

Development of a remote monitoring system for oximetry to be used by parents in the community

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Introduction

- Continuous monitoring is essential for some children with complex medical needs
- The need for close monitoring even when not in the same room inspired a father/engineer to develop the innovative Remote Monitoring System (RMS)

Innovative Technology

- The RMS sends Pulse Oximetry data to a server through Wi-Fi
- The Pulse Oximetry data is continuously sent to a portable smart-device
- Interfaces seamlessly with existing Pulse Oximetry technology

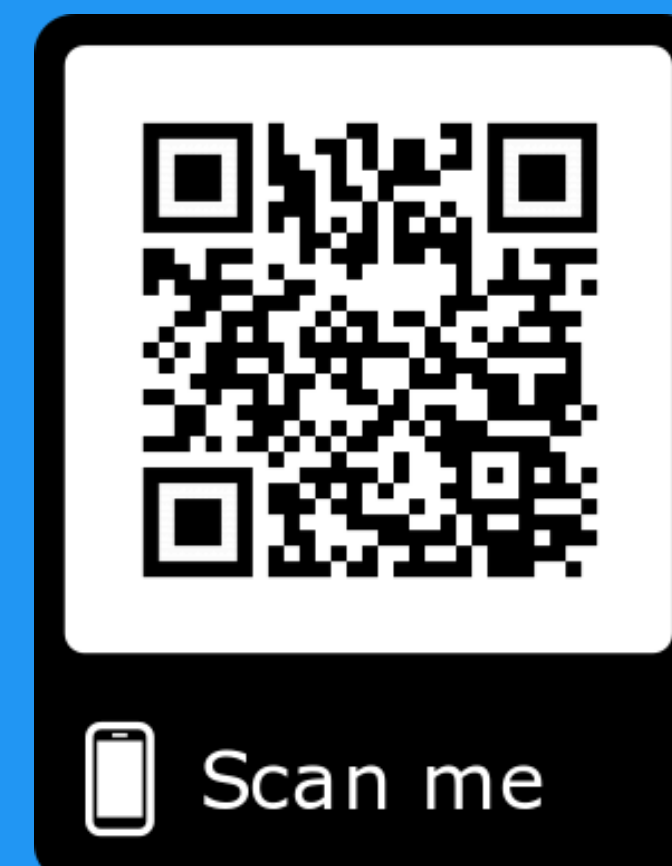
Usability Evaluation

1. Explore how the RMS influences caregiving at home
2. Evaluate how the client and caregiver interact with the RMS
3. Evaluate the impact on caregiver quality of life

Methods

- Mixed method design
- Qualitative case study with semi-structured interviews
- Participants are families of children with medical complexity using a home RMS

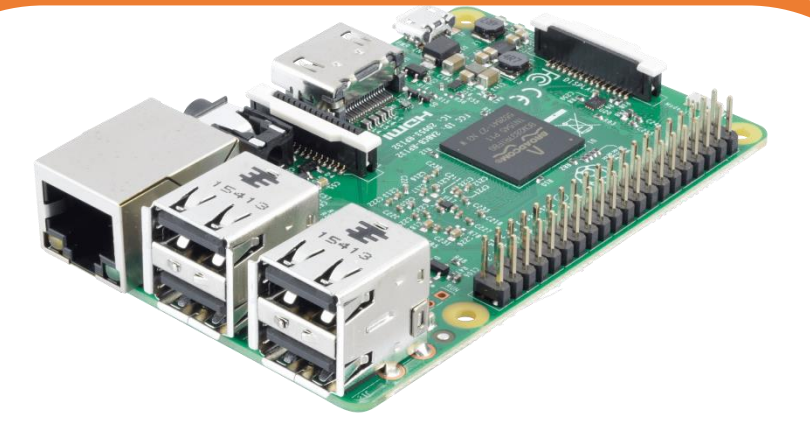
Remote monitoring transformed the reality of constant monitoring for one parent, now the technology is being shared with others.



Scan me



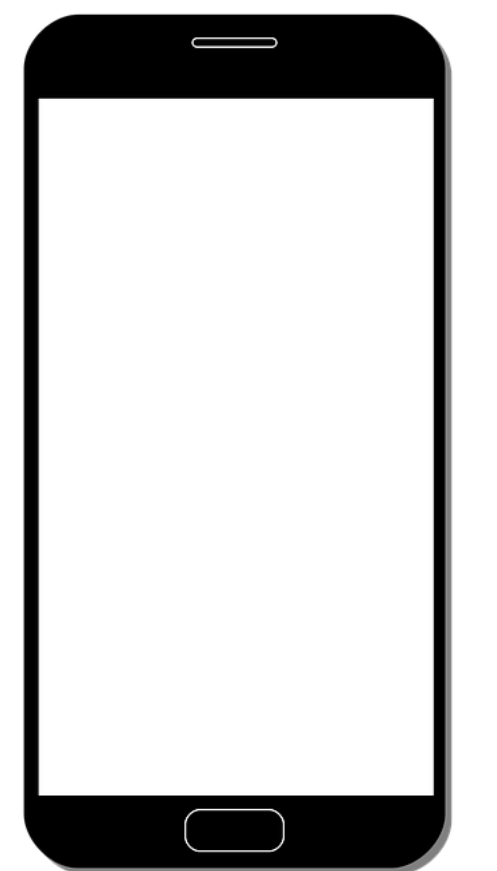
Pulse Oximeter



Remote Monitor



Remote Monitor Server



Client Device

Where are we now

- We have received research ethics approval to move forward with research and testing
- The team is finalizing software and hardware for remote monitoring
- We aim to complete testing with 5-8 families in their home this year