RESIDENT GAMES: ENHANCING COMMUNICATION AMONG INTERPROFESSIONAL TEAM MEMBERS USING A SIMULATED INTERACTIVE ENVIRONMENT

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Background: The ACGME requires Residents to participate as team members in real and/or simulated interprofessional clinical patient training activities. Confounding this effort, Residents will increasingly encounter obese, diabetic, depressed patients with cardiometabolic disease. Interprofessional teams for treating these patients often include: Dietician, PCP, Cardiologist, Nurse, Endocrinologist, Psychiatrist, and/or Bariatric Surgeon. Since it is virtually impossible to gather these professionals in one place for training purposes, we are creating a virtual scenario using a mixed reality holographic computer headset. Resident Games will provide data that is useful in developing trainee roles in teams and help discover best practices in delivering complex health care needs of patients.

Objectives: The purpose of the simulation is to provide an active learning experience for Medical and Psychiatric Residents as they build interprofessional teamwork and decision-making abilities. **1:** Program an interactive simulation/game to teach competencies targeted towards interprofessional skills. **2:** During the game, teach understanding of the patient's concerns. **3:** Portray different team members' approaches towards the patient and colleagues in real time.

Methods: The HoloLens is an untethered headset used to generate the simulated environment and provide an immersive experience. Virtual EMR is accessed to retrieve patient data and characters are programmed using the Unity game engine with audio scripts written by professionals. The Resident hears virtual sounds, along with those in the environment. Command inputs include gaze, gesture and voice. The patient and team members are selected and animated by clicking an imaginary computer mouse. Before, during and after the simulation, assessment methods are used that have been developed for analyzing simulations.

Results/Outcomes/Improvements: Assessments are collected in three ways at three time points using eIRB protocols. **1:** The pre-game survey is answered online by equal numbers of Medicine and Psychiatric Resident cohorts. Multiple choice (M/C) questions follow the format of a reproducible and reliable pre-assessment IPE survey tool: https://collaborate.uw.edu/ipe-teaching-resources/evaluation-tools/ **2:** The simulation itself requires about 30 minutes wearing the HoloLens headset. A pause after every 10 minutes of play allows the Resident to verbally answer M/C questions using voice commands. **3:** The post-assessment debrief has two goals: evaluate the Residents' engagement with the HoloLens and measure knowledge gained about interprofessional teams. This debrief uses team based simulation learning tools that are reliable and reproducible: https://collaborate.uw.edu/ipe-teaching-resources/debriefing-tools/

Significance/Implications/Relevance: Barriers to successful teamwork are often rooted in misunderstanding the role or intent of a team member involved in patient care. Using novel, holographic 3D immersion instead of a static 2D model will provide a much better understanding of an increasingly typical patient seen in clinics and hospitals by all health professions. A rich data set generated by the HoloLens will provide the Residents with the ability to consider alternate treatments as well as behavioral strategies using virtual interprofessional 'teachers' that can ultimately be programmed to generate different scenarios and training opportunities. Input from actual trainees is essential for the ongoing design of relevant and realistic games. The resulting analytics would serve to help Residents learn to become effective interprofessional healthcare leaders.