Nurse Practitioners and Health Care Teams’ Pivotal Role in Remote Monitoring Novel Infrastructures: A Performance Improvement Initiative System

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Abstract

Implementing innovative infrastructures for patients implanted with wireless LINQ™ ILRs to promote understanding of new technology while providing RM connectivity prior to hospital discharge for a seamless transition to home activated connection.

Background

Wireless LINQ™ implantable loop recorders (ILRs) send daily arrhythmia data once “paired” to the remote monitor (RM); needing registration to manufacturer’s website for data capture to avoid connectivity gaps thus providing up-to-date arrhythmia information, which can impact clinical decisions for optimal patient care. Health care infrastructures lag in updated communications and understanding of novel technologies in cardiac implantable electronic device (CIED) pts.

Objectives

Implementing innovative infrastructures for pts implanted with wireless LINQ™ ILRs to promote understanding of new technology while providing RM connectivity prior to hospital discharge for a seamless transition to home activated connection.

Methods

A Lean Sigma project (Medtronic, Minneapolis, MN) was designed for Same Day Medicine unit and nursing staff to help integrate new technology into existing routine for best practices application and workflow standardization. An initial pt cohort implanted with ILRs was chosen for project in February 2014. Nursing staff had intense introduction and education to technology, device pairing via analog lines, and pt education for device fluid understanding. Nursing staff educated pts while “pairing” ILRs to the RM “connected”.

Between February & August 2014, our initial cohort (N=100), age 66.3 ± 13, male 67%, ILRs were “paired” prior to discharge with verified connectivity follow-up in 24 hours (81%), 1 month (100%), 6 months (99%) and at 12 months (98%).

APPLICATION TO PRACTICE

Innovative technologies in telemedicine impact patient follow-up practices. A paradigm shift in CIED care, with the advent of wireless loop recorders with daily data, obligates institutions to design and facilitate connectivity infrastructures for on-going data acquisition and review. Nurse practitioners can deliver up-to-date, appropriate, team-guided arrhythmia care. New technologies can be barriers to all parties involved. Infrastructures-in-place can deliver prompt clinical care to LINQ™ pts.

Results

Between February and August 2014, our initial cohort (N=100), age 66.3 ± 13, male (67%), implanted with ILRs were “paired” prior to discharge with verified connectivity follow-up in 24 hours (81%), 1 month (100%), 6 months (99%) and at 12 months (98%).

Diagnoses included cryptogenic stroke (14%), syncope (16%), palpitations (3%), atrial fibrillation/flutter monitoring (26%), and atrial fibrillation management (39%) with 31 patients having ablation therapy (79%).

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A Performance Improvement Initiative Project in February 2014. SDM nursing staff underwent an intensive introduction and education to technology, device pairing via analog lines, and patient education to provide device fluid understanding. In turn, nursing staff educated patients while “pairing” ILRs; discharging patients “connected”.