The current study was performed to compare the automated system described above, against simultaneous ECG monitoring in a coronary care unit using a standard patient monitoring system. ECGs were de-identified and randomized, and blinded R-R interval measurements were performed using manual digital calipers by three independent cardiologists.

**METHOD**

ECG acquisition and continuous wireless transmission showed excellent data integrity and no significant dropouts. Storage and encryption of data was robust. The ECG signals acquired by our device appeared visually identical to the standard monitoring system. Agreement of R-R interval measurement between devices and observers was good, with RMSE and Bias at 26 and 6 ms, respectively. The rhythm comparison showed an accuracy of 93%.

**RESULT**

Our continuous, wearable ECG device with real time wireless data transmission to a mobile device provides robust data integrity, and good agreement compared with a standard ECG monitoring system. The framework provides a suitable platform for automated continuous arrhythmia detection on a smart phone, using AI.

**CONCLUSION**

To validate the ECG signal acquired by the Alerte continuous ECG acquisition device, by comparing simultaneously the Alerte device with a commercially available critical care ECG monitoring system.

**AIM**

The current study was performed to compare the automated system described above, against simultaneous ECG monitoring in a coronary care unit using a standard patient monitoring system. ECGs were de-identified and randomized, and blinded R-R interval measurements were performed using manual digital calipers by three independent cardiologists.

**ADDITIONAL INFORMATION**

Using a trained artificial intelligence model, we have been able to correctly classify between atrial fibrillation and sinus rhythm. Please refer to our separate communication on validation of our AI models: *A Validation Study of Automated Atrial Fibrillation Detection using Alerte Digital Health's Artificial Intelligence System*