



Aims

- ❖ Explore resident engagement in current traditional model of noon conference
- ❖ Investigate the impact of “gamified” noon conference sessions on learner engagement and knowledge retention
- ❖ Evaluate the effect of “gamified” noon conferences on faculty participation

Background

- ❖ Educational noon conference/ morning report is an enduring and ubiquitous component of didactic instruction in internal residency training programs, yet there is little research investigating the most efficacious format of these sessions
- ❖ Novel formats in medical education have emerged to foster engagement, increase active learning, and promote retention
- ❖ One of these formats is **gamification**, which is the application of game design to traditionally non-game contexts. This teaching technique is a tenet of K-12 education theory, and could be applied to medical education.

Methods

Games

- ❖ **Medical Jeopardy:** Groups of learners compete with one another to answer questions covering core clinical topics.
- ❖ **DermBanz:** Two teams compete, with one rotating designated “guesser” on each. A dermatologic image is shown to all participants except the guesser. Team members give the guesser dermatologic physical exam descriptors and relevant clinical information about the condition to help them arrive at the correct diagnosis.

Tools

- ❖ Learner engagement survey given before and after rotation
- ❖ Multiple-choice knowledge assessment given before and after rotation

Study Design

- ❖ Game sessions will be held every other month
- ❖ During the non-game months, the same material covered in the game sessions will be delivered via a PowerPoint lecture format
- ❖ Participants will fill out an engagement survey and knowledge assessment at the beginning and end of the month. The results of the survey and assessment of those who received material via a traditional didactic format compared with the results of those who received the material via a gamified format will be analyzed.
- ❖ Faculty attendance will also be taken for each of the sessions listed above.
- ❖ Data collection has been on hold the last year due to limitations in group gathering

Preliminary Results

Figure 1. Learner engagement before and after DermBanz game session

PreTest	Percentage
I like dermatology	61% (n=13)
I feel proficient at dermatology	7.7% (n=13)
I studied or prepared for this noon conference	7.7% (n=13)
I feel actively engaged at noon conference	Always: 7.7% Sometimes: 92.3% Never: 0% (n=13)
Post Test	
DermBanz increased my knowledge of dermatology topics	100% (n=11)
DermBanz was a fun way to learn dermatology	100% (n=11)
DermBanz increased my level of engagement at noon conference	100 % (n=11)
I will prepare/study for the next DermBanz.	50% (n=8)

Next steps/limitations

- ❖ We plan to resume data collection over a 6-month period now that in-person noon conference has resumed
- ❖ Will need to update survey to match pre- and post-test questions
- ❖ Limitations of study include other variables that might influence faculty attendance that don't reflect engagement
- ❖ To obtain target number of respondents, may need to extend study period to one year

Discussion/Potential Impact

- ❖ Increase faculty participation at noon conference
- ❖ If gamified conference sessions show an increase in learner engagement, knowledge retention, and faculty engagement, this could lead to modifications in the current noon conference curriculum
- ❖ Additional traditionally didactic medical education sessions could be adapted to a gamified or interactive format

References

References:

1. Ali Abdo M, Bradley D. Twelve Tips to Improve Medical Teaching on Rounds. *Medical Teacher*. 2013; 35: 895-899.
2. Bochennek K, et al. More than Mere Games: a review of card and board games for medical education. *Medical Teacher*. Nov 2007; 29(9), 941-948.
3. Cayce R, et al. Dermatology Curriculum for Internal Medicine Residents: a randomized trial. *Journal of Graduate Medical Education*. June 2014; 6(2), 296-300.
4. Friedlander M, et al. What can Medical Education Learn from the Neurobiology of Learning? *Academic Medicine*. 2011; Vol 86, no. 4: 415-420.
5. Gorbanev, I, et al. A systematic review of Serious Games in Medical Education: quality of evidence and pedagogical strategy. *Medical Education online*. 2018; 23(1): 1438718
6. Goyal Amit, Garibaldi Brian, et al. Morning Report Innovation: Case Oriented Report and Exam Skills. *Diagnosis* 2019; vol. 6, no. 2: 79-83.
7. Kamel El-Sayed S, Loftus S. Using and Combining Learning Theories in Medical Education. *Medical Science Educator*. March 2018; vol. 28, no. 1: 255-258.
8. McNeill M, Ali S, et al. Morning Report: Can an Established Medical Education Tradition be Validated? *Journal of Graduate Medical Education*. Sept 2013: 374-384.
9. Olszewski A, Wolbrink T. Serious Gaming in Medical Education. *Journal of the Society of Simulation in Healthcare*. Aug 2017; vol 12, no 4: 240-253.
10. Trachtman Howard. Morning Report: Is the Time Ripe for a Change? *Teaching and Learning in Medicine*; vol. 24, no. 2: 163-164.