Virtual Reality Simulation, Cardiovascular Disease and Social Determinants of Health: A High-Tech Strategy to Improve Health Outcomes

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Background

 Medical care provided by UC Health Professionals only influences 20% of health outcomes. Behavior, social circumstances and environmental conditions, which comprise the Social Determinants of Health (SDoH), determine the other 80%. Patients with unmet SDoH needs are particularly vulnerable to poor health outcomes.

Problem Statement

 Can a Virtual Reality Simulation (VRS) be used to provide training in health equity and promote cultural competence while managing implicit bias in the U.S. health system?



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Intervention

 We will provide Primary Care Providers the opportunity to enter the world of a patient with unmet SDoH via a VRS experience. We believe that VRS technology can break down barriers and increase empathy as the provider experiences the environment, challenges, emotions and thoughts that drive healthcare decisions.

Methods

Subject Choice

We have chosen to present two common scenarios: a patient with uncontrolled mental health issues and a patient who does not speak English.

Building the Scripts Physicians provided input into the creation of scenarios that demonstrates common unmet SDoH needs that many providers do not feel equipped to handle. Multiple subject experts reviewed the scripts to ensure evidence-based knowledge and adult learning methods.

Building the Simulations Virtual Reality Simulation experts ensured that topics were appropriate for VRS and that software was available for creation using the latest technology.

Iterative Testing & Feedback Scenario content and design was reviewed and critiqued by primary and medical students, as well as faculty and staff from the UC Colleges of Medicine and Nursing.



Above: A screenshot of an apartment from the VRS



character from the VRS gameplay.

gameplay.

care providers, psychiatric providers,

Above: A screenshot of a street scene and non-player

Teaching Points: Common SDoH

- Food Insecurity
- Health Literacy
- Housing: Quality & Stability
- Isolation & Loneliness
- Language Barriers
- Medication Costs
- Mental Health Stigma
- Neighborhood Safety
- Transportation

Next Steps

• The simulations will be taken on the road for presentation to Medicaid providers in both urban and rural Ohio counties. Users will complete brief on-site evaluation as well as a separate Medicaid driven evaluation by email.

Left & Right: Covers of the

brochures participants will

gameplay.



No Show



Virtual Reality Simulation and Social Determinants of Health: A High-Tech Strategy to Improve Health Outcomes receive after completing VRS

Simulation #2: Schizophrenia



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