AN EDUCATOR'S APPROACH TO PLACING NASOGASTRIC TUBES: INTERDISCIPLINARY COLLABORATION THROUGH SIMULATION

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Abstract

Effective June 1, 2022, ACEND accreditation standards for nutrition and dietetic internship programs added five new clinical skills for meeting the Core Competencies for entry-level practice as Registered Dietitian Nutritionists. Since dietetic practitioners historically have not been trained to provide these services, the objective of this program improvement project was to design a new interdisciplinary skills lab assisting faculty and dietetic interns in the process of placing nasogastric tubes. A Registered Nurse who served as the clinical learning coordinator for the University's undergraduate nursing program was recruited to assist in the skills lab design and facilitate the interdisciplinary experience. Prior to the skills lab, nutrition faculty met with the nursing coordinator to create a lesson plan. To prepare for the skills lab, six dietetic interns attended a lecture on the topic and were assigned pre-lab readings, videos, and worksheets to enhance their knowledge. During the skills lab, nutrition faculty as well as dietetic interns utilized a mannequin to perform the skill in the University's simulated environment teaching hospital, under the supervision and with the assistance of the nursing coordinator. Following the lab, students provided qualitative feedback on their experience. Overall, students found the skills lab very beneficial, and expressed that their confidence and knowledge on explaining the steps involved and assisting in the process of placing nasogastric tubes had improved. Incorporating this lab design may be helpful to nutrition and dietetics educators who are challenged with integrating new clinical skills into their dietetics curriculum, to prepare students for entry-level practice.

Objective

Upon completion, participants will be able to develop a simulation scenario aimed at assisting students in placing nasogastric tubes in preparation for entry-level practice.

Methods

1. A nursing faculty member was solicited to assist with the design of the simulation and serve as the subject-matter expert.
2. A meeting was held between the nursing faculty member and the core nutrition faculty members to design the lesson plan and identify a list of resources needed to implement the simulation.
3. Prior to the simulation, six dietetic interns (DI) attended a 2-hour lecture and were assigned pre-readings to assist in their knowledge of the topic.
4. The DI as well as nutrition faculty then participated in hands-on training by the nursing faculty member in the University's Simulated Environment Teaching Hospital (SETH).
5. After the simulation, students completed a post-lab worksheet in which they explained the steps involved in placing a nasogastric (NG) tube, which was mapped to achievement of CRDN 3.5.

Figure 1. A DI practices placing an NG tube on a model in the University's SETH

Methods, cont.

Table 1. Placement of NG Tube Simulation: Lesson Plan

Task	Location	Time Allotted
Discussion of high-risk patients, decision making tree, preview video of NGT placement, and review pre-lab readings	Debrief 1	30 minutes
DI observe nursing faculty member perform the placement of an NG tube on a mannequin	Sim 4	30 minutes
DI independently assist nursing faculty member in the placement of an NG tube on a model and mannequin	Sim 4	120 minutes

Table 2. Placement of NG Tube Simulation: Supply List

7 NG tube holders or silk tape
7 Piston tip syringes
7 Keofeed tubes
7 Stethoscopes
1 Pulse oximeter
1 Vital sign machine
7 Penlights
Personal protective equipment (i.e. gloves)
Tape measure

Results

Following the simulation, students completed a post-lab worksheet in which they were able to correctly identify and explain the steps involved (with rationale) in the assessment, implementation, and evaluation of placing an NG tube. Qualitative feedback produced positive results, where students expressed that their knowledge and confidence on explaining the steps involved and assisting in the process of placing an NG tube had improved.

Figure 2. A DI uses a penlight to assess the mannequin prior to placing an NG tube

Discussion

Research supports the role of registered dietitians placing feeding tubes, citing improved costs and timeliness of initiation, both of which are associated with better patient outcomes[1]. Published guidelines, such as the Academy of Nutrition and Dietetics Small Bowel Feeding Tube Insertion by Registered Dietitian Nutritionists: A Toolkit for Success[2], provides educators and practitioners alike with valuable resources to achieve this new skill, citing that only trained practitioners with established, documented competency should implement into daily practice[3].

Conclusion

By incorporating a simulation experience into the dietetics curriculum, students take a hands-on approach to placing NG tubes in a safe and controlled environment. The requirement of new clinical skills into nutrition and dietetics educational programs offers an opportunity for entry-level practitioners to gain clinical competence and further their role as a valuable member of the interdisciplinary care team.

References

1. Rollins CM. Blind bedside placement of postpyloric feeding tubes by registered dietitians: success rates, outcomes, and cost effectiveness. *Nutr Clin Pract.* 2013;28(4):506–509.
2. Dietitians in Nutrition Support. Small bowel feeding tube insertion by registered dietitian nutritionists: A toolkit for success. *Academy of Nutrition and Dietetics*. 2017.
3. Stieber MR. Scope of practice and legal issues in nutrition-focused physical examination. *Support Line.* 2011;33(2):2–6.

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