Measuring the Right Things

NCSBN’s Next Generation
NCLEX® Endeavors to Go
Beyond the Leading Edge
As one of the preeminent exams in the world, the NCLEX® is standing at a precipice of a new era in testing, poised to take a leap ...

However, being the preeminent example of testing means that it does not take “leaps of faith” but rather bases decisions about its future direction on the rigor of research. Changes, when determined to be necessary, are made by experts in the field based on sound evidence gathered over time. In short, these are the reasons it is a well-respected, legally defensible and psychometrically sound exam. So this is where NCSBN finds itself two decades into the 21st century, taking an analytical look at its exams and trying to determine how to take what is already the standard bearer of testing beyond the leading edge of where it already sits.

The ability to instantaneously access an unlimited wealth of information is now commonplace. Knowledge of just about anything is nothing more than a finger swipe away. The need to memorize a list of facts and statistics almost obsolete. The way students learn is different from even a decade ago and the environment in which they are educated is rapidly changing; nursing candidates are no exception. Obviously, nurses still need to be able to recall facts and measures without a smart phone in their hands, but more importantly, can they, at the entry level, appropriately put together those facts, assess the client under their care and make crucial clinical judgments about the care they need to deliver? And, from a licensure exam perspective, is decision making and critical thinking measurable? That is what NCSBN is trying to find out.

“Back in 2012 this all started with a very profound question posed by the NCLEX® Exam Committee,” explains Philip Dickison, PhD, RN, NCSBN, chief officer, Examinations, “which was, ‘Is the NCLEX measuring the right things?’ To determine whether the test is actually accessing what needs to be measured, NCSBN commissioned a literature review of 200 peer-reviewed manuscripts detailing what is occurring in nursing practice, education and testing. What emerged was that nursing education had already made critical thinking, clinical decision making, and clinical judgment a standard part of nursing curricula. What was somewhat alarming was that 50 percent of nurses were involved in errors in some way, and 65 percent of those errors were attributable to poor clinical decision-making skills. Additionally, it was found that only 20 percent of employers were happy with the decision-making skills of novice nurses.

Recognizing that the NCLEX measures practice, not education, NCSBN decided that it needed to do a practice analysis but to do it in a more innovative way than it had done before – an observational practice analysis. This study, done in 2015, was a departure from the traditional survey type of analysis NCSBN usually conducts. To conduct the observational analysis, the country was divided into quadrants and observers were deployed to watch novice nurses do their job. Everything that happened was recorded. Focus groups of both novice and experienced nurses were also conducted. What was observed was divided into either task, skills or attributes. This generated a 1,000 plus pages of data!

The data were analyzed to determine the strength of association between entry-level nurse tasks and nurse skills. Unsurprisingly many of the attributes and tasks...
required problem solving, critical thinking and clinical judgment. This is the evidence of how important those three proficiencies are. This brings us back to the big questions – can we measure these proficiencies? Are we doing so already?

The next step in the process was an assessment of the current NCLEX item bank to ascertain whether its item types adequately measure clinical judgment, critical thinking and problem solving skills on a consistent basis. The analysis found that there were three areas where the current items could measure clinical judgment, about a half that could moderately measure it but there were still large gaps. Dickison comments, "Because we know that nurse client care and nurse errors can be improved by enhancing clinical judgment skills in novice nurses, it is imperative that we find a way to assess the degree to which NCLEX candidates possess clinical judgment. It is a critical component of the overall goal of ascertaining whether a nursing candidate is minimally competent. This is a public protection issue."

Paramount in NCSBN’s approach to potential evolutionary transformation to its exam was the foundational tenet that any changes must be evidence-based. The construct must be built first and then the items that can be used to measure it can be described. NCSBN first defined clinical judgment as “the observed outcome of critical thinking and decision making. It is an iterative process that uses nursing knowledge to observe and access presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care."

NCSBN then embarked upon research, a literature review and pilot studies to develop a comprehensive clinical judgment assessment model, “Assessing Higher-order Cognitive Constructs by Using an Information-processing Framework,” published in the Journal of Applied Testing Technology. “If you can define the ‘boxes’ of clinical judgment, you can measure each of the boxes together and gauge where the strengths and weaknesses are. More importantly, you can access how successful a candidate is at making clinical judgments,” notes Dickison.

The Clinical Judgment Model (CJM) represents a fundamental shift from the current dichotomous measurement models in which something is either right or wrong. When context is removed and items are extremely sterile, a very precise and stable measurement can be obtained. “The problem is that the way individuals learn today and the way we make decisions is not context irrelevant, Dickison asserts. “The context in which we make decisions matters. Consequences, time constraints and risks cause someone to make decisions a certain way.”

The CJM (see Figure 1) is complex but can be broken down into four levels. Imagine that a nurse walks into a client room and cues exist that must be first be recognized and then analyzed in order to care for the client properly. The nurse (1) forms hypotheses, (2) prioritizes them, (3) generates solutions and then (4) takes actions. Research thus far has indicated that these actions can be measured. The next layer is one that has not been introduced in any psychometric models before now – the context. Dickison stresses, "The question is whether you can put context around items in a way that you actually make it more real. In addition to the exam being psychometrically sound and legally defensible, one more condition must be introduced as we move forward into the future – fidelity. Does it look like what we do as nurses?"

Students today who were raised on video games and information being available at their fingertips are educated differently. Now it is about giving them the whole picture and having them interact within that world. They have fidelity from the first day and throughout their education. NCSBN believes that measuring clinical judgment is not only new to how it tests its candidates but also new to the field of measurement. It is a game changer that stretches beyond nursing into all instances where public safety is involved.

Recognizing that it was necessary to ascertain whether
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clinical judgment is more than just possessing nursing knowledge, NCSBN conducted a pilot study in 2016 (Muntean et al. 2016 AERA presentation). Results from this study found that while knowledge is essential, it is not enough to substantiate the clinical judgment essential to safe nursing practice. The study also indicated that the average ability of a nurse to demonstrate the different steps in the clinical judgment process (cue recognition, hypothesis generation, hypothesis evaluation, taking actions and evaluating outcomes) is progressive. Thus, a nurse’s ability to recognize cues, develop hypotheses and take appropriate actions does not guarantee the ability to evaluate the outcomes of the action taken. Ultimately, no single element of clinical judgment adequately predicts a nurse’s clinical judgment ability, rather it is the combination of all the elements that add validity and reliability to the measurement of a nurse’s clinical judgment ability. In short, having content knowledge does not always translate to having clinical judgment skills.

Armed with this knowledge, NCSBN chose to move forward with what is now called the Next Generation NCLEX® (NGN) project. Bringing together experts from technology, content and measurement to imagine item prototypes that could measure clinical judgment, NCSBN worked on creating items that could be inserted as a Special Research Section in real candidate examinations. These new item prototypes that are being tested are those that have the possibility to measure the second, third and fourth layers of the CJM. Examples of the prototypes include: enhanced hot spots, enhanced multiple response and extended drag and drop.

The first set of these NGN prototypes were included as a voluntary component on the NCLEX exam beginning in July 2017. The Special Research Section is offered to select candidates taking the NCLEX-RN and takes approximately 30 minutes to complete. This section is administered following the regular exam and does not count as part of the NCLEX score. Candidates are making valuable contributions by their participation, and thus far a significant number have been willing to complete the section. That first data collection period has concluded but the Special Research Section will be included in the next three consecutive quarters in October 2017, January 2018 and April 2018. Data obtained will be used to ascertain which items accurately measure clinical judgment and nursing competence.

NCSBN plans to provide continual updates about this long-term research endeavor. One such mechanism is the new Next Generation NCLEX® News that will be published quarterly. As time goes on various other communications vehicles will be implemented.

NCSBN has ventured forth into the unknown with this ambitious and groundbreaking project. At this point, early indicators lead NCSBN to believe they are on the right road but because this project is rooted in research and dedicated to making evidence-based decisions, it will continue to move forward only if the results support doing so. • • •

References