Educational Board Games Adjunct to Traditional Lectures for Learning Infectious Diseases

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BACKGROUND
- Philadelphia College of Osteopathic Medicine–Georgia Campus School of Pharmacy (PCOM SOP) is a four-year program utilizing the trimester schedule within the didactic curriculum
- Two Infectious Disease (ID) courses (3 credit hours each), ID-1 in the Winter Term and ID-II in the Spring Term, are taught in the second year
- Infectious disease is a difficult subject for students and various methods have been utilized to increase retention and knowledge of learned material
- Games are a powerful teaching strategy to develop creative and vigorous learning experiences.1
  - Engage students, challenge, and motivate1
  - Increase student accountability for learning1
  - Exhibit increased knowledge, skills, and performance among professional healthcare students1

OBJECTIVE
- To determine if the utilization of modified games, such as ID-Candyland and ID-Taboo, are effective methods to reinforce student knowledge gained in traditional Infectious Diseases (ID) lectures by
  - Applying knowledge to clinical practice
  - Extending learning opportunities and promoting a fun and competitive environment
  - Developing creative learning experiences

METHODS
- Before each exam, ID-1 students were provided opportunities for educational review games
- Surveys were administered after each session to determine the impact of games on knowledge and retention of material learned in ID-1 course
- ID-Candyland
  - Rules were similar to the actual Candyland® rules
  - Each person needed to correctly answer an ID-related question prior to drawing a card to move
  - Winner was the furthest along the “Infectious Disease Trail”
  - Example question: “What is the first-line treatment for acute otitis media?,” correct answer being “amoxicillin”
- ID-Taboo
  - Mimicked original game, except clues and words were ID-based
  - For each Guess Word correctly identified within one minute, one point was awarded to the team
  - Team with the most points at the end was declared the winner
  - Example: If the Guess Word was “vancomycin” associated Clue Words included “MRSA,” “tough,” and “nephrotoxicity”

RESULTS
- Four Game Review Sessions were provided, which resulted in a total of thirty-nine participants
- Sixteen students completed surveys (eleven participated in ID-Candyland; five participated in ID-Taboo)
  - 93.8% of students recommended fellow students to participate in future game review sessions
  - 87.5% felt the sessions were either “very good” or “excellent” with regards to “Contribution to Learning”
- When asked if felt prepared for the upcoming exam after sessions, all but one student answered “agree”
  - 93.8% of students felt prepared
  - 6.2% of students did not feel prepared
- Suggestions for improvement:
  - Prizes, multiple choice answers, more exam-style questions, Guess Who? style games

DISCUSSION
- Traditional lectures are unable to effectively reflect real life situations2
- Games are models of complex systems, simplifying challenging issues and
  - Have the potential to motivate students by including competition and surprise2
- When compared to a traditional lecture, games, in combination with reading, are equally effective in reinforcing short-term knowledge2
- Games improved knowledge to greater extent than lecture-based seminar2
- Although only a small number of students participated in the games, the review sessions at PCOM-GA Campus during the ID-1 course showed the added benefit games have assisting students to better learn infectious disease topics
- Most students who participated in the games highly recommend future sessions to their classmates

CONCLUSION
- Positive response from students
- Will take suggestions for improvement into account for future ID courses
- Future plans include:
  - Promoting game sessions early in course to allow students to plan more in advance
  - Incorporating Game Review Sessions into other courses at PCOM SOP
  - Planning for additional time slots for each session to allow more flexibility
- Paves the way for future review sessions with higher student attendance

REFERENCES

DISCLOSURES
Authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation