

Quality Improvement Initiative in Enhanced Provider Communication for Telemetry Optimization

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Problem

- Despite American Heart Association (AHA) guidelines, cardiac telemetry monitoring (CTM) remains overused, leading to alarm fatigue, unnecessary testing, prolonged treatment, and increased costs
- Site: Tertiary Care Hospital
 - Average 46% of all patients on telemetry
 - Hospital-wide goal: <40%
- Unit selected for high telemetry usage: 18-beds
 - Goal to reduce average daily telemetry usage to <40% of patients.
- Root cause analysis identified inefficient CTM discontinuation communication as an addressable issue.

Purpose

This Quality Improvement (QI) project aims to enhance notification of providers to when patients are overdue for CTM discontinuation.

Goals

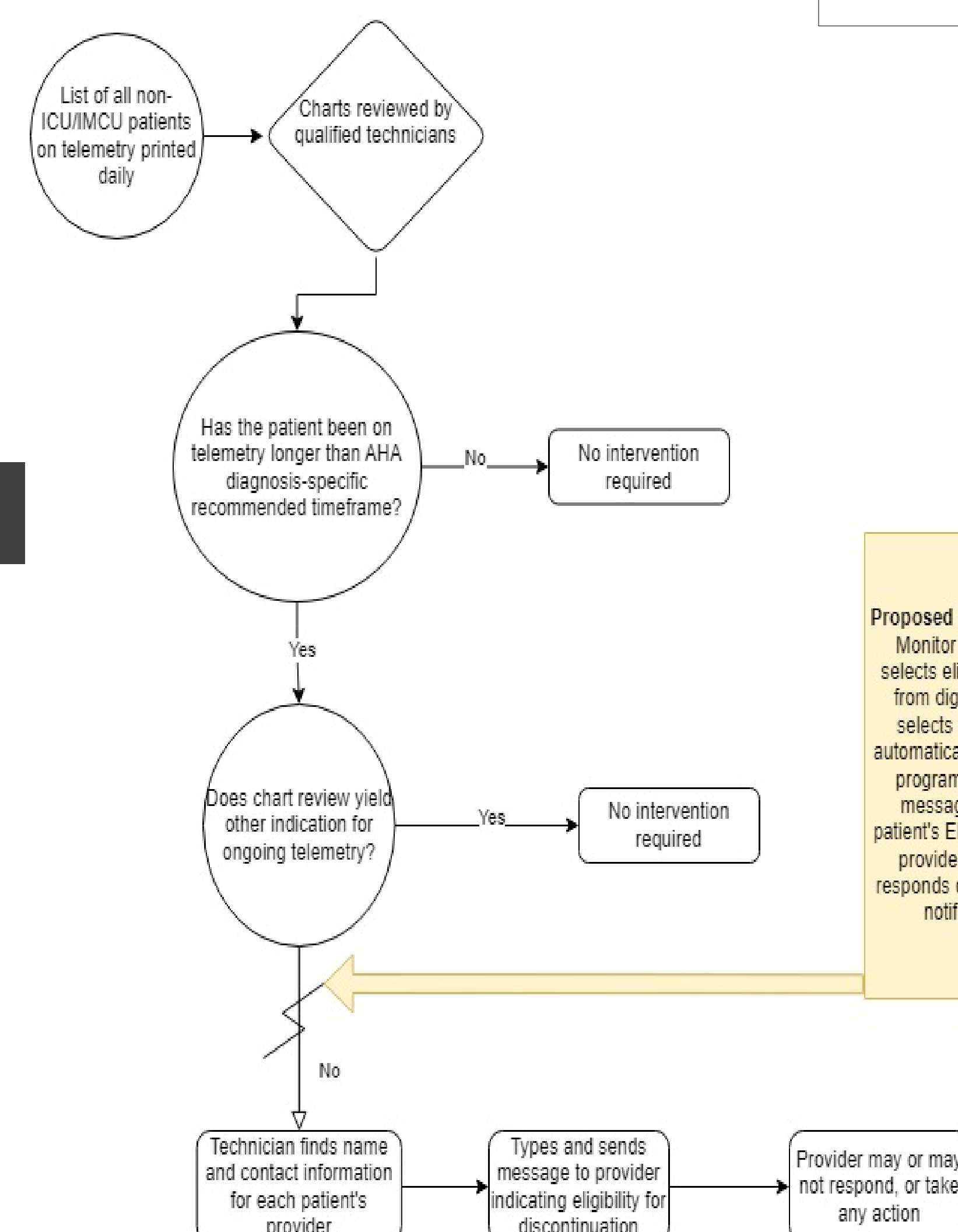
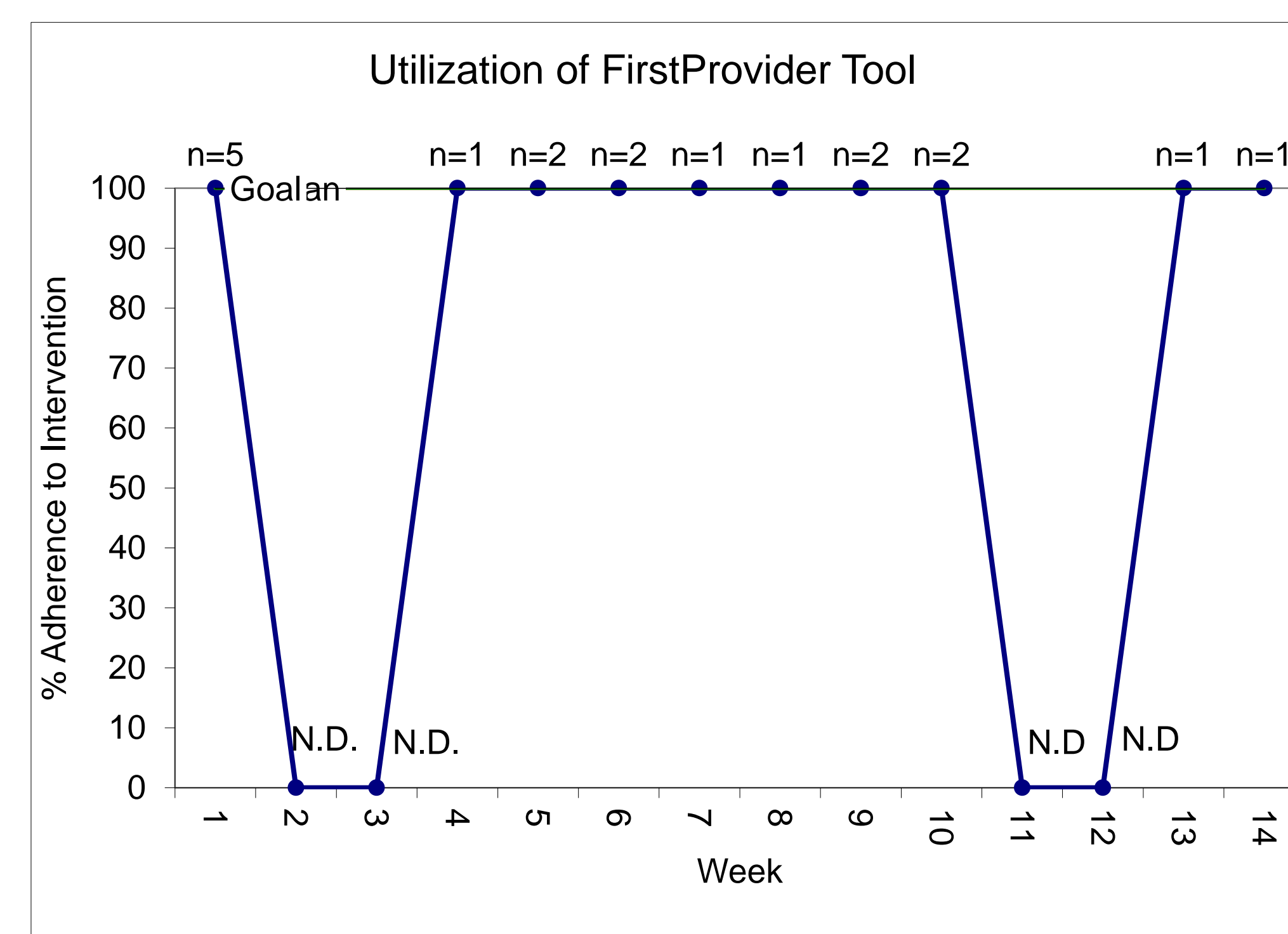
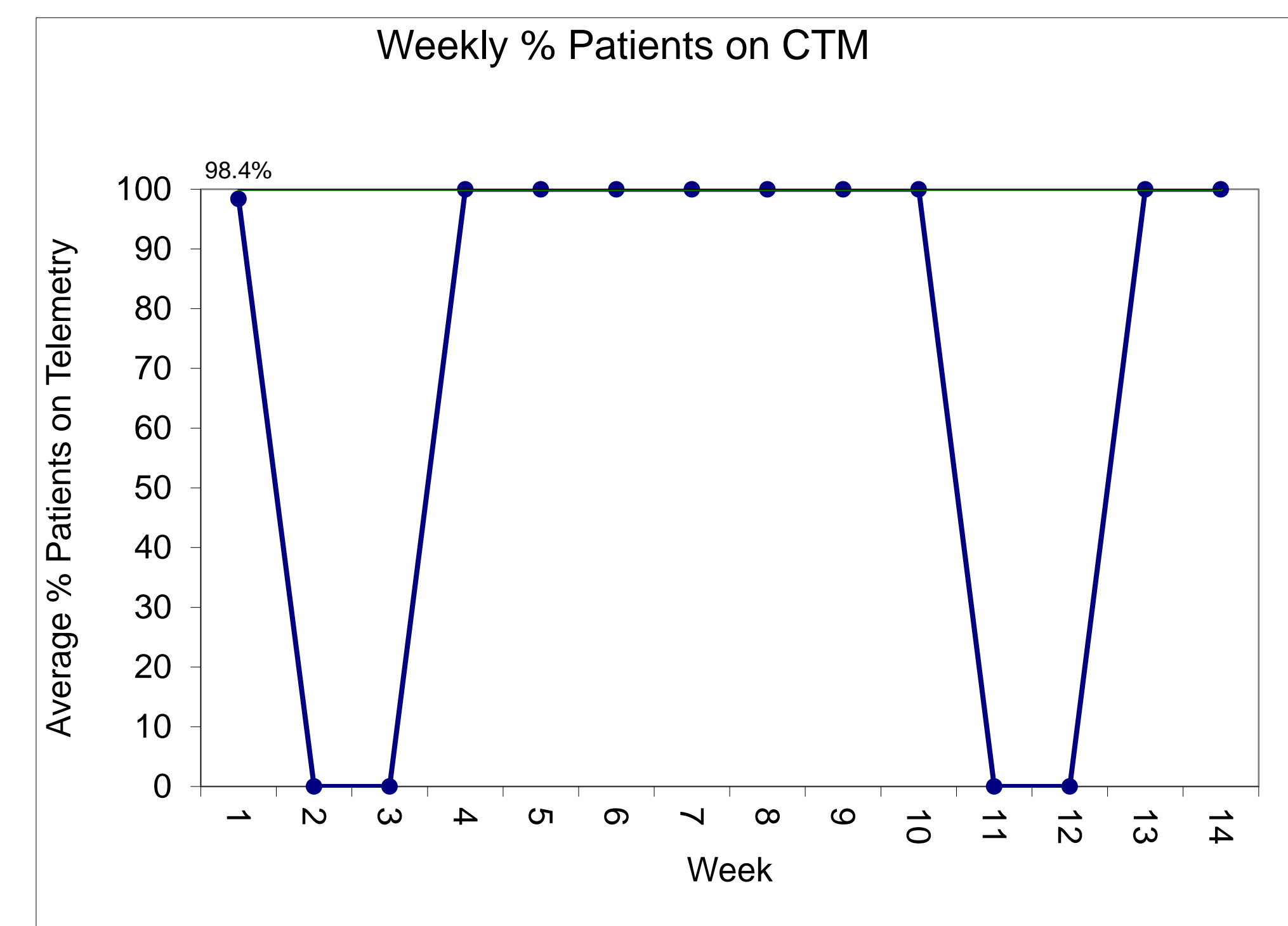
- Outcome measure:** Total unit telemetry usage (weekly average % patients on CTM)
 - Goal: <40% weekly patients on telemetry
- Process measure:** Utilization of the FirstProvider communication tool when indicated (weekly % utilization of the tool)
 - Goal: 100% utilization
- Structure measure:** Evaluate the successful creation and usability of the intervention.
 - Goal: 100% staff understanding based on educational session

Methods

- Communication:**
 - FirstProvider** – EHR tool simplifies finding the most appropriate provider
 - TigerConnect** – pre-programmed message sent to selected providers when patients were eligible for CTM discontinuation
- Education:**
 - One pre-intervention session for staff preparation
 - QR-code tracking for compliance monitoring
 - Intervention went live in Fall 2024

Results

- Education Session**
 - Monitor technicians (MTs)** trained on use of TigerConnect and FirstProvider in context of project
 - 100% of participants did not have further questions
- Intervention and Tools Usage**
 - MTs used the tool for 100% of patients who were deemed eligible upon chart audit
- Weekly Census**
 - No changes in telemetry utilization
 - 98% patients had CTM orders during first week
 - 100% patients had CTM orders each subsequent week



- CTM Utilization**
 - Average 99.84% telemetry usage on the unit for the 10 weeks with reported data
 - Goal of <40% was not achieved
- Discontinuation Eligibility**
 - Fewer patients were identified as eligible for telemetry discontinuation over time
 - 50% decrease in number the of eligible patients from the first to last week.
- Missing Data**
 - Weeks 2, 3, 11, and 12 did not yield any data (N.D.)
 - Due to staffing constraints/holidays
 - No MTs available: no chart audits performed during these times.

Discussion

- Limitations:**
 - Competing hospital priorities, particularly expansion of telemetry to all units in June 2024
 - Unit became designated telemetry unit, contributing to continued high telemetry usage
 - Information-technologies resources limited to students
 - Literature suggests use of combined Electronic Health Record (EHR) pop-up and policy adjustment
 - Both were unfeasible for this QI project; methods slightly diverged from literature recommendations
 - Decline in patients eligible for CTM discontinuation may suggest improved adherence to AHA guidelines
- | Strengths | Weaknesses |
|---|--|
| <ul style="list-style-type: none"> Low-cost intervention Reduced workload for MTs Project aligns with culture & hospital stated values | <ul style="list-style-type: none"> Telemetry expansion/ competing priorities Designated telemetry unit Necessity of IT help Discouraging project results |

Conclusions

The QI project did not significantly impact telemetry rates despite adherence to the intervention protocol.

- Next Steps:**
 - Consider system-level interventions, like integrated EHR decision support tools and policy revision
 - Collaboration with hospital administration to align goals
 - Implement change on a non-designated telemetry unit
 - Evaluate current efforts (existing pop-ups, policy on CTM discontinuation) and priorities for change

Acknowledgements & References

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