannabis that is legal under applicable jurisdiction law has been set out in U.S. Department of Justice position papers. In 2009, the U.S. Attorney General took a position that discourages federal prosecutors from prosecuting people who*

---

*distribute or use cannabis for medical purposes in compliance with applicable jurisdiction law; further similar guidance was given in 2011, 2013, and 2014.<sup>9</sup> In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement. The 2018 memorandum<sup>10</sup> provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely, the prosecution is to weigh all relevant considerations, including priorities set by the attorneys general, seriousness of the crime, deterrent effect of criminal prosecution, and cumulative impact of particular crimes on the community.*

2. The nurse shall have general knowledge of the principles of an MMP.

- *MMPs are defined and described within the statute and rules of the specific jurisdiction. The relevant statute or rules are most easily located through the jurisdiction's Department of Health and MMP.<sup>11</sup> Laws and rules regarding MMPs are an evolving process. Always confirm use of the most recent versions.*
- *A health care provider does not prescribe cannabis.*
- *The MMP will specify the qualifying conditions and the certifying process as well as the type of health care provider who can certify a qualifying condition.<sup>12</sup>*
- *The MMP will specify whether an advanced practice registered nurse can certify a qualifying condition and whether a specific course or training is required in order to participate in certifying an MMP qualifying condition.<sup>13</sup>*
- *After the qualifying condition is certified, the patient registers with the MMP. Once registered, the patient can obtain cannabis from a jurisdiction-authorized cannabis dispensary.*
- *Procurement and administration of cannabis for medical purposes are limited to the patient and/or the patient's designated caregiver. The MMPs will specify whether designated caregivers are permissible as well as the applicable process for registration as a designated caregiver.<sup>14</sup>*
- *In some jurisdictions, the MMP allows an employee of a hospice provider or nursing, or medical facility, or a visiting nurse, personal care attendant, or home health aide to act as a designated caregiver for the administration of medical marijuana.<sup>15</sup>*

3. The nurse shall have a general understanding of the endocannabinoid system, cannabinoid receptors, cannabinoids, and the interactions between them.

- *The endocannabinoid system consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.<sup>16</sup>*
- *Discovered in 1973, this system includes a series of cannabinoid receptors throughout the body embedded in cell membranes that, when stimulated by endocannabinoids, are thought to promote homeostasis.<sup>17</sup>*
- *Endocannabinoids are naturally occurring substances within the body, while phytocannabinoids (plant substances that stimulate cannabinoid receptors) are found in cannabis.<sup>18</sup>*
- *The most well known of these cannabinoids is tetrahydrocannabinol (THC); however, cannabidiol (CBD) and cannabinol (CBN) are gaining interest in therapeutic use.<sup>19</sup>*

4. The nurse shall have an understanding of cannabis pharmacology and the research associated with the medical use of cannabis.

*Due to government restrictions on research involving cannabis, the surge of legislation has outpaced research, leaving nurses with few resources when caring for patients who use medical cannabis. Therefore, information regarding medicinal use of cannabis must be derived from moderate- to high-quality evidence using randomized placebo-controlled studies. These particular studies are the most likely to elucidate causality in treatments and are the only trusted source of evidence for cannabis as a clinical intervention. Research on*



---

*cannabis is an evolving body of work. As with any scientific literature, it is important to rely on the most recent high-quality evidence.*

a. Current scientific evidence exists for the use of cannabis for the following qualifying conditions

- *Moderate- to high-quality evidence exists for*
  - *cachexia*
  - *chemotherapy-induced nausea and vomiting*
  - *pain (resulting from cancer or rheumatoid arthritis)*
  - *chronic pain (resulting from fibromyalgia),*
  - *neuropathies (resulting from HIV/AIDS, multiple sclerosis {MS}, or diabetes)*
  - *spasticity (from MS or spinal cord injury).*<sup>20</sup>

b. Adverse effects of cannabis use are influenced by the patient's condition and current medications

- *The patient's propensity for the following may be exacerbated by cannabis: increased heart rate, increased appetite, sleepiness, dizziness, decreased blood pressure, dry mouth/dry eyes, decreased urination, hallucination, paranoia, anxiety, impaired attention, memory, and psychomotor performance.*<sup>21</sup>
- *Cannabis may exacerbate symptoms associated with asthma, bronchitis, and emphysema; cardiac disease; and alcohol or other drug dependence.*<sup>22</sup>
- *Cognitive impairment by cannabis may be dose- and age-dependent.*<sup>23</sup>
- *It is highly likely that cannabis will exacerbate symptoms of poor balance and posture in patients with dyskinetic disorders. Similarly, cannabis may worsen mental faculties in conditions that cause cognitive deficits. Patients who suffer from diseases with neurologic symptomology may show greater cognitive impairment.*<sup>24</sup>
- *Some participants report fatigue, suicidal ideation, nausea, asthenia, and vertigo as adverse effects of cannabis.*<sup>25</sup>
- *Cannabinoid receptors are effectively absent in the brainstem cardiorespiratory centers. This is believed to preclude the possibility of a fatal overdose from cannabinoid intake.*<sup>26</sup>
- *Cannabis can be a drug of abuse. Cannabis use disorder is defined as a problematic pattern of cannabis use leading to clinically significant impairment or distress; the clinical indications are included in the DSM-5.*<sup>27</sup>
- *Cannabis withdrawal syndrome has been identified as a syndrome seen in some patients whose cannabis use has been heavy and prolonged (i.e., usually daily or almost daily use over a period of at least a few months). The withdrawal syndrome has varying symptomatology, including insomnia, loss of appetite, physical symptoms, and restlessness initially, then irritability/anger, vivid and unpleasant dreams after a week.*<sup>28</sup>

c. Variable effects of cannabis are dependent on type of product and route of administration

- *Since medical cannabis is not an FDA drug, there is no recommended dosage. Instead medical cannabis is titrated by the patient, with the principle of "start low, go slow."*
- *Continual patient assessment of perceived efficacy and adverse effects is recommended. Useful strategies include tracking dose, symptoms, relief, and adverse effects in a journal for review with the authorizing practitioner.*
- *FDA-approved synthetic THC drugs (dronabinol and nabilone) are administered orally or by an oromucosal route with a specific dosage.*

d. Risks to particular groups of patients

- *Adolescence. Many studies show a correlation between cannabis use and poor grades, high dropout rates, lower income, lower percentage of college degree completion, greater need for economic assistance, unemployment, and use of other drugs. Although these trends are related to recreational rather than medicinal cannabis use, the trends cannot be ignored but should be balanced with the benefits of cannabis for medical use.*<sup>29</sup>
- *Fertility. Two preclinical studies indicate that interference with endogenous cannabinoids might increase chances of failed embryo implantation<sup>30</sup> and cannabinoids are capable of dysregulating hormones, which in turn can affect spermatogenesis.*<sup>31</sup>
- *Neonate. Presently there are no reliable data for neurodevelopmental outcomes with early exposure to cannabis in neonatal life, or through either breastfeeding or secondhand inhalation.*<sup>32,33,34</sup>
- *Cannabis can be a drug of abuse and precautions should be taken to minimize the risk of misuse and abuse.*
- *Cannabis use may exacerbate existing psychoses in those with a risk of suicide or history of suicide attempt, schizophrenia, bipolar disorder, or other psychotic conditions.*<sup>35</sup>

5. The nurse shall be aware of the facility or agency policies regarding administration of medical marijuana.

*Always check with the facility and local Department of Health or MMP for more information on the facility policy when caring for a patient using cannabis medically.*<sup>36</sup>

**Clinical Encounter Considerations**

1. As part of the clinical encounter for a patient using cannabis for medical use, the nurse shall conduct an assessment related to the following:

- *Signs and symptoms of cannabis adverse effects*
  - *Increased heart rate, increased appetite, sleepiness, dizziness, decreased blood pressure, dry mouth/dry eyes, decreased urination, hallucination, paranoia, anxiety, impaired attention, memory, psychomotor performance<sup>37</sup> as well as, symptoms associated with asthma, bronchitis, and emphysema<sup>38</sup> or exacerbation of poor balance and posture in patients with dyskinetic disorders.*<sup>39</sup>
  - *Less frequently: fatigue, suicidal ideation, nausea, asthenia, and vertigo.*
  - *Hyperemesis syndrome caused by overconsumption of edible cannabis product that can cause higher than normal blood concentrations of cannabinoids.*<sup>40</sup>
  - *Variable effects of cannabis are dependent on type of product and route of administration*
  - *As medical cannabis dosage is titrated by the patient, with the principle of “start low, go slow,” continual patient assessment of perceived efficacy and adverse effects is recommended.*
  - *Useful strategies include tracking dose, symptoms, relief, and adverse effects in a journal.*

2. The nurse shall communicate the findings of the clinical encounter to other health care providers and note such communication in documentation.

*Clear, complete, and accurate documentation in a health record ensures that all those involved in a patient’s care have access to information upon which to plan and evaluate their interventions.*

3. The nurse shall be able to identify the safety considerations for patient use of cannabis.

- *Administration of cannabis for medical use can only be carried out by the certified patient or designated caregivers registered to care for the patient.*
- *Cannabis storage considerations include:*
  - *keeping cannabis out of the reach of children, minors, and nonregistered individuals*

- *storing all cannabis products in a locked area*
- *keeping cannabis in the original child-resistant packaging*
- *storing raw cannabis in a cool, dry, place*
- *following labeling guidelines for storage and expiration dates*
- *Disposal of unused cannabis products should be completed according to the DEA's Disposal Act.<sup>41</sup> Generally, one can locate a collection receptacle via the DEA Registration Call Center (800-882-9539).*

#### **Medical Marijuana Administration Considerations**

1. A nurse shall not administer cannabis to a patient unless specifically authorized by jurisdiction law.<sup>42</sup>
2. Instances in which the nurse may administer cannabis or synthetic THC to a patient.
  - *Administration of FDA-approved synthetic THC drugs (dronabinol and nabilone) as per facility formulary and policy*
  - *As a registered MMP-designated caregiver*
    - *The majority of jurisdictions allow a designated caregiver to assist a patient with the medical use of cannabis.*
    - *These caregivers must meet specific qualifications and be registered with the MMP and must not practice outside of the limits of the caregiving statute.<sup>43</sup>*
    - *Some jurisdictions allow an employee of a hospice provider or nursing or medical facility, or a visiting nurse, to assist in the administration of medical marijuana.*
    - *Check the most current MMP statute or rules.<sup>44</sup>*
    - *Check facility policy regarding medical marijuana administration.*

#### **Ethical Considerations**

In addition to ethical responsibilities under the nurse's jurisdictional law, the nurse shall approach the patient without judgment regarding the patient's choice of treatment or preferences in managing pain and other distressing symptoms.

*Awareness of one's own beliefs and attitudes about any therapeutic intervention is vital, as nurses are expected to provide patient care without personal judgment of patients.*

#### **References**

- 1 National Conference of State Legislatures (NCSL). (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 2 Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.
- 3 U.S. Department of Transportation. National Highway Traffic Safety Administration (NHTSA). (2107). Marijuana- Impaired Driving A Report to Congress. Retrieved from <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-drivingreport-to-congress.pdf>
- 4 Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.
- 5 National Institute on Drug Abuse (NIDA). (May 2017). Information on Marijuana Farm Contract. Retrieved from <https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuanaresearch/information-marijuana-farm-contract>
- 6 U.S. Department of Justice, Drug Enforcement Administration (DEA). (November 8, 2017). Established Aggregate Production Quotas for Schedule I and II Controlled Substances and Assessment of Annual Needs for the List I Chemicals Ephedrine, Pseudoephedrine, and Phenylpropanolamine for 2018. 82 FR 51873. Retrieved from <https://www.federalregister.gov/documents/2017/11/08/2017-24306/established-aggregate-production-quotas-for-schedule-i-and-ii-controlled-substances-and-assessment>
- 7 Mikos. R.A. (December 12, 2012). On the Limits of Federal Supremacy: When States Relax (or Abandon) Marijuana Bans. Cato Institute. Policy Analysis, No. 714. Retrieved from <https://object.cato.org/sites/cato.org/files/pubs/pdf/PA714.pdf>; *Beek v. City of Wyoming*. (February 6, 2014) (Findlaw, Dist. 145816). Retrieved from <http://caselaw.findlaw.com/mi-supreme-court/1656759.html>

- 
- 8 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 9 U.S. Department of Justice, Office of Public Affairs (DOJ). (October 19, 2009). Attorney General Announces Formal Medical Marijuana Guidelines. Retrieved from <https://www.justice.gov/opa/pr/attorney-general-announces-formal-medical-marijuana-guidelines>; DOJ. (June 29, 2011). Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use. Retrieved from <https://www.justice.gov/sites/default/files/oip/legacy/2014/07/23/dag-guidance-2011-for-medical-marijuana-use.pdf>; DOJ. (August 29, 2013). Guidance Regarding Marijuana Enforcement. Retrieved from <https://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>; DOJ. (February 14, 2013). Guidance Regarding Marijuana Related Financial Crimes. Retrieved from <https://www.justice.gov/sites/default/files/usao-wdwa/legacy/2014/02/14/DAG%20Memo%20-%20Guidance%20Regarding%20Marijuana%20Related%20Financial%20Crimes%202%2014%2014%20%282%29.pdf>; DOJ. (October 28, 2014). Policy Statement Regarding Marijuana Issues in Indian Country. Retrieved from <https://www.justice.gov/sites/default/files/tribal/pages/attachments/2014/12/11/policystatementregardingmarijuanaissuesinindiancountry2.pdf>
- 10 DOJ. (January 4, 2018). Marijuana Enforcement. Retrieved from <https://www.justice.gov/opa/press-release/file/1022196/download>
- 11 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 12 Ibid.
- 13 Ibid.
- 14 Ibid.
- 15 Ibid.
- 16 Mackie K. Cannabinoid receptors: where they are and what they do. *J Neuroendocrinol* 2008; 20 Suppl 1: 10-4. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2826.2008.01671.x/full>
- 17 Ibid.
- 18 Ibid.
- 19 Pacher et al. The endocannabinoid system as an emerging target of pharmacotherapy. *Pharmacological Reviews* 2006; 58: 389-462. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2241751/>
- 20 National Academies of Sciences, Engineering, and Medicine (National Academies of Sciences). (2017). *The Health Effects of Cannabis and Cannabinoids: The Current Jurisdiction of Evidence and Recommendations for Research*. Washington, D.C.: National Academy Press; Madras, B. (2015). Update of cannabis and its medical use. Retrieved from [http://www.who.int/medicines/access/controlled-substances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf)
- 21 Federal Drug Administration. (September 2004). Marinol® (Dronabinol) Capsules. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
- 22 Hall, W., & Solowij, N. (1998). Adverse effects of cannabis. *The Lancet*, 352(9140), 1611-1616; Tashkin, D. P. (2013). Effects of marijuana smoking on the lung. *Annals of the American Thoracic Society*, 10(3), 239-247; Federal Drug Administration (FDA). (September 2004). Marinol® (Dronabinol) Capsules. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
- 23 Crean, R. D., Crane, N. A., & Mason, B. J. (2011). An evidence based review of acute and long-term effects of cannabis use on executive cognitive functions. *Journal of addiction medicine*, 5(1), 1; Solowij, N., & Pesa, N. (2012). Cannabis and cognition: short and long-term effects. *Marijuana and madness*, 2, 91-102.
- 24 Koppel, B. S., Brust, J. C., Fife, T., Bronstein, J., Youssof, S., Gronseth, G., & Gloss, D. (2014). Systematic review: Efficacy and safety of medical marijuana in selected neurologic disorders *Report of the Guideline Development Subcommittee of the American Academy of Neurology. Neurology*, 82(17), 1556-1563.
- 25 Collin, C., Ehler, E., Waberszinek, G., Alsindi, Z., Davies, P., Powell, K., ... & Zapletalova, O. (2010). A double-blind, randomized, placebo-controlled, parallel-group study of Sativex, in subjects with symptoms of spasticity due to multiple sclerosis. *Neurological research*, 32(5), 451-459; National Academies of Sciences. (2017). *The Health Effects of Cannabis and Cannabinoids: The Current Jurisdiction of Evidence and Recommendations for Research*. Washington, D.C.: National Academy Press; Madras, B. (2015). *Update of cannabis and its medical use*. Retrieved from [http://www.who.int/medicines/access/controlled-substances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf)
- 26 Glass, M., Faull, R. L. M., & Dragunow, M. (1997). Cannabinoid receptors in the human brain: a detailed anatomical and quantitative autoradiographic study in the fetal, neonatal and adult human brain. *Neuroscience*, 77(2), 299-318.
- 27 American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- 28 Hesse, M., & Thylstrup, B. (2013). Time-course of the DSM-5 cannabis withdrawal symptoms in poly-substance abusers. *BMC psychiatry*, 13(1), 258; American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author; Budney, A. J., Moore, B. A., Vandrey, R. G., &

- 
- Hughes, J. R. (2003). The time course and significance of cannabis withdrawal. *Journal of abnormal psychology*, 112(3), 393.
- 29 Madras, B. (2015). Update of cannabis and its medical use. Retrieved from [http://www.who.int/medicines/access/controlledsubstances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlledsubstances/6_2_cannabis_update.pdf); Crean, R. D., Crane, N. A., & Mason, B. J. (2011). An evidence based review of acute and longterm effects of cannabis use on executive cognitive functions. *Journal of addiction medicine*, 5(1), 1.
- 30 Park, B., McPartland, J. M., & Glass, M. (2004). Cannabis, cannabinoids and reproduction. *Prostaglandins, leukotrienes and essential fatty acids*, 70(2), 189-197.
- 31 du Plessis, S. S., Agarwal, A., & Syriac, A. (2015). Marijuana, phytocannabinoids, the endocannabinoid system, and male fertility. *Journal of assisted reproduction and genetics*, 32(11), 1575-1588.
- 32 Jaques, S. C., Kingsbury, A., Henshcke, P., Chomchai, C., Clews, S., Falconer, J., ... & Oei, J. L. (2014). Cannabis, the pregnant woman and her child: Weeding out the myths. *Journal of Perinatology*, 34(6), 417.
- 33 Jutras-Aswad, D., DiNieri, J. A., Harkany, T., & Hurd, Y. L. (2009). Neurobiological consequences of maternal cannabis on human fetal development and its neuropsychiatric outcome. *European Archives of Psychiatry and Clinical Neuroscience*, 259(7), 395-412.
- 34 Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. (2014). Adverse health effects of marijuana use. *New England Journal of Medicine*, 370(23), 2219-2227.
- 35 Wilkinson, S. T., Radhakrishnan, R., & D'Souza, D. C. (2014). Impact of cannabis use on the development of psychotic disorders. *Current addiction reports*, 1(2), 115-128.
- 36 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 37 FDA. (September 2004). *Marinol® (Dronabinol) Capsules*. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
- 38 Hall, W., & Solowij, N. (1998). Adverse effects of cannabis. *The Lancet*, 352(9140), 1611-1616; Tashkin, D. P. (2013). Effects of marijuana smoking on the lung. *Annals of the American Thoracic Society*, 10(3), 239-247
- 39 Koppel, B. S., Brust, J. C., Fife, T., Bronstein, J., Yousof, S., Gronseth, G., & Gloss, D. (2014). Systematic review: Efficacy and safety of medical marijuana in selected neurologic disorders Report of the Guideline Development Subcommittee of the American Academy of Neurology. *Neurology*, 82(17), 1556-1563.
- 40 Calabria, B., Degenhardt, L., Hall, W., & Lynskey, M. (2010). Does cannabis use increase the risk of death? Systematic review of epidemiological evidence on adverse effects of cannabis use. *Drug and alcohol review*, 29(3), 318-330.
- 41 DEA. (2014). Disposal Act: General Public Fact Sheet. Retrieved from [https://www.deadiversion.usdoj.gov/drug\\_disposal/fact\\_sheets/disposal\\_public.pdf](https://www.deadiversion.usdoj.gov/drug_disposal/fact_sheets/disposal_public.pdf)
- 42 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 43 Ibid.
- 44 Ibid.

## NCSBN Recommendations: Cannabis-specific Education Content for Pre-licensure Nursing Programs

### Purpose of the guidelines

Over 31 jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical use. Several NCSBN associate member jurisdictions also have legalized cannabis for medical use.\* Each medical marijuana program has unique characteristics. In the United States, cannabis is a Schedule I Controlled Substance. Therefore, medical cannabis is unlike most other therapeutics in that providers cannot prescribe cannabis, nor can pharmacies dispense cannabis. However, applicable jurisdiction statutes and rules provide for the manufacture, distribution, and use of cannabis for medical purposes.

These guidelines provide nurses with principles of safe and knowledgeable practice to promote patient safety when caring for patients taking medical marijuana.

### Definitions

**Cannabis.** Any raw preparation of the leaves or flowers from the plant genus *Cannabis*. This report uses “cannabis” as a shorthand that also includes cannabinoids.

**Cannabidiol (CBD).** A major cannabinoid that indirectly antagonizes cannabinoid receptors, which may attenuate the psychoactive effects of tetrahydrocannabinol.

**Cannabinoid.** Any chemical compound that acts on cannabinoid receptors. These include endogenous and exogenous cannabinoids.

**Cannabinol (CBN).** A cannabinoid more commonly found in aged cannabis as a metabolite of other cannabinoids. It is nonpsychoactive.

**Certify.** The act of confirming that a patient has a qualifying condition. Many jurisdictions use alternative phrases such as “attest” or “authorize”; however, 13 of 29 jurisdictions use “certify” language in their statutes.

**Clinical research.** An activity that involves studies that experimentally assign randomized human participants to one or more drug interventions to evaluate the effects on health outcomes.

**Designated caregiver.** An individual who is selected by the Medical Marijuana Program qualifying patient and authorized by the Medical Marijuana Program to purchase and/or administer cannabis on the patient’s behalf. Also sometimes referred to as an “alternate caregiver.”

---

\* In Australia, cannabis for medical use is federally legal, with states allowed to implement as they see fit. Although Bermuda has not legislated use of marijuana, its Supreme Court ruled that citizens could apply for personal licenses to possess cannabis for medical use. Cannabis for medical use is federally legal in all provinces of Canada. In New Zealand, physicians may prescribe CBD and cannabis-based products.

---

**Dronabinol.** The generic name for synthetic tetrahydrocannabinol. It is the active ingredient in the U.S. Food & Drug Administration (FDA)-approved drug Marinol®.

**Endocannabinoid system.** A system that consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.

**Marijuana.** A cultivated cannabis plant, whether for recreational or medicinal use. The words “marijuana” and “cannabis” are often used interchangeably in various lay and scientific literature. These guidelines will primarily use the word “cannabis.” When referring to a medical marijuana program, the guidelines will use the word “marijuana,” as it is often used within program references.

**Medical Marijuana Program (MMP).** The official jurisdictional resource for the use of cannabis for medical purposes. Search the jurisdiction’s website or Department of Health for “medical cannabis program” or “medical marijuana program.”<sup>1</sup>

**Nabilone.** The generic name for a synthetic cannabinoid similar to tetrahydrocannabinol. It is the active ingredient<sup>4</sup> in the FDA-approved drug Cesamet™.

**Schedule I Controlled Substance.** Defined in the federal Controlled Substances Act<sup>2</sup> as those substances that have a high potential for abuse; no currently accepted medical use in treatment in the United States; and a lack of accepted safety for use of the substance under medical supervision.

**Tetrahydrocannabinol (THC).** One of many cannabinoids found in cannabis. THC is the primary substance responsible for most of the characteristic psychoactive effects of cannabis.<sup>3</sup>

## **Recommendations for Content**

1. The nursing student shall have a working knowledge of the current state of legalization of medical and recreational cannabis use.

- *The Drug Enforcement Agency (DEA) classifies cannabis as a Schedule I Controlled Substance. This classification not only prohibits practitioners from prescribing cannabis, it also prohibits most research using cannabis.*<sup>4</sup>
- *The process for obtaining cannabis for federally funded research purposes is cumbersome. Currently, the only legal source of cannabis for research purposes is grown in limited quantities at the University of Mississippi.*<sup>5</sup> *The DEA sets an annual quota for cannabis grown for research purposes.*<sup>6</sup>
- *Over 31 jurisdictions (including the District of Columbia), Guam, and Puerto Rico passed legislation legalizing cannabis for medical purposes. In these laws, the jurisdiction has adopted exemptions legalizing the use of cannabis for medical purposes. Although the use of marijuana pursuant to authorized MMPs conflicts with federal law and regulations, at present there is no controlling case law holding that Congress intended to preempt the field of regulation of cannabis use under its supremacy powers.*<sup>7</sup>
- *An increasing proportion of jurisdictions have also decriminalized or legalized recreational cannabis use.*<sup>8</sup>
- *The federal government’s position on prosecuting the use of cannabis that is legal under applicable jurisdiction law has been set out in U.S. Department of Justice position papers. In 2009, the U.S. Attorney General took a position that discourages federal prosecutors from prosecuting people who distribute or use cannabis for medical purposes in compliance with applicable jurisdiction law; further*

---

*similar guidance was given in 2011, 2013, and 2014.<sup>9</sup> In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement. The 2018 memorandum<sup>10</sup> provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely, the prosecution is to weigh all relevant considerations, including priorities set by the attorneys general, seriousness of the crime, deterrent effect of criminal prosecution, and cumulative impact of particular crimes on the community.*

2. The nursing student shall have general knowledge of the principles of an MMP.

- *MMPs are defined and described within the statute and rules of the specific jurisdiction. The relevant statute or rules are most easily located through the jurisdiction's Department of Health and MMP.<sup>11</sup> Laws and rules regarding MMPs are an evolving process. Always confirm use of the most recent versions.*
- *A health care provider does not prescribe cannabis.*
- *The MMP will specify the qualifying conditions and the certifying process as well as the type of health care provider who can certify a qualifying condition.<sup>12</sup>*
- *The MMP will specify whether an APRN can certify a qualifying condition and whether a specific course or training is required in order to participate in certifying an MMP qualifying condition.<sup>13</sup>*
- *After the qualifying condition is certified, the patient registers with the MMP. Once registered, the patient can obtain cannabis from a jurisdiction-authorized cannabis dispensary.*
- *Procurement and administration of cannabis for medical purposes are limited to the patient and/or the patient's designated caregiver. The MMPs will specify whether designated caregivers are permissible as well as the applicable process for registration as a designated caregiver.<sup>14</sup>*
- *In some jurisdictions, the MMP allows an employee of a hospice provider or nursing or medical facility, or a visiting nurse, personal care attendant, or home health aide to act as a designated caregiver for the administration of medical marijuana.<sup>15</sup>*

3. The nursing student shall have a general understanding of the endocannabinoid system, cannabinoid receptors, cannabinoids, and the interactions between them.

- *The endocannabinoid system consists of endocannabinoids, cannabinoid receptors, and the enzymes responsible for synthesis and degradation of endocannabinoids.<sup>16</sup>*
- *Discovered in 1973, this system includes a series of cannabinoid receptors throughout the body embedded in cell membranes that, when stimulated by endocannabinoids, are thought to promote homeostasis.<sup>17</sup>*
- *Endocannabinoids are naturally occurring substances within the body, while phytocannabinoids (plant substances that stimulate cannabinoid receptors) are found in cannabis.<sup>18</sup>*
- *The most well known of these cannabinoids is tetrahydrocannabinol (THC); however, cannabidiol (CBD) and cannabitol (CBN) are gaining interest in therapeutic use.<sup>19</sup>*

4. The nursing student shall have an understanding of cannabis pharmacology and the research associated with the medical use of cannabis.

*Due to government restrictions on research involving cannabis, the surge of legislation has outpaced research, leaving nurses with a few resources when caring for patients who use medical cannabis. Therefore, information regarding medicinal use of cannabis must be derived from moderate to high quality evidence using randomized placebo-controlled studies. These particular studies are the most likely to elucidate causality in treatments and are the only trusted source of evidence for cannabis as a clinical intervention.*



---

*Research on cannabis is an evolving body of work. As with any scientific literature, it is important to rely on the most recent high quality evidence.*

a. Current scientific evidence exists for the use of cannabis for the following qualifying conditions

- *Moderate to high quality evidence exists for*
  - *cachexia*
  - *chemotherapy-induced nausea and vomiting*
  - *pain (resulting from cancer or rheumatoid arthritis)*
  - *chronic pain (resulting from fibromyalgia)*
  - *neuropathies (resulting from HIV/AIDS, multiple sclerosis {MS}, or diabetes)*
  - *spasticity (from MS or spinal cord injury).<sup>20</sup>*

b. Adverse effects of cannabis use are influenced by the patient's condition and current medications

- *The patient's propensity for the following may be exacerbated by cannabis: increased heart rate, increased appetite, sleepiness, dizziness, decreased blood pressure, dry mouth/dry eyes, decreased urination, hallucination, paranoia, anxiety, impaired attention, memory, and psychomotor performance.<sup>21</sup>*
- *Cannabis may exacerbate symptoms associated with asthma, bronchitis, and emphysema; cardiac disease; and alcohol or other drug dependence.<sup>22</sup>*
- *Cognitive impairment by cannabis may be dose- and age-dependent.<sup>23</sup>*
- *It is highly likely that cannabis will exacerbate symptoms of poor balance and posture in patients with dyskinetic disorders. Similarly, cannabis may worsen mental faculties in conditions that cause cognitive deficits. Patients who suffer from diseases with neurologic symptomology may show greater cognitive impairment.<sup>24</sup>*
- *Some participants report fatigue, suicidal ideation, nausea, asthenia, and vertigo as adverse effects of cannabis.<sup>25</sup>*
- *Cannabinoid receptors are effectively absent in the brainstem cardiorespiratory centers. This is believed to preclude the possibility of a fatal overdose from cannabinoid intake.<sup>26</sup>*
- *Cannabis can be a drug of abuse. Cannabis use disorder is defined as a problematic pattern of cannabis use leading to clinically significant impairment or distress; the clinical indications are included in the DSM-5.<sup>27</sup>*
- *Cannabis withdrawal syndrome has been identified as a syndrome seen in some patients whose cannabis use has been heavy and prolonged (i.e., usually daily or almost daily use over a period of at least a few months). The withdrawal syndrome has varying symptomatology, including insomnia, loss of appetite, physical symptoms, and restlessness initially, then irritability/anger, vivid and unpleasant dreams after a week.<sup>28</sup>*

c. Variable effects of cannabis are dependent on type of product and route of administration

- *Since medical cannabis is not an FDA drug, there is no recommended dosage. Instead, medical cannabis dosage is titrated by the patient, with the principle of "start low, go slow."*
- *Continual patient assessment of perceived efficacy and adverse effects is recommended. Useful strategies include tracking dose, symptoms, relief, and adverse effects in a journal for review with the authorizing practitioner.*
- *FDA-approved synthetic THC drugs (dronabinol and nabilone) are administered orally or by an oromucosal route with a specific dosage.*

d. Risks to particular groups of patients

- *Adolescence. Many studies show a correlation between cannabis use and poor grades, high dropout rates, lower income, lower percentage of college degree completion, greater need for economic assistance, unemployment, and use of other drugs. Although these trends are related to recreational rather than medicinal cannabis use, the trends cannot be ignored but should be balanced with the benefits of cannabis for medical use.*<sup>29</sup>
- *Fertility. Two preclinical studies indicate that interference with endogenous cannabinoids might increase chances of failed embryo implantation<sup>30</sup> and cannabinoids are capable of dysregulating hormones, which in turn can affect spermatogenesis.*<sup>31</sup>
- *Neonate. Presently there are no reliable data for neurodevelopmental outcomes with early exposure to cannabis in neonatal life, or through either breastfeeding or secondhand inhalation.*<sup>32,33,34</sup>
- *Cannabis can be a drug of abuse and precautions should be taken to minimize the risk of misuse and abuse.*
- *Cannabis use may exacerbate existing psychoses in those with a risk of suicide or history of suicide attempt, schizophrenia, bipolar disorder, or other psychotic conditions.*<sup>35</sup>

5. The nursing student shall be able to identify the safety considerations for patient use of cannabis.

- *Administration of cannabis for medical use can only be carried out by the certified patient or designated caregivers registered to care for the patient.*
- *Cannabis storage considerations include:*
  - *keeping cannabis out of the reach of children, minors, and nonregistered individuals*
  - *storing all cannabis products in a locked area*
  - *keeping cannabis in the original child-resistant packaging*
  - *storing raw cannabis in a cool, dry, place*
  - *following labeling guidelines for storage and expiration dates*
- *Disposal of unused cannabis products should be completed according to the DEA's Disposal Act.*<sup>36</sup> *Generally, one can locate a collection receptacle via the DEA Registration Call Center (800-882-9539).*

6. In addition to ethical responsibilities under the nurse's jurisdictional law, the nursing student shall approach the patient without judgment regarding the patient's choice of treatment or preferences in managing pain and other distressing symptoms.

*Awareness of one's own beliefs and attitudes about any therapeutic intervention is vital as nurses are expected to provide patient care without personal judgment of patients.*

7. The nursing student shall be aware of medical marijuana administration considerations.

- *A nurse shall not administer cannabis to a patient unless specifically authorized by jurisdiction law.*<sup>37</sup>
- *Instances in which the nurse may administer cannabis or synthetic THC to a patient.*
- *Administration of FDA-approved synthetic THC drugs (dronabinol and nabilone) per facility formulary and policy*
- *As a registered MMP designated caregiver*
  - *The majority of jurisdictions allow a designated caregiver to assist a patient with the medical use of cannabis.*
  - *These caregivers must meet specific qualifications and be registered with the MMP and must not practice outside of the limits of the caregiving statute.*<sup>38</sup>
  - *Some jurisdictions allow an employee of a hospice provider or nursing or medical facility, or a visiting nurse, to assist in the administration of medical marijuana.*<sup>39</sup>

- *Check the most current MMP statute or rules.*<sup>40</sup>
- *Check facility policy regarding medical marijuana administration.*

## References

- 1 National Conference of State Legislatures (NCSL). (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 2 Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.
- 3 U.S. Department of Transportation. National Highway Traffic Safety Administration (NHTSA). (2107). Marijuana-Impaired Driving A Report to Congress. Retrieved from <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-drivingreport-to-congress.pdf>
- 4 Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.
- 5 National Institute on Drug Abuse (NIDA). (May 2017). Information on Marijuana Farm Contract. Retrieved from <https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuanaresearch/information-marijuana-farm-contract>
- 6 U.S. Department of Justice, Drug Enforcement Administration (DEA). (November 8, 2017). Established Aggregate Production Quotas for Schedule I and II Controlled Substances and Assessment of Annual Needs for the List I Chemicals Ephedrine, Pseudoephedrine, and Phenylpropanolamine for 2018. 82 FR 51873. Retrieved from <https://www.federalregister.gov/documents/2017/11/08/2017-24306/established-aggregate-productionquotas-for-schedule-i-and-ii-controlled-substances-and-assessment>
- 7 Mikos. R.A. (December 12, 2012). On the Limits of Federal Supremacy: When States Relax (or Abandon) Marijuana Bans. Cato Institute. Policy Analysis, No. 714. Retrieved from <https://object.cato.org/sites/cato.org/files/pubs/pdf/PA714.pdf>; Beek v. City of Wyoming. (February 6, 2014) (Findlaw, Dist. 145816). Retrieved from <http://caselaw.findlaw.com/mi-supreme-court/1656759.html>
- 8 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 9 U.S. Department of Justice, Office of Public Affairs (DOJ). (October 19, 2009). Attorney General Announces Formal Medical Marijuana Guidelines. Retrieved from <https://www.justice.gov/opa/pr/attorney-general-announces-formal-medical-marijuana-guidelines>; DOJ. (June 29, 2011). Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use. Retrieved from <https://www.justice.gov/sites/default/files/oip/legacy/2014/07/23/dag-guidance-2011-for-medical-marijuana-use.pdf>; DOJ. (August 29, 2013). Guidance Regarding Marijuana Enforcement. Retrieved from <https://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>; DOJ. (February 14, 2013). Guidance Regarding Marijuana Related Financial Crimes. Retrieved from <https://www.justice.gov/sites/default/files/usao-wdwa/legacy/2014/02/14/DAG%20Memo%20-%20Guidance%20Regarding%20Marijuana%20Related%20Financial%20Crimes%202%2014%2014%20%282%29.pdf>; DOJ. (October 28, 2014). Policy Statement Regarding Marijuana Issues in Indian Country. Retrieved from <https://www.justice.gov/sites/default/files/tribal/pages/attachments/2014/12/11/policystatementregardingmarijuanaissuesinindiancountry2.pdf>
- 10 DOJ. (January 4, 2018). Marijuana Enforcement. Retrieved from <https://www.justice.gov/opa/press-release/file/1022196/download>
- 11 NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 12 Ibid.
- 13 Ibid.
- 14 Ibid.
- 15 Ibid.
- 16 Mackie K. Cannabinoid receptors: where they are and what they do. J Neuroendocrinol 2008; 20 Suppl 1: 10-4. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2826.2008.01671.x/full>
- 17 Ibid.
- 18 Ibid.
- 19 Pacher et al. The endocannabinoid system as an emerging target of pharmacotherapy. Pharmacological Reviews 2006; 58: 389-462. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2241751/>
- 20 National Academies of Sciences, Engineering, and Medicine (National Academies of Sciences). (2017). The Health Effects of Cannabis and Cannabinoids: The Current Jurisdiction of Evidence and Recommendations for Research. Washington, D.C.: National Academy Press; Madras, B. (2015). Update of cannabis and its medical use. Retrieved from [http://www.who.int/medicines/access/controlled-substances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf)
- 21 Federal Drug Administration. (September 2004). Marinol® (Dronabinol) Capsules. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>

- 
- 22 Hall, W., & Solowij, N. (1998). Adverse effects of cannabis. *The Lancet*, 352(9140), 1611-1616; Tashkin, D. P. (2013). Effects of marijuana smoking on the lung. *Annals of the American Thoracic Society*, 10(3), 239-247; Federal Drug Administration (FDA). (September 2004). Marinol® (Dronabinol) Capsules. Retrieved from <https://www.fda.gov/ohrms/dockets/dockets/05n0479/05N-0479-emc0004-04.pdf>
- 23 Crean, R. D., Crane, N. A., & Mason, B. J. (2011). An evidence based review of acute and long-term effects of cannabis use on executive cognitive functions. *Journal of addiction medicine*, 5(1), 1; Solowij, N., & Pesa, N. (2012). Cannabis and cognition: short and long-term effects. *Marijuana and madness*, 2, 91-102.
- 24 Koppel, B. S., Brust, J. C., Fife, T., Bronstein, J., Youssof, S., Gronseth, G., & Gloss, D. (2014). Systematic review: Efficacy and safety of medical marijuana in selected neurologic disorders Report of the Guideline Development Subcommittee of the American Academy of Neurology. *Neurology*, 82(17), 1556-1563.
- 25 Collin, C., Ehler, E., Waberzinek, G., Alsindi, Z., Davies, P., Powell, K., ... & Zapletalova, O. (2010). A double-blind, randomized, placebo-controlled, parallel-group study of Sativex, in subjects with symptoms of spasticity due to multiple sclerosis. *Neurological research*, 32(5), 451-459; National Academies of Sciences. (2017). *The Health Effects of Cannabis and Cannabinoids: The Current Jurisdiction of Evidence and Recommendations for Research*. Washington, D.C.: National Academy Press; Madras, B. (2015). *Update of cannabis and its medical use*. Retrieved from [http://www.who.int/medicines/access/controlled-substances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlled-substances/6_2_cannabis_update.pdf)
- 26 Glass, M., Faull, R. L. M., & Dragunow, M. (1997). Cannabinoid receptors in the human brain: a detailed anatomical and quantitative autoradiographic study in the fetal, neonatal and adult human brain. *Neuroscience*, 77(2), 299-318.
- 27 American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- 28 Hesse, M., & Thylstrup, B. (2013). Time-course of the DSM-5 cannabis withdrawal symptoms in poly-substance abusers. *BMC psychiatry*, 13(1), 258; American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author; Budney, A. J., Moore, B. A., Vandrey, R. G., & Hughes, J. R. (2003). The time course and significance of cannabis withdrawal. *Journal of abnormal psychology*, 112(3), 393.
- 29 Madras, B. (2015). *Update of cannabis and its medical use*. Retrieved from [http://www.who.int/medicines/access/controlledsubstances/6\\_2\\_cannabis\\_update.pdf](http://www.who.int/medicines/access/controlledsubstances/6_2_cannabis_update.pdf); Crean, R. D., Crane, N. A., & Mason, B. J. (2011). An evidence based review of acute and longterm effects of cannabis use on executive cognitive functions. *Journal of addiction medicine*, 5(1), 1.
- 30 Park, B., McPartland, J. M., & Glass, M. (2004). Cannabis, cannabinoids and reproduction. *Prostaglandins, leukotrienes and essential fatty acids*, 70(2), 189-197.
- 31 du Plessis, S. S., Agarwal, A., & Syriac, A. (2015). Marijuana, phytocannabinoids, the endocannabinoid system, and male fertility. *Journal of assisted reproduction and genetics*, 32(11), 1575-1588.
- 32 Jaques, S. C., Kingsbury, A., Henshcke, P., Chomchai, C., Clews, S., Falconer, J., ... & Oei, J. L. (2014). Cannabis, the pregnant woman and her child: Weeding out the myths. *Journal of Perinatology*, 34(6), 417.
- 33 Jutras-Aswad, D., DiNieri, J. A., Harkany, T., & Hurd, Y. L. (2009). Neurobiological consequences of maternal cannabis on human fetal development and its neuropsychiatric outcome. *European Archives of Psychiatry and Clinical Neuroscience*, 259(7), 395-412.
- 34 Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. (2014). Adverse health effects of marijuana use. *New England Journal of Medicine*, 370(23), 2219-2227.
- 35 Wilkinson, S. T., Radhakrishnan, R., & D'Souza, D. C. (2014). Impact of cannabis use on the development of psychotic disorders. *Current addiction reports*, 1(2), 115-128.
- 36 DEA. (2014). *Disposal Act: General Public Fact Sheet*. Retrieved from [https://www.deadiversion.usdoj.gov/drug\\_disposal/fact\\_sheets/disposal\\_public.pdf](https://www.deadiversion.usdoj.gov/drug_disposal/fact_sheets/disposal_public.pdf)
- 37 NCSL. (2017). *State Medical Marijuana Laws*. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
- 38 Ibid.
- 39 Ibid.
- 40 Ibid.

## NCSBN Guidelines for the Board of Nursing: Complaints Involving a Licensee and Cannabis

### Purpose of the guidelines

Over 31 jurisdictions (including the District of Columbia), Guam and Puerto Rico passed legislation legalizing cannabis for medical use. Several NCSBN associate member jurisdictions also have legalized cannabis for medical use.\* Each medical marijuana program has unique characteristics. In the U.S., cannabis is a Schedule I Controlled Substance. Therefore, cannabis use medically is unlike most other therapeutics, in that providers cannot prescribe cannabis, nor can pharmacies dispense cannabis. However, applicable jurisdiction statutes and rules provide for the manufacture, distribution and use of cannabis for medical use.

These guidelines provide necessary information for BONs regarding matters involving cannabis, specifically including complaints to the board of nursing involving:

- A. A licensee who tests positive for THC or its metabolite
- B. An APRN licensee's certifying of a Medical Marijuana Program qualifying condition
- C. A licensee's administration of cannabis to a patient outside of designated caregiver provisions of the Medical Marijuana Program

### Definitions

*Cannabis* - any raw preparation of the leaves or flowers from the plant genus, *Cannabis*. This report uses "cannabis" as a shorthand that also includes cannabinoids.

*Cannabidiol* (CBD) – A major cannabinoid that indirectly antagonizes cannabinoid receptors, which may attenuate the psychoactive effects of tetrahydrocannabinol.

*Cannabinoid* - is any chemical compound that acts on cannabinoid receptors. These include endogenous and exogenous cannabinoids.

*Cannabinol* (CBN) – is a cannabinoid more commonly found in aged cannabis as a metabolite of other cannabinoids. It is non-psychoactive.

*Certify* - the act of confirming that a patient has a qualifying condition. Many jurisdictions use alternative phrases such as 'attest' or 'authorize', however, 13 of 29 jurisdictions use 'certify' language in their statutes.

---

\*In [Australia](#), cannabis for medical use is federally legal, with states allowed to implement as they see fit. Although Bermuda has not legislated use of marijuana, their Supreme Court [ruled](#) that citizens could apply for personal licenses to possess cannabis for medical use. Cannabis for medical use is federally legal in all provinces of [Canada](#). In [New Zealand](#), physicians may prescribe CBD and cannabis-based products.

---

*Clinical research* - involves studies that experimentally assign randomized human participants to one or more drug interventions to evaluate the effects on health outcomes

*Designated Caregiver* - an individual who is selected by the Medical Marijuana Program qualifying patient and authorized by the Medical Marijuana Program to purchase and/or administer cannabis on their behalf. Also sometimes referred to as an alternate caregiver.

*Dronabinol* - the generic name for synthetic THC. It is the active ingredient in the FDA approved drug, Marinol®.

*Endocannabinoid system* - consists of endocannabinoids, cannabinoid receptors and the enzymes responsible for synthesis and degradation of endocannabinoids.

*Marijuana* – Marijuana refers to a cultivated cannabis plant, whether for recreational or medicinal use. The words marijuana and cannabis are often used interchangeably in various lay and scientific literature. These guidelines will primarily use the word “cannabis.” When referring to medical marijuana program, the guidelines will use the word marijuana as it is often used within program references.

*Medical Marijuana Program (MMP)* - the official jurisdictional resource for the use of cannabis for medical purposes. Search the jurisdiction’s website or Department of Health for “medical cannabis program or medical marijuana program.”<sup>1</sup>

*Nabilone* - the generic name for a synthetic cannabinoid similar to THC. It is the active ingredient in the FDA approved drug, Cesamet™

*Per se violation* – makes a certain act a violation without needing proof of any surrounding circumstances<sup>2</sup>

*Right-touch regulation* - suggests the minimum regulatory force required to achieve the desired result. In the context of the BONs mission to protect the public, right-touch regulation requires consideration of proportionate, consistent, targeted, transparent, accountable, and agile regulatory discipline.<sup>3</sup>

*Schedule I Controlled Substance* – Defined in the federal Controlled Substances Act<sup>4</sup>, as those substances that have a high potential for abuse; no currently accepted medical use in treatment in the U.S.; lack of accepted safety for use of the substance under medical supervision.

*Tetrahydrocannabinol (THC)* - one of many cannabinoids found in cannabis; THC is believed to be responsible for most of the characteristic psychoactive effects of cannabis.<sup>5</sup>

---

## **A. Model Guidelines for the Evaluation of a Complaint Regarding a Licensee Who Tests Positive for THC or its Metabolite**

### **1. The BON should have a working knowledge of the current state of legalization of medical and recreational cannabis use.**

- *The Drug Enforcement Agency (DEA) classifies cannabis as a Schedule I Controlled Substance. This classification not only prohibits practitioners from prescribing cannabis, it also prohibits most research using cannabis, except under rigorous oversight from the government.<sup>6</sup>*
- *Over 31 jurisdictions (including the District of Columbia), Guam and Puerto Rico passed legislation legalizing cannabis for medical purposes. In these laws, the jurisdiction has adopted exemptions legalizing the use of cannabis for medical purposes. Although the use of marijuana pursuant to authorized MMPs conflicts with federal law and regulations, at present, there is no controlling case law holding that Congress intended to preempt the field of regulation of cannabis use under its supremacy powers.<sup>7</sup>*
- *The federal government's position on prosecuting the use of cannabis that is legal under applicable jurisdiction law has been set out U.S. Department of Justice position papers. In 2009, the U.S. Attorney General took a position that discourages federal prosecutors from prosecuting people who distribute or use cannabis for medical purposes in compliance with applicable jurisdiction law; further similar guidance was given in 2011, 2013 and 2014.<sup>7</sup> In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement. The 2018 memorandum<sup>8</sup> provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely the prosecution is to weigh all relevant considerations including priorities set by the attorneys general, seriousness of the crime, deterrent effect of criminal prosecution and cumulative impact of particular crimes on the community.*
- *MMPs are defined and described within the statute and rules of the specific jurisdiction. These statutes include specific conditions that qualify an individual to participate in a jurisdiction's MMP, as well as the process to become qualified. The relevant statute is most easily located through the jurisdiction's Department of Health and MMP. The law of the jurisdiction's MMP will specify the qualifying conditions, certification process, and length of time certification is valid.<sup>9</sup>*
- *An increasing proportion of jurisdictions have also decriminalized or legalized recreational cannabis use.<sup>10</sup>*

### **2. The BON should have a working knowledge of the standards for, and limitations of, current laboratory testing related to cannabis use and impairment.**

- *THC is the primary psychoactive component of the cannabis plant and is believed to be primarily responsible for the cognitive effects of cannabis. THC ingestion "transiently impairs cognitive function on a number of levels—from basic motor coordination to more complex tasks, such as the ability to plan, organize, solve problems, make decisions, remember, and control emotions and behavior."<sup>11</sup>*

- 
- A 2017 report to Congress entitled “Marijuana-Impaired Driving”<sup>12</sup> concluded that current laboratory tests cannot provide any objective threshold that establishes impairment based on a specific level of THC or THC metabolite concentration.
    - A laboratory test for THC examines the biological specimen for the presence or absence of THC or THC metabolite.
      - A screening test is completed first to determine if there is detectable presence of THC or its metabolite; if positive, a second test using a gas chromatograph with mass spectrometry (GC/MS) is necessary to determine the precise concentration of THC or its metabolite.<sup>13</sup>
      - Current laboratory tests can positively indicate whether there is THC or its metabolite in the specimen, but can only indicate concentration according to the equipment’s capability/threshold.<sup>14</sup>
      - Current laboratory tests cannot indicate when the individual ingested cannabis.<sup>15</sup>
    - Unlike alcohol, a water-soluble substance with steady metabolism, THC is a fat-soluble substance that is not metabolized at a steady rate and therefore can be detected in the blood long after ingestion.<sup>16</sup>
    - Current laboratory tests cannot provide any objective threshold that establishes impairment based on THC or THC metabolite concentration.<sup>17</sup>
    - Peak impairment does not occur when THC concentration in the blood is at or near peak levels. Peak THC levels can occur when low impairment is measured, and high impairment can be measured when THC levels are low.<sup>18</sup> The level of THC in the blood and the degree of impairment do not appear to be closely related.<sup>19</sup>
    - The acute psychoactive effects of cannabis ingestion last for hours and do not closely correlate to the concentration of THC in the blood.<sup>20</sup>
    - Peak and duration of psychoactive effects vary with concentration and method of ingestion. For example, the psychoactive effects of smoked cannabis are experienced within minutes after smoking, with peak levels occurring after approximately 30 minutes. THC concentration declines rapidly over 1-3 hours. With oral ingestion, peak concentrations occur over 1-3 hours.<sup>21</sup>
  - Despite the lack of scientific evidence for an objective threshold which establishes impairment based on THC concentration, some jurisdictions have adopted a *per se* limit while performing specific activities. *Per se* laws are not necessarily based on scientific evidence of impairment, instead they are based on laboratory threshold or cut-off values. These laboratory cut-offs are based on analytical capability of current equipment and are irrespective of impairment.<sup>22</sup>
    - For example, *per se* laws make it a criminal offense for an individual to have a specific drug or the drug’s metabolite in his/her body while performing specific activities. Some jurisdictions have a *per se* law which specifies that it is illegal to drive with any or more



---

*than a specific concentration of a specific drug(s) in blood or urine.<sup>23</sup> A per se law regarding THC is not evidence-based at this time.*

**3. If the complaint includes a positive laboratory test for THC or its metabolite, PLUS allegations of impairment/lack of fitness to practice while working, the BON should follow specific board processes for evaluation of impairment/lack of fitness to practice at the workplace.**

- Nursing, by its nature requires adequate cognitive ability for critical decision making that is typical for assessments, diagnosis of patients, interventions, reassessments and other appropriate or necessary actions, sometimes occurring in stressful situations.<sup>24</sup> Accordingly, there is a direct and immediate nexus between the nurse's job duties and a significant safety risk.<sup>25</sup> A nurse impaired on-the-job carries a risk of causing a significant incident affecting the health or safety of the public.*
- Legal use notwithstanding, the ingestion of cannabis can be a violation of nurse practice act or rules where on-the-job impairment creates an actual or potential impairment of the ability to practice nursing with reasonable skill and safety to patients by reason of the use of alcohol, drugs, chemicals, or any other material.<sup>26</sup>*
- Evaluations of workplace impairment/fitness to practice can confirm actual or potential inability to practice nursing with reasonable skill and safety. The BON should follow established board processes regarding assessment of fitness to practice.*

**4. If the complaint includes a positive laboratory test for THC or its metabolite, but does NOT include an allegation of impairment while working, the BON should determine if the licensee's ingestion of cannabis was in a location where cannabis is legal or illegal and use right-touch regulation in the resolution of the complaint.**

- Over 31 jurisdictions (including the District of Columbia), Guam and Puerto Rico passed legislation legalizing cannabis for medical purposes. An increasing proportion of jurisdictions have also decriminalized or legalized recreational cannabis use.*
- Many facilities operate under a policy of a drug free workplace and may discharge an employee for violation of those policies, despite the absence of an allegation of impairment or whether the jurisdiction has legalized medical or recreational cannabis.*
- Absent impairment, principles of public protection may not be served by a per se violation for a positive test for THC or its metabolite which results in a BON action or request for a substance use evaluation/fitness to practice evaluation.*

- *In the case of a positive test for THC, absent allegations of impairment, the BON should consider:*
  - *that current laboratory tests cannot provide any objective threshold that establishes impairment based on THC or THC metabolite concentration<sup>27</sup>*
  - *the circumstances and timing of the licensee's use of cannabis*
    - *whether the licensee used cannabis in a jurisdiction which allows for use of cannabis for medical or recreational purposes*
    - *if the BON jurisdiction has not legalized medical or recreational cannabis use, licensee should present proof of travel to a jurisdiction where cannabis use is legal*
  - *all aggravating and mitigating factors*
- *Legal use of cannabis, absent impairment, should be considered on a case-by-case basis using principles of right-touch regulation*
  - *A per se violation requiring a substance use evaluation/fitness to practice evaluation for the legal use of marijuana, absent an allegation of workplace impairment, may subject the nurse to burdensome licensure requirements without enhancing public protection.*
- *Use of cannabis, absent impairment, in a state where cannabis is NOT legal should be considered on a case-by-case basis using principles of right-touch regulation*
  - *A non-disciplinary letter of concern and/or administrative fine may serve to warn the licensee of the BON's concern regarding use of cannabis in a state where not legal*
    - *The non-disciplinary letter of concern should include specific warnings regarding future positive test and the potential for a substance use evaluation or discipline*

## **B. Model Guidelines for the Evaluation of a Complaint Regarding APRN Certification of a Medical Marijuana Program Qualifying Condition**

- 1. The BON should have a working knowledge of the current state of legalization of medical and recreational cannabis use.**
  - *The Drug Enforcement Agency (DEA) classifies cannabis as a Schedule I Controlled Substance. This classification not only prohibits practitioners from prescribing cannabis, it also prohibits most research using cannabis, except under rigorous oversight from the government.<sup>28</sup>*
  - *The process for obtaining cannabis for federally funded research purposes is a cumbersome process and unlike any other drug research. The DEA sets a quota for cannabis that can be grown for research studies.<sup>29</sup> Applications to use cannabis must be made to the U.S. Food and Drug Association (FDA), DEA and National Institute on Drug Abuse.<sup>30</sup>*
  - *Over 31 jurisdictions (including the District of Columbia), Guam and Puerto Rico passed legislation legalizing cannabis for medical purposes. In these laws, the jurisdiction has adopted exemptions legalizing the use of cannabis for medical purposes. Although the use of marijuana pursuant to authorized MMPs conflicts with federal law and regulations, at*

---

*present, there is no controlling case law holding that Congress intended to preempt the field of regulation of cannabis use under its supremacy powers.<sup>31</sup>*

- The federal government's position on prosecuting the use of cannabis that is legal under applicable jurisdiction law has been set out U.S. Department of Justice position papers. In 2009, the U.S. Attorney General took a position that discourages federal prosecutors from prosecuting people who distribute or use cannabis for medical purposes in compliance with applicable jurisdiction law; further similar guidance was given in 2011, 2013 and 2014.<sup>32</sup> In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement. The 2018 memorandum<sup>33</sup> provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely the prosecution is to weigh all relevant considerations including priorities set by the attorneys general, seriousness of the crime, deterrent effect of criminal prosecution and cumulative impact of particular crimes on the community.*

## **2. The BON should have a working knowledge of the jurisdiction's MMP.**

- MMPs are defined and described within the statute and rules of the specific jurisdiction. The relevant statute or rules are most easily located through the jurisdiction's Department of Health and MMP.<sup>34</sup> Laws and rules regarding MMPs are an evolving process. Always confirm use of the most recent versions.*
- A health care provider does not prescribe cannabis.*
- The MMP will specify the qualifying conditions and the certifying process, as well as the type of health care provider who can certify a qualifying condition.<sup>35</sup>*
- The MMP will specify whether an APRN can certify a qualifying condition and whether a specific course or training is required in order to participate in certifying a MMP qualifying condition.<sup>36</sup>*
- After the qualifying condition is certified, the patient registers with the MMP. Once registered, the patient can obtain cannabis from a jurisdiction authorized cannabis dispensary.<sup>37</sup>*
- Specific MMP statutes define the bona fide health care provider-patient relationship necessary required for authorization to certify a patient as having a qualifying condition. Some statutes require a pre-existing and ongoing relationship with the patient at as a treating health care provider; others note that the relationship may not be limited to issuing a written certification for the patient or a consultation simply for that purpose. Verification of the existence of the required provider-patient relationship and documentation of the certification within the jurisdiction's MMP is essential.*
- Procurement and administration of cannabis for medical purposes is limited to the patient and/or the patient's designated caregiver. The MMPs will specify whether designated caregivers are permissible, as well as the applicable process for registration as a designated caregiver.<sup>38</sup>*

- 
- *In some jurisdictions, the MMP allows an employee of a hospice provider, nursing, or medical facility or a visiting nurse, personal care attendant, or home health aide to act as a designated caregiver for the administration of medical marijuana.<sup>39</sup>*

**3. The BON should be aware of the following NCSBN Guidelines for an APRN's identification of a MMP qualifying condition when evaluating whether the APRN violated the nurse practice act or the jurisdiction's MMP.**

- *The NCSBN Model Guidelines for an APRN's identification of a MMP qualifying condition include the following:*
  - *Complete any jurisdiction specific education required for certifying a MMP qualifying condition.*
  - *Follow all jurisdiction laws, rule and regulations for the certification of a qualifying condition.*
  - *Perform a clinical assessment within the framework of a professional provider/patient relationship during an in-person encounter including a complete assessment of the patient and a review of diagnostic information in order to identify whether the patient has a condition specified in the MMP.*
  - *Review the patient's current treatment for the qualifying condition and the response to that treatment.*
  - *Complete a thorough medication reconciliation.*
  - *Review the patient's mental health, alcohol and substance use history and if present, seek a consultation or referral for that use.*
  - *Gather specific historical and current information regarding the patient's experience with cannabis. Discuss the patient's values, preferences, needs and knowledge related to cannabis use.*
  - *Decide to certify the MMP qualifying condition not predicated on the existence of a qualifying condition alone; but to consider the available scientific evidence for the specific qualifying condition prior to certification and the associated risks according to the patient's clinical presentation.*
  - *Provide information to the patient and family members/caregivers regarding the scientific evidence for cannabis for medical purposes for the qualifying condition and associated risks, variable effects, lack of product standardization, principles of dose titration, safety considerations, individualized goals of cannabis therapy, requirements for ongoing monitoring and safety considerations.*
  - *Research on cannabis is an evolving body of work. As with any scientific literature, it is important to rely on the most recent high quality evidence.*
  - *Initiate appropriate documentation and communication for the use of cannabis.*
  - *Follow any specific employer policies and procedures regarding certification of MMP qualifying conditions*
  - *Be cognizant of personal values and opinions regarding the medical use of cannabis and how those values and opinions may influence assessment and advisement of the patient.*

- *Take all appropriate steps to ensure that the APRN is not placed in a position where there is or may be an actual conflict, or potential conflict of interest between the APRN and a cannabis dispensary or cultivation center.*
- *Not provide a certification of a MMP qualifying condition for oneself or a family member.*

### **C. Model Guidelines for the Evaluation of a Complaint Regarding a Licensee's Administration of Cannabis to a Patient Outside of Medical Marijuana Program Designated Caregiver**

#### **1. The BON should have a working knowledge of the current state of legalization of medical and recreational cannabis use.**

- *The Drug Enforcement Agency (DEA) classifies cannabis as a Schedule I Controlled Substance. This classification not only prohibits practitioners from prescribing cannabis, it also prohibits most research using cannabis, except under rigorous oversight from the government.<sup>40</sup>*
- *Over 31 jurisdictions (including the District of Columbia), Guam and Puerto Rico passed legislation legalizing cannabis for medical purposes. In these laws, the jurisdiction has adopted exemptions legalizing the use of cannabis for medical purposes. Although the use of marijuana pursuant to authorized MMPs conflicts with federal law and regulations, at present, there is no controlling case law holding that Congress intended to preempt the field of regulation of cannabis use under its supremacy powers.<sup>41</sup>*
- *An increasing proportion of jurisdictions have also decriminalized or legalized recreational cannabis use.<sup>42</sup>*
- *The federal government's position on prosecuting the use of cannabis that is legal under applicable jurisdiction law has been set out U.S. Department of Justice position papers. In 2009, the U.S. Attorney General took a position that discourages federal prosecutors from prosecuting people who distribute or use cannabis for medical purposes in compliance with applicable jurisdiction law; further similar guidance was given in 2011, 2013 and 2014.<sup>43</sup> In January 2018, the U.S. Office of the Attorney General rescinded the previous nationwide guidance specific to marijuana enforcement.<sup>44</sup> The 2018 memorandum provides that federal prosecutors follow the well-established principles in deciding which cases to prosecute, namely the prosecution is to weigh all relevant considerations including priorities set by the attorneys general, seriousness of the crime, deterrent effect of criminal prosecution and cumulative impact of particular crimes on the community.*

#### **2. The BON should have a working knowledge of the jurisdiction's MMP, specifically related to administration of marijuana.**

- *MMPs are defined and described within the statute and rules of the specific jurisdiction. These statutes include lists of conditions that qualify an individual to participate in a jurisdiction's MMP, as well as the process to become qualified. The relevant statute is most easily located through the jurisdiction's Department of Health and MMP.<sup>45</sup>*

- 
- A nurse shall not administer cannabis to a patient unless specifically authorized by jurisdiction law.<sup>46</sup>
  - Instances where the nurse may administer cannabis or synthetic THC to a patient.
    - *Administration of FDA approved synthetic THC drugs (dronabinol and nabilone) as per facility formulary and policy*
    - *As a registered MMP designated caregiver*
      - *The majority of jurisdictions allow a designated caregiver to assist a patient with the medical use of cannabis.*
      - *These designated caregivers must meet specific qualifications and be registered with the MMP and must not practice outside of the limits of the caregiving statute.*<sup>47</sup>
      - *Some jurisdictions allow an employee of a hospice provider, nursing, or medical facility or a visiting nurse, to assist in the administration of medical marijuana.*<sup>48</sup>
      - *Check the most current MMP statute or rules.*<sup>49</sup>
    - *Facility policies may exist regarding medical marijuana administration. Caregiver provisions for administration of medical marijuana do not apply within a federal facility or to federal employees.*

**3. The BON should consider the administration of cannabis outside of the designated caregiver provision of the MMP in the context of the nurse practice act**

- *Administration of cannabis without a designated caregiver registration exceeds the nurse's scope of practice and does not conform to prevailing standards of safe nursing care*
- *Administration of cannabis beyond the designated caregiver provisions exceeds the nurse's scope of practice and does not conform to prevailing standards of safe nursing care*

---

<sup>1</sup> National Conference of State Legislatures (NCSL). (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>

<sup>2</sup> Yoo, E. (2015). THC Driving Limits: A Shot in the Dark. Retrieved from <https://druglawandpolicy.wordpress.com/2015/04/04/thc-driving-limits-a-shot-in-the-dark/>

<sup>3</sup> Professional Standards Authority. (2015). Right-touch regulation (revised). Retrieved from [www.professionalstandards.org.uk/docs/defaultsource/publications/thought-paper/right-touch-regulation-2015pdf?sfvrsn=12](http://www.professionalstandards.org.uk/docs/defaultsource/publications/thought-paper/right-touch-regulation-2015pdf?sfvrsn=12)

<sup>4</sup> Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.

<sup>5</sup> U.S. Department of Transportation. National Highway Traffic Safety Administration (NHTSA). (2107). Marijuana-Impaired Driving A Report to Congress. Retrieved from <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-driving-report-to-congress.pdf>

<sup>6</sup> Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.

<sup>7</sup> Mikos, R.A. (December 12, 2012). On the Limits of Federal Supremacy: When States Relax (or Abandon) Marijuana Bans. Cato Institute. Policy Analysis, No. 714. Retrieved from <https://object.cato.org/sites/cato.org/files/pubs/pdf/PA714.pdf>; *Beek v. City of Wyoming*. (February 6, 2014) (Findlaw, Dist. 145816). Retrieved from <http://caselaw.findlaw.com/mi-supreme-court/1656759.html>

<sup>7</sup> U.S. Department of Justice, Office of Public Affairs (DOJ). (October 19, 2009). Attorney General Announces Formal Medical Marijuana Guidelines. Retrieved from <https://www.justice.gov/opa/pr/attorney-general-announces-formal-medical-marijuana-guidelines>; DOJ. (June 29, 2011). Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use. Retrieved from <https://www.justice.gov/sites/default/files/oip/legacy/2014/07/23/dag-guidance-2011-for-medical-marijuana-use.pdf>; DOJ. (August 29, 2013). Guidance Regarding Marijuana Enforcement. Retrieved from <https://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>; DOJ. (February 14, 2013). Guidance Regarding Marijuana Related Financial Crimes. Retrieved from <https://www.justice.gov/sites/default/files/usao-wdwa/legacy/2014/02/14/DAG%20Memo%20-%20Guidance%20Regarding%20Marijuana%20Related%20Financial%20Crimes%20%2014%2014%20%282%29.pdf>; DOJ. (October 28, 2014). Policy Statement Regarding Marijuana Issues in Indian Country. Retrieved from <https://www.justice.gov/sites/default/files/tribal/pages/attachments/2014/12/11/policystatementregardingmarijuanaissuesinindiancountry2.pdf>

<sup>8</sup> DOJ. (January 4, 2018). Marijuana Enforcement. Retrieved from <https://www.justice.gov/opa/press-release/file/1022196/download>

<sup>9</sup> NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.asp>

<sup>10</sup> Ibid.

<sup>11</sup> Crean, R.D., Crane, N.A., Mason, B.J. (March 2011). An Evidence-Based Review of Acute and Long-Term Effects of Cannabis Use on Executive Cognitive Functions. *Journal of Addiction Medicine*: Volume 5 - Issue 1 - p 1-8.

<sup>12</sup> NHTSA. (2107). Marijuana-Impaired Driving A Report to Congress. Retrieved from <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-driving-report-to-congress.pdf>

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

---

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Synergy Health. (April 2014). Laboratory Technical Specifications Manual. Retrieved from [https://www.synergyhealthplc.com/sites/default/files/laboratory\\_technical\\_specification\\_manual\\_4\\_.pdf](https://www.synergyhealthplc.com/sites/default/files/laboratory_technical_specification_manual_4_.pdf)

<sup>23</sup> NHTSA. (2107). Marijuana-Impaired Driving A Report to Congress. Retrieved from <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-driving-report-to-congress.pdf>

<sup>24</sup> Wyoming State Board of Nursing. (2014). Checklist for Substance Abuse Evaluations.

<sup>25</sup> Rand, C.A. (2014). Safety-Sensitive Positions and Random Drug Testing by Private Employers in New Jersey. Retrieved from <https://www.njlawblog.com/2014/08/articles/employment/safety-sensitive-positions-and-random-drug-testing-by-private-employers-in-new-jersey/>

<sup>26</sup> National Council of State Boards of Nursing. (2012). NCSBN Model Act. Retrieved from [https://www.ncsbn.org/14\\_Model\\_Act\\_0914.pdf](https://www.ncsbn.org/14_Model_Act_0914.pdf)

<sup>27</sup> NHTSA. (2107). Marijuana-Impaired Driving A Report to Congress. Retrieved from <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-driving-report-to-congress.pdf>

<sup>28</sup> Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904.

<sup>29</sup> Drug Enforcement Administration (DEA). (November 8, 2017). Established Aggregate Production Quotas for Schedule I and II Controlled Substances and Assessment of Annual Needs for the List I Chemicals Ephedrine, Pseudoephedrine, and Phenylpropanolamine for 2018. 82 FR 51873. Retrieved from <https://www.federalregister.gov/documents/2017/11/08/2017-24306/established-aggregate-production-quotas-for-schedule-i-and-ii-controlled-substances-and-assessment>

<sup>30</sup> National Institute on Drug Abuse (NIDA). (March 2017). NIDA's Role in Providing Marijuana for Research. Retrieved from <https://www.drugabuse.gov/drugs-abuse/marijuana/nidas-role-in-providing-marijuana-research>

<sup>31</sup> Mikos. R.A. (December 12, 2012). On the Limits of Federal Supremacy: When States Relax (or Abandon) Marijuana Bans. Cato Institute. Policy Analysis, No. 714. Retrieved from <https://object.cato.org/sites/cato.org/files/pubs/pdf/PA714.pdf>

<sup>32</sup> DOJ. (October 19, 2009). Attorney General Announces Formal Medical Marijuana Guidelines. Retrieved from <https://www.justice.gov/opa/pr/attorney-general-announces-formal-medical-marijuana-guidelines>; DOJ. (June 29, 2011). Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use. Retrieved from <https://www.justice.gov/sites/default/files/oip/legacy/2014/07/23/dag-guidance-2011-for-medical-marijuana-use.pdf>; DOJ. (August 29, 2013). Guidance Regarding Marijuana Enforcement. Retrieved from <https://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>; DOJ. (February 14, 2013). Guidance Regarding Marijuana Related Financial Crimes. Retrieved from <https://www.justice.gov/sites/default/files/usao-wdwa/legacy/2014/02/14/DAG%20Memo%20-%20Guidance%20Regarding%20Marijuana%20Related%20Financial%20Crimes%202%2014%2014%200%282%29.pdf>; DOJ. (October 28, 2014). Policy Statement Regarding Marijuana Issues in Indian Country. Retrieved from <https://www.justice.gov/sites/default/files/tribal/pages/attachments/2014/12/11/policystatementregardingmarijuanaissuesinindiancountry2.pdf>



---

<sup>33</sup> DOJ. (January 4, 2018). Marijuana Enforcement. Retrieved from <https://www.justice.gov/opa/press-release/file/1022196/download>

<sup>34</sup> NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.asp>

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

<sup>40</sup> Comprehensive Drug Abuse Prevention and Control Act. (1970). 21 U.S.C. § 801 – 904

<sup>41</sup> Mikos. R.A. (December 12, 2012). On the Limits of Federal Supremacy: When States Relax (or Abandon) Marijuana Bans. Cato Institute. Policy Analysis, No. 714. Retrieved from <https://object.cato.org/sites/cato.org/files/pubs/pdf/PA714.pdf>; *Beek v. City of Wyoming*. (February 6, 2014) (Findlaw, Dist. 145816). Retrieved from <http://caselaw.findlaw.com/mi-supreme-court/1656759.html>

<sup>42</sup> NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>

<sup>43</sup> DOJ. (October 19, 2009). Attorney General Announces Formal Medical Marijuana Guidelines. Retrieved from <https://www.justice.gov/opa/pr/attorney-general-announces-formal-medical-marijuana-guidelines>; DOJ. (June 29, 2011). Guidance Regarding the Ogden Memo in Jurisdictions Seeking to Authorize Marijuana for Medical Use. Retrieved from <https://www.justice.gov/sites/default/files/oip/legacy/2014/07/23/dag-guidance-2011-for-medical-marijuana-use.pdf>; DOJ. (August 29, 2013). Guidance Regarding Marijuana Enforcement. Retrieved from <https://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>; DOJ. (February 14, 2013). Guidance Regarding Marijuana Related Financial Crimes. Retrieved from <https://www.justice.gov/sites/default/files/usao-wdwa/legacy/2014/02/14/DAG%20Memo%20-%20Guidance%20Regarding%20Marijuana%20Related%20Financial%20Crimes%202%2014%2014%200%282%29.pdf>; DOJ. (October 28, 2014). Policy Statement Regarding Marijuana Issues in Indian Country. Retrieved from <https://www.justice.gov/sites/default/files/tribal/pages/attachments/2014/12/11/policystatementregardingmarijuanaissuesinindiancountry2.pdf>

<sup>44</sup> DOJ. (January 4, 2018). Marijuana Enforcement. Retrieved from <https://www.justice.gov/opa/press-release/file/1022196/download>

<sup>45</sup> NCSL. (2017). State Medical Marijuana Laws. Retrieved from <http://www.ncsl.org/research/health/state-medical-marijuana-laws.asp>

<sup>46</sup> Ibid.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

## Members

Nathan Goldman, JD, Kentucky, Area III, Chair

Peggy Benson, MSN, MSHA, NE-BC, Alabama, Area III

Amy Fitzhugh, JD, North Carolina, Area III

Ruby Jason, MSN, RN, NEA-BC, Oregon, Area I

Linda Kmetz, PhD, RN, Pennsylvania, Area IIII

Barbara McGill, MSN, RN, Louisiana RN, Area III

Linda Young, MS, RN, FRE, BC, South Dakota, Area II

## Staff

Greg Pulaski, MS, PMP, SSBB, Director, Performance Measurement and Standard Setting

## Meeting Dates

- May 2–3, 2017
- Sept. 25–26, 2017
- Jan. 30–31, 2018
- March 8, 2018

## Relationship to Strategic Plan (if applicable)

### Strategic Initiative A

Envision and refine regulatory systems for increased relevance and responsiveness to changes in health care

NCSBN's purpose, vision and mission all incorporate statements about its relation to regulation and ensuring the safety and well-being of the public. With this in mind, NCSBN needs to be on the cutting edge of knowledge regarding regulatory relevance in health care. It must play a lead role at the national level in support of state-based licensure. It must also be aware of current trends, have direct lines of communication with its stakeholders, and be able to sort through multiple dimensions of data and information.

# Report of the NCSBN Standards Development Committee (NSDC)

## Background

In 2012, the Board of Directors (BOD) and NCSBN staff began discussing the benefits of introducing the notion of standardizing steps and activities in the processes of licensure. It was felt that such focus and accomplishment would lend great credence to the overall process and ensure the accomplishment of the overarching goals of patient safety and public protection.

NCSBN reached out to the American National Standards Institute (ANSI) for direction and guidance. ANSI is the administrator and coordinator of the U.S. private sector voluntary standardization system. ANSI is the U.S. member to the International Standards Organization (ISO). Founded in 1918, ANSI's primary goal has been "to enhance global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems and safe guarding their integrity." "ANSI empowers its members and constituents to strengthen the U.S. marketplace position in the global economy while helping to assure the safety and health of consumers and the protection of the environment." ANSI represents and serves the diverse interests of more than 270,000 companies and organizations and 30 million professionals worldwide.

"ANSI facilitates the development of American National Standards (ANS) by accrediting the procedures of standards developing organizations (SDOs). These groups work cooperatively to develop voluntary national consensus standards. Accreditation by ANSI signifies that the procedures used by the standards body in connection with the development of American National Standards meet the Institute's essential requirements for openness, balance, consensus and due process."

There are various types of standards:

- De facto: standard based on common practices that are well established, such as the QWERTY keyboard.
- Consortium: standard developed by companies to address a specific market need.
- Consensus: a voluntary standard developed by a consensus of professionals from the public and private sector, such as American National Standards.

After a rigorous application process, NCSBN was granted accreditation as a SDO by ANSI on Nov. 15, 2013.

NCSBN believed that by achieving SDO Accreditation, it would be able to further advance its mission by:

- Focusing on the protection of the public through evidence-based standards;
- Addressing the future of nursing through inclusivity and consensus building;
- Achieving public awareness;
- Demonstrating leadership in nursing regulation and nurse licensure;
- Influencing government regulation through ANSI participation and visibility; and
- Evolving regulatory models.

In response to our accreditation by ANSI, the BOD engaged in a dialogue around what would be a first process to consider for standardization. After careful debate they chose Criminal Background Checks (CBCs).

The profession of nursing requires a high degree of skill and responsibility. Often, nursing involves working with vulnerable individuals who rely on BONs to assure that health care providers are safe and competent. The level of trust that comes with the practice of nursing coupled with the

ease of mobility between jurisdictions requires BONs to be vigilant in properly assessing the qualifications of nurses. One step in this process is the utilization of fingerprint-based state and federal CBCs for nurses upon application for initial, endorsement, reinstatement and renewal of licensure to assure individuals with criminal histories are screened for their ability to safely practice nursing.

The BOD also chose to form a committee, NSDC, with a formal charter, to further exercise influence and coordinate NCSBN's efforts. As committee chair they named Nathan Goldman, a seasoned committee leader.

On Aug. 11, 2015, NCSBN was granted American National Standard status for *Criminal Background Checks* by ANSI (NCSBN 001 - 2015) (see Attachment A).

The challenge to the NSDC at that time was defining the "Consensus Body." According to ANSI procedures, the consensus body is the group that approves the content of a standard and whose vote demonstrates evidence of consensus. Consensus is defined as "substantial agreement has been reached by directly and materially affected interests." The NSDC determined that the consensus body should be composed of the member boards, each state nursing association, and several national nursing organizations.

After the first standard was accomplished, the NSDC took on the task of envisioning other standards. The NSDC reached out to the BOD and the member boards for ideas on what subjects to make into standards. The committee did not receive any suggestions for standards from member boards. As a result the committee submitted a list of suggestions to the BOD and received direction for future standards.

The committee then began developing two other standards, *Reporting of Disciplinary Actions by Boards of Nursing*, which became NCSBN 002-2016 (Attachment B), and *Primary Source Verification of Licensure by Endorsement*, which became NCSBN 003-2016 (Attachment C). The committee determined that the Consensus Body for each of these Standards consisted solely of the NCSBN Member Boards. The ANSI directive was to include all affected parties in the consensus body. Given the nature of nursing regulation this could effectively have been all professional nursing associations, schools, licensees, etc. Eventually, ANSI accepted the member boards as the consensus body, but recommended revisions to the procedure manual concerning the description of member boards.

## Assessment:

Thereafter, the NSDC continued to find challenges with its perceived charge to develop standards. The committee turned to the Member Board Profiles and the NCSBN Model Rules to seek inspiration for subject matter related to the five areas of licensure, practice, education, governance, and discipline.

Throughout this entire process, the NSDC was acutely aware of the precarious legal position of standards in the nursing regulatory world. As a government agency, a state board of nursing only has the authority granted to it by statute. Such authority generally includes the promulgation of implementing rules/regulations. These have the force of law when the state's procedures for promulgation are followed. Standards do not have the force of law. For the purposes of nursing regulation, standards must relate to an authorizing statute or rule. The committee questioned whether the standards developed by the committee would be more appropriate as a Model Act or Rule.

The Model Nursing Practice Act was developed by NCSBN's Nursing Practice and Standards Committee and adopted by the Delegate Assembly (DA) in 1982. The Model Nursing Administrative Rules was adopted by DA in 1983. The Nursing Practice and Standards Committee revised the Model Act and Model Rules which were adopted by the DA in 1988. The Nursing Practice and Education Committee revised the Model Act and Model Rules again in 1994. In 2004, revisions to the Model Nursing Practice Act and Model Administrative Rules were adopted by the DA. Finally, a Model Act and Rules Committee was formed in 2010 and

## Strategic Objective C2

Promote standardization and the use of evidence-based criteria and decision making when supporting boards of nursing in the achievement of regulatory excellence

NCSBN believes that establishing a national standard for licensure requirements is necessary to assure that health care providers are safe and competent.

## Strategic Objective A3

Help the boards of nursing achieve operational excellence and efficiency.

Develop standards for nursing licensure that require expediting verification of licensure by endorsement, and develop standards for nursing licensure that incorporate reporting of disciplinary actions to a shared nursing database. Through these standards, NCSBN contributes to public protection and effectiveness by obtaining thorough information on applicants and making informed decisions about licensure.

## Attachments

- A. 2015 NCSBN 001
- B. 2016 NCSBN 002
- C. 2016 NCSBN 003
- D. NCSBN Framework

proposed revisions were adopted by the DA in 2012, after which the committee was disbanded.

The Model Act and Rules were developed as a resource for states when initially considering or amending a state's Nurse Practice Act and rules. They encourage uniformity and consistency between jurisdictions. They are, of course, voluntary and aspirational. By comparison, the enhanced Nurse Licensure Compact (NLC) that went into effect in 2017 contains a provision that allows the Interstate Commission of Nurse Licensure Compact Administrators to promulgate rules that are binding on the party states. These rules pertain only to the implementation of the NLC. The commission does not have the authority to promulgate broader rules, for example on approval of prelicensure nursing education programs. The Rules Committee appointed by the Commission drafts rules for the compact only.

The NSDC is recommending adding oversight of the Model Act and Model Rules to its charge. It would continue to develop standards within that framework. However, it is important to understand the meaning of the word "standard," particularly as used by the committee.

ANSI defines "standard" as a recognized unit of comparison by which the correctness of others can be determined. A standard may also be defined as a set of characteristics or qualities that describes features of a product, process, or service.

According to the World Trade Organization Technical Barriers to Trade (WTO/TBT) Agreement, Annex 1, a standard is "a document, established by consensus, that provides rules, guidelines, or characteristics for activities or their results" or "a document that provides, for common and repeated use, rules, guidelines or characteristics for products or related process and production methods, with which compliance is not mandatory."

## **Fiscal Year 2018 (FY18) Highlights and Accomplishments**

FY18 was a challenging period for the NSDC. Numerous attempts at brainstorming opportunities to standardize often came up short when challenged by ANSI's rigorous guidelines. Continued false starts have led to the committee to consider alternative approaches.

While meeting four times during FY18, the NSDC focused on the following charge: Develop standards for regulation regarding licensure, investigations, discipline and education.

### **NEXT STEPS/COMMITTEE RECOMMENDATIONS:**

The NSDC proposes that it develop standards that would operationalize the Model Act and Rules. They may be referred to in different states as advisory opinions, interpretive guidelines, etc. We are using the term "standard" for this category. These standards would be suggested by the committee's review (and revision if needed) of the Model Rules.

In the history of the Model Rules, revisions have occurred in two ways: (1) the ad hoc convening of a committee to review the entire document; and (2) suggestions on particular rules from other committees (e.g., simulation). The regulatory environment changes quickly. Establishing a committee with an on-going mandate of oversight of the Model Act and Rules would provide a mechanism to facilitate currency and relevancy. It would also provide a procedure for revisions to be reviewed that are generated by other committees to ensure alignment with the Model Act, Rules, and standards. NCSBN has several past efforts that may need Model Rules and several current efforts will, in all likelihood, lead to additions to the Model Rules. These include the publications *Resource Manual on the Licensure of Internationally Educated Nurses* (2015), the *Practical Nurse Scope of Practice White Paper* (2005), *CORE Discipline Effective Practices Report* (2014), and the work of the Nursing Education Outcomes and Metrics Committee, the Marijuana Regulatory Guidelines Committee, and the NCSBN study of monitoring programs.

The NSDC is of the opinion that, due to the nature of the business of state boards of nursing, standards to be developed do not need the ANSI approval. The decision to adopt model standards should be the purview of the member boards alone. This is reinforced by the fact that, at present, there are no other associations of regulatory boards utilizing the ANSI standard development process.

The only other organization similar to NCSBN that we could find that was ANSI approved was the National Council of Examiners for Engineering and Surveying (NCEES). NCEES created two ANSI standards in 2009 and 2011, but had done nothing since then. The Chief Operating Officer, Davy McDowell, was contacted and informed us that NEECS was no longer active with ANSI, having decided that it did not fit their needs.

In order to transition the work of this committee, we recommend that the current membership of the committee be maintained with the addition of Board attorneys experienced in promulgation of rules and Executive Officers with legislative and rulemaking experience.

The committee respectfully submits the attached formal recommendation for BOD consideration and critical pathway, (see Attachment D).

The NSDC makes the following recommendations:

1. NCSBN shall withdraw from membership in ANSI.
2. The NSDC shall be referred to as the Model Act, Rules, and Standards (MARS) Committee and shall continue the development of standards.
3. The charge of the MARS Committee shall include ongoing review of the Model Act and Rules.
4. The charge of the MARS Committee shall include review of the work of other NCSBN committees to determine whether to propose revisions or additions to the Model Act or Rules, or the development of standards.
5. The charge of the MARS Committee shall include the development of a library for standards to operationalize the Model Act and Rules.

## 2015 NCSBN 001

NCSBN – 001 - 2015

### ***TITLE OF STANDARD***

CRIMINAL BACKGROUND CHECKS FOR LICENSURE AS A NURSE

### ***FORWARD***

In November, 2013, the National Council of State Boards of Nursing (NCSBN) received the designation of American National Standards Institute (ANSI) Accredited Standards Developer Organization. In support of NCSBN's mission, this designation is for the purpose of developing and promoting increased recognition and voluntary adoption of standards of excellence in the regulation of nursing practice through nurse licensure and competency assessment throughout the U.S. and its territories.

This standard has been developed by the NCSBN Standards Development Committee with the intention that it will be submitted to ANSI for adoption as a national standard.

### ***EXPLANATION OF NEED***

The primary purpose of boards of nursing (BONs) is to protect the public. One way this is accomplished is by the enforcement of minimum standards for licensure.

The level of trust that comes with the practice of nursing coupled with the ease of mobility between jurisdictions requires BONs to be vigilant in the assessment of applicants in meeting the requirements for licensure. The practice of nursing deals with vulnerable populations and, as such, there may be a criminal history within the background of the applicant that could have a significant impact on the ability to safely care for and interact with patients/clients.

Currently, a majority of BONs require a state and federal fingerprint-based criminal background check (CBC). Some jurisdictions allow self-disclosure or state records search as the only requirement for determining the existence of a criminal history. A state records search does not take into account the ease of mobility within jurisdictions and review of the literature has determined that self-disclosure results

---

do not reveal the same extent of criminal history as a state and federal fingerprint-based CBC.

### ***STATEMENT OF SCOPE***

NCSBN proposes this standard which would require a biometrics-based state and federal criminal background check for all applicants consistent with Public Law 92-544.

### ***IDENTIFICATION OF STAKEHOLDERS***

The NCSBN Standards Development Committee (NSDC) has identified the following stakeholders related to this standard:

- Professional nursing associations or societies (professional associations)
- Hospital systems and major employers (employer, consumer)
- NCSBN Member Boards and associate members (user)
- Regulatory representatives (users/producers)
- Education and training programs and institutions (general interest)
- Members of the public (consumer)
- Licensed nurses (user)
- Legislators (producer)
- Law Enforcement (user)

### ***NOMENCLATURE***

Applicant – a person who applies for licensure by examination, reactivation, reinstatement, endorsement or renewal.

### ***EXISTING STANDARDS***

No existing standards have been identified.

### ***DRAFT STANDARD (COPYRIGHT NCSBN)***

Section 1.0 A board of nursing (BON) shall obtain the statutory authority to conduct criminal background checks (CBCs) by adoption of the language of section 2.0 of this standard.

Section 2.0 The BON shall require a state and federal CBC of an applicant by means of a fingerprint check or other biometric method which is in compliance with

---

the methodology acceptable to the appropriate state law enforcement agency and the Federal Bureau of Investigation (FBI).

Section 3.0 The BON shall include the CBCs as part of the application process in such a manner as is consistent with the FBI policy.

### ***WRITTEN INTERPRETATION OF THE STANDARD***

It is the purpose of this standard to assist each jurisdiction to pass legislation consistent with Public Law 92-544 to require a state and federal fingerprint-based CBC. The Standard is written to allow the use of new biometric technologies as they emerge.

It is anticipated that each jurisdiction would implement a review process for applicants with criminal convictions, determining which convictions may warrant disciplinary action or denial.

#### **References**

1. Surowiec, V. P. (2010), Does Past Criminal Behavior Predict Future Criminal Behavior? *Journal of Nursing Regulation*. 1(3), 33-37.
2. Blubaugh, M (2012) Using Electronic Fingerprinting for Criminal Background Checks. *Journal of Nursing Regulation*. 2(4), 50-52.
3. Smith, D., Corvers, S., Wilson, W. J., Douglas, D., & Bienemy, C. (2013) Prelicensure RN Students With and Without Criminal Histories: A Comparative Analysis. *Journal of Nursing Regulation*. 4(1), 34-38.
4. Texas Board of Nursing. (2007) Experiences with Nurses Who Have Criminal Histories. Unpublished presentation.



**NCSBN-002-2016**

***TITLE OF STANDARD***

**REPORTING OF DISCIPLINARY ACTIONS BY BOARDS OF NURSING**

***FORWARD***

In November 2013, the National Council of State Boards of Nursing (NCSBN) received the designation of American National Standards Institute (ANSI) Accredited Standards Developer Organization. In support of NCSBN's mission, this designation is for the purpose of developing and promoting increased recognition and voluntary adoption of standards of excellence in the regulation of nursing practice through nurse licensure and competency assessment throughout the U.S. and its territories.

This standard has been developed by the NCSBN Standards Development Committee with the intention that it will be submitted to ANSI for adoption as a national standard.

***EXPLANATION OF NEED***

The primary purpose of boards of nursing (BON) is to protect the public. Violations of the state nurse practice act may result in adverse action on a license. It is incumbent on BONs to report the adverse actions taken on a nurse to a shared database in order to protect the public when nurses relocate to another state or practice remotely across state borders.

***STATEMENT OF SCOPE***

This standard relates to a board of nursing reporting disciplinary actions to a shared database.

***IDENTIFICATION OF STAKEHOLDERS***

The NCSBN Standards Development Committee (NSDC) has identified the following stakeholders related to this standard:

---

Member boards

### ***NOMENCLATURE***

Board of Nursing – the entity within a state, territory or other jurisdiction of the United States responsible for the regulation of nurses and nursing practice. The entity is considered a primary source of licensing information.

Coordinated licensure information system – an integrated process for collecting, storing, and sharing primary source information on nurse licensure and enforcement activities related to nurse licensure laws that is administered by a nonprofit organization composed of and controlled by licensing boards.

Disciplinary action – an adverse action on a nurse’s license taken by a board of nursing and as defined by the National Practitioners Data Bank (NPDB)

### ***EXISTING STANDARDS***

No existing standards have been identified.

### ***DRAFT STANDARD (COPYRIGHT NCSBN)***

1.0 A board of nursing shall report all final disciplinary actions it takes against a licensee to a coordinated licensure information system.

2.0 A board of nursing shall make a report pursuant to Section 1.0 of this Standard no later than 15 calendar days from the entry of the disciplinary action.

### ***WRITTEN INTERPRETATION OF THE STANDARD***

The purpose of this Standard is to provide for reporting of disciplinary actions by a board of nursing to a coordinated licensure information system in order to inform other boards of nursing of the adverse action. NCSBN maintains such a coordinated licensure information system and reports required actions to the NPDB.

While the National Practitioner Data Bank’s (NPDB) policies and guidelines are used to determine what constitutes final disciplinary action for purposes of reporting, the NPDB is not a coordinated licensure information system as defined by this Standard. The requirement to report to the NPDB is independent of this Standard.

## **2016 NCSBN 003**

NCSBN-003-2016

### ***TITLE OF STANDARD***

PRIMARY SOURCE VERIFICATION OF LICENSURE BY ENDORSEMENT

### ***FORWARD***

In November 2013, the National Council of State Boards of Nursing (NCSBN) received the designation of American National Standards Institute (ANSI) Accredited Standards Developer Organization. In support of NCSBN's mission, this designation is for the purpose of developing and promoting increased recognition and voluntary adoption of standards of excellence in the regulation of nursing practice through nurse licensure and competency assessment throughout the U.S. and its territories.

This standard has been developed by the NCSBN Standards Development Committee with the intention that it will be submitted to ANSI for adoption as a national standard.

### ***EXPLANATION OF NEED***

The primary purpose of boards of nursing (BON) is to protect the public. BONs issue licenses to qualified individuals. Nurses often relocate to other states and practice remotely across state borders. In order to insure a properly vetted workforce, boards of nursing must receive primary source information on current licensure that is both accurate and timely. Current use of paper documents present a greater risk for fraud than those sent through a secure electronic transmission.

### ***STATEMENT OF SCOPE***

This standard relates to a board of nursing issuing primary source verification of licensure through a secure electronic transmission for endorsement of an applicant to another board of nursing.

### ***IDENTIFICATION OF STAKEHOLDERS***

---

The NCSBN Standards Development Committee (NSDC) has identified the following stakeholders related to this standard:

Member boards

### ***NOMENCLATURE***

Board of Nursing – the entity within a state, territory or other jurisdiction of the United States responsible for the regulation of nurses and nursing practice. The entity is considered a primary source of licensing information.

Coordinated licensure information system - an integrated process for collecting, storing, and sharing of primary source information on nurse licensure and enforcement activities related to nurse licensure laws that is administered by a nonprofit organization composed of and controlled by licensing boards

Secure electronic transmission – encrypted transmission from and to a system which enforces approved user access to control the flow of information within the system and between interconnected systems, and also protects the confidentiality and integrity of information at rest.

### ***EXISTING STANDARDS***

No existing standards have been identified.

### ***DRAFT STANDARD (COPYRIGHT NCSBN)***

1.0 A Board of Nursing shall conduct primary source verification of licensure on an applicant for licensure by endorsement.

2.0 Primary source verification shall be obtained from a board of nursing or a coordinated licensure information system.

Section 2.1 The coordinated licensure information system shall be a board of nursing designated primary source equivalent information system.

3.0 Primary source verification shall be obtained via a secure electronic transmission from the board of nursing or the coordinated licensure information system.

4.0 The primary source shall provide license verification within ten business days.

### ***WRITTEN INTERPRETATION OF THE STANDARD***

---

The purpose of this Standard is to describe a mechanism to obtain primary source verification of a license from one board of nursing for the purpose of endorsement into another board of nursing. Electronic transmission will accomplish verification efficiently and securely to decrease potential for fraud.

**NCSBN Model Act, Rules and Standards Committee  
(MARS)  
Organizing Framework**

---

## Purpose

In support of NCSBN's mission, vision and values, the purpose of creating a model act, rules and standards development committee is to promote the consistent adoption and application of NCSBN's model act, rules and standards of excellence throughout all jurisdictions.

## Responsibility

The NCSBN Model Act, Rules and Standards Committee (MARS) is responsible for oversight, direction, strategy, revision, implementation and maintenance of the NCSBN model act, rules and standards development process, under the auspices of the NCSBN Board of Directors (BOD).

## Vision

The MARS vision for model act, rules and standards of excellence development includes:

- Improving consistent regulation in a broader partnership with nursing regulator boards across all jurisdictions;
- Improving nursing regulation, thereby increasing public protection and providing for consumer confidence in the quality of nursing practice, the licensure process and standards for competency in the nursing profession;
- Effectively utilizing valuable input from an established framework of collaboration among member boards and other stakeholders;
- Promoting a culture of continuous quality improvement;
- Promoting model acts, rules and standards of excellence for the use in multidisciplinary regulation in the global community; and
- Identifying metrics, pursuing, tracking and documenting performance, sharing and communicating broadly, and encouraging improvement through lessons learned.

## Goals and Objectives

The fundamental goal of the MARS is to continuously improve regulation through the consistent and on-going review and revision of the regulatory model act, rules and to develop standards of excellence related to nursing regulation, as directed by the NCSBN BOD. The revision and review of the model act, rules, and the development of standards shall remain consistent with the mission and vision of NCSBN for the benefit of public protection. This will be achieved by:

- Implementing a systematic process for review and revision of the model act, rules to include identifying model standards of excellence in nursing regulation licensure, discipline, education governance and practice;
- Assuring that the NCSBN member boards and stakeholders are recognized as an integral part of the process and take advantage of all opportunities to communicate effectively and share information;
- Communicating and disseminating approved model act, rules and standards to all regulatory bodies;
- Utilizing and integrating NCSBN's quality initiatives and regulatory data to drive changes to the model act, rules and standard development;
- Maintaining and reviewing all approved model act, rules and standards for needed updates or revisions;
- Establishing and maintaining a repository of approved best regulatory model act, rules and practice standards, to be known as the Regulatory Model Act, Rules and Standard Library; and
- Developing a recognition process for member boards that adopt and implement the established model act, rules and standards of nursing regulatory practice.

## MARS Members

MARS membership requires a commitment of a great deal of time and effort. Members should also be prepared to spend time outside of the formal committee meetings away working on committee business.

---

## Standards Guidance

A standard is not meant to replace a rule. A model standard may be developed that further enhances or augments the model act or rules.

## Model Act, Rules or Standards Development/Identifying Process Opportunities to Standardize

### 1. General Provisions

The MARS will focus on standards development related to licensure, discipline, education, governance and practice. The process includes:

- The proposal shall be submitted to the MARS on Form #1.
- Standards may be developed as they are identified during model act and rule review or revisions.
- Development of standards shall be relevant to the model act and rule consistent with the mission and vision of NCSBN for the benefit of public protection.
- All proposed model act, rule revisions and standards will be vetted against a list of NCSBN processes, programs, services and procedures to ensure that no conflict of interest occurs.

### 2. Board Approval

The NCSBN BOD must approve all model act, rule and standards prior to beginning the formal process of member board approval.

The BOD has detailed knowledge of strategic planning initiatives, committee reports, member board requests and current NCSBN research. Therefore, assignments to the MARS are driven by the BOD and strategically determines the priority sections of the model act, model rules or potential standard in need of review, revision or development.

Once submitted, to the MARS committee, an evidenced-based review begins, which includes NCSBN subject matter experts, committee reports and research findings. If the findings result in no change, a recommendation and report is sent to the BOD.

If evidence supports change or revision, the MARS submits to the BOD the potential model act, rule revisions and subject matter of the proposed standard, with a rationale for its development.

Once BOD approval is obtained for development, the MARS shall prepare a draft document of the proposed changes. The draft document is sent to The BOD for approval.

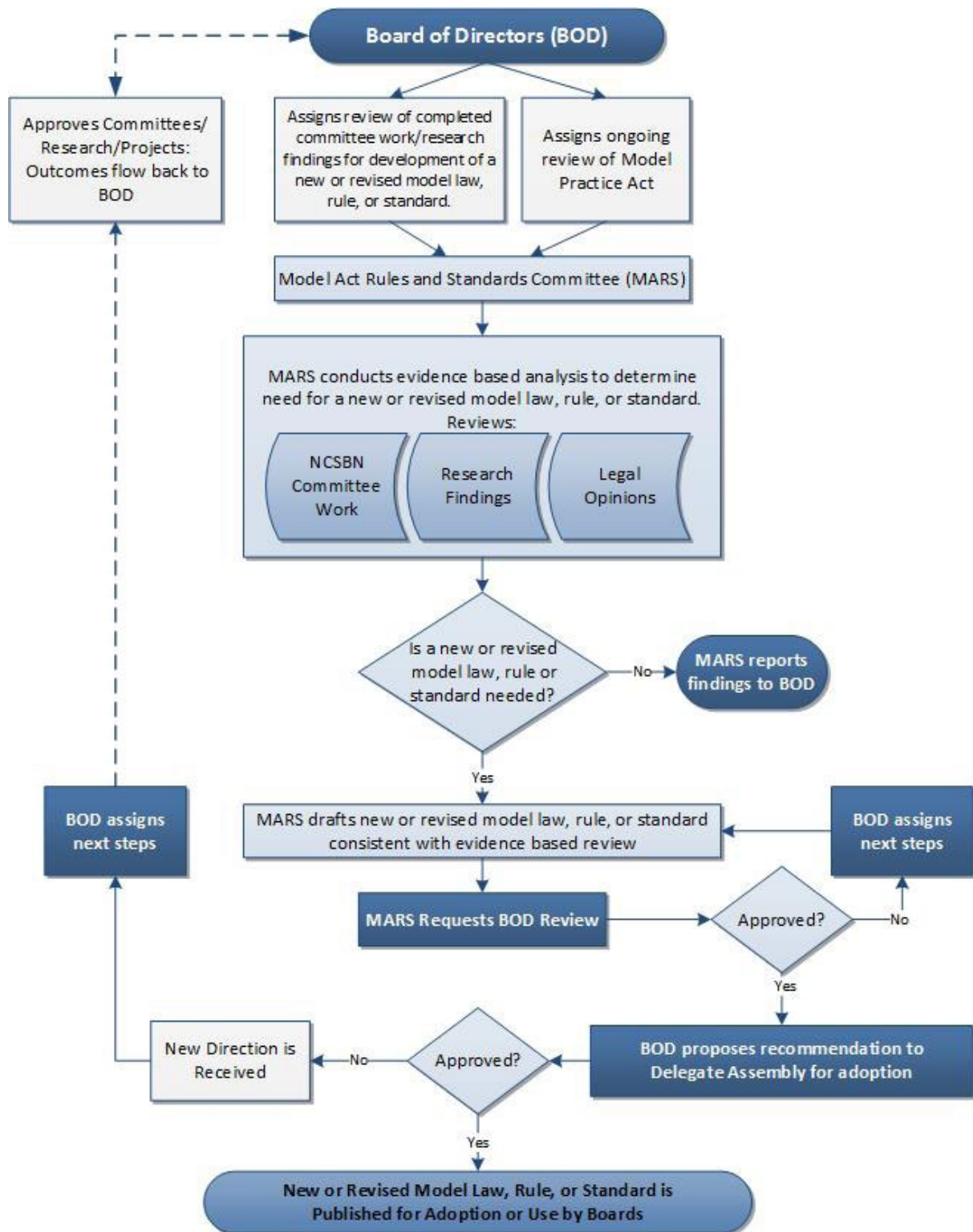
After BOD approval, a final draft shall be presented to the BOD. If approved by the BOD, the formal process of member board approval shall begin and follow NCSBNs formal approval process (See flow chart).

### 3. Critical Path Document

Critical Path steps for completing the project includes the following:

- Proposed revisions to the model act, rules or development of standards may be generated by the BOD or Delegate Assembly (DA).
- NCSBN and MARS members will vet the proposals to the model act, rules, revisions or standards against an approved list of current NCSBN programs, processes, services and procedures to ensure that no conflict of interest exists.
- All proposed changes reflect the current NCSBN Strategic Plan, Vision, Mission and Values.
- Any action that impacts Member Relations, such as involving the member boards, BONs, or DA voting by the membership will be carefully reviewed.





---

## Proposal for a New Standard—MARS

1. STATE THE SUBJECT MATTER OF THE PROPOSED MODEL LAW, RULE OR STANDARD:
2. STATE THE NECESSITY FOR THE PROPOSED REVIEW OF THE MODEL LAW, RULE OR STANDARD:
3. WILL DEVELOPMENT OF THIS PROPOSED STANDARD REQUIRE TECHNICAL EXPERTISE? IF SO, WHAT TYPE?
4. WHAT COMMITTEE WORK, RESEARCH, OR NCSBN SUBJECT MATER EXPERTS SHOULD BE INCLUDED?
5. WHAT GROUPS WILL THIS PROPOSED STANDARD AFFECT?

Standards developed by the MARS shall generally conform to the following template:

Standard Number

Title of Standard

Forward

Explanation of Need

Statement of Scope

Identification of Stakeholders

Existing Standards

Existing Model Act

Existing Rule

Draft Standard

Written Interpretation

# Report of the National Nurse Aide Assessment Program (NNAAP®) and the Medication Aide Certification Examination (MACE®)

## Background

In August 2008, NCSBN acquired exclusive ownership of the intellectual property for the NNAAP® and MACE® programs. NNAAP is a two-part examination consisting of a written or oral examination and a skills demonstration. The candidate is allowed to choose between a written or an oral examination.

NNAAP has been administered to more than 2.5 million candidates and is the leading nurse aide assessment instrument in the U.S. MACE is a national examination that NCSBN developed for state boards of nursing (BONs) and other medication aide oversight agencies, which became effective Jan. 1, 2010. MACE helps to evaluate the competence of unlicensed individuals allowed to administer medications to clients in long-term care settings.

Pearson VUE is the exclusive test administrator for NNAAP and MACE and continues to be responsible for all delivery, administration and publishing (electronic and paper), while assisting with sales and market development activities associated with the exams. In addition, Pearson VUE provides the following testing services for NNAAP: eligibility screening and registration; test site scheduling; test administration (test site and registered nurse evaluator management); scoring; and reporting. The registry services provided by Pearson VUE include initial certification, recertification and reciprocity management, as well as public access registry verifications through the Internet.

NNAAP is consistent with the training requirements for nurse aides/nursing assistants (NAs) delineated in the Omnibus Budget Reconciliation Act (OBRA) of 1987, 1989. This act states that anyone working as an NA must complete a competency evaluation program. The competency evaluation program must be state-approved, consist of a minimum of 75 hours of training and include 16 hours of supervised clinical training.

The nursing Model Act and Model Rules, developed by NCSBN and its member boards, along with the Medication Assistant-Certified (MA-C) Model Curriculum, are two resources used to develop content for MACE. Subject matter experts (SMEs) are selected to participate in item writing and review workshops, using criteria delineated in the above stated resources. MACE is designed to assess entry-level competence of unlicensed direct care providers who have been approved by their state/jurisdiction to administer medications in long-term care settings ("medication aides").

NCSBN continues to serve as the premier organization that advances regulatory excellence for public protection. States participating in these examination programs, through NCSBN, will continue to provide support to licensed health care professionals who need more qualified staff at the bedside to assist in the delivery of safe, competent care.

## Fiscal Year 2018 (FY18) Highlights and Accomplishments

The following is a list of the highlights and accomplishments in fulfilling strategic initiatives for FY18.

- In January 2018, new NNAAP written forms went into operational use. Pretest items were administered along with operational items in the test forms. Successful pretest items will be added to the operational item pool.
- In May 2018, the NNAAP Virtual Item Writing Panel was held.
- In June 2018, the NNAAP Virtual Item Review Panel was held.
- The updated skills portion of the NNAAP examination went into effect in July 2018.

## Staff

Philip Dickison, PhD, RN,  
Chief Officer, Operations  
& Examinations

Jennifer Gallagher, Director,  
Business Operations,  
Examinations

Aly Brenton, MSN, RN, CNL, RN  
Test Development Associate,  
Examinations

Julie Burgett, PMP, Test  
Development Associate,  
Examinations

Daniel Hydzik, Test Development  
Associate, Examinations

Doyoung Kim, PhD, Senior  
Psychometrician, Examinations

Hong Qian, PhD, Psychometrician,  
Examinations

Betty Sanders, MBA, PMP, CAE,  
Test Development Manager,  
Examinations

Kristin Singer, MSN, RN, RN,  
Test Development Associate,  
Examinations

## Meeting Dates

FY17

- March 28–30, 2017 – NNAAP  
Virtual Item Writing Panel
- April 20, 2017 – NNAAP Virtual  
Item Review Panel
- July 17–18, 2017 – NNAAP Skills  
Review Panel
- Aug. 29, 2017 – NNAAP Virtual  
Item Review Panel
- Sept. 12–13, 2017 – NNAAP  
Skills Standard Setting Panel

FY18

- May 8–9, 2018 – NNAAP Virtual  
Item Writing Panel
- June 13, 2018 – NNAAP Virtual  
Item Review Panel

## Relationship to Strategic Plan

### Strategic Initiative D

Pioneer competency assessments  
to support the future of health  
care and the advancement of  
regulatory excellence.

## Attachments

None

## **PPROGRAM HIGHLIGHTS AND TEST DEVELOPMENT ACTIVITIES**

### **NNAAP Virtual Item Writing and Item Review Panels**

Two panels of SMEs convened virtually to perform test development activities for the NNAAP examination. In preparation for each panel, a gap analysis was conducted on the item bank to prioritize the content areas in need of items to be developed and/or reviewed. All meetings began with an introduction to NCSBN. The item writing panel, May 8-9, 2018, continued with an item writing workshop that included specific guidelines to use when writing new items. The guidelines provided to SMEs included a practice session in the writing of items; a list of activity statements to write new items based on the analysis of item bank needs; and an explanation of how to use the NNAAP Examination Content Outline.

The item review panel, June 13, 2018, continued with an item review workshop that included specific guidelines to use when reviewing items. SMEs discussed the guidelines necessary for reviewing items. An NCSBN staff member then facilitated the review of exam items.

### **NNAAP Skills Standard Setting Panel**

On Sept. 12–13, 2017, the Examinations department convened a panel of SMEs for the NNAAP Skills Standard Setting Panel to recommend passing standards for NNAAP skills that represent the minimal level of competency entry-level nurse aides must demonstrate in order to provide safe and effective care. SMEs representing NCSBN geographic regions with a wide variety of nursing expertise served on the panel. The SMEs recommended the passing standards for the NNAAP skills that will be administered on the evaluation from 2018 to 2023. The standard setting study was conducted using a criterion-referenced model called the modified Angoff method. The updated NNAAP skills became available on the Pearson VUE website beginning on July 1, 2018.

### **Future Activities**

- Share information with the public about NNAAP and MACE.
- Develop new test items, test forms and maintain item pools for NNAAP and MACE.
- Perform appropriate item response and statistical analyses of items for NNAAP and MACE.
- Build test forms for written and oral examinations for NNAAP.
- Continue to increase the bank of items for NNAAP and MACE
- Enhance the quality of NNAAP and MACE.

### **SUMMARY OF NNAAP EXAMINATION RESULTS FOR CALENDAR YEAR 2017 – PASS RATES BY STATE<sub>1</sub>**

Across all jurisdictions, the pass rates for NNAAP were 89 percent for the written or oral examinations and 75 percent for the skills evaluation. The table below provides passing rates by jurisdiction for the written or oral examination, skills evaluation and overall pass rates for forms administered in 2017. The number in parentheses represents the number of candidates taking the examination. The overall pass rate provides information on the completion of all requirements for NA certification. A candidate must pass both the written or oral examination and skills evaluation to obtain an overall pass.

**Table 1: Pass Rates by Jurisdiction in 2017**

\*Number of candidates is in parentheses

Jurisdiction	Written/Oral (N*)			Skills (N*)			Total
	First Time Takers	Repeaters	Total	First Time Takers	Repeaters	Total	
AK	94% (620)	67% (82)	91% (702)	89% (610)	84% (97)	88% (707)	91% (676)
AL	86% (822)	67% (81)	85% (903)	70% (827)	71% (174)	71% (1,001)	75% (893)
CA	90% (12,200)	71% (2,610)	86% (14,810)	90% (12,248)	83% (2,520)	89% (14,768)	89% (14,111)
CO	96% (5,472)	79% (549)	94% (6,021)	72% (5,541)	72% (1,768)	72% (7,309)	85% (6,065)
DC	91% (403)	79% (91)	88% (494)	82% (445)	75% (142)	80% (587)	79% (524)
GA	91% (7,880)	73% (779)	90% (8,659)	78% (7,986)	75% (1,361)	78% (9,347)	79% (8,831)
GU	94% (34)	100% (1)	94% (35)	91% (34)		91% (34)	86% (35)
LA	84% (686)	44% (101)	79% (787)	84% (689)	85% (80)	84% (769)	85% (700)
MD	91% (2,743)	84% (264)	90% (3,007)	83% (2,750)	80% (369)	83% (3,119)	84% (2,969)
MN	93% (5,041)	84% (1,171)	91% (6,212)	74% (5,039)	71% (2,281)	73% (7,320)	86% (6,040)
MS	85% (2,049)	78% (520)	84% (2,569)	68% (2,079)	67% (770)	67% (2,849)	73% (2,489)
NC	96% (13,324)	89% (1,837)	95% (15,161)	73% (13,584)	68% (4,458)	72% (18,042)	83% (15,521)
ND	91% (1,135)	75% (200)	89% (1,335)	88% (1,140)	80% (233)	87% (1,373)	90% (1,266)
NH	91% (11)		91% (11)	100% (11)		100% (11)	91% (11)
PA	94% (5,511)	75% (706)	92% (6,217)	83% (5,577)	80% (1,248)	82% (6,825)	89% (6,164)
RI	84% (1,118)	46% (300)	76% (1,418)	56% (1,148)	58% (593)	57% (1,741)	70% (1,295)
SC	93% (3,351)	80% (376)	92% (3,727)	74% (3,397)	66% (937)	72% (4,334)	81% (3,757)
TX	86% (16,529)	65% (3,527)	82% (20,056)	74% (17,106)	72% (4,626)	74% (21,732)	79% (19,158)
VA	92% (5,367)	61% (652)	88% (6,019)	65% (5,433)	61% (1,753)	64% (7,186)	71% (6,378)

1 The NNAAP testing year coincides with calendar year. Pass rates from Jan. 1 to Dec. 31, 2017 are presented here.

**Table 1: Pass Rates by Jurisdiction in 2017**

\*Number of candidates is in parentheses

Jurisdiction	Written/Oral (N*)			Skills (N*)			Total
	First Time Takers	Repeaters	Total	First Time Takers	Repeaters	Total	
VI	100% (3)	0% (1)	75% (4)	33% (3)		33% (3)	25% (4)
VT	96% (743)	79% (19)	96% (762)	77% (743)	81% (98)	78% (841)	85% (757)
WA	93% (8,570)	63% (1,095)	89% (9,665)	71% (8,633)	67% (3,150)	70% (11,783)	83% (8,863)
WI	97% (7,381)	87% (560)	96% (7,941)	77% (7,445)	75% (1,923)	76% (9,368)	86% (8,091)
WY	96% (933)	81% (36)	95% (969)	74% (936)	77% (217)	74% (1,153)	86% (992)
<b>TOTAL</b>	<b>92%</b> <b>(101,926)</b>	<b>73%</b> <b>(15,558)</b>	<b>89%</b> <b>(117,484)</b>	<b>76%</b> <b>(103,404)</b>	<b>71%</b> <b>(28,798)</b>	<b>75%</b> <b>(132,202)</b>	<b>83%</b> <b>(115,590)</b>

# Report of the Nursing Education Outcomes and Metrics Committee

## Background

In September 2016, the Board of Directors (BOD) established the Nursing Education Outcomes and Metrics Committee, based on the needs of our membership. The charge for this committee is to:

Establish a set of outcomes and associated metrics to recommend processes to assess nursing education programs.

- Review current literature on program approval metrics and their relevance to public safety.
- Recommend factors in addition to first-time NCLEX pass rates that can be used to determine criteria for a BON's legally defensible approval/removal process.

Because this is a complex charge, with many sides and components, the first year of the committee was spent developing expertise on the issues, along with any available evidence to support nursing program outcomes and metrics. In 2016–17 the members reviewed the literature; held calls with experts in nursing education, higher education, health care accreditors, U.S. Department of Education, and nursing regulators in Canada; and held face-to-face meeting with NCSBN's attorney. Armed with this evidence, in 2017–18 the committee spent the first two meetings reviewing the evidence, identifying the gaps and making the decision to go forward with our own studies to collect data, enabling us to develop an evidence-based nursing program approval process. Since the November 2017 meeting, the committee has been on hiatus, awaiting the results of the studies that are being conducted.

## Fiscal Year 2018 (FY18) Highlights and Accomplishments

- Conference call with the College of Nurses of Ontario for an update on their work surrounding nursing education approval metrics.
- Reviewed results from a survey sent to BON education consultants about regulatory quality indicators and red flags when programs are falling below standards, finding that consensus in these areas can be reached.
- Reviewed results of a survey to education consultants as to whether they would be willing, and able, to share their annual reports and approval statuses, from the last five years, as part of a predictive analysis looking at program approval status as related to nursing education program elements (e.g., faculty, curriculum, etc.)
- Developed a theoretical model of the available evidence for program approval metrics and outcomes, though finding gaps in evidence to support each element.
- Reviewed data from Texas on graduation rates and clinical hours as compared to NCLEX® pass rates, finding no significant relationships.
- Met with NCSBN's Chief Officer, Examinations and Operations, to learn about psychometrics of the NCLEX, as well as the problems inherent in using it as the only proxy for program quality.
- Made the decision for NCSBN to proceed with two national studies to provide us with more evidence for developing an evidence-based approval process:
  1. Five-year annual report study, where five years of annual reports from BONs will be collected, along with their program approval statuses during those five years, and using predictive analyses will learn which program elements are related to a downward approval status or approval removal.
  2. Delphi study of education consultants at BONs, educators and clinical educators who work with new graduates, looking for consensus on regulatory quality indicators, red flags when programs are falling below standards and outcomes.

## Members

Janice I. Hooper, PhD, RN, FRE, CNE, FAAN, ANEF, Texas, Area III, Chair  
Brenda Bolen Rowe, MN, JD, RN, Georgia, Area III  
Bonita Jenkins, EdD, RN, CNE, District of Columbia, Area IV  
Carol Moreland, MSN, RN, Kansas, Area II  
Sabita Persaud, PhD, RN, APHN-BC, Maryland, Area IV  
Mindy Schaffner, PhD, MSN-CNS, RN, Washington, Area I  
Bibi Schultz, MSN, RN, CNE, Missouri, Area II  
Valerie Fuller, PhD, DNP, AGACNP-BC, FNP-BC, FAANP, Area IV, Board Liaison  
Joan M. Stanley, PhD, DS, RN, CRNP, FAAN, FAANP, External Consultant from the American Association of Colleges of Nursing (AACN)  
Elaine Tagliareni, EdD, RN, CNE, FAAN, External Consultant from the National League for Nursing (NLN)

## Staff

Nancy Spector, PhD, RN, FAAN, Director, Regulatory Innovations  
Josephine Silvestre, MSN, RN, Associate, Regulatory Innovations  
Hong Qian, PhD, Lead Psychometrician, Operations & Maintenance, Exams

## Meeting Dates

- Aug. 1–2, 2017
- Nov. 8–9, 2017
- Feb. 20, 2018 – Webinar inviting boards of nursing (BONs) to participate in our five-year annual report study

## Relationship to Strategic Plan

### Strategic Initiative A

Envision and refine regulatory systems for increased relevance and responsiveness to changes in health care

**Strategic Objective A4**

Amongst all relevant stakeholders, facilitate the generation and transfer of knowledge that supports decision-making and evidence based regulation.

**Attachments**

None

The results of these two studies will be integrated, and it is hoped that BONs will be provided with an evidence-based approval process. The plan is for the studies to be completed by the beginning of October so that the results can be presented at the December BOD meeting.

**Committee Recommendations**

The committee asked the BOD to approve one more meeting so that they can review the study results and make recommendations. This request was approved at the May BOD meeting.



## **SECTION III: NCSBN RESOURCES**



---

# Standing Rules of the Delegate Assembly

## 1. Credentialing Procedures and Reports

- A. The president shall appoint the Credentials Committee, which is responsible for registering and accrediting delegates and alternate delegates.
- B. Upon registration, each delegate and alternate shall receive a badge and the appropriate number of voting devices authorized for that delegate. Delegates authorized to cast one vote shall receive one voting device. Delegates authorized to cast two votes shall receive two voting devices. Any transfer of voting devices must be made through the Credentials Committee.
- C. A registered alternate may substitute for a delegate provided the delegate turns in the delegate badge and voting device(s) to the Credentials Committee at which time the alternate is issued a delegate badge. The initial delegate may resume delegate status by the same process.
- D. The Credentials Committee shall give a report at the first business meeting. The report will contain the number of delegates and alternates registered as present with proper credentials, and the number of delegate votes present. At the beginning of each subsequent business meeting, the committee shall present an updated report listing all properly credentialed delegates and alternate delegates present, and the number of delegate votes present.

## 2. Meeting Conduct

- A. Meeting Conduct
  - 1. Delegates must wear badges and sit in the section reserved for them.
  - 2. All attendees shall be in their seats at least five minutes before the scheduled meeting time.
  - 3. There shall be no smoking in the meeting room.
  - 4. All mobile devices shall be turned off or turned to a silent mode. An attendee must leave the meeting room to answer a telephone.
  - 5. A delegate's conversations with non-delegates during a business meeting must take place outside the designated delegate area.
  - 6. All attendees have a right to be treated respectfully.
  - 7. There shall be no videotaping, audio recording or photographing of the sessions without the written permission of NCSBN.

## 3. Agenda

- A. Business Agenda
  - 1. The Business Agenda is prepared by the president in consultation with the chief executive officer and approved by the Board of Directors.
- B. Consent Agenda
  - 1. The Consent Agenda contains agenda items that do not recommend actions.
  - 2. The Board of Directors may place items on the Consent Agenda that may be considered received without discussion or vote.
  - 3. An item will be removed from the Consent Agenda for discussion or vote at the request of any delegate.
  - 4. All items remaining on the Consent Agenda will be considered received without discussion or vote.

## 4. Motions or Resolutions

- A. Only delegates, members of the Board of Directors, and the NCLEX® Examination Committee may present motions or resolutions to the Delegate Assembly. Resolutions or motions made by the NCLEX Examination Committee are limited to those to approve test plans pursuant to Article X, Section 1(a) of the bylaws of the National Council.

- 
- B. All motions, resolutions and amendments shall be in writing and on triplicate motion paper signed by the maker and a second. All motions, resolutions and amendments must be submitted to the Delegate Assembly chair and the parliamentarian. All resolutions and non-procedural main motions must also be submitted to the chair of the Resolutions Committee before being presented to the Delegate Assembly.
  - C. The Resolutions Committee will evaluate motions and resolutions in accordance with the following established criteria:
    - 1. Determination of consistency with NCSBN articles of incorporation, bylaws, mission, vision, strategic initiative(s), objectives, and policies;
    - 2. Determination of relationship to ongoing programs and services;
    - 3. Will not duplicate concurrent programs and services;
    - 4. Determination that no negative legal or business implications are anticipated; and
    - 5. Financial impact, including budget estimates of expense and/or revenue and funding.
  - D. The Resolutions Committee shall review motions and resolutions submitted before Thursday, Aug. 16, 2018 at 3:30 pm. Resolution or motion-makers are encouraged to submit motions and resolutions to the Resolutions Committee for review before this deadline.
  - E. The Resolutions Committee will convene its meeting on Thursday, Aug. 16, 2018 at 3:30 pm and schedule a mutually agreeable time during the meeting to meet with each resolution or motion-maker. The Resolutions Committee shall meet with the resolution or motion-maker to prepare resolutions or motions for presentation to the Delegate Assembly and to evaluate the resolution or motion in accordance with the established criteria. The committee chair shall notify the Delegate Assembly of the committee's review, analysis, and evaluation of each resolution and motion referred to the Committee.
  - F. If a member of the Delegate Assembly wishes to introduce a non-procedural main motion or resolution after the deadline of 3:30 pm on Thursday, Aug. 16, 2018, the request shall be submitted under New Business; provided that the maker first submits the resolution or motion to the chair of the Resolutions Committee. All motions or resolutions submitted after the deadline must be presented with a written analysis that addresses the motion or resolution's consistency with the established review criteria. The member submitting such a motion or resolution shall provide written copies of the motion or resolution to all delegates. A majority vote of the delegates shall be required to grant the request to introduce this item of business. The Resolutions Committee shall advise the Delegate Assembly where the required analyses have not been performed and/or recommend deferral of a vote on the motion pending further analysis.

## **5. Debate at Business Meetings**

- A. Order of Debate: Delegates shall have the first right to speak. Non-delegate members and employees of member boards and exam user members, including members of the Board of Directors, followed by associate members, may speak only after all delegates have spoken.
- B. Any person who wishes to speak shall go to a microphone. When recognized by the chair, the speaker shall state his or her name and jurisdiction or organization.
- C. No person may speak in debate more than twice on the same question on the same day, or longer than four minutes per speech, without permission of the Delegate Assembly, granted by a majority vote without debate.
- D. A red card raised at a microphone interrupts business for the purpose of a point of order, a question of privilege, orders of the day, a parliamentary inquiry or an appeal. Any of these motions takes priority over regular debate.
- E. A timekeeper will signal when the speaker has one minute remaining, and when the allotted time has expired.
- F. The Delegate Assembly may by a majority vote go into executive session. The enacting motion shall specify those permitted to attend.

---

## 6. Nominations and Elections

### A. Definitions:

1. **Cumulative Voting:** A system of voting whereby multiple votes allotted to a delegate are all cast for a single candidate.
2. **Majority Vote:** A majority vote means more than half of the total votes cast by registered delegates.
3. **Plurality Vote:** A plurality vote is the largest number of votes to be given to any candidate.

### B. Procedures:

1. Any member who intends to be nominated from the floor is required to submit their completed nomination form and must meet with the Leadership Succession Committee the day before the presentation of the slate of candidates to the Delegate Assembly.
2. A delegate making a nomination with a motion form from the floor shall have two minutes to list the qualifications of the nominee.
3. Electioneering for candidates is prohibited except during the candidate forum.
4. The voting strength for the election shall be determined by those registered by 5 pm on Wednesday, Aug. 15, 2018.
5. Election for officers, directors, and members of the Leadership Succession Committee shall be held Thursday, Aug. 16, 2018 from 8:30 –9:00 am.
6. If more than one position is listed on a ballot, each delegate may cast one vote for each position. Cumulative voting for individual candidates is not permitted.
7. If no candidate receives the required vote for an office and repeated balloting is required, the president shall immediately announce run-off candidates and the time for the run-off balloting.
8. If, on the first ballot, no candidate for officer or director receives a majority vote, or if not all positions on the ballot are filled by a candidate receiving a majority vote, the run-off balloting shall proceed as follows:
  - a. Where only one open position is on the ballot, the run-off shall be limited to the two candidates receiving the highest number of votes.
  - b. If there is more than one position on the ballot and only one position is not filled by a candidate(s) receiving a majority vote on the first ballot, the run-off shall be limited to the two unelected candidates receiving the highest number of votes on the first ballot.
  - c. If more than one position is not filled by a candidate(s) receiving a majority vote on the first ballot, the run-off shall be limited to up to twice the number of candidates as there are open positions to be filled on the second ballot, the candidates to be selected for inclusion on the second ballot will be in the order of the votes received on the first ballot.
  - d. In the event there remains an unfilled position after the second ballot, the candidate receiving the fewest votes on the second ballot shall be removed from the next run-off ballot.
  - e. If there is a tie vote on the third ballot or if a position remains unfilled after the third ballot, the final selection shall be determined by lot.

## 7. Forums

- A. **Scheduled Forums:** The purpose of scheduled forums is to provide information helpful for decisions and to encourage dialogue among all delegates on the issues presented at the forum. All delegates are encouraged to attend forums to prepare for voting during the Delegate Assembly. Forum facilitators will give preference to voting delegates who wish to raise questions and/or discuss an issue. Guests may be recognized by the chair to speak after all delegates, non-delegate members and employees of member boards have spoken.

- 
- B. Open Forum: Open forum time may be scheduled to promote dialogue and discussion on issues by all attendees. Attendee participation determines the topics discussed during an Open Forum. The president will facilitate the Open Forum.
  - C. To ensure fair participation in forums, the forum facilitators may, at their discretion, impose rules of debate.

---

## Orientation Manual for Delegate Assembly (DA) Participants

The purpose of the Orientation Manual is to provide information about the mission, governance and operations of NCSBN. It is hoped that this manual will facilitate the active participation of all DA participants as well as the Board of Directors (BOD) and committee members.

Following a brief discussion of NCSBN's history, this manual will describe the organization's structure, functions, policies and procedures.

### History

The concept of an organization such as NCSBN had its roots as far back as August 1912 when a special conference on state registration laws was held during the American Nurses Association (ANA) convention. At that time, participants voted to create a committee that would arrange an annual conference for people involved with state boards of nursing to meet during the ANA convention. It soon became evident that the committee required a stronger structure to deal with the scope of its concerns. However, for various reasons, the committee decided to remain within the ANA.

Boards of nursing (BONs) also worked with the National League for Nursing Education (NLNE), which, in 1932, became the ANA's Department of Education. In 1933, by agreement with ANA, NLNE accepted responsibility for advisory services to the State Boards of Nurse Examiners (SBNE) in all education and examination-related matters. Through its Committee on Education, NLNE set up a subcommittee that would address, over the following decade, state board examination issues and problems. In 1937, NLNE published *A Curriculum Guide for Schools of Nursing*. Two years later, NLNE initiated the first testing service through its Committee on Nursing Tests.

Soon after the beginning of World War II, nurse examiners began to face mounting pressures to hasten licensing and to schedule examinations more frequently. In response, participants at a 1942 NLNE conference suggested a "pooling of tests" whereby each state would prepare and contribute examinations in one or more subjects that could provide a reservoir of test items. They recommended that the Committee on Nursing Tests, in consultation with representative nurse examiners, compile the tests in machine-scorable form. In 1943, the NLNE board endorsed the action and authorized its Committee on Nursing Tests to operate a pooling of licensing tests for interested states (the State Board Test Pool Examination or SBTPE). This effort soon demonstrated the need for a clearinghouse whereby state boards could obtain information needed to produce their test items. Shortly thereafter, a Bureau of State Boards of Nursing began operating out of ANA headquarters.

The bureau was incorporated into the ANA bylaws and became an official body within that organization in 1945. Two years later, the ANA board appointed the Committee for the Bureau of State Boards of Nurse Examiners, which was comprised of full-time professional employees of state boards.

In 1961, after reviewing the structure and function of the ANA and its relation to state BONs, the committee recommended that a council replace it. Although council status was achieved, many people continued to be concerned about potential conflicts of interest and recognized the often heard criticism that professional boards serve primarily the interests of the profession they purport to regulate.

In 1970, following a period of financial crisis for the ANA, a council member recommended that a freestanding federation of state boards be established. After a year of study by the state boards, this proposal was overwhelmingly defeated when the council adopted a resolution to remain with the ANA. However, an ad hoc committee was appointed later to examine the feasibility of the council becoming a self-governing incorporated body. At the council's 1977 meeting, a task force was elected and charged with the responsibility of proposing a specific plan for the formation of a new independent organization. On June 5, 1978, the DA of ANA's Council of State Boards of Nursing voted 83 to 8 to withdraw from ANA to form the National Council of State Boards of Nursing (NCSBN).

### Organizational Mission, Strategic Initiatives and Outcomes

NCSBN provides education, service, and research through collaborative leadership to promote evidence-based regulatory excellence for patient safety and public protection.

NCSBN currently has four strategic initiatives for Fiscal Year 2017–2019 (FY17–19):

- Envision and refine regulatory systems for increased relevance and responsiveness to changes in health care.
- Champion regulatory solutions to address borderless health care delivery.

- Expand the active engagement and leadership potential of all members.
- Pioneer competency assessments to support the future of health care and the advancement of regulatory excellence.

To achieve its strategic initiatives, NCSBN identifies expected outcomes, under which performance measures for achieving these outcomes are developed, assessed and refined each fiscal year and provide the organization with a flexible plan within a disciplined focus. Annually, the BOD evaluates the accomplishment of strategic initiatives and objectives, and the directives of the DA.

## Organizational Structure and Function

### MEMBERSHIP

There are currently three categories of NCSBN Membership: member board, exam user member (EUM) and associate member. NCSBN Member Board status is extended to those BONs that agree to use, under specified terms and conditions, one or more types of licensing examinations developed by NCSBN. At the present time, there are 59 member boards, including those from the District of Columbia, the U.S. Virgin Islands, Guam, American Samoa and the Northern Mariana Islands. BONs may become member boards upon approval of the DA and execution of a contract for using the NCLEX-RN® examination and/or the NCLEX-PN® examination. Revisions to the bylaws by the membership in 2007 also allow for advanced practice nurse boards to become full members.

Member boards maintain their good standing through compliance with all membership terms and conditions and bylaws. In return, they receive the privilege of participating in the development and use of NCSBN's licensure examinations. Member boards also receive information services, public policy analyses and research services. Member boards that fail to adhere to the conditions of membership may have their membership terminated by the BOD. They may then choose to appeal the BOD's decision to the DA.

Revisions to the NCSBN Bylaws in 2017 created a new category of NCSBN Membership, the EUM. EUMs are authorized nurse regulatory bodies from other countries that have an organizational mandate exclusively related to the regulation of the profession and protection of the public. Additionally, EUMs must execute a contract for using the prelicensure exam developed by NCSBN, must pay an annual membership fee and be approved for membership by the DA. EUMs maintain their good standing through compliance with all membership terms and conditions and bylaws. In return, they receive the privilege of participating in the development and use of NCSBN's licensure examinations, as well as voting privileges at the annual DA. EUMs also receive information services, public policy analyses and research services. EUMs that fail to adhere to the conditions of membership may have their membership terminated by the BOD. They may then choose to appeal the BOD's decision to the DA.

Associate members are authorized nurse regulatory bodies from other countries that must pay an annual membership fee and be approved for membership by the DA. NCSBN has 30 associate members:

- |   |  |
|---|--|
| ■ Association of New Brunswick Licensed Practical Nurses            | ■ College of Licensed Practical Nurses of Nova Scotia          |
| ■ Association of Registered Nurses of Newfoundland and Labrador     | ■ College of Nurses of Ontario                                 |
| ■ Association of Registered Nurses of Prince Edward Island          | ■ College of Registered Nurses of British Columbia             |
| ■ Bermuda Nursing Council   | ■ College of Registered Nurses of Manitoba                     |
| ■ College and Association of Registered Nurses of Alberta           | ■ College of Registered Nurses of Nova Scotia                  |
| ■ College of Licensed Practical Nurses of Alberta                   | ■ College of Registered Psychiatric Nurses of Alberta          |
| ■ College of Licensed Practical Nurses of British Columbia          | ■ College of Registered Psychiatric Nurses of British Columbia |
| ■ College of Licensed Practical Nurses of Manitoba                  | ■ College of Registered Psychiatric Nurses of Manitoba         |
| ■ College of Licensed Practical Nurses of Newfoundland and Labrador | ■ College of Licensed Practical Nurses of Prince Edward Island |
|   | ■ Nurses Association of New Brunswick                          |
|   | ■ Nursing and Midwifery Board of Australia                     |



- 
- Nursing and Midwifery Board of Ireland
  - Nursing and Midwifery Council of New South Wales
  - Nursing Council of New Zealand
  - Ordre des infirmières et infirmiers du Québec
  - Registered Nurses Association of the Northwest Territories and Nunavut
  - Registered Psychiatric Nurses Association of Saskatchewan
  - Saskatchewan Association of Licensed Practical Nurses
  - Saskatchewan Registered Nurses' Association
  - Singapore Nursing Board
  - Yukon Registered Nurses Association

## **AREAS**

NCSBN's Member Boards are divided into four geographic areas. The purpose of this division is to facilitate communication, encourage engagement on NCSBN issues and provide diversity of BOD and committee representation. Member board delegates elect area directors from their respective Areas through a majority vote of the DA.

## **DELEGATE ASSEMBLY**

The DA is the membership body of NCSBN and is comprised of delegates who are designated by the member boards and EUMs. Each member board has two votes and may name two delegates and alternates. Each EUM has one vote and may name one delegate and alternate. The DA meets at NCSBN's Annual Meeting, traditionally held in early August. Special sessions can be called under certain circumstances.

At the Annual Meeting, delegates elect officers and directors and members of the Leadership Succession Committee (LSC) by majority and plurality vote respectively. They also receive and respond to reports from officers and committees. They may revise and amend the bylaws by a two-thirds vote, providing the proposed changes have been submitted at least 45 days before the session. In addition, the DA adopts the mission statement, strategic initiatives of NCSBN, approves all new NCSBN memberships, the substance of all Terms and Conditions of NCSBN Membership between NCSBN and member boards, adopts test plans to be used for the development of the NCLEX® examination, and establishes the fee for the NCLEX examination.

## **OFFICERS AND DIRECTORS**

NCSBN officers include the president, president-elect and treasurer. Directors consist of four area directors and four directors-at-large. Members or staff of member boards may hold office, subject to exclusion from holding office if other professional obligations result in an actual or perceived conflict of interest. Members or staff of EUMs are only eligible for the office of director-at-large, subject to exclusion from holding office if other professional obligations result in an actual or perceived conflict of interest.

No person may hold more than one elected office at the same time. The president shall have served as a delegate, a committee member, a director or an officer prior to being elected to office. The treasurer and the directors shall serve no more than two consecutive terms in the same position excluding time served by appointment and/or election due to a vacancy. The president and president-elect shall serve no more than one term in the same position, except when a vacancy occurs.

The president, president-elect and treasurer are elected for terms of two years or until their successors are elected. The president-elect and the directors-at-large are elected in even-numbered years. The treasurer and area directors are elected in odd-numbered years.

The four area directors are elected for terms of two years or until their successors are elected. Four directors-at-large will be elected for terms of two years or until their successors are elected.

Officers and directors are elected by ballot during the annual session of the DA. Member board delegates elect area directors from their respective areas.

Election is by a majority vote. Write-in votes are prohibited. In the event a majority is not established, the bylaws dictate the rebaloting process.

Officers and directors assume their duties at the close of the session at which they were elected. The president-elect fills a vacancy in the office of president. Board appointees fill other officer vacancies until the next Annual Meeting and a successor is elected.

---

## **BOD**

The BOD, the administrative body of NCSBN, consists of 11 elected officers. The BOD is responsible for the general supervision of the affairs of NCSBN between sessions of the DA. The BOD authorizes the signing of contracts, including those between NCSBN and its member boards and EUMs. It also engages the services of legal counsel, approves and adopts an annual budget, reviews membership status of noncompliant member boards, EUMs and associate members and renders opinions, when needed, about actual or perceived conflicts of interest.

Additional duties include approval of the NCLEX examination test service, appointment of committees, monitoring of committee progress, approval of studies and research pertinent to NCSBN's purpose, and provision for the establishment and maintenance of the administrative offices.

## **MEETINGS OF THE BOD**

All BOD meetings are typically held in Chicago, with the exception of the post-Annual Meeting BOD meeting that may be held at the location of the Annual Meeting. The call to meeting, agenda and related materials are mailed and/or digitally distributed to BOD officers and directors two weeks before the meeting. The agenda is prepared by staff, in consultation with the president, and provided to the membership via the NCSBN website ([www.ncsbn.org](http://www.ncsbn.org)).

A memo or report that describes the item's background and indicates the BOD action needed accompanies items for BOD discussion and action. Motion papers are available during the meeting and are used so that an accurate record will result. Staff takes minutes of the meeting.

Resource materials are available to each BOD officer and director for use during BOD meetings. These materials are updated periodically throughout the year and include copies of the articles of incorporation and bylaws, strategic plan, policies and procedures, contracts, budget, test plan, committee rosters, minutes and personnel manual.

## **COMMUNICATIONS WITH THE BOD**

Communication between BOD meetings takes place in several different ways. The CEO communicates weekly or as needed with the president regarding major activities and confers as needed with the treasurer about financial matters.

## **LSC**

The LSC consists of seven members. Any board member or employee of a member board or EUM is eligible to serve as a member of the LSC. Four members are elected, one from each area, and are elected for two-year terms. Even-numbered area members are elected in even-numbered years and odd-numbered area members are elected in odd-numbered years. Members are elected by ballot with a plurality vote. The BOD appoints three at-large members, one of whom shall have served on the BOD. The terms of the appointed members shall be staggered so that at least one is appointed each year. A committee member shall serve no more than two consecutive terms in the same position on the committee, excluding time served by appointment and/or election due to a vacancy. A member elected or appointed to the LSC may not be nominated or apply for an officer or director position during the term for which that member was elected or appointed.

The LSC's function is to present a slate of candidates through a determination of qualifications and geographic distribution for inclusion on a ballot for the election of the BOD and the LSC. The LSC's report shall be read at the first session of the DA, when additional nominations may be made from the floor. No name shall be placed in nomination without the written consent of the nominee.

## **COMMITTEES**

Many of NCSBN's objectives are accomplished through the committee process. Every year, the committees report on their activities and make recommendations to the BOD. At the present time, NCSBN has two standing committees: NCLEX Examinations and Finance. Subcommittees, such as the Item Review Subcommittee (Exam), may assist standing committees.

In addition to standing committees, special committees are appointed by the BOD for a defined term to address special issues and concerns. NCSBN conducts an annual call for committee member nominations prior to the beginning of each fiscal year. Committees are governed by their specific charge and NCSBN policies and procedures. The appointment of committee chairs and committee members is a responsibility of the BOD. Committee membership is extended to all current members and staff of member boards and EUMs, consultants and external stakeholders.

---

In the appointment process, every effort is made to match the expertise of each individual with the charge of the committee. Also considered is balanced representation whenever possible, among areas, board members and board staff, registered and licensed practical/vocational nurses, and consumers. Nonmembers may be appointed to special committees to provide specialized expertise. A BOD liaison and an NCSBN staff member are assigned to assist each committee. The respective roles of BOD liaison, committee chair and committee staff are provided in NCSBN policy. Each work collaboratively to facilitate committee work and provide support and expertise to committee members to complete the charge. Neither the BOD liaison nor the NCSBN staff are entitled to a vote, but respectively can advise the committee regarding the strategic or operational impact of decisions and recommendation.

## **Description of Standing Committees**

### **NCLEX® EXAMINATIONS COMMITTEE (NEC)**

The NEC is comprised of at least nine members. One of the committee members shall be a licensed practical/vocational nurse (LPN/VN) or a board or staff member of an LPN/VN BONs. The committee chair shall have served as a member of the committee prior to being appointed as chair. The purpose of the NEC is to develop the licensure examinations and evaluate procedures needed to produce and deliver the licensure examinations. Toward this end, it recommends test plans to the DA and suggests enhancements, based on research that is important to the development of licensure examinations.

The NEC advises the BOD on matters related to the NCLEX examination process, including psychometrics, item development, test security and administration and quality assurance. Other duties may include the selection of appropriate item development panels, test service evaluation, oversight of test service transitions and preparation of written information about the examinations for member boards, EUMs and other interested parties. The NEC also regularly evaluates the licensure examinations by means of item analysis and test, and candidate statistics.

One of NCSBN's major objectives is to provide psychometrically sound and legally defensible nursing licensure examinations to member boards and EUMs. Establishing examination validity is a key component of this objective. Users of examinations have certain expectations about what an examination measures and what its results mean; a valid examination is simply one that legitimately fulfills these expectations.

Validating a licensure examination is an evidence-gathering process to determine two things: 1) whether or not the examination actually measures competencies required for safe and effective job performance, and 2) whether or not it can distinguish between candidates who do and do not possess those competencies. An analysis of the job for which the license is given is essential to validation.

There are several methods for analyzing jobs, including compilation of job descriptions, opinions of experts, and surveys of job incumbents. Regardless of the method used, the outcome of the job analysis is a description of those tasks that are most important for safe and effective practice. The results of the job analysis can be used to devise a framework describing the job, which can then be used as a basis for a test plan and for a set of instructions for item writers. The test plan is the blueprint for assembling forms of the test, and usually specifies major content or process dimensions and percentages of questions that will be allotted to each category within the dimension. The instructions for item writers may take the form of a detailed set of knowledge, skills and abilities (KSA) statements or competency statements which the writers will use as the basis for developing individual test items. By way of the test plan and KSA statements, the examination is closely linked to the important job functions revealed through the job analysis. This fulfills the first validation criterion: a test that measures important job-related competencies.

The second criterion, related to the examination's ability to distinguish between candidates who do and do not possess the important competencies, is most frequently addressed in licensure examinations through a criterion-referenced standard setting process. Such a process involves the selection of a passing standard to determine which candidates pass and which fail. Expert judges with first-hand knowledge of what constitutes safe and effective practice for entry-level nurses are selected to recommend a series of passing standards for this process. Judges are trained in conceptualizing the minimally competent candidate (performing at the lowest acceptable level), and they go through a structured process of judging success rates on each individual item of the test. Their pooled judgments result in identification of a series of recommended passing standards. Taking these recommendations along with other data relevant to identification of the level of competence, the BOD sets a passing standard that distinguishes between candidates who do and do not possess the essential competencies, thus fulfilling the second validation criterion.

---

Having validation evidence based on job analysis and criterion-referenced standard setting processes and utilizing item construction and test delivery processes based on sound psychometric principles constitute the best legal defense available for licensing examinations. For most of the possible challenges that a candidate might bring against an examination, if the test demonstrably measures the possession of important job-related skills, its use in the licensure process is likely to be upheld in a court of law.

### **FINANCE COMMITTEE**

The Finance Committee is comprised of at least four members and the treasurer, who serves as the chair. The committee reviews the annual budget, monitors NCSBN investments, and facilitates the annual independent audit. The committee recommends the budget to the BOD and advises the BOD on fiscal policy to assure prudence and integrity of fiscal management and responsiveness to member board needs. It also reviews financial status on a quarterly basis.

### **NCSBN STAFF**

NCSBN staff members are hired by the chief executive officer. Their primary role is to implement the DA's and BOD's policy directives and provide assistance to committees.

### **GENERAL DELEGATE ASSEMBLY INFORMATION**

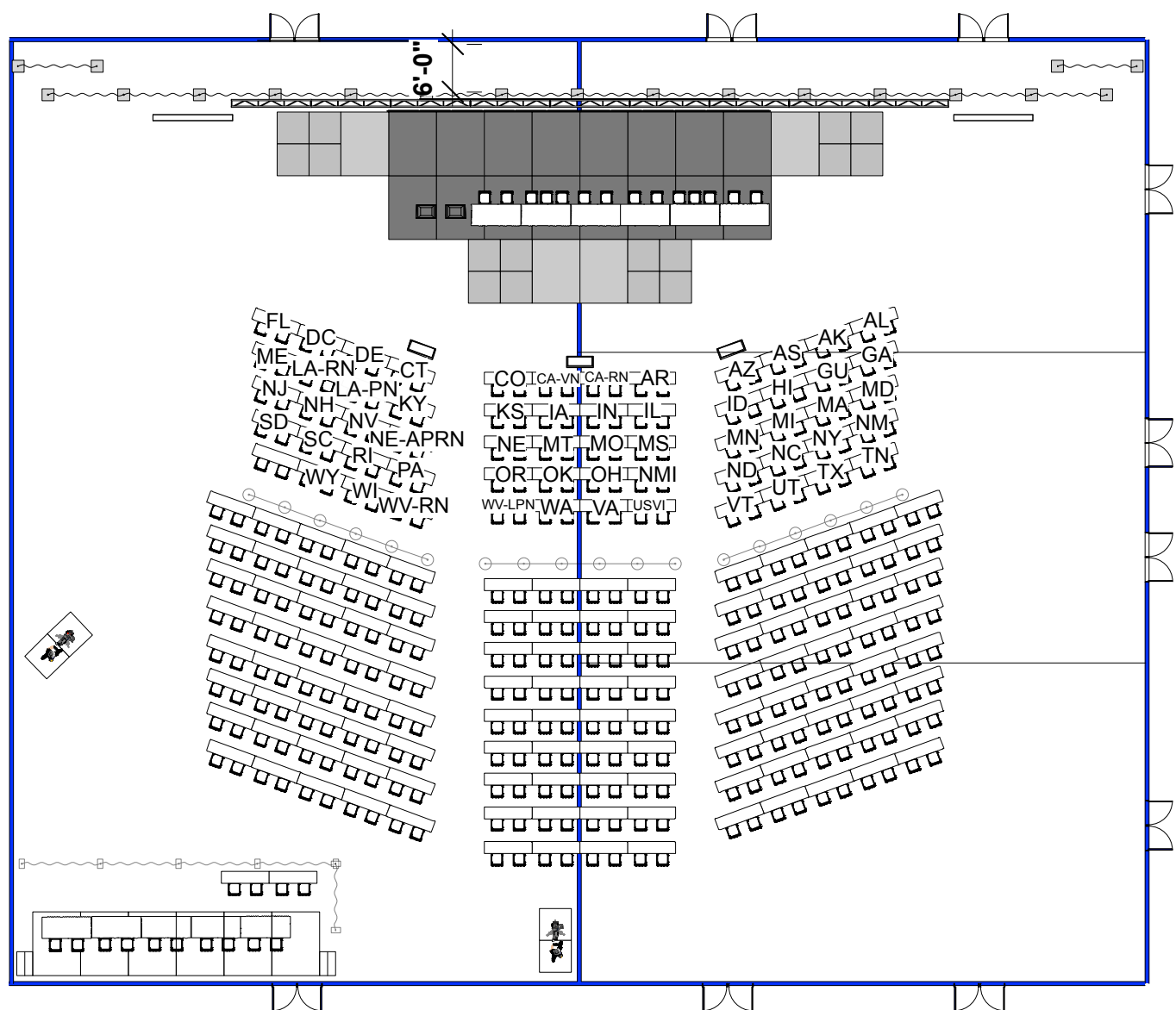
The business agenda of the DA is prepared and approved by the BOD. At least 45 days prior to the Annual Meeting, Member boards are sent the recommendations to be considered by the DA. A Business Book is provided to all Annual Meeting registrants which contains the agenda, reports requiring DA action, reports of the BOD, reports of special and standing committees, and strategic initiatives and objectives.

Prior to the annual session of the DA, the president appoints the credentials, resolutions, and elections committees, as well as the Committee to Approve Minutes. The president may also appoint a timekeeper, a parliamentarian and pages.

The function of the Credentials Committee is to provide delegates with identification bearing the number of votes to which the delegate is entitled. It also presents oral and written reports at the opening session of the DA and immediately preceding the election of officers and the LSC. The Elections Committee conducts all elections that are decided by ballot in accordance with the bylaws and standing rules. The Resolutions Committee receives, edits, and evaluates all resolutions in terms of their relationship to NCSBN's mission and fiscal impact to the organization. At a time designated by the president, it reports to the DA.

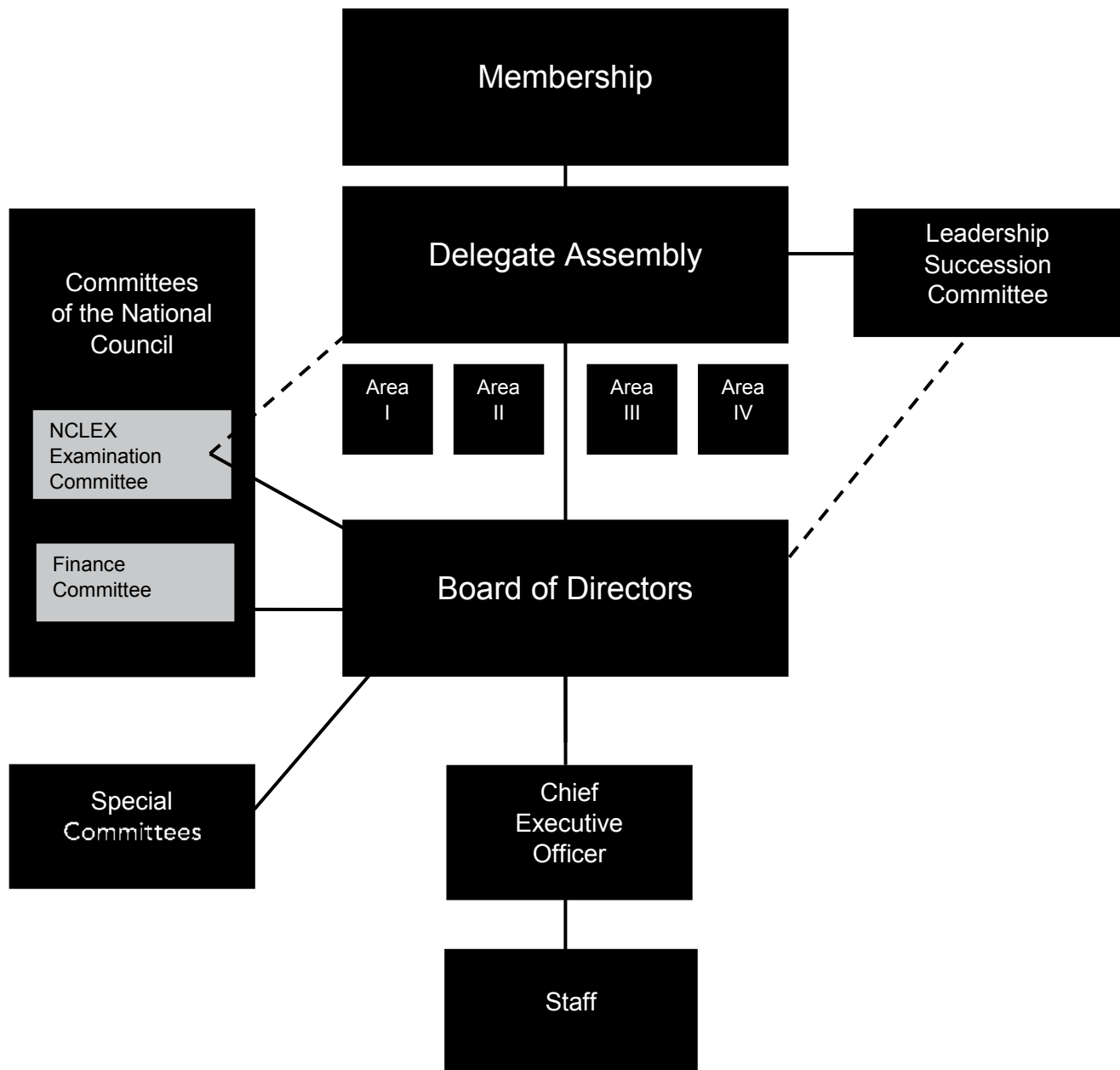
The parliamentarian keeps minutes of the DA. These minutes are then reviewed, corrected as necessary and approved by the Committee to Approve Minutes, which includes the chief executive officer who serves as corporate secretary.

# NCSBN Delegate Seating Chart



---

## NCSBN Organizational Chart



The dotted line of authority from the NCLEX® Examination Committee (NEC) to the Delegate Assembly represents the charge of the NEC to recommend test plans to the Delegate Assembly.

The dotted line of authority from the Board of Directors (BOD) to the Leadership Succession Committee (LSC) represents the BOD's authority to make appointments to the LSC per the NCSBN Bylaws.

---

# NCSBN Bylaws

*Revisions adopted - 8/29/87*  
*Amended - 8/19/88*  
*Amended - 8/30/90*  
*Amended - 8/01/91*  
*Revisions adopted - 8/05/94*  
*Amended - 8/20/97*  
*Amended - 8/8/98*  
*Revisions adopted - 8/11/01*  
*Amended - 08/07/03*  
*Revisions adopted - 08/08/07*  
*Amended - 8/13/10*  
*Amended - 08/16/13*  
*Amended - 08/15/14*  
*Amended - 5/11/16*  
*Revisions adopted - 08/19/16*  
*Amended - 8/18/17*

## Article I

### ■ Name

The name of this organization shall be the National Council of State Boards of Nursing, Inc. (NCSBN).

## Article II

### ■ Purpose and Functions

**Section 1. Purpose.** The purpose of the NCSBN is to provide an organization through which jurisdictional boards of nursing act and counsel together on matters of common interest and concern affecting the public health, safety and welfare, including the development of licensing examinations in nursing that are valid, reliable, and legally defensible and in compliance with professionally accepted psychometric standards.

**Section 2. Functions.** The NCSBN's functions shall include but not be limited to providing services and guidance to its members in performing their regulatory functions regarding entry into nursing practice, continued safe nursing practice and nursing education programs. The NCSBN provides Member Boards with examinations and standards for licensure and credentialing; promotes uniformity in standards and expected outcomes in nursing practice and education as they relate to the protection of the public health, safety and welfare; provides information, analyses and standards regarding the regulation of nursing practice and nursing education; promotes the exchange of information and serves as a clearinghouse for matters related to nursing regulation.

## Article III

### ■ Members

#### Section 1. Definitions.

- a) Jurisdictional Board of Nursing. A jurisdictional board of nursing is the agency empowered to license and regulate nursing practice in any country, state, province, territory or political subdivision of the country.
- b) Member Board. A member board is a jurisdictional board of nursing, which is approved by the Delegate Assembly as a member of NCSBN.
- c) Exam User Member. An Exam User Member is a jurisdictional board of nursing that has an organizational mandate exclusively related to the regulation of the profession and protection of the public and uses the pre-licensure exam developed by NCSBN, which is approved by the Delegate Assembly as an Exam User Member of NCSBN.

- 
- d) Associate Member. An Associate Member is a nursing regulatory body or empowered regulatory authority that is in whole or in part empowered by government to license and regulate nursing practice in the jurisdiction, which is approved by the Delegate Assembly.

***Proviso:*** *The amended member definitions in Article III, Section 1 shall become effective on the day and upon the adjournment of the 2017 Annual Meeting at which these amendments to the Bylaws were adopted by the Delegate Assembly. The Board of Directors may receive applications for the new and redefined categories of membership or application for movement from one category to another as soon as the new Bylaws become effective.*

**Section 2. Qualifications.** To qualify for approval, and to maintain membership as a Member Board or Exam User Member, a jurisdictional board of nursing that regulates registered nurses and/or practical/vocational nurses must use applicable NCSBN Licensing Examinations (the “NCLEX® examination”) for licensure of registered nurses and/or practical/vocational nurses, cause candidates for licensure in its jurisdiction to pay NCSBN the examination fee established by the Delegate Assembly, execute a current Terms and Conditions of NCSBN Membership, as amended from time to time by Delegate Assembly, and agree to comply with all applicable terms and conditions for the use of the NCLEX® examination(s). Member Boards must additionally agree to comply with:

- a) all applicable terms and conditions for the use of Nursys®; and
- b) participation in Nursys® which includes discipline and licensure.

***Proviso:*** *Regarding amendments to member qualifications in Article III, Section 2 adopted by the Delegate Assembly at the 2017 Annual Meeting: all current Member Boards shall continue as a Member Board for five (5) years from the adoption of this amendment by which time all Member Boards must fully meet these requirements to remain a Member Board, otherwise they will be re-categorized as an Exam User Member.*

**Section 3. Admission.** A jurisdictional board of nursing shall become a member of the NCSBN and be known as a Member Board, Exam User Member, or Associate Member upon approval by the Delegate Assembly, as described in Article IV and payment of the required fees, if applicable.

**Section 4. Areas.** The Delegate Assembly shall divide the membership into numbered Areas. At no time shall the number of Areas be less than three nor more than six. New members shall be assigned to existing Areas by the Board of Directors. The purpose of this division is to facilitate communication encourage engagement on NCSBN issues and provide diversity of representation on the Board of Directors and on committees.

**Section 5. Fees.** The annual membership fees, for a Member Board, Exam User Member, and Associate Member shall be set by the Delegate Assembly and shall be payable each October 1.

**Section 6. Privileges.** Member Board and Exam User Member privileges include but are not limited to the right to vote as prescribed in these bylaws and the right to assist in the development of the NCLEX® examination, except that a Member Board or Exam User Member that uses both the NCLEX® examination and another examination leading to the same license shall not participate in the development of the NCLEX® examination to the extent that such participation would jeopardize the integrity of the NCLEX® examination.

**Section 7. Noncompliance.** Any member whose fees remain unpaid after January 15 is not in good standing. Any member who does not comply with the provisions of the bylaws, and where applicable, the membership agreement, shall be subject to immediate review and possible termination by the Board of Directors.



---

**Section 8. *Appeal.*** Any termination of membership by the Board of Directors is subject to appeal to the Delegate Assembly.

**Section 9. *Reinstatement.*** A member in good standing that chooses to terminate membership shall be required to pay only the current fee as a condition of future reinstatement. Any membership which has been terminated for nonpayment of fees shall be eligible for reinstatement to membership upon payment of the current fee and any delinquent fees.

## **Article IV**

### **■ Delegate Assembly**

#### **Section 1. *Composition.***

- a) *Designation of Delegates.* The Delegate Assembly shall be comprised of no more than two (2) delegates designated by each Member Board and no more than one (1) delegate designated by each Exam User Member as provided in the Standing Rules of the Delegate Assembly ("Standing Rules"). An alternate duly appointed by a Member Board or Exam User Member may replace a delegate and assume all delegate privileges.
- b) *Qualification of Delegates.* Members and employees of Member Boards and Exam User Members shall be eligible to serve as delegates until their term or their employment with a Member Board or Exam User Member ends. A NCSBN officer or director may not represent a Member Board or Exam User Member as a delegate.
- c) *Term.* Delegates and alternates serve from the time of appointment until replaced.

#### **Section 2. *Voting.***

- a) *Annual Meetings.* Each Member Board shall be entitled to two votes. The votes may be cast by either one or two delegates. Each Exam User Member shall be entitled to one vote to be cast by the designated delegate. There shall be no proxy or absentee voting at the Annual Meeting.
- b) *Special Meetings.* A Member Board and Exam User Member may choose to vote by proxy at any special session of the Delegate Assembly. A proxy vote shall be conducted by distributing to Member Boards and Exam User Members a proxy ballot listing a proposal requiring either a yes or no vote. A Member Board and Exam User Member may authorize the corporate secretary of the NCSBN or a delegate of another Member Board or Exam User Member to cast its votes.

**Section 3. *Authority.*** The Delegate Assembly, the membership body of the NCSBN, shall provide direction for the NCSBN through resolutions and enactments, including adoption of the mission and strategic initiatives, at any Annual Meeting or special session. The Delegate Assembly shall approve all new NCSBN memberships; approve the substance of all Terms and Conditions of NCSBN Membership between the NCSBN and Member Boards and Exam User Members; adopt test plans to be used for the development of the NCLEX® examination; and establish the fee for the NCLEX® examination.

**Section 4. *Annual Meeting.*** The NCSBN Annual Meeting shall be held at a time and place as determined by the Board of Directors. The Delegate Assembly shall meet each year during the Annual Meeting. The official call to that meeting, giving the time and place, shall be conveyed to all members at least 90 days before the Annual Meeting. In the event of a national emergency, the Board of Directors by a two thirds vote may cancel the Annual Meeting and shall schedule a meeting of the Delegate Assembly as soon as possible to conduct the business of the NCSBN.

**Section 5. *Special Session.*** The Board of Directors may call, and upon written petition of at least ten Member Boards made to the Board of Directors, shall call a special session of the Delegate Assembly. Notice containing the general nature of business to be transacted and date and place of said session shall be sent to each Member Board and Exam User Member at least ten days before the date for which such special session is called.

---

**Section 6. *Quorum.*** The quorum for conducting business at any session of the Delegate Assembly shall be at least one delegate from a majority of the Member Boards and Exam User Members and two officers present in person or, in the case of a special session, by proxy.

**Section 7. *Standing Rules.*** The Board of Directors shall present and the Delegate Assembly shall adopt Standing Rules for each Delegate Assembly meeting.

## **Article V**

### **■ Officers and Directors**

**Section 1. *Officers.*** The elected officers of the NCSBN shall be a president, a president-elect and a treasurer.

**Section 2. *Directors.*** The directors of the NCSBN shall consist of four directors-at-large and a director from each Area.

### **Section 3. *Eligibility.***

- a) Board Members or employees of Member Boards shall be eligible to be elected or appointed as NCSBN officers and directors and they may continue to serve in such capacity until their term or their employment with a Member Board ends. Members of a Member Board who become permanent employees of a Member Board will continue their eligibility to serve.
- b) Board Members or employees of Exam User Members shall be eligible to be elected or appointed as a director-at-large, and they may continue to serve in such capacity until their term or their employment with an Exam User Member ends. Members of an Exam User Member who become permanent employees of an Exam User Member will continue their eligibility to serve.
- c) An area director must be a Board Member or employee of a Member Board from an Area for which the director is elected.

**Section 4. *Qualifications for President-elect.*** The president-elect shall have served NCSBN as either a delegate, a committee member, a director or an officer before being elected to the office of president-elect.

### **Section 5. *Election of Officers and Directors.***

- a) *Time and Place.* Election of officers and directors shall be by ballot of the Delegate Assembly during the Annual Meeting.
- b) *Officers and Directors.* Officers and directors shall be elected by majority vote of the Delegate Assembly.
- c) *Area Directors.* Each Area shall elect its Area director by majority vote of the delegates from each such Area.
- d) *Run-Off Balloting.* If, on the first ballot, no candidate for an officer or director position is elected by majority vote or if not all positions on the ballot are filled by a candidate receiving a majority vote, run-off balloting for the unfilled positions shall be conducted according to the Standing Rules adopted by the Delegate Assembly pursuant to Article IV, Section 7. In the case of a tie upon the conclusion of run-off balloting, provided for in the Standing Rules, the final selection shall be determined by lot.
- e) *Voting.*
  - (i.) Voting for officers and directors shall be conducted in accordance with these bylaws and the Standing Rules. Write-in votes shall be prohibited.
  - (ii.) Cumulative voting for individual candidates is not permitted.
  - (iii.) Notwithstanding any provision of this Section, in the event there is only one candidate for an officer or director position, election for that position shall be declared by acclamation. No ballot shall be necessary.

- 
- f) The provisions of this section shall not apply to a special election as provided in Section 8(c) of this Article.

**Section 6. *Terms of Office.***

- a) The president-elect, treasurer, Area directors, and directors-at-large shall be elected for a term of two years or until their successors are elected. The president shall serve for a term of two years.
- b) The president-elect and the directors-at-large shall be elected in even-numbered years. The treasurer and area directors shall be elected in odd-numbered years.
- c) Officers and directors shall assume their duties at the close of the Annual Meeting of the Delegate Assembly at which they are elected or upon appointment in accordance with Section 8 of this Article.
- d) The treasurer and the directors shall serve no more than two consecutive terms in the same position excluding time served by appointment and/or election pursuant to Section 8 of this Article. The president and president-elect shall serve no more than one term in the same position, except when a vacancy occurs pursuant to Section 8 of this Article.

**Section 7. *Limitations.*** No person may hold more than one officer position or directorship at one time. No officer or director shall hold elected or appointed office or a salaried position in a state, territorial, provincial, regional or national association or body if the office or position might result in a potential or actual, or the appearance of, a conflict of interest with the NCSBN, as determined by the Leadership Succession Committee before election to office and as determined by the Board of Directors after election to office. If incumbent officers or directors win an election for another officer or director position, the term in their current position shall terminate at the close of the Annual Meeting at which the election is held.

**Section 8. *Vacancies.***

- a) If the office of the president becomes vacant, the president-elect shall assume the presidency and shall serve the remainder of that term as well as the term for which she or he was elected.
- b) If the office of the president-elect becomes vacant, then the position shall remain vacant until an election can be held at the next annual meeting for the remainder of the term for which the president-elect was elected.
- c) In the event of a simultaneous vacancy in both the offices of the president and the president-elect, which occurs prior to or on February 1<sup>st</sup> in any given year, the Board of Directors shall take the following action:
  - i. The Board of Directors shall notify all Member Boards and Exam User Members of the simultaneous vacancies within five (5) business days of the occurrence.
  - ii. The notice shall specify the manner and deadline for nominating candidates for the office of the president to the Leadership Succession Committee. Nominations shall be accepted for a period of no more than twenty (20) business days. Candidates shall meet the eligibility requirements outlined in Section 3 of this Article.
  - iii. The Leadership Succession Committee shall review nominations received and announce a slate of no more than two candidates within ten (10) business days after the deadline for nominations.
  - iv. The Board of Directors shall schedule a special election by electronic voting to be held within fifteen (15) business days of the receipt of the slate. In the event of a tie, the election shall be decided by lot. The elected candidate shall serve until the next Annual Meeting.
  - v. The Board of Directors shall appoint one of its members to assume the responsibilities of the president until the results of the special election are final. If there are no nominations, that person shall serve until the next Annual Meeting.

- 
- vi. The office of president-elect shall remain vacant until the next Annual Meeting.
  - vii. At the Annual Meeting following the special election, the Delegate Assembly shall elect a president and a president-elect to fill any remainder of the term, if applicable. Otherwise, a president and a president-elect shall be elected for a regular term pursuant to Section 5 of this Article.
  - d) In the event of a simultaneous vacancy in the offices of both president and president-elect, which occurs after February 1<sup>st</sup> in any given year, the Board of Directors shall appoint one of its members to serve as the president until the next Annual Meeting.
  - e) The Board of Directors shall fill vacancies in the office of the treasurer and directors by appointment. The person filling the vacancy shall serve until the next Annual Meeting and a successor is elected. The Delegate Assembly shall elect a person to fill any remainder of the term.
  - f) Serving as an officer or director under the provisions set forth in Section 8 of this Article shall not preclude the person from being nominated for any office in an election under Section 5 of this Article. Time served by appointment or election to fill the remainder of a term as an officer or director under the provisions of Section 8 of this Article shall be excluded from the determination of the term served in office under Section 6 of this Article.

**Section 9. Responsibilities of the President.** The president shall preside at all meetings of the Delegate Assembly and the Board of Directors, assume all powers and duties customarily incident to the office of president, and speak on behalf of and communicate the policies of the NCSBN.

**Section 10. Responsibilities of the President-elect.** The president-elect shall assist the president, perform the duties of the president in the president's absence, be assigned responsibilities by the president, and assume the office of the president at the conclusion of the president's term and fill any vacancy in the office of the president.

**Section 11. Responsibilities of the Treasurer.** The treasurer shall serve as the chair of the Finance Committee and shall assure that quarterly reports are presented to the Board of Directors, and that annual financial reports are provided to the Delegate Assembly.

## Article VI

### ■ Board of Directors

**Section 1. Composition.** The Board of Directors shall consist of the elected officers and directors of the NCSBN.

**Section 2. Authority.** The Board of Directors shall transact the business and affairs and act on behalf of the NCSBN except to the extent such powers are reserved to the Delegate Assembly as set forth in these bylaws and provided that none of the Board's acts shall conflict with resolutions or enactments of the Delegate Assembly. The Board of Directors shall report annually to the Delegate Assembly and approve the NCLEX® examination test service.

**Section 3. Meetings of the Board of Directors.** The Board of Directors shall hold an annual meeting and may schedule other regular meetings as necessary to accomplish the work of the Board. Publication of the dates for such regular meetings in the minutes of the Board meeting at which the dates are selected shall constitute notice of the scheduled regular meetings. Special meetings of the Board of Directors may be called by the president or shall be called upon written request of at least three members of the Board of Directors. At least twenty-four hours' notice shall be given to each member of the Board of Directors of a special meeting. The notice shall include a description of the business to be transacted.

---

**Section 4. *Quorum and Voting.*** The quorum for conducting business by the Board of Directors at any meeting shall be the presence of a majority of directors and officers currently serving. Every act or decision done or made by a majority of the Board of Directors at a meeting duly held where a quorum is present is an act of the Board unless a greater number is required by law, the articles of incorporation or these bylaws.

**Section 5. *Removal from Office.*** A member of the Board of Directors may be removed with or without cause by a two-thirds vote of the Delegate Assembly or the Board of Directors. The individual shall be given 30 days' written notice of the proposed removal.

**Section 6. *Appeal.*** A member of the Board of Directors removed by the Board of Directors may appeal to the Delegate Assembly at its next Annual Meeting. Such individual may be reinstated by a two-thirds vote of the Delegate Assembly.

## **Article VII**

### **■ Leadership Succession Committee**

#### **Section 1. *Leadership Succession Committee***

- a) *Composition.* The Leadership Succession Committee shall be comprised of seven committee members. One member shall be elected from each of the areas by the Delegate Assembly and the remaining members shall be appointed by the Board of Directors, one of whom shall have served on the Board of Directors.
- b) *Term.* The term of office shall be two years. Odd numbered area members shall be elected in each odd numbered year and even numbered area members shall be elected in each even numbered year. The terms of the appointed members shall be staggered so that at least one is appointed each year. A committee member shall serve no more than two consecutive terms in the same position on the committee excluding time served by appointment and/or election pursuant to Section 1e of this Article. Members shall assume duties at the close of the Annual Meeting at which they are elected or appointed.
- c) *Selection.* The area members shall be elected by plurality vote of the Delegate Assembly at the Annual Meeting. In the event there is only one candidate for a committee position, election for that position shall be declared by acclamation. No ballot shall be necessary. The Chair shall be selected by the Board of Directors.
- d) *Limitation.* A member elected or appointed to the Leadership Succession Committee may not be nominated for an officer or director position during the term for which that member was elected or appointed.
- e) *Vacancy.* A vacancy occurring in the area representatives on the committee shall be filled from the remaining candidates from the previous election, in order of votes received. If no remaining candidates can serve, the Board of Directors shall fill the vacancy with an individual who meets the qualifications of Section 1a of this Article. A vacancy occurring in the board-appointed members shall be filled by the Board of Directors. The person filling a vacancy shall serve the remainder of the term.
- f) *Duties.* The Leadership Succession Committee shall present a slate of candidates through a determination of qualifications and geographic distribution for inclusion on a ballot for the election of the Board of Directors and the Leadership Succession Committee. The Committee's report shall be read at the first session of the Delegate Assembly, when additional nominations may be made from the floor. No name shall be placed in nomination without the written consent of the nominee. The Leadership Succession Committee shall determine qualifications and geographic distribution of nominations from the floor for recommendations to the Delegate Assembly.
- g) *Eligibility.* Any board member or employee of a Member Board or Exam User Member is eligible to serve as a member of the Leadership Succession Committee.

***Proviso: Leadership Succession Committee (LSC) Members shall be elected and appointed in the years 2018-2020 in accordance with the following schedule:***

<b>Positions</b>	<b>2017 Election</b>	<b>2018 Election</b>	<b>2019 Election</b>	<b>2020 Election</b>
Area 1 Member	-	X (one-year term)	X (two-year term)	-
Area 2 Member	-	X (two-year term)	-	X (two-year term)
Area 3 Member	-	X (one-year term)	X (two-year term)	-
Area 4 Member	-	X (two-year term)	-	X (two-year term)
Member-at-Large	X (two-year term)	-	Appointed by BOD (one-year term)	Appointed by BOD (two-year term)
Member-at-Large	X (two-year term)	-	Appointed by BOD (two-year term)	-
Member-at-Large	X (two-year term)	-	Appointed by BOD (two-year term)	-

**LSC member Election and Appointment Schedule:**

X – Indicates the year in which a position will be elected.

Appointed by BOD – Indicates the year in which a position will be appointed

## **Article VIII**

### **■ Meetings**

#### **Section 1. Participation.**

- a) *Delegate Assembly Session.*
  - (i) *NCSBN Members.* All categories of NCSBN members shall have the right, subject to the Standing Rules of the Delegate Assembly, to speak at all open sessions and forums of the Delegate Assembly, provided that only delegates shall be entitled to vote and only delegates and members of the Board of Directors may make motions at the Delegate Assembly, except the Examination Committee may bring motions to approve test plans pursuant to Article X, Section 1(a).
  - (ii) *Public.* All sessions of the Delegate Assembly held in accordance with Sections 4 and 5 of Article IV of these bylaws shall be open to the public, except executive sessions, provided that the minutes reflect the purpose of, and any action taken in, executive session.
- b) *Delegate Assembly Forums.* Participation in forums conducted in association with the Annual Meeting shall be governed by the Standing Rules of the Delegate Assembly.
- c) *Meetings.* NCSBN, including all committees thereof, may establish methods of conducting its business at all other meetings provided that the meetings of the Board of Directors and committees are open to all categories of NCSBN members.
- d) *Interactive Communications.* Meetings held with one or more participants attending by telephone conference call, video conference or other interactive means of conducting conference communications constitute meetings where valid decisions may be made. A written record documenting that each member was given notice of the meeting, minutes reflecting the names of participating members and a report of the roll call on each vote shall be distributed to all members of the group and maintained at the NCSBN Office.

- 
- e) *Manner of Transacting Business.* To the extent permitted by law and these bylaws, business may be transacted by electronic communication or by mail, in which case a report of such action shall be made part of the minutes of the next meeting.

## Article IX

### ■ Chief Executive Officer

**Section 1. *Appointment.*** The Chief Executive Officer shall be appointed by the Board of Directors. The selection or termination of the Chief Executive Officer shall be by a majority vote of the Board of Directors.

**Section 2. *Authority.*** The Chief Executive Officer shall serve as the agent and chief administrative officer of the NCSBN and shall possess the authority and shall perform all duties incident to the office of Chief Executive Officer, including the management and supervision of the office, programs and services of NCSBN, the disbursement of funds and execution of contracts (subject to such limitations as may be established by the Board of Directors). The Chief Executive Officer shall serve as corporate secretary and oversee maintenance of all documents and records of the NCSBN and shall perform such additional duties as may be defined and directed by the Board.

**Section 3. *Evaluation.*** The Board of Directors shall conduct an annual written performance appraisal of the Chief Executive Officer, and shall set the Chief Executive Officer's annual salary.

## Article X

### ■ Committees

**Section 1. *Standing Committees.*** NCSBN shall maintain the following standing committees.

- a) *NCLEX® Examination Committee.* The NCLEX® Examination Committee shall be comprised of at least nine committee members. One of the committee members shall be a licensed practical/vocational nurse or a board or staff member of an LPN/VN board. The committee chair shall have served as a member of the committee prior to being appointed as chair. The NCLEX® Examination Committee shall advise the Board of Directors on matters related to the NCLEX® examination process, including examination item development, security, administration and quality assurance to ensure consistency with the Member Boards' and Exam User Members' need for examinations. The Examination Committee shall recommend test plans to the Delegate Assembly. Subcommittees may be appointed to assist the Examination Committee in the fulfillment of its responsibilities.
- b) *Finance Committee.* The Finance Committee shall be comprised of at least four committee members and the treasurer, who shall serve as chair. The Finance Committee shall review the annual budget, the NCSBN's investments and the audit. The Finance Committee shall recommend a budget to the Board of Directors and advise the Board of Directors on fiscal policy to assure prudence and integrity of fiscal management and responsiveness to Member Board needs.

**Section 2. *Special Committees.*** The Board of Directors may appoint special committees as needed to accomplish the mission of the NCSBN and to assist any Standing Committee in the fulfillment of its responsibilities. Special committees may include subcommittees, task forces, focus groups, advisory panels or other groups designated by the Board of Directors.

**Section 3. *Delegate Assembly Committees.*** The president shall appoint such Delegate Assembly Committees as provided in the Standing Rules and as necessary to conduct the business of the Delegate Assembly.

**Section 4. *Committee Membership.***

- 
- a) *Composition.* Members of Standing and Special committees shall be appointed by the Board of Directors from the membership, provided, however, that Associate Members may not serve on the NCLEX® Examination, Bylaws, or Finance committees. Committees may also include other individuals selected for their special expertise to accomplish a committee's charge. In appointing committees, one representative from each Area shall be selected unless a qualified member from each Area is not available considering the expertise needed for the committee work. The president, or president's designee, shall be an ex-officio member of all committees except the Leadership Succession Committee. All categories of NCSBN members shall have full voting rights as committee members.
  - b) *Term.* The standing committee members shall be appointed for two years or until their successors are appointed. Standing committee members may apply for re-appointment to the committee. Members of special committees shall serve at the discretion of the Board of Directors.
  - c) *Vacancy.* A vacancy may occur when a committee member resigns or fails to meet the responsibilities of the committee as determined by the Board of Directors. The vacancy may be filled by appointment by the Board of Directors for the remainder of the term.

## Article XI

### ■ Finance

**Section 1. *Audit.*** The financial records of the NCSBN shall be audited annually by a certified public accountant appointed by the Board of Directors. The annual audit report shall be provided to the Delegate Assembly.

**Section 2. *Fiscal Year.*** The fiscal year shall be from October 1 to September 30.

## Article XII

### ■ Indemnification

**Section 1. *Direct Indemnification.*** To the full extent permitted by, and in accordance with the standards and procedures prescribed by Sections 5741 through 5750 of the Pennsylvania Nonprofit Corporation Law of 1988 or the corresponding provision of any future Pennsylvania statute, the corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was a director, officer, employee, agent or representative of the corporation, or performs or has performed volunteer services for or on behalf of the corporation, or is or was serving at the request of the corporation as a director, officer, employee, agent or representative of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including but not limited to attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding.

**Section 2. *Insurance.*** To the full extent permitted by Section 5747 of the Pennsylvania Nonprofit Corporation Law of 1988 or the corresponding provision of any future Pennsylvania statute, the corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee, agent or representative of the corporation, or performs or has performed volunteer services for or on behalf of the corporation, or is, or was serving at the request of the corporation as a director, officer, employee, agent or representative of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against him or her and incurred by him or her in any such capacity, whether or not the corporation would have the power to indemnify him or her against such liability under the provisions of Section 1 of this Article.

**Section 3. *Additional Rights.*** Pursuant to Section 5746 of the Pennsylvania Nonprofit Corporation Law of 1988 or the corresponding provisions of any future Pennsylvania statute, any indemnification provided pursuant to Sections 1 or 2 of this Article shall:



- 
- a) not be deemed exclusive of any other rights to which a person seeking indemnification may be entitled under any future bylaw, agreement, vote of members or disinterested directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding such official position; and
  - b) continue as to a person who has ceased to be a director, officer, employee, agent or representative of, or provider of volunteer services for or on behalf of the corporation and shall inure to the benefit of the heirs, executors and administrators of such a person.

## Article XIII

### ■ Parliamentary Authority

The rules contained in the current edition of *Robert's Rules of Order Newly Revised* shall govern the NCSBN in all cases not provided for in the articles of incorporation, bylaws and any special rules of order adopted by the NCSBN.

## Article XIV

### ■ Amendment of Bylaws

Section 1. *Amendment and Notice.* These bylaws may be amended at any Annual Meeting or special session of the Delegate Assembly upon:

- a) written notice to the Member Boards and Exam User Members of the proposed amendments at least 45 days prior to the Delegate Assembly session and a two-thirds affirmative vote of the delegates present and voting; or
- b) written notice that proposed amendments may be considered at least five days prior to the Delegate Assembly session and a three-quarters affirmative vote of the delegates present and voting.

In no event shall any amendments be adopted without at least five days' written notice prior to the Delegate Assembly session that proposed amendments may be considered at such session.

Section 2. *Bylaws Committee.* A Bylaws committee may be appointed by the Board of Directors to review and make recommendations on proposed bylaw amendments as directed by the Board of Directors or the Delegate Assembly.

## Article XV

### ■ Dissolution

**Section 1. Plan.** The Board of Directors at an annual, regular or special meeting may formulate and adopt a plan for the dissolution of the NCSBN. The plan shall provide, among other things, that the assets of the NCSBN be applied as follows:

Firstly, all liabilities and obligations of the NCSBN shall be paid or provided for.

Secondly, any assets held by the NCSBN which require return, transfer or conveyances, as a result of the dissolution, shall be returned, transferred or conveyed in accordance with such requirement.

Thirdly, all other assets, including historical records, shall be distributed in considered response to written requests of historical, educational, research, scientific or institutional health tax exempt organizations or associations, to be expended toward the advancement of nursing practice, regulation and the preservation of nursing history.

**Section 2. Acceptance of Plan.** Such plan shall be acted upon by the Delegate Assembly at an Annual or legally constituted special session called for the purpose of acting upon the proposal to dissolve. A

---

majority of all Delegates present at a meeting at which a quorum is present must vote affirmatively to dissolve.

**Section 3. *Conformity to Law.*** Such plan to dissolve must conform to the law under which NCSBN is organized and to the Internal Revenue Code concerning dissolution of exempt corporations. This requirement shall override the provisions of Sections 1 and 2 herein.



# ***Save the Date***

**2019 NCSBN Annual Meeting**

**Aug. 21–23, 2019 • Chicago**



# NCSBN

Leading Regulatory Excellence

111 E. Wacker Drive, Ste. 2900, Chicago, IL 60601 • [ncsbn.org](http://ncsbn.org) • 312.525.3600