

Educational Board Games Adjunct to Traditional Lectures for Learning Infectious Diseases Sirena Hu, 2018 PharmD Candidate, Haley Ethredge, 2018 PharmD Candidate, Drew W. Cates, PharmD, AAHIVP, Essie Samuel, PharmD, BCPS

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 to:¹
- Engage students, challenge, and motivate¹
- Increase student accountability for learning¹
- Exhibit increased knowledge, skills, performance among and 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 educational review games
- Surveys were administered after each session to determine the impart 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 pr 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?", c 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 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", "trough", and "nephrotoxicity"

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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 Contribution to learning





Graph 1: Student reported levels of skill/knowledge related to Game Review Session.

	PHAR 241G: Infectious Disease I – Games Review Session Evaluation	
,	1. Which game did you participate in during the Infectious Diseases 1 game review session	
s for	a. Candyland	
	b. Taboo	
	2. Contribution to learning	Г
act of	a. Level of skill/knowledge at start of session	
	i. 1 = Poor, 2 = Fair, 3 = Satisfactory, 4 = Very Good, 5 = Excellent	
	b. Level of skill/knowledge at end of session	
	i. 1 = Poor, 2 = Fair, 3 = Satisfactory, 4 = Very Good, 5 = Excellent	
	c. Contribution of review session to your skill/knowledge	
	i. 1 = Poor, 2 = Fair, 3 = Satisfactory, 4 = Very Good, 5 = Excellent	
tion to	3. Course content	
	a. Topics in the games were relevant to material covered in class	
	 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree 	
	b. Before participating in the game review session, I felt prepared for the upcoming exam	
	 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree 	
	c. After participating in the game review session, I feit more prepared for the upcoming	
	exam	
orrect	 I = Strongly Disagree, Z = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree What concerts of the come neutron section were most work located. 	
	4. What aspects of the game review session were most useful or valuable?	
	5. I would recommend fellow students to participate in future game review session	
	a. I = Highly recommend, Z = Recommend, S = Neutral, 4 = Not Recommend, S = Not Recommend At All	
	6 How would you improve the game review sessions?	L
	7 What other games would you like to have included in future review sessions?	
naint	8 Are the various times provided for these review sessions convenient with your schedule?	
point	a Ves	
	h No	
	9. If not, what other times should be added?	0
		Gra
	Data Collection Survey	



Graph 2: Student reported game topic relevance and preparation felt for the upcoming exam.



aph 3: Student reported positive recommendations for Game Review Session participation.

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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 at reinforcing short-term knowledge³

• Games improved knowledge to greater extent than lecture-based seminar³

• 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

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DISCLOSURES