ABSTRACT

Purpose: To evaluate use, acceptance and learning outcomes of an interactive video game aiding in helping medical students learn the AAMC geriatric competencies.

Methods: A 4th year medical students were recruited from their geriatric rotations during 2011 were recruited for the pilot study. Game use on medication management, delirium, falls, and changes of aging and long term retention. No difference in overall clerkship final exam scores between players and overall clerkship during 2011 invited to participate in study. The game was designed as a role playing game by Brainstorm Rising. An evaluation tool or learner survey and effectiveness of EQ was administered upon completion of gameplay.

RESULTS

1. Subjects

• 4 year medical students during calendar year 2011
• 12 students on their geriatrics clerkship during 2011 invited to participate in study
• 21 students chose to play (19%)
• Age, gender of players vs. overall class similar

2. Learner Performance Data

• Game content coded to the AAMC competencies
• Performance data collection measures built into game design software by Brainstorm Rising
• Face validity and screen feedback all operators were satisfied

3. Player Satisfaction/ Retention of Learning

• Students asked to rate effectiveness of ElderQuest for gaining knowledge in geriatrics (n=23)

4. Effectiveness in Competency Areas

• No difference in geriatrics clerkship final exam scores between players and overall class
• No differences in overall clerkship ratings

5. Learner Outcomes

• No difference in geriatrics clerkship final exam scores between players and overall class
• No differences in overall clerkship ratings

6. Blended of medical education and gameplay play was well accepted

7. Technical issues/game support need improvement

8. Conclusions

• Students can use an educational geriatrics video game (ElderQuest) to reinforce the AAMC geriatrics competencies of a geriatrics clerkship.
• Student acceptance of video gaming as a learning tool was high and believed to improve long term retention.
• Refinement of the game is needed to address technical issues and gameplay concerns.

This research was supported by the Donald W. Reynolds Foundation and the Florida State University College of Medicine. The investigators retained full independence in the conduct of this research.

METHODS

Why Video Games?

• New generations of learners have grown up playing video games, and game design is essential.
• Preferred learning strategies of the Millenials/Net generations emphasize fun, reward, care with first person play, fun, reward-based, self-motivating environment
• Game difficulty and content can be tailored to meet the needs of different levels of learners or health care preceptors.

AAMC Competencies Applied: Module 1

MEDICATION MANAGEMENT

• Explain impact of age-related changes on drug selection and dosing
• Identify medications that should be avoided or used with caution in older adults and explain the potential problems associated with each.

COGNITIVE AND BEHAVIORAL DISORDERS

• Formulate a differential diagnosis and implement initial evaluation in an older patient who exhibits cognitive impairment.
• Gravely initiate a diagnostic work-up to determine the root cause (etiology) of delirium in an older patient.
• Perform and interpret a cognitive assessment in older patients for whom there are concerns regarding memory or function.
• Develop an evaluation and non-pharmacologic management plan for agitated, demented, or delirious patients.

SELF-CARE CAPACITY

• Identify and assess safety risks in the home environment, and make recommendations to mitigate them.

STYICAL PRESENTATION OF DISEASE

• Identify psychosocial changes of aging for each organ system and their impact on the patient, including their contribution to homesthcenes.