



Keeping Watch: Reviewing Recent Telemetry-Related Events in Pennsylvania Facilities

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In the inpatient setting, cardiac telemetry monitoring (or continuous cardiac monitoring) enables healthcare workers to quickly detect and diagnose cardiac arrhythmia.¹ Previous research has demonstrated that patients at high risk for a cardiac-related event can benefit from telemetry monitoring.² However, telemetry monitoring has also been associated with negative patient outcomes due to overuse,^{3,4} alarm fatigue,^{4,5} and other telemetry-related complications.⁶

A 2019 paper published in *Patient Safety* reviewed 558 reports submitted to the Pennsylvania Patient Safety Reporting System (PA-PSRS) over a five-year period that were related to telemetry monitoring.⁶ In this paper, telemetry monitoring events were associated with user errors, communication issues between healthcare providers, equipment malfunctions, and alarm issues.⁶

Telemetry-related safety events continue to be reported to PA-PSRS. A review of recently submitted event reports describe mismatches between patients' telemetry box numbers and central monitoring, prolonged connections to telemetry boxes with dead batteries, failure to connect patients to telemetry monitoring as ordered, and lack of response to telemetry alarms. The most recent telemetry-related reports include both incidents and serious events and show that telemetry-related safety issues remain a persistent patient safety issue. Notably, at least two recent events resulted in patient deaths.

This recent exploration shows that despite previous research identifying telemetry-related patient safety events and providing risk mitigation strategies, events similar to those summarized in the 2019 [article](#)⁶ are still occurring. The Patient Safety Authority (PSA) has provided [telemetry monitoring tips](#)⁷ to mitigate these types of events and a [toolkit](#)⁸ for investigating telemetry-related events. PSA encourages facilities to review these materials to reduce the risk of encountering future telemetry-related events. Examples of mitigation tips from these resources that are relevant to the reports described above include:

- Review the practice standards for electrocardiographic monitoring in hospital settings by the American Heart Association (AHA).¹
- Include telemetry monitoring verification as a standard part of the hand-off process.⁷
- Create a process to identify patients who have orders for telemetry but are not being monitored.⁷
- Inventory all telemetry batteries.⁷
- Determine the battery life for each type of battery.⁷
- Develop a consistent schedule around battery changes.⁷
- Reduce false and clinically irrelevant alarms by preparing the skin when electrodes are applied, changing electrodes per a defined schedule, and individualizing alarms to each patient.⁷

Telemetry monitoring remains a critical part of inpatient care,^{1,2} but ongoing system and human factors continue to pose a risk to patient safety.³⁻⁶ Consistent application of evidence-based standards, proactive maintenance, and staff education can reduce preventable errors and enhance monitoring reliability to improve patient safety.³⁻⁷

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