Remote cardiac monitoring:
- Reduces hospitalizations
- Prevents atrial fibrillation (AF)-related strokes
- Reduce mortality

Implantable loop recorders (ILR) are a large and growing proportion of cardiac implants.

ILR devices generate enormous amounts of data:
- Data can be vital in preventing morbidity/mortality
- False positives also common

Timely evaluation of data is key to interventions

Most remote monitoring is manual with complicated workflow.

Methods

Data obtained from automated remote follow-up of CIEDs utilizing PaceMate™ software technology.

30 day data capture window in October/November 2017.

Analysis included:
- Frequency of events and downloads for all devices and by device type.
- ILR device false positives adjudicated by IBHRE technician interpretation.

Results

1441 patients were followed.
- 253 (17%) ICDs
- 682 (47%) PMs
- 182 (12.6%) BIV ICDs
- 37 (2.6%) BIV PMs
- 287 (16.4%) ILR

1247 total transmissions were received:
- 719 (57.6%) transmissions due to a perceived event
- 528 (42.4%) due to routine/scheduled remote follow-up.

ILR:
- 342 transmissions (27% of all downloads, most by device)
- 179 false positives (52%)

ILR transmission rate = 144% (1.44 transmissions/device)

Implications

Devices produce large quantities of data, half from potential actionable events.

The volume, as well as downloads occurring after clinic hours present challenges to device clinics.

Software-based monitoring can identify and process true events allowing better and more timely monitoring of patients.

Conclusions

ILR were 17% of devices but produced 27% of transmissions.

Half of transmissions are triggered by a perceived event.

About half the transmissions from ILR devices are true positives.

Purpose

To demonstrate the potential advantages of an automated, software-based solution that employs artificial intelligence (AI) and IBHRE certified techs in the management patients with ILR devices.