Cranial Nerve Wheel of Competencies
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ABSTRACT
Background. The neuroscience intensive care unit (ICU) staff development committee explored ways to test cranial nerve competencies of staff. With the assistance of the nurse manager, clinical nurse specialist, and education specialist, a game called Cranial Nerve Wheel of Competencies was developed.

Method. The game tested learners' competency knowledge of cranial nerves. Game participants had the opportunity to attend classes on cranial nerve function and to review written materials prior to the day of testing.

Results. Staff evaluated the testing methodology as excellent and preferable to a written test. They found the game challenged their knowledge, yet was not intimidating.

Conclusion. The game as a method to test competency knowledge of cranial nerves was an exciting alternative to written testing or return demonstration.

Ensuring competency of nursing staff has become an integral part of nursing practice today. In the neuroscience intensive care unit (ICU), the staff development committee decided which competencies will be validated each year. In the past, the committee had identified the need to validate nurses' knowledge of cranial nerves, their functions, and how to assess them in the care of acutely ill neuroscience patients. Learning information relevant to cranial nerves has been difficult for some nurses. Therefore, innovative ways to teach and test the topic were needed. This article will share a testing methodology that was positively perceived by the staff and complemented other testing options supported by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

The JCAHO (1998) in its standards for orienting, training, and educating staff states organizations will conduct ongoing in-service and other education and training to maintain and improve staff competency. Standards indicate the staff may receive:

- ongoing in-service training through various means, such as dawroom type programs, staff meeting presentations, journal articles, video tapes, audiotapes, teleconferences, product demonstrations by manufacturers, and self-instructional materials (JCAHO, 1998, p. 14).

The standards also state the institution must regularly collect “aggregate data on competence patterns and trends to identify and respond to the staff’s learning needs” (JCAHO, 1998, P. HR-14).

BACKGROUND
In 1998, the neuroscience ICU staff discovered a knowledge deficit of cranial nerves through a paper and pencil competency test. To heighten cranial nerve knowledge, staff nurses volunteered to research and teach information on one cranial nerve a month (covering all 12 cranial nerves in a 1-year time frame). Cranial nerve content was taught in a 30-minute class allowing multiple opportunities for staff to attend. Class objectives, pre- and posttests and a class outline were filed on the unit in a cranial nerve notebook.

When the time came to validate competencies, the nurse manager (NM), nursing education specialist (NES), and clinical nurse specialist (CNS) sought a testing method that allowed the staff to demonstrate their...
knowledge of cranial nerves in a nonthreatening and hm way. Henry (1997) promoted the use of gaming as a teaching and testing strategy. A game, called Cranial Nerve Wheel of Competencies, combined the concepts of several television game shows. It fWed the needs of competency testing while also being challenging, educational, and fun for teams of nui-se coworkers.

PREPARATION
Approximately 1 month before Cranial Nerve Wheel of Competencies was to be played, two staff nurses volunteered to be team captains. The team captains selected four of their peers as team members, forming two teams of five. Teams prepared for the game in a variety of ways including reviewing the materials in the cranial nerve notebook. Some people even copied the cranial nerve notebook so they could study at home. Teams strategized on how to best prepare for the competition. Some teams assigned responsibility for specific cranial nerves to each member and expected that person to answer questions on their assigned nerve.

The NM and CNS developed 60 questions from materials presented in the earlier classes. Five questions covered the content for each cranial nerve. Each question had a point value from 10 to 50 based on the perceived degree of difficulty. The questions (Table 1) tested knowledge of cranial nerve anatomy, physiology, function, ways to test function, and neurological diseases that might impair function.

The hospital carpentry shop fabricated a wheel, much like a roulette wheel, with 12 divisions, each labeled randomly for the 12 cranial nerves. The NES obtained a simple buzzer system with controls allowing each player the ability to signal to answer the question. When an individual player activated the signal, a master light illuminated, indicating the team with the first chance to answer the question. The team members had an opportunity to confer among themselves prior to answering.

GAME DAY
On the day of the game, the two teams were prepared for friendly competition. One team arrived with signs pinned to their chests with their team's name. Other staff members came to cheer on their colleagues. The rules were explained to the teams (Table 2).

A spectator marked the point board, keeping track of the questions answered and the points won by each team. If a team was unable to answer a question or answered incorrectly, the other team could win the points with a correct answer.

The CNS and NM moderated the game and acted as judges, particularly if questions arose concerning any of the answers. From the beginning of the game, it was obvious teams had prepared. The teams were excited and eager to answer the questions. A couple of the team members had presented a cranial nerve class and would say, "that's my nerve" when a specific nerve was indicated by the wheel. There was a real sense of involvement and camaraderie.

At the end of the game, team points were tallied, and prizes were awarded to all game participants. The teams were delighted to receive a small reward for participation. A potluck luncheon was held after the game to promote fellowship.

EVALUATION
When asked to evaluate the experience, the teams said the game, although challenging, was an excellent way to test learning and was preferable to a written test. Working as a team to answer questions lessened feelings of intimidation, eased pressure on individuals and simulated the work setting in which nurses validate dementia assessment findings with a peer. Participants believed they could adequately prepare for the Saine

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>SAMPLE QUESTIONS BY DIFFICULTY LEVEL</th>
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<tbody>
<tr>
<td>10 points</td>
<td>20 points</td>
</tr>
<tr>
<td>Cranial nerve V is a sensory or motor nerve or both?</td>
<td>What is the facial pain caused by irritation of cranial nerve V?</td>
</tr>
</tbody>
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TABLE 2

CRANIAL NERVE WHEEL OF COMPETENCIES

GAME RULES

Each team alternately spins the wheel,

2. The spinning team selects the point value being sought.

3. Both teams have equal opportunity to answer the questions. However, the Orlit team to push the buzzer wins the right to answer the question.

4. Members must wait until the question is mad completely before pushing the button.

5. Team members may confer before presenting the answer.

6. If the team answers the question incorrectly, the Cher team may win the points with a correct answer.

7. The game continues until all questions are answered or until 1 hour has passed.

8. The team with the most points is the winner.

by attending the monthly cranial nerve classes or by studying content in the cranial nerve notebook. They stated the questions challenged their knowledge, but were fair because they were created from materials available to them. When questions could not be answered correctly by the team, the CNS or NM explained the answer. Staff said they appreciated this learning opportunity.

In reviewing the questions used for the game, the NM and CNS realized some of the questions needed clarification or simplification. Questions that caused confusion were those with multiple answers, such as “Name five functions of cranial nerve X.” The team might only remember four functions. Such questions were rewritten to limit the necessary responses.

The game took longer to complete than was anticipated so the teams agreed to set a time limit of 1 hour. When 10 minutes remained, the teams stopped spinning the wheel and chose a cranial nerve and point value from those remaining on the point board. They agreed using the wheel was effective at the start of the game, because it forced them to answer questions about the nerves in a random fashion. Had they been able to choose a nerve, they indicated they would have selected the one about which they knew the most. The wheel gave more balance to the game.

Most of the team members shared equally in answering questions. Those team members who were not fully prepared or invested in the test process of competency testing answered fewer questions and did not engage themselves with their fellow team members when it was their teams turn to answer the question. To better validate that cranial nerve knowledge and competence exist equally among all nurses, changes in how the game is played will be made. Future teams will consist of only three members. Smaller-sized teams increase the ability of the team to collaborate and may enable the game facilitators to better assess the level of active participation of each member. Each nurse on a team will also be required to answer two questions of moderate difficulty (Le, 30-point value or greater) before members can confer with each other.

CONCLUSION

Gaming provides the opportunity to learn in a controlled environment without the danger or fear of jeopardizing patient safety (Henry, 1997). It can provide a form of positive reinforcement by allowing for achievement and recognition and encourages active problem solving among members of a team. This form of gaming encourages staff to identify their mentors on a particular subject and use them to increase their own knowledge and understanding. Gaming also provides the opportunity to evaluate knowledge in a less threatening environment.

Henry (1997) points out the disadvantages of gaming which should be considered when using this methodology. Issues surrounding differences in learning styles and competition need to be considered. Overall, the experience with gaming, however, was very positive. This game and method of teaching and testing could be modified to cover any topic. It has been effective in making cranial nerve content challenging and fun. Nonetheless, some players could still be heard whispering “On old Olympus towering tops a Fian and German viewed some hops” (Le, the pneumonic device for remembering the 12 cranial nerves).

REFERENCES
