To Fib or not to Fib: Misdiagnosis of Atrial Fibrillation on Telemetry: Case Presentation and Root Cause Analysis

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To Fib or Not to Fib: Misdiagnosis of Atrial Fibrillation on Telemetry

Case Presentation and Root Cause Analysis

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CASE PRESENTATION

A patient with a complex past medical history was admitted to a community hospital with symptoms of stroke, and he was found to have multiple acute cerebral infarctions on MRI.

He was transferred to Jefferson for further management, and he was admitted to a telemetry unit.

Morning and afternoon EKGs showed normal sinus rhythm. PGY1 notes atrial fibrillation on review of telemetry alerts. Heparin infusion started.

Cardiology was consulted, and they determined that the atrial fibrillation alert was actually from the day prior to when this patient was admitted.

Summary of Error: The patient was started on anticoagulation for atrial fibrillation; however atrial fibrillation was not present.

ROOT CAUSE ANALYSIS

PROTOCOLS

- Practice variation between telemetry units
- No standard protocol for admitting/discharging patients

PATIENT

- Health literacy
- Patient education and advocacy for themselves
- High index of suspicion for AF due to embolic stroke

SUPERVISION/DUPLICATE CHECK MODELS

- RN/MD communication
- Confirmation bias

INDIVIDUAL

- Lack of formal telemetry training in medical education
- Previous patient was not discharged from telemetry.
- Adding patient identifiers is not mandatory for monitor to function. Typically only last name is used.

WORK ENVIRONMENT

- No dedicated personnel for management of telemetry
- 12-lead EKGs showed sinus rhythm - lack of confirmation of telemetry findings
- Patient name can be changed without having to discharge patient from telemetry.

GOALS FOR IMPROVEMENT

GOALS:

1. To standardize the process for telemetry admission and discharge so that patients are always correctly identified on telemetry.
2. To incorporate telemetry into medical education curricula so that providers can accurately identify arrhythmia events.

SMART Aims:

By the end of the 2017 academic year:

1. 90-percent of nursing staff on the inpatient medicine units will know the procedure for telemetry admission and discharge;
2. 90-percent of internal medicine residents will be able to describe a process for telemetry interpretation.

PROPOSED INTERVENTION

1. Create a standardized module for nurses which will teach the telemetry admission and discharge process
2. Develop an algorithm for telemetry interpretation to be used by house staff.

NEXT STEPS

1. Partner with nursing leadership on telemetry units to implement education sessions on the telemetry admission/discharge process.
2. Incorporate telemetry interpretation into intern orientation and signoff requirements.
3. Survey medical staff to assess completion of the training module as well as its implementation in clinical practice.
4. Continue to encourage providers to report telemetry errors through the Error Reporting System, and ask those who interpret telemetry often (i.e. cardiology) for their assessment of the type and frequency of telemetry errors to monitor future issues.