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Electrophysiology

A NEW MODEL OF 24/7 12-LEAD ECG AND TELEMETRY IN CCU MONITORING FOR PROMPT ROMI AND ARRHYTHMIA CARE AT HOME: 7-YEAR EXPERIENCE

Poster Contributions
For exact presentation time, refer to the online ACC.22 Program Planner at https://www.abstractsonline.com/pp8/#!/10461

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Background: Delay in prompt diagnosis, monitoring, intervention and admission if needed for high-risk patients with acute chest pain and arrhythmia out of hospital remains a significant challenge as well as the main contributor of increased cardiovascular complications and mortality. This study summarizes a 7-year experience of implementing an at-home Telemetry model and 12-Lead ECG with CCU Monitoring capacity with personalized devices, customized processes, and 24/7 specialty care.

Methods: The 24/7 program was initiated at home, ALF, and nursing homes in South FL on5/24/2014. Consecutive 1,764 pts with CV risk factors, CAD and arrhythmia were enrolled for 3 to 12 months based on the patient's clinical status (Post-MI, Post-op, BPCI, or special services). The program uses a patented process with individual devices (10 Real-time wireless CCU level Telemetry, 121 wireless 12-lead ECG, vitals monitors and Tablets/Sim Cards), customized protocols with labs and imaging, and 24/7 cardiology monitoring with on-site and on-line care. The number of acute events of chest pain or A Fib with RVR as well as acute MI and hospital admissions were analyzed.

Results: A total of 4,616 ECGs were performed. Out of 166 events with acute chest pain,SOB, or palpitations, 5 ACS/unstable angina and 72 new/recurrent Afib were diagnosed. 16 patients were admitted to the hospital and 56 patient episodes (78%) were stabilized or chemically cardioverted (6 pts,11%) at home. There were no deaths.

Conclusion: This study is the first home-based 24/7 acute cardiac service for ACS and arrhythmia diagnosis utilizing telemedicine using personalized 12-lead ECG and telemetry for monitoring and care. It provides a solid foundation for a hospital at home service which is safe, clinically validated, and cost effective with 78% reduction of admissions and cost savings. Further studies are warranted for scalability.