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Short Communication

Simulation in Advanced Practice Education: Let's Dialogue!!

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Abstract: Advanced practice nurses are in a key position to meet the increasing demand for health care providers in North America, but the lack of clinical sites, qualified nursing faculty, and small preceptor pools hinder advanced practice nursing program expansion. Simulation is a pedagogical methodology that is used in advanced practice nursing education, yet regulatory agencies do not allow simulation to replace direct patient care experiences. Simulation enhances clinical experiences and allows for better learning and assessment. This article invites dialogue regarding the role of simulation in providing quality clinical educational experiences for the advanced practice nursing student.

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Advanced practice nursing (APN) education is in a state of stress. There is a dire necessity for more providers to meet the needs of the aging population (American Association of Colleges of Nursing [AACN], 2017b; Heiser, 2017; Yee, Boukas, Cross, & Samuel, 2013). The pathway to produce adequate numbers of quality health care providers is not clear and is fraught with challenges. How do we create meaningful learning experiences in this austere environment? Solving these issues requires an open and frank dialogue between educators, students, health care organizations, credentialing agencies, regulatory bodies, and interprofessional colleagues. Nursing education cannot stay in the status quo. We must bravely risk and innovate in the pursuit of educational experiences that will produce quality providers and ultimately optimal patient health outcomes. The goal of the authors is to stimulate discussion and innovative thinking regarding a complex problem that must be solved to fulfill the health care needs over the next 50 years.

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Current APN Educational Challenges

To know where we need to go, it is important to review the issues faced in APN education today. The challenges encountered include a faculty shortage, inadequate clinical sites, a preceptor pool that does not allow for expansion of programs, and questions regarding the use of a clinical hour requirement as a valid measurement of student learning and competency. The continuing faculty shortage constrains the number of students who can be admitted to academic programs (AACN, 2017a, 2017b; Larue, Pepin, & Allard, 2015; Richardson, Goldsamt, Simmons, Gilmartin, & Jeffries, 2014). A key factor is the aging of the current faculty workforce (AACN, 2017a, 2017b). Per the Health Resources and Services Administration, as reported by the AACN (2017b), in North America alone, over one million nurses will be of retirement age in the next 15 years. Many of those retiring will be nurse practitioners (NPs) and NP faculty. According to the 2017 AANP National Nurse Practitioner Sample Survey, as reported in the American Association of Nurse Practitioners (2018), the average age of current NPs was 49 years. In addition to the aging workforce, academic institutions face difficulty in matching the pay of NPs in clinical practice (AACN, 2017a; Blazek, 2013). NPs in academia also may have difficulty in obtaining enough practice hours to maintain their APN licensure and certification, as well as struggle balancing two roles (Blazek, 2013).

Key Points

- Lack and unpredictability of clinical sites increases the need for simulation to augment clinical experiences for both undergraduate and graduate nurse training.
- The critical need for health care providers cannot be met by the current advanced practice nursing education.
- Further dialogue and research is necessary to outline the best practice standards for simulation use in advanced practice nursing education.

A concurrent challenge is clinical placement. This universal challenge includes increasing competition for scarce clinical sites and preceptors (AACN, 2017a; Clark, Kent, & Riesner, 2018; Cooper et al., 2012; Fulton, Clark, & Dickinson, 2017; Richardson et al., 2014). Because of current reimbursement models, clinical sites and preceptors face a mounting need to maintain ever-higher levels of productivity. The time involved in precepting students can interfere with managing heavy patient workloads (Campbell & Hawkins, 2007; Roberts, Wheeler, Tyler, & Padden, 2017; Webb, Lopez, & Guarino, 2015). A majority of NP student clinical experience is supervised by NP preceptors (Campbell & Hawkins, 2007; Fulton et al., 2017; Roberts et al., 2017; Webb et al., 2015). These NP preceptors may have different levels of expertise, support, resources, and variable knowledge of educational theory and practice (Roberts et al., 2017). The inconsistencies in clinical learning experienced may partly explain the perception of new graduates that they are not fully practice ready (Hart & Bowen, 2016; MacKay, Glynn, McVey, & Rissmiller, 2018). According to LeFlore and Thomas (2016), this preceptorship model for NP students is no longer adequate.

An additional important discussion item is the quality and quantity of clinical experiences. There are no guarantees that the time an NP student spends in clinical education consists of rich learning experiences (LeFlore & Thomas, 2016), as faculty cannot control this environment (Ironside, McNelis, & Ebright, 2014). One study noted that clinical education for undergraduate nursing students focused on timely task completion rather than critical thinking, and students had a significant amount of downtime (Ironside et al., 2014). This downtime left opportunities for additional activities to promote learning, but the researchers reported that much of this downtime was spent on busywork rather than demonstrating competencies—the authors urge examining other methods of education to be an adjunct to this apprenticeship model (Ironside et al., 2014). In a study by Fulton et al. (2017), over 65% of the NP students' time was unaccounted for in clinical practicum. This suggests that the time that NP students spend in clinical education does not necessarily correlate with quality learning that prepares them for practice.

The National Organization of Nurse Practitioner Faculties and the National Task Force on Quality Nurse Practitioner Education support the use of simulation in APN education as long as simulation hours are not included within the minimum direct patient care hours required by the degree-specific credentialing agencies (Rutherford-Hemming, Nye, & Coram, 2016). There has been much recent discussion on the validity of requiring a specific set of hours versus creating competency-based requirements (LeFlore & Thomas, 2016; National Task Force on Quality Nurse Practitioner Education [NTF], 2016; Starkweather et al., 2017). Authors have asked, do more clinical hours for APN students equate to competence (Fulton et al., 2017)?

The real question in nursing education is "Why is clinical education considered the 'gold standard'" (Jeffries, 2012; Harder, 2015)? Leaders in the field of simulation and nursing education question this assumption; for example, Jeffries (2012); Harder (2015); and Fulton et al. (2017) wonder why more innovative experiential opportunities like simulation are discounted. In addition, LeFlore and Thomas (2016) have stated that there is a lack of scholarship supporting the current number of NP student required hours. In a recent study, the 500-hour requirement for APN student clinical education was not supported (Fulton et al., 2017).

Simulation Pedagogy—A Hidden Solution for Advanced Practice Nursing Education?

Although undergraduate nursing education faces similar constraints in providing adequate clinical experiences, they have embraced simulation as a method to provide quality, consistent, and replicable clinical experiences. The publication of the landmark National Council of State Boards of Nursing simulation study in 2014 (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014) led to a rapid adoption of state-level regulatory changes that allowed simulation to take the place of a proportion of clinical hours (Breymier et al., 2015). A second key factor in the rapid adoption of simulation is the body of research supporting its efficacy in improving the clinical skills, knowledge, and attitudes of undergraduate nursing students (Lee & Oh, 2015).

While research provides support for substitution of some of clinical education with simulation in undergraduate nursing education, high-quality research studies exhibiting the equivalence of simulation to clinical experiences in APN education are lacking (Rutherford-Hemming et al., 2016). There are data that simulation enhances student "learner" outcomes, such as learning and skill-performance; however, there are not many well-constructed studies on the effectiveness of simulation in translating knowledge into clinical practice and into patient outcomes (Adamson, 2015; Rutherford-Hemming et al., 2016). Even without the data, APN faculty have actively incorporated simulation into APN education. In a soon to be published research study, over 98% of respondents from 140 APN programs reported using simulation as an educational pedagogy (Nye, Campbell, Hebert, Short, & Thomas, 2018). This pervasive use of simulation addresses the perceived worth of simulation as a teaching strategy by APN faculty.

Simulation offers an avenue where all students can actively engage in managing specific patient and family situations. Simulation provides standardization of experiences for all students (LeFlore & Thomas, 2016; National League for Nursing [NLN] Board of Governors, 2015); however, this does not occur during the current clinical experiences (Campbell & Hawkins, 2007; LeFlore & Thomas, 2016). It provides intentional deliberate practice opportunities (Sujatta & Oberärztin, 2015; Tschannen, Aebersold, McLaughlin, Bowen, & Fairchild, 2012) leading to mastery; and student competencies can be demonstrated and validated in an efficient manner (Starkweather et al., 2017; Watson et al., 2012). Simulation can be used for basic skills and emergency training (Amatullah, 2018; Cooper et al., 2012; McKenna et al., 2011) and provides unique opportunities for interprofessional education (Amatullah, 2018; LeFlore & Thomas, 2016). According to the INACSL Standards of Best Practice: Simulation[SM]: Simulation-enhanced Interprofessional Education (INACSL Standards Committee, 2016) and other sources (Maxson et al., 2011; Patterson, Geis, Falcone, LeMaster, & Wears, 2013; Zimmermann et al., 2015), these interprofessional education experiences with a focus on team collaboration, communication, priority setting, and leadership prepare students for their future work environment.

Students today have access to vast quantities of information. This information can be overwhelming, can be hard to categorize and apply, and often conflicts with their experience in clinical practice. Simulation affords a safe environment for students to integrate and apply their knowledge. In addition, when guided by NP faculty utilizing INACSL Standards of Best Practice: Simulation[SM] (INACSL, n.d.) and evidence-based and evidence-informed guidelines, simulation allows for student reflection on practice choices and knowledge translation (Tschannen et al., 2012).

Simulation provides opportunities to practice critical thinking (Hayden et al., 2014; Larue et al., 2015; Richardson et al., 2014), as well as clinical decision-making, in a practice environment (Hayden et al., 2014) that translates to enhanced skills when they reach clinical practice. It also allows for role-modeling from faculty or other experts (LeFlore & Anderson, 2009; Stayt, Merriman, Ricketts, Morton, & Simpson, 2015). The robustness of simulation education includes the ability to integrate technology including telehealth and electronic health records into the learning experience. Simulation supports standardized opportunities for assessment of student competencies (Starkweather et al., 2017; Watson et al., 2012). Finally, incorporating nontechnical skills (Cooper et al., 2012), such as cultural humility, communication, handover, and relational practice, can all be achieved through simulation.

The Future of APN Education

What pathways should be explored to meet the need for providing quality clinical education for APN students? We believe that opportunities for using simulation in APN education need to be carefully and strategically examined and considered, pedagogically, professionally, and legislatively.

Given the challenges faced by APN education, simulation could be a viable solution to meet the educational needs of APN students. As we forge into the future of APN education, we will benefit by keeping our minds open, exploring and investigating new options, and dialoguing with peers. Scrupulous adherence to the INACSL Standards of Best Practice: Simulation[SM] (INACSL, n.d.) as a framework for APN simulation is necessary. Evidence of clinical outcomes must be documented during APN student simulated experiences and in the clinical environment by evaluating behavior change and patient outcomes (Fey &

Kardong-Edgren, 2017). Nursing faculty and clinical preceptors require professional development and expertise related to the use of simulation in APN education (Campbell, MacPhee, & Ryan, 2018; Cheng et al., 2016). Finally, we cannot remain stagnant. We cannot continue in the status quo and expect different results. Forge on, simulationists!

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