Implementation of a PA into a Heart Failure Remote Monitoring Clinic

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INTRODUCTION

- Heart failure (HF) is a growing clinical and financial burden in the US, with 8 million Americans projected to have HF by 2030
- HF is the #1 cause of hospitalization for adults > 65 years old, remote monitoring (RM) has been shown to provide early warning signs of decompensation and reduce HF hospitalizations (HFH)
- RM in HF is a rapidly growing field
- At time of PA introduction our RM group was monitoring CardioMEMS and Boston Scientific ICDs with HeartLogic
- CardioMEMs is an implantable pulmonary artery (PA) sensor that allows for RM of PA pressures and has been shown to reduce HFH and improve quality of life
- HeartLogic is an algorithm embedded into certain ICDs that has been shown to predict HF exacerbations with reasonable accuracy

METHODS

- Prior to PA introduction our RM group involved one MD and one RN
- We introduced one PA to the RM team who was salaried 8 hours weekly for RM expansion and revamping, as well as 32 hours staffing HF clinic
- The PA duties involved with RM were able to be completed from home
- The role of the PA with the RM group consisted of CardioMEMs recruitment and monitoring, HeartLogic monitoring, and introduction of a 3rd RM technology (Zoll HF Management System (HFMS) patch)

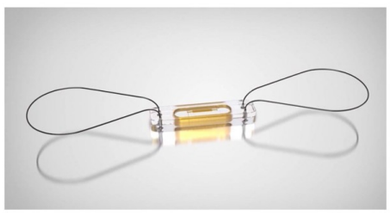
RESULTS/PRINCIPAL FINDINGS

- Results of PA introduction into the RM space can be separated into 3 principal areas based on RM technology

- **CardioMEMs (CM)**
  - PA role was to recruit new pts through clinic and frequent communication with inpatient PAs, resulted in increase in implants from 17 in 2022 to 40 in 2023
  - RN logged in 1-2 times weekly to monitor PA pressures. PA role was to serve as provider for RN when they had questions, such as medication adjustments, and for any issues RN had with interpreting PA pressure results
  - PA role also consisted of expanding implementation of CM into appropriate pts with left ventricular assist devices (LVADs). We increased our number of LVADs with CM from 7 to 14. PA served as point person for LVAD team regarding PA pressure reporting

- **HeartLogic (HL)**
  - PA role was to monitor HL values weekly. This consisted of logging into Boston Scientific site for data access. On average PA would respond to 6-8 pts weekly who were in “alert status” and at risk of HF exacerbation
  - In the year prior to HL monitoring as compared to the year post monitoring, admission rates for pts implanted with ICDs with HL technology were reduced by 50%

- **Zoll HFMS patch**
  - PA role was to identify pts who may benefit from patch and prescribe for them out of HF clinic
  - PA then monitored trends weekly and adjusted meds and/or saw pts in clinic as needed based off alerts



DISCUSSION

- We successfully implemented a PA into the HF RM team with excellent results
- We saw evidence of increased patient enrollment (CardioMEMS and Zoll) and reduced HFH (HL)
- We have multiple new implantable and wearable technologies that are entering the HF RM space in the coming months and years
- RM is an area that is prime for APP growth and leadership
- My role as a PA on the HF RM allows me to serve as a medical decision maker but also as a go between and resource and patients, RNs, and providers
- Our current plan is to expand our HF RM team (as we incorporate new technologies) with several APPs (all of whom will split clinic and RM time) and an APP RM team lead
- We need to continue to grow and evolve along with track our outcomes with our multiple HF RM technologies

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