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scale examination program. The current paper describes the practices and security methods in place to preserve the integrity of the NCLEX® nursing licensure examinations.

Owned and developed by the National Council of State Boards of Nursing (NCSBN), the NCLEX examination is used for initial nursing licensure for registered nurses and licensed practical/vocational nurses in all U.S. states, Guam, Northern Mariana Islands, Virgin Islands and the American Samoa. More than 280,000 NCLEX examinations are administered annually. Due to the high-stakes nature of the examinations, the temptation to gain an unfair advantage through cheating is great among some candidates. As a result, the NCLEX follows a set of comprehensive proce-dures to detect and mitigate the impact of potential aberrant test-taking behaviors throughout the test development and administration processes.

Computerized Adaptive Testing Format

The NCLEX employs a multifaceted security design starting with test assembly and administration. The NCLEX is administered using Computerized Adaptive Testing (CAT) format. Each test administered is tailored to the candidate's ability and is variable in length. The difficulty of items seen by each candidate is determined by the person's ability esti-mate. When a candidate answers an item correctly, he/she will be presented with a more difficult item; when an item is answered incorrectly, an easier item will be administered next. This process will continue until the candidate has responded to a sufficient number of items and his/her ability estimate reaches one of the pre-established termination crite-ria. The variable length CAT format limits item exposure to only what is necessary to reach a passing

verification of ATT letter, government issued identification document, photograph, signature, and digital fingerprint (NCSBN, 2011). As identification technology evolves, many testing programs have responded by implementing increasingly high-tech methods to authenticate identity of candidates and deter proxy test-taking (Hechinger, 2008). Starting from 2009, the NCLEX added palm vein technology to its existing identity check procedures. Palm vein scans capture the unique patterns of the blood vessels in an individual's palm using a near-infrared light source. Palm vein technology provides an extremely accurate way of identifying individuals and screening proxy test-taking attempts. All mismatches of biometrics and candidate identifications are kept on files and subjected to future investigations.

Test Administration and Incidents Reporting

All NCLEX examinations are administered following standardized procedures. Test administrators thoroughly explain examination rules during the candidate check-in process. Candidates confirm their understanding and agreement by providing digital signatures, noting that violation of any of the rules will result in withholding or cancelation of test results. Non-compliant candidates are not allowed to test. These standardized procedures are subjected to security audits by NCSBN staff. Random site visits and regular review of procedures are part of the overall security plan.

After candidates complete the check-in process, they begin testing in one of the standardized testing rooms. The testing rooms are designed for optimal monitoring by trained test administrators. Video cameras are installed in every testing room to monitor each candidate. Test administrators are able to monitor multiple candidates at once using a video monitor in the proctor station. Continuous video monitoring as well as full sound and motion videos are captured for all testing sessions.

To support test administrators in foll0ktKj-nl91pcppcjc⦀⊦lf⦀Kj-l9pp⦀Kj-l(9(cjc⦀⊦of⦀Kj-9cjc⦀⊦rf⦀Kj-m9kpkcjc⦀⊦ fhlo⦀Kj-lpno1cjc⦀⊦ef⦀Kj-nl9

faceted security procedures are well documented, not the least of which is to enhance legal defensibility of the test (e.g., Gorham & Woo, 2011). The authors hope that the example of the NCLEX program may provide some insight in developing security processes. With the advent of technology and the computers' capacity of simultaneously processing a large amount of information, the field of test security is growing rapidly to combat the rising sophistication of cheating attempts.

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