Remote Treatment Monitoring with the Tablo Hemodialysis System

BACKGROUND:
• Amidst the COVID-19 pandemic, a critical need emerged to reduce patient proximity during care.
• Remotely viewing dialysis treatments in real-time could improve efficiency when treating COVID-19 patients.
• Tablo® Hemodialysis System is an all-in-one system that is easy to learn and use and is connected and intelligent.
• Sensors track treatment and machine data which are securely and wirelessly transmitted in real-time to the cloud.
• TabloHub is the web interface allowing clinicians to access this data on a smartphone, tablet, laptop or other connected device.

OBJECTIVE:
• To report on the accelerated deployment of remote, near real-time treatment monitoring capability on TabloHub to help clinicians treat COVID-19 patients.

METHODS:
• The product roadmap was quickly re-prioritized to free-up necessary development resources.
• An iterative human-centered design approach was leveraged involving multiple user interviews and product feedback.
• A new API (Application Programming Interface) was developed to transmit, display and interact with data.

CONCLUSION:
TabloHub combined with Outset Medical’s focus on patient and user experience enabled the rapid development of remote treatment monitoring to meet the urgent needs of users.

RESULTS:
• Users identified and prioritized five critical areas of treatment data: alarms, pressures, UF, blood flow rate, and remaining treatment time.
• The machine status is also displayed which helps users optimize resource availability.
• In about three months we conducted user needs analysis, developed a functional prototype and completed final development and testing. The ability to iterate this quickly was driven by the human-centered design approach we took.

The multi-card view displays live data from multiple Tablo Systems simultaneously.

Cards expand to display previously recorded treatment data.