

Preparation and Planning

- Boston Children's Hospital's (BCH) Cardiovascular Operating Room (CVOR) will add new OR theaters in the Hale Family Building, opening Summer 2022
 - Increased need for surgical scrub personnel
- To support onboarding of surgical scrub personnel, a Virtual Reality (VR) training platform was employed
- After review by VR Team, selection of suitable VR platform was made

Description of Team

- CVOR VR Lead
- BCH Simulator Program (SIMPeds)
- Main Operating Room (MOR)
- CVOR Registered Nurses (RNs)

Assessment

- The MOR Training Manager & SIMPeds trialed scrub modules purchased off-the-shelf in Fall 2021
- Students accessed the software in 2D using an tablet
 - Average of 2.1 hours self-study per user
 - In-person testing showed students memorized all required instruments
- Memorization previously required an average of 7.5 hours hands-on, supervised, classroom time
- We expect surgical scrub modules would have a similar outcomes in the CVOR curriculum

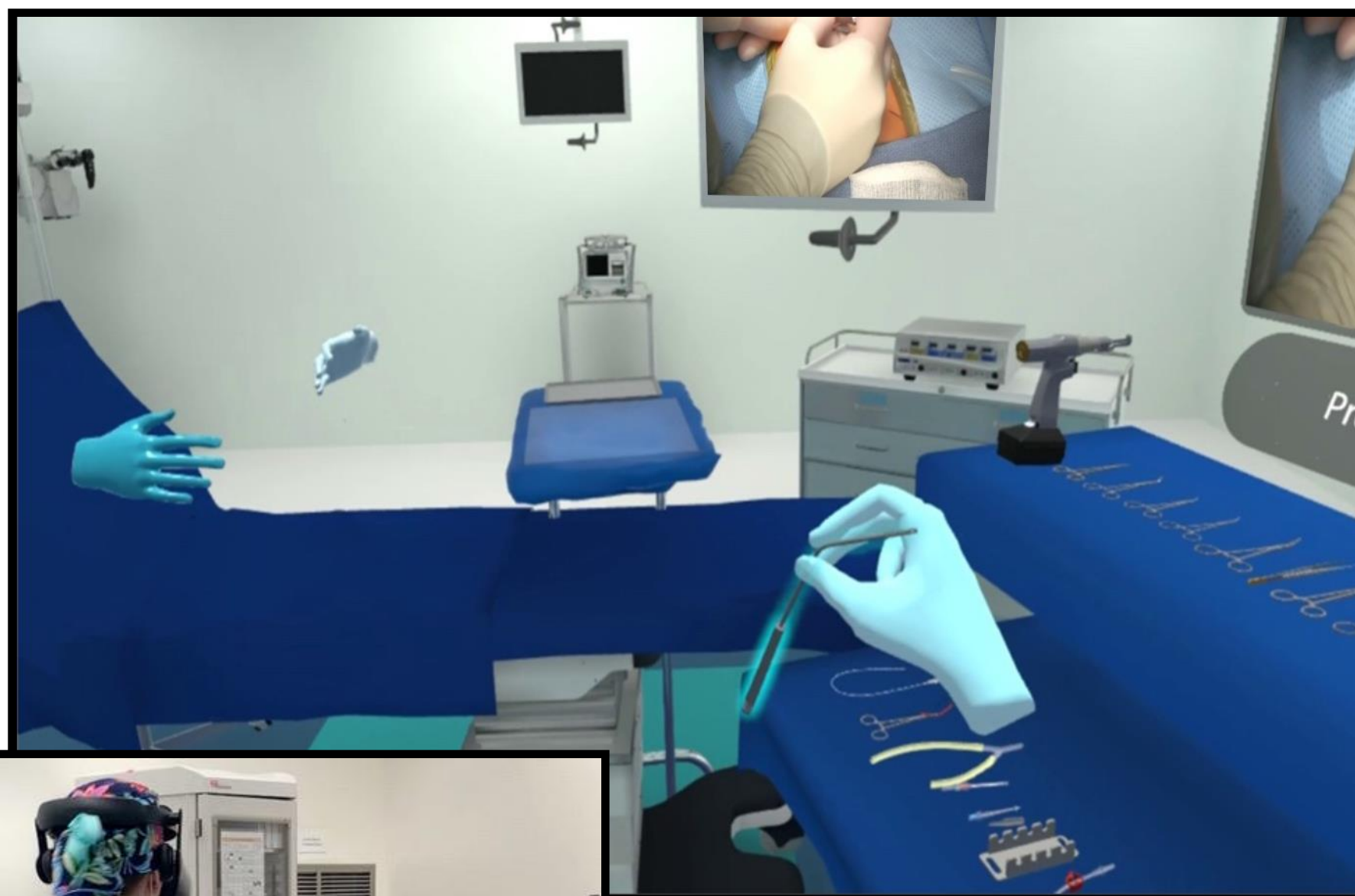


Figure 1. Image of view in VR headset



Figure 2. CVOR staff using VR program

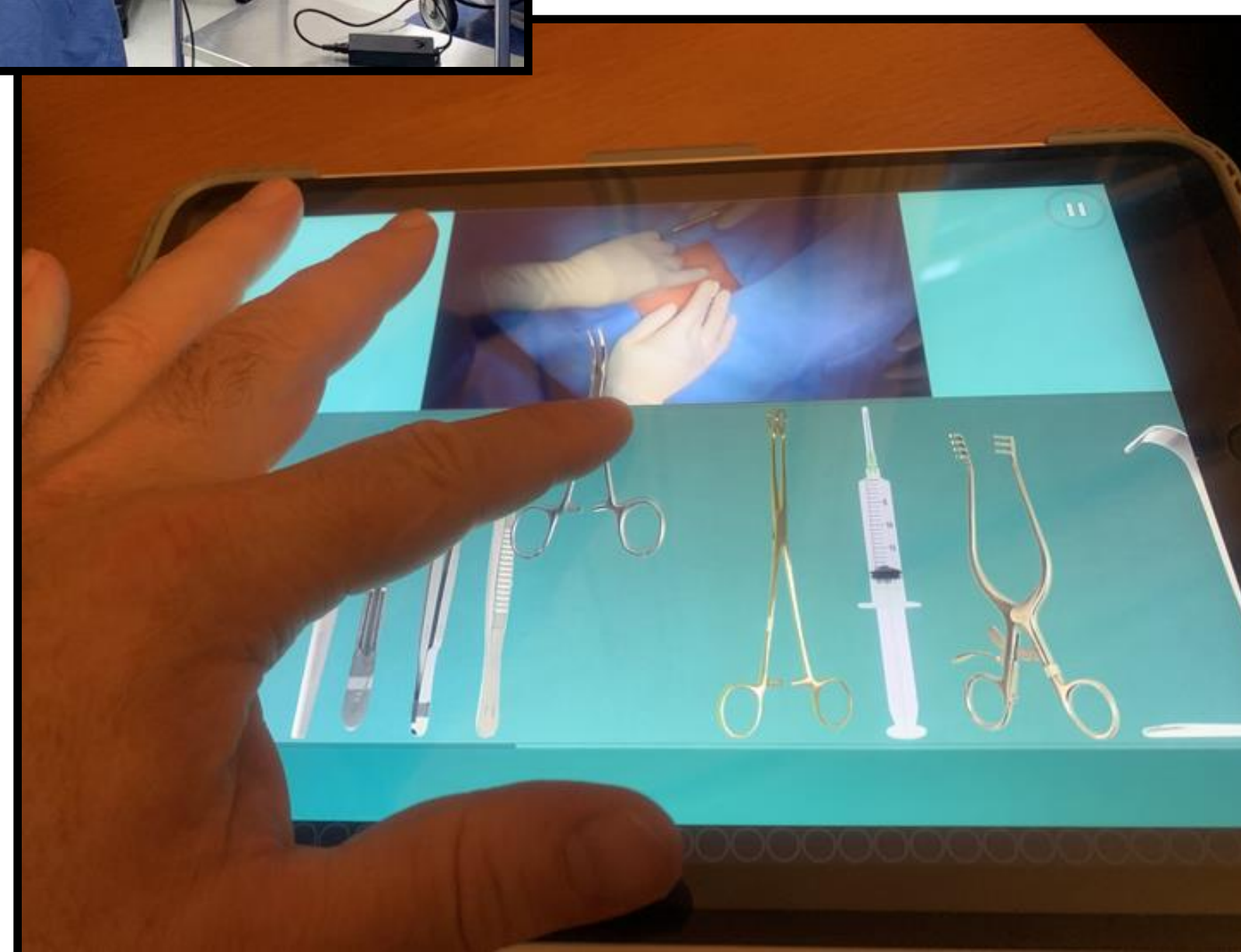


Figure 3. 2D iPad version

Implementation

- CVOR and BCH SIMPeds are producing a similar VR scrub training environment
- Training modules include the on/off bypass process and seven pediatric cardiac repairs
- Trainee hands instruments, in order, to virtual doctor (Figures 1 & 2)
- A tablet based 2D version is available (Figure 3)
- A learning management system tracks their progress

Outcomes

- CVOR will use 2D and VR versions to:
 - reinforce instrumentation
 - learn procedural steps
 - learn gross motor movements
 - increase student confidence in the process
- Reduction in training time to memorization

Implications for Perioperative Nursing

- Quicker training which increases training capacity
- Currently piloting VR training modules for cardiopulmonary bypass and heart defect modules

Acknowledgement

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