

DEVELOPING A WEB-BASED EDUCATIONAL TOOL FOR VENTRICULAR ASSIST DEVICES FOR PEDIATRIC PATIENTS AND CAREGIVERS.

Lauren M Williams¹, Patricia Bastero², Corey Chartan², Satid Thammasitboon², Hari Tunuguntla³, Barbara Elias³

¹ Baylor College of Medicine, Department of Pediatrics, Critical Care

² Texas Children's Hospital , Pediatrics, Critical Care

³ Texas Children's Hospital , Pediatrics, Cardiology

Background: Patients with heart failure who require ventricular assist devices (VADs) are a unique, low volume, but high complexity patient population that requires intensive education on their mechanical devices and recognition of the possible complications to be able to safely be discharged home. There exists a significant need for continued to improve patient and family satisfaction and confidence in their ability to live outside of the hospital. There is growing emphasis on technology based education initiatives for patient and family education; however, debate exists on how to best utilize technology for patient education. Together with a multidisciplinary team that includes intensivists, cardiologists, surgeons, VAD coordinators, and educators, we propose the development of a web based educational tool for high technology dependent children, using VAD as an exemplar, to enhance comfort level in daily living. We hope to apply the tool to future applications for other complex and technologically dependent children.

Materials/Methods: To define the true problems we will gather end-users viewpoints through descriptive surveys and semi-structured interviews. Survey questions will include baseline demographics, their current technology use and open ended descriptive questions. To design a prototype we hope to guide patients and their families to envision an "ideal" educational tool using a primer to activate prior experiences and opinions. We will analyze and synthesize all inputs to inform the design process using both quantitative and qualitative content analyses. We will use Theory of Mind's cognition, conation, and affect as a framework. We will also use Richard Mayer's 12 Principles of Multi-Media Learning. The Theory of Mind framework will also be used to guide the tool's evaluation. Cognition will be assessed using quizzes and exams to evaluate the educational content. Affect will be assessed by semi-structured interviews and self-assessment questionnaires. Conation will be assessed through Altman's Goal Orientation Index, Kolbe Conative Index, and/or the conative elements of Myers-Briggs Type Indicator (MBTI). In order to test the ease of use, or lack thereof of our tool, we plan to utilize the System Usability Scale (SUS) 10-item Likert scale questionnaire.

Results: Ongoing

Conclusions: Ongoing