



## Purpose of Study

- The purpose of this study is to determine provider (nurse and nursing assistant) perceptions towards adopting a novel hospital-based Virtual Reality (VR) pain distraction intervention on an adult acute care hospital unit delivered by providers.
- Some studies have investigated the efficacy of VR in an acute care hospital setting but few studies have addressed barriers to implementation.
- Because the hospital environment poses unique challenges, it is important to understand the practicality of using VR in hospitalized patients.
- Determining feasibility of implementation is a necessary step before pursuing more extensive, long-term evaluation of a hospital-based VR intervention on inpatient outcomes and resource utilization.

## Background and Significance

- Millions of patients suffer from significant acute pain as a result of injury, illness, or procedure. Less than half of patients experiencing pain in acute care settings report adequate pain relief and control.
- There is growing evidence to support the use of immersive VR as a non-pharmacologic, adjunct pain management therapy with minimal side effects.
- VR is a computer-generated simulation of a three-dimensional image that individuals can interact with in a physical way using special equipment.
- VR has been shown to be an effective adjunct intervention to reduce perceived pain for acute, procedural, and experimental pain in adult and pediatric populations by distracting from painful stimuli.
- One study has evaluated the practicality and qualitative experiences of patients using VR in an acute hospital setting delivered by research team members rather than providers.
- Thus far, no studies have captured the perceptions of providers, specifically nurses and nursing assistants, that would deliver the intervention

## Methodology

### Sample Method

- Nurses and nursing assistants (NAs) will be recruited from an acute care rehabilitation unit from a midwestern regional hospital during a staff meeting.
- Once consented, participants will be given a brief introduction to therapeutic VR for acute pain management and then asked to complete a survey.

### Design Method

#### Surveys

- Nurses and NAs will be asked to complete an adapted Measurement Instrument for Determinants of Innovations (MIDI), regarding their perceptions towards implementing this intervention in their practice.
- Participants will be asked to take the survey before training and once again after intervention is implemented on their unit for approximately three months.

### Semi-Structured Interviews

- Some participants will also participate in brief semi-structured interviews.
- Participants will be asked a series of open-ended questions regarding their perceptions of barriers and facilitators related to the use of a therapeutic VR intervention in their pain management practice.

### Implementation Method

#### Staff training

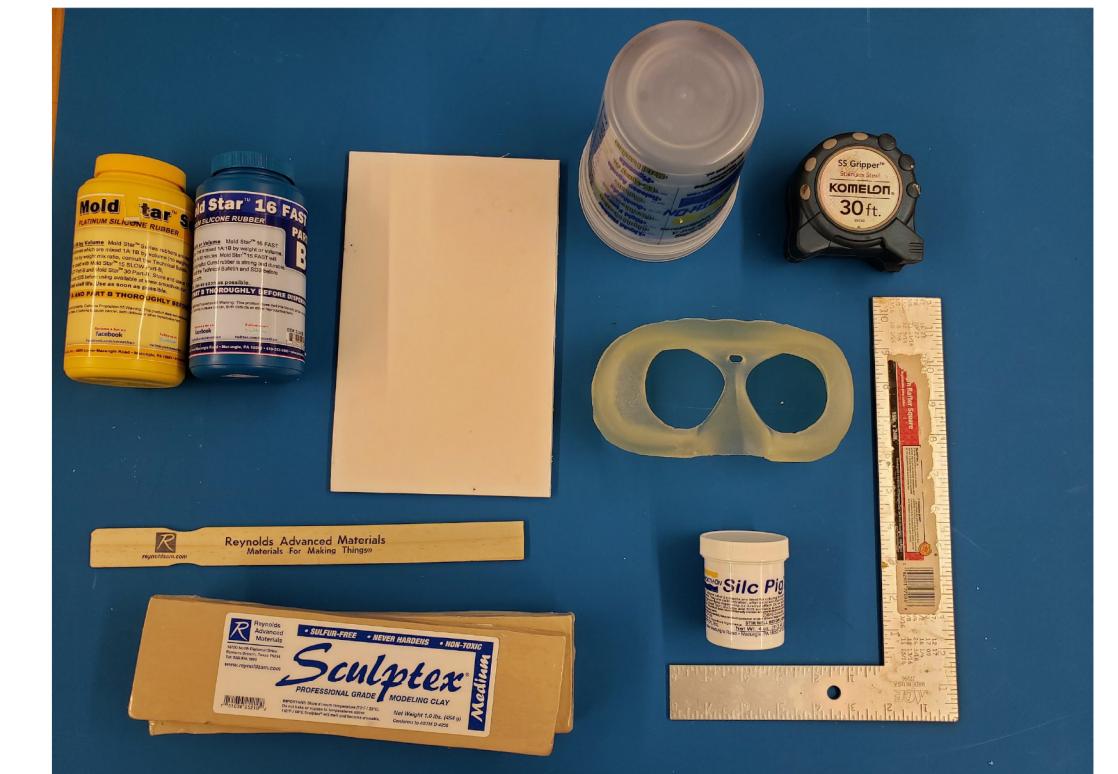
- Training will consist of 4 phases: 1) Online learning modules; 2) In-person staff training; 3) mock training scenarios; and 4) evaluation and feedback.

#### Policy and Procedures:

- Patients with a history of motion sickness, vertigo, delirium, and/or claustrophobia may still use the VR treatment with caution and continuous monitoring by the provider.
- Patients will be supervised and remain seated or lying down during the treatment, which will last 10-15 minutes.
- Providers will document the session via a "VR Smartphrase" note in the EMR, consisting of: predictors of unfavorable outcomes; pain before and after VR exercises; number of minutes patient engaged in the VR session; application/exercise used; patient response; patient willing to try VR again; and side effects.
- Education will be provided prior to treatment and handouts will be given following the intervention.

## Progress to Date

### Development of silicone masks



### App Selection



## Practice and Research Implications

- Results from this initial study will be used to modify the VR protocol to deliver VR in a hospital setting by examining provider perceptions toward VR use.
- The next step in this study is to examine patient and provider outcomes and experience after VR use.
- A future goal in this project is to conduct a pilot study examining patient outcomes and provider use of therapeutic VR to address pain related concerns among patients in a hospital setting.
- The long-term goal of VR therapy is to provide adjunctive/alternative treatments for pain in a hospital setting, in replacement of pharmacological interventions.

## References

References are available upon request to krscott@coe.edu