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An Analysis of Post Entry-Level Registered Nurse Practice

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Introduction

Most licensure examinations assess the competence of the entry-level practitioner in order to ensure that the newly licensed practitioner has the knowledge, skills, and abilities to be a safe practitioner and thus to protect the public. Furthermore, most licensure programs use a practice analysis of the entry-level practitioner to assist in validating the examination and support the assertion that the examination is measuring the essential competencies of the entry-level practitioner (Raymond, 2004). Currently, there does not seem to be a consensus on how to ensure the continued competence of the licensee. For example, some licensing programs use continuing education contact hours while others require the licensee to re-take the initial examination.

In the nursing profession in the United States, all jurisdictions require nurses to take and pass a licensure examination prior to beginning their nursing practice. There is little uniformity, however, among jurisdictions on how to assess the continued competence of the Registered Nurse. In order to address this ambiguity, the National Council of State Boards of Nursing (NCSBN) has completed a practice analysis of post entry-level Registered Nurses (RNs). This study is the first to describe post entry-level RN practice, on a comprehensive and national level, to determine if there is a core set of RN activity statements that can be used to assess RN competencies regardless of practice setting, specialty area, or years of experience.

While NCSBN has been performing practice analyses for entry-level nurses for many years, as this is the first practice analysis to describe post entry-level practice, the study methodology employed was reviewed and approved by five job analysis methodology experts external to NCSBN. Because nursing practice seems to be quite different based on work setting and nursing specialty areas, NCSBN used multiple job analysis methodologies in an attempt to have a clear, accurate description of RN practice.

Because there seems to be a paucity of information on post entry-level practice analyses for licensure examinations, this article will address, in detail, the methodology used for the *Report of Findings from the 2006 RN Post Entry-Level Practice Analysis* in addition to some brief preliminary findings of the study itself (NCSBN, 2007).

Methodology

The primary methods used for the 2006 post entry-level RN practice analysis were a task analysis and a large scale survey. Other methods such as direct observation, document review, interviews, brainstorming, and structured analyses were used as informational inputs into the task analysis. The following is a description of the processes:

Preliminary Interviews with Nurse Leaders
In order to collect information about trends in nursing and to anticipate possible changes in future nursing practice, a variety of leaders in the nursing profession were interviewed regarding their opinions about nursing and future trends in nursing and health care. This added step was performed to provide NCSBN with advanced warning should drastic changes in practice be expected. Interviews with the nurse leaders were taped and transcribed in July and August 2005 after the leader's identifying information was removed in order to provide anonymity. The transcriptions of the phone interviews were made available as source documents for the SME panel to consider when developing the activity statements. In addition, NCSBN nursing staff reviewed the transcripts of the interviews and when themes or trends were noted and agreed upon, this information was provided as source documents to the Subject Matter Expert (SME) panels for consideration when developing activity statements.

Panel of Subject Matter Experts (SMEs)
Two SME panels consisting of a total of 27 RNs were assembled to assist with the practice analysis. The SMEs were nominated for the panel by their professional organizations based on their current expertise in their specialty area. All panel members were RNs in practice. The RNs represented all geographic areas of the country, all major nursing specialties, all major practice settings, a range of years of experience, and 27 RN professional and specialty practice organizations. Two consecutive panels were used in order to allow for full participation by all panel members. Specialty representation was ensured for each panel. The first panel developed an initial list of RN activity statements which was refined by the second panel.

The panels were given a comprehensive orientation to the development of activity statements and frameworks that could be used to categorize activity statements. A category structure was reviewed and revised by the panels. The panel members then worked to create a list of nursing activities performed within each category. Each nursing activity was reviewed for applicability to the delivery of safe care to members of the public and the scope of RN practice. Care was taken to create the nursing activities at approximately the same level of conceptual specificity, to avoid redundancy within and between categories, and to ensure that the activity statements were clear, understandable, and observable.

Finally, the SMEs also provided frequency and importance ratings on the final list of nursing activity statements in order to assist in evaluating the validity of the instrument. There was full participation by all panel members, and there was no domination by any one member of the two groups. The SMEs provided positive ratings regarding the meeting and group process which helped to validate that job analysis processes were faithfully followed.

Direct Observation
The SME panels performed several tasks crucial to the success of the practice analysis study. Each panel member was asked to request that three of their colleagues complete a log of their daily activities. The daily logs were a proxy for the direct observation method of practice analyses. Since it would have been difficult and time-consuming to conduct direct observations of RNs in a variety of work settings and specialty areas, asking the SMEs to provide daily logs seemed to be a reasonable proxy for the direct observation. The logs were analyzed by nursing staff and summarized for the SMEs. Additionally, the logs themselves were made available to the SMEs at each meeting.

Document Review
The panelists also submitted job descriptions, orientation manuals, performance evaluations, and institutional policies and procedures. This information was summarized by NCSBN nursing staff and also made available to the panel. Additionally the panels reviewed:

- Nursing activity statements from previous nursing practice job analyses,
- Results of a literature review of nursing competencies,
- Competencies from various professional nursing organizations,
- Transcriptions of telephone interviews with various RN leaders.

Continued Competence Task Force
Additionally, an oversight group, NCSBN's Continued Competence Task Force, met to review the list of activity statements and rating scales. Thus, in addition to the vested members of the nursing profession assembled for the SME panels, an independent group of nurses with expert-

ise in regulation reviewed and approved the list of activity statements and the rating scales.

Questionnaire Development
A number of processes were used to create, evaluate, and refine the survey instrument used for the 2006 RN Post Entry-Level Practice Analysis study. The activity statements created by the SME panels were reviewed and edited by the 2006 NCSBN Continued Competence Task Force. The SMEs reviewed the survey and provided feedback. Revisions were made in the questionnaire based on feedback. The resulting 129 activity statements were incorporated into a survey format.

The survey included questions about the nurses' practice settings, past experiences, and demographics. Two forms of the survey were created to decrease the number of activity statements contained on each form and to increase the likelihood that the survey would be completed by respondents. The survey forms included 23 common activity statements. The remaining 106 activity statements were selected for placement on the two forms. The resulting surveys contained 76 activity statements. Except for the 53 activity statements unique to each of the two forms, the questionnaires were identical.

The survey was divided into four sections. The first section contained demographic questions including the average number of CE contact hours that the participants earned each year regardless of whether or not their jurisdiction required it. Section 2 asked about their work environment. Section 3 asked about their performance of nursing activities using three separate questions and scales. First, the participants were asked ("Y Yes" or "N No") if the activity was part of core RN practice. Next, participants were asked to provide a rating about the importance of each activity for RN practice considering client safety using a scale of "1 Not Important," "2 Somewhat Important," "3 Important," and "4 Extremely Important." The third scale asked participants if the activity was performed in their work setting on a typical day using a scale of "0 typically performed less than 1 time a day" to "4 times a day or more." The scale also included an "NA Not applicable" rating. A space to write in any activities not mentioned in the survey was included at the end of Section 3. Section 4 asked for additional comments and contact information for recognition of participation and awards.

Survey Process
A sample of 20,000 RNs was selected. This sample of 20,000 RNs was split into two subsets of 10,000 RNs that had roughly the same geographic representativeness for each of the two forms. The sample was stratified by jurisdiction and then randomly drawn from the population of active licenses within that jurisdiction. Given this procedure and the large sample size, it was reasonable to assume that the RNs receiving a survey should be proportionally equivalent to the population with regard to employment setting, clinical specialty, and other important factors.

Prior to the mailing of the survey, an announcement postcard was mailed to the sampled RNs telling them to expect a survey in a few days and that the survey was very important. This mailing was followed by the survey, which was sent via first-class mail. A week later, a reminder postcard was sent followed by a second reminder postcard sent two weeks later. A third postcard was sent approximately three weeks after the survey in anticipation of increasing the response rate. A second survey was sent to any participants who requested one.

Of the 20,000 names on the mailing list, 180 were removed due to invalid addresses. Surveys were sent to the remaining 19,820 RNs throughout the U.S. and its territories. Of this reduced set (19,820) there were 302 surveys returned unopened due to incorrect addresses.

The sample selected for this study was proportionally equivalent to the population of U.S. Nurse Licensees. The survey respondents were not substantially different from the population as estimated from the number of active licenses reported in the 2003 Nurse Licensee Volume and NCLEX Examination Statistics (NCSBN, 2005).

A total of 4,777 surveys were returned and scanned for an adjusted return rate of 24.5%. The dataset was then further cleaned by excluding surveys that did not meet two additional quality control criteria: at least 25.0% of the survey was completed and the respondent was currently employed as an RN. A total of 762 surveys were excluded from the sample based on the two quality assurance criteria resulting in an analyzable return rate of 20.6%. The 4,015 analyzable surveys had valid responses for at least 25.0% of the ratings by the participants who were working as RNs.

Demographics, Experiences, and Work Environments of Participants
The majority of respondent RNs reported being female (96.0%). The reported ages of respondent RNs ranged

from 20 to 84 years. Overall the average age of respondent RNs was 48.12 years (SD 10.21 years). On average, RNs reported approximately 20 years of RN work experience. The majority of respondent RNs reported White (85.9%) as their racial/ethnic background. Approximately 5% selected African American and 2.3% selected Hispanic. There were 17 respondents who did not answer this question.

Overall, the highest percentage of RNs indicated associate degree (36.4%) and baccalaureate degree (36.8%) as their highest level of nursing education. Completion of a nursing diploma accounted for 16.3% of the RN responses, and 9.0% indicated a master's degree as their highest level of nursing education. Respondents were also asked to select, from a list, all the nursing specialty certifications they currently held. RNs were most likely to hold certifications in critical care nursing (7.7%) and medical-surgical nursing (7.9%). About 24% of RNs reported holding a type of nursing specialty certificate that was not listed as an option. RNs reported earning an average of 21 continuing education (CE) contact hours per year. On average, RNs who indicated public health department as their primary facility reported the greatest yearly CE contact hours. Respondents from business/industry and home health care settings reported the lowest average CE contact hours.

Work Environment

On average, respondents reported working 36.3 hours per week as an RN. There was little variance across facilities and specialty practice. The majority of RN respondents (59.1%) reported working in hospitals. About 13.0% of RNs reported working in community-based/ambulatory care, and 6.3% worked in long-term care, while 6.0% reported working in home health care. About 22.0% of RNs reported working in a type of specialty area that was not listed as an option. Of the listed specified areas, RN respondents most frequently indicated medical surgical (10.5%), critical care (10.4%), and operating room (7.2%) as their primary specialty area. The majority of RN respondents (64.9%) reported staff nurse as their primary role. About 11.0% of RNs reported working as managers, and 3.2% worked as administrators. About 17.0% of respondents indicated a type of role that was not listed as an option.

Results

Representativeness of Activity Statements

The participants were asked whether the activities on their questionnaire form represented what they actually did in their positions. A majority indicated that the activities were representative of their current practice which indicates that the survey was perceived by respondents as being a sufficient or reasonable representation of their work. This is important for establishing the content validity of the survey. In addition, the respondents were asked to list any activity statements that were "missing." These comments were reviewed by NCSBN nursing content staff, and no additional activities were noted to be "missing." The written comments that were received reflected the absence of activities that had been included on the other form of the survey or were addressed more globally by an existing activity statement thus providing greater evidence to establish the content validity of the survey.

Respondents indicated an activity was not applicable to his or her work setting by marking the "NA Not Applicable" response. The activities ranged from 1.1% not performed (more than 1.0% of the respondents reported that the activity was not performed within their work settings) to 72.6% (nearly three-fourths of the respondents reported the activity was not performed within their work setting).

Respondents were asked to rate the frequency of performance of all activities that were applicable to their work settings. They reported how frequently they performed the activity on the typical day they worked on a five-point scale: "0 Performed less than 1 time a day" to "4 times or more a day." Average total group frequencies ranged from 0.52 to 3.78 times per day.

Respondents were asked to rate the importance of performing each nursing activity for RN practice considering client safety. Importance ratings were recorded using a four-point scale which ranged from "1" (Not Important) to "4" (Extremely Important).

Average total group importance ratings ranged from 2.80 to 3.87. The activities with the lowest importance ratings were "Evaluate the outcomes of health promotion activities" (2.80) and "Participate in community health outreach activities" (2.81). The activities with the highest importance ratings were "Apply principles of infection control" (3.87) and "Maintain confidentiality/privacy" (3.87).

Activity Performance Findings

Data were analyzed for all activities. Four separate analyses were conducted to determine if an activity statement should be considered part of the core RN practice:

- Core Practice Rating

- Percent Not Performing
- Mean Importance Rating
- Mean Frequency Rating

Of the 129 activity statements, 103 (79.84%) were considered part of core practice by at least 75% of the respondents. Of the 129 activity statements, 123 (95.34%) were on average performed at least one or more times in a typical day. Regarding importance of the activity statements, 123 of the 129 activity statements (95.34%) were rated a "3.0" (Important) by the participants.

Subgroup Analyses

To ensure practice was consistent across practice settings, specialty areas, years of experience, and geographic setting, separate analyses were conducted to determine if RN practice was viewed similarly among the nurses participating in the study. Importance ratings for all activity statements were calculated based on the aforementioned demographic subgroups. These subgroups were derived from responses to demographic questions on the survey. In most of the analyses, a majority of the respondents in the demographic subgroups indicated that the mean importance rating of each activity statement used for core competencies was at least "3.0" which corresponds to "Important" on the rating scale.

Summary & Conclusion

A non-experimental, descriptive study was conducted to explore the importance and frequency of activities performed by post entry-level RNs as well as those activities that are part of core RN practice. More than 4,700 RNs responded to the survey. The 2006 RN Post Entry-Level Practice Analysis study collected data on core practice and the frequency and importance of RN activity performance. NCSBN's Continued Competence Task Force reviewed the results of the study and noted that importance ratings provided by the RN respondents were comparable across facilities, specialty practices, years of experience, and geographic regions.

In general, findings indicate that nursing practice, as it relates to patient care, is essentially the same regardless of facility, specialty, years of experience, and geographic region. The results of this study can be used to develop core RN competencies for a continued competence assessment instrument. While the practice analysis lays an essential foundation, extensive development and research is needed to produce a standardized, psychometrically sound, evidenced-based assessment instrument that will measure current nursing knowledge, skills, and abilities for the post entry-level practitioner.

In addition to the post entry-level practice of the RN, NCSBN is also utilizing the same methodology to conduct a comprehensive review of post entry-level practice of the Practical Nurse (PN). While it is uncertain at this time whether these practice analyses will ultimately result in psychometrically sound and legally defensible examinations for post entry-level RN and PN licensure, these studies do provide an empirical grounding to support future activities related to assessing on-going nurse competence. Both of these studies can be found at no charge and in their entirety, along with all other information on the NCSBN Continued Competence initiative, online at www.ncsbn.org. ■