Abstract: P577

Early experience with the first pacemakers to directly connect with smart devices for remote monitoring

Authors:
K Tarakji¹, S Zweibel², A Seiler³, P Roberts⁴, N Shaik⁵, J Silverstein⁶, A Patwala⁷, S Mittal⁸, G Molon⁹, G Augello¹⁰, A Porfilio¹¹, K Holloman¹², N Varma¹, S Sears¹³, M Turakhia¹⁴, ¹Cleveland Clinic Foundation - Cleveland - United States of America, ²Hartford Hospital - Hartford - United States of America, ³Moses Cone Heart and Vascular Center - Greensboro - United States of America, ⁴University Hospital Southampton NHS Foundation Trust - Southampton - United Kingdom of Great Britain & Northern Ireland, ⁵Cardiovascular Institutes - Orlando - United States of America, ⁶Mount Carmel - Columbus - United States of America, ⁷North Staffordshire NHS Trust, Cardiology - Stoke on Trent - United Kingdom of Great Britain & Northern Ireland, ⁸The Valley Hospital - Ridgewood - United States of America, ⁹Sacred Heart Hospital of Negrar - Negrar - Italy, ¹⁰Istituto Clinico Citta Studi, Cardiology - Milano - Italy, ¹¹Provincia Religiosa San Pietro Di Roma - Roma - Italy, ¹²Medtronic PLC, Clinical Research - Mounds View - United States of America, ¹³East Carolina University - Greenville - United States of America, ¹⁴Stanford University - Palo Alto - United States of America,

Topic(s):
Remote Patient Monitoring and Telemedicine

Citation:

Funding Acknowledgements:
Medtronic PLC

BACKGROUND: Remote monitoring is associated with improved patient outcomes; however, adoption and adherence to remote monitoring via home-based consoles remains suboptimal. BlueSync technology in new generation pacemaker and CRT-P models enables the implanted device to communicate directly with patient-owned, Bluetooth-equipped smartphones/tablets and an app (MyCareLink Heart). The app can automatically retrieve information from the cardiac device and transmit the data to the remote network, eliminating the need for traditional remote monitoring consoles.

OBJECTIVES: To characterize the communication process between implanted pacemakers and smart device remote monitoring apps by assessing the success of prescheduled remote transmissions in the first month of follow-up. Additionally, to assess the feedback of both patients and clinicians about the process of device pairing.

METHODS: Enrollment in the BlueSync Field Evaluation began in April 2018 and was completed November 2018. Follow-up is ongoing. Prior to enrollment in the evaluation, patients completed the device pairing process with the app using their own compatible smartphone or tablet. Patient and clinician questionnaires were completed at the time of the device pairing process. After enrollment, successful completion of scheduled transmissions occurring in the first month were analyzed.

RESULTS: Preliminary data includes 241 enrolled patients with mean age of 64.7±15.5 yrs (min 20, max 90 yrs), who completed device pairing between their implanted device and their smart device app. Of enrolled patients, 79% felt that the device pairing was easy to do, 85% were satisfied with the amount of time it took to complete it, and 93% felt that they would be comfortable using the app. Clinicians reported that 67% of the device pairings took less than 20 minutes and 78% felt patients would be able to use the app independently. At the time of analysis 174 patients had at least one scheduled transmission within the first month, and collectively had a total of 322 scheduled transmissions. Out of these, 309 (96%, 95% CI: 93%-98%) were successfully
CONCLUSIONS: Initial experience with the world’s first app based remote monitoring system for Bluetooth enabled pacemakers demonstrated success to scheduled transmissions in the first month across a wide range of patient ages. Patients and clinicians reported high satisfaction with this novel technology.