Teaching About Zebras

Health care students are often told during their education “if you hear hoofbeats, think horses not zebras.” This aphorism stresses the importance of not becoming distracted by rare diagnoses. Students are conditioned to identify high-frequency, common diagnoses. However, they need to be challenged to identify situations when less common illnesses are likely. The core competencies from the National Organization of Nurse Practitioner Faculties (NONPF) identifies that nurse practitioner (NP) programs need to prepare students to utilize clinical decision-making skills to accurately identify the diagnosis (NONPF, 2014). It is imperative that NP programs provide students with a safe environment to critically think through cases that have the potential for missed diagnoses and ultimately formulate a more extensive differential diagnosis. Faculty from the acute care NP programs at Creighton University identified a gap in how students were applying their clinical decision-making skills to think beyond common illnesses. As a result, the faculty developed a medical mystery diagnosis that was actualized in a low-fidelity simulation exercise for early learner students in their second NP practicum course.

The pedagogy used for this innovative teaching strategy was inquiry-based learning. This pedagogy encourages students to seek knowledge and understanding of a concept through question inquiry (Nilson, 2010). With inquiry-based learning as the core of the activity, students can become reflective practitioners of their own learning, gain a better understanding of their patient’s health status, and enhance their critical thinking skills (Nilson, 2010).

The main goal of this innovative strategy was to utilize inquiry-based learning as a foundational instructional pedagogy for students to identify uncommon diagnoses that present with common symptoms. The intent of this activity was for students to apply principles of inquiry-based learning to the clinical setting. These principles can serve as fundamental strategies to appropriately develop differential diagnoses and diagnostic reasoning.

Students were placed in small groups and were provided with a chief complaint. Each student-group collaborated to formulate both pertinent patient history questions and physical assessments. The chief complaint was intentionally vague because faculty wanted a presenting symptom that frequently contributed to low acuity illness but could be a zebra diagnosis as well. An example of this is the chief complaint of fever, with the ultimate diagnosis being histoplasmosis.

A simulated patient, portrayed by a faculty member or an advanced graduate NP student, provided answers to the students’ questions pertaining to the chief complaint, past medical history, social and family history, and the review of systems. Students collaborated to develop a minimum of three differential diagnoses with the corresponding diagnostic evaluation. The students then called the faculty to gather the results of the pertinent diagnostics. Students were given 2.5 hours to identify the final diagnosis and create a management plan. Appropriate utilization of resources was emphasized throughout this activity, as students were required to determine the anticipated cost of their proposed management plan.

Following the simulated activity, the students and faculty reconvened to listen to the group case presentations, which were presented in a manner that reflected inpatient hospital rounds. Each group selected a representative to present the case during the simulated rounds. The remainder of the group participated in the debriefing session. The group evaluation included (a) presentation style, (b) identification of appropriate differential diagnoses and management plan, (c) and ability to critically respond to questions posed by the faculty and their fellow NP students. A debriefing session included faculty feedback on performance and student feedback related to the simulation experience.

This simulation exercise received positive feedback from the acute care NP students. The students recognized the benefit of a safe environment to critically think through an uncommon illness and appreciated the comfort of collaborating with their peers. The low-fidelity simulation provided an effective mechanism for the students to further their critical thinking skills and advance their practice approach when faced with zebras. Students acknowledged that this interactive exercise had more potential to influence a future clinical situation when compared with a traditional written course assignment. The students stated the collaborative, comfortable environment promoted retention of information and confidence to think outside the box.

This medical mystery challenge proved to be a useful strategy to meet the NONPF core competency of preparing students to utilize clinical decision-making skills to accurately identify a diagnosis (NONPF, 2014). Because this simulation was completed without a costly, high-fidelity manikin, it can be replicated in various academic institutions as a viable methodology for promoting critical thinking skills in acute care NP students. In addition, the low-cost, low-resource nature of this activity lends itself to easy replication for individual assessment.

References
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