Measuring and Improving the Fidelity of the Event Reporting Process

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Background & Problem

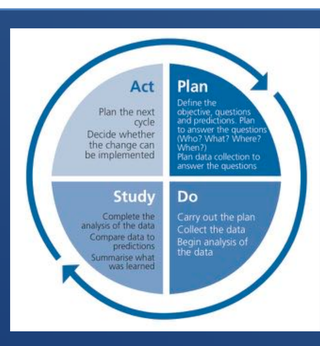
- Voluntary Event Reporting promotes the detection and prevention of patient safety events and quality problems.
- The Agency for Healthcare Research and Quality (AHRQ) stipulates that an effective event reporting system has: 1) a **structured mechanism for reviewing reports**, and 2) a **timely response,** so that findings are quickly disseminated.
- With the increase of voluntary event reporting in the intensive care units at UT Southwestern Hospitals, there is a concern that reporting systems are not capable of processing a greater volume of reports.

Aim

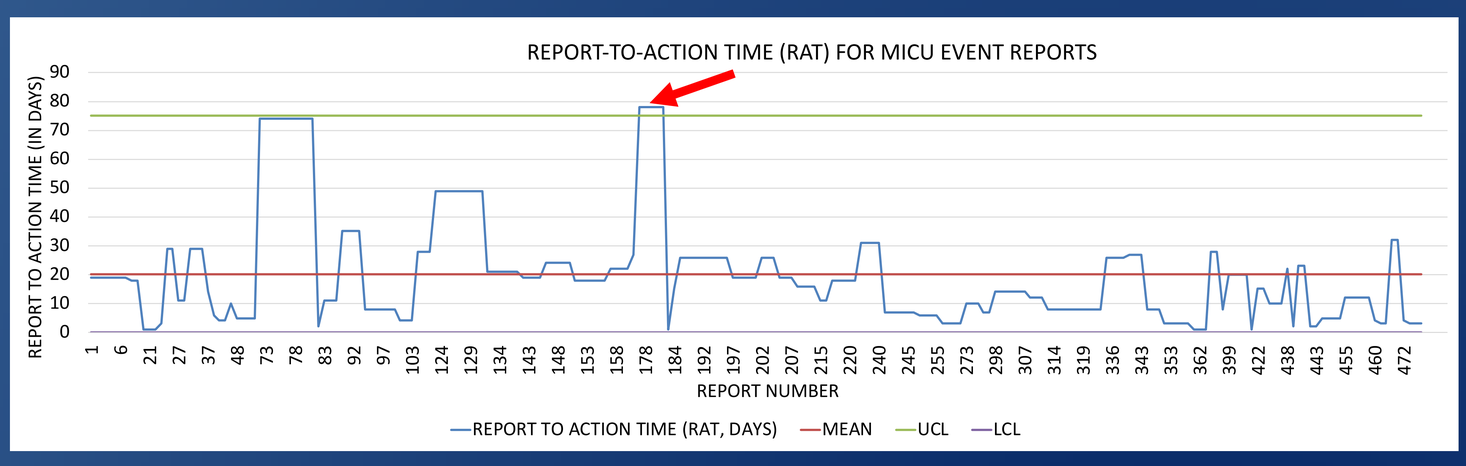
1. The long-term aim of this project is to decrease CVICU unit response time to voluntary event reports (Report-to-Action Time) by 50% by the end of 2018.
2. The immediate aim of this phase of the project is to measure the fidelity of a hospital unit's event reporting process using a valid metric (by August 1, 2018).

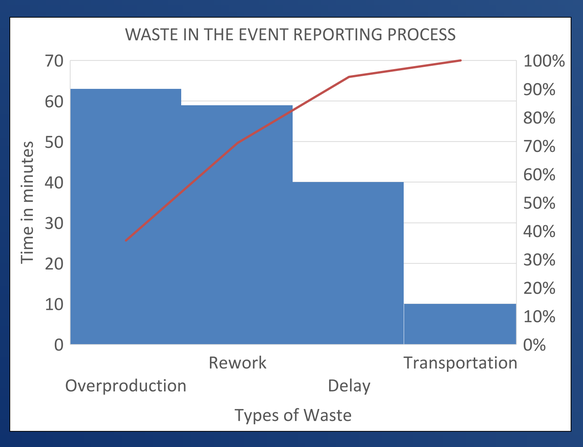
Quality Tools

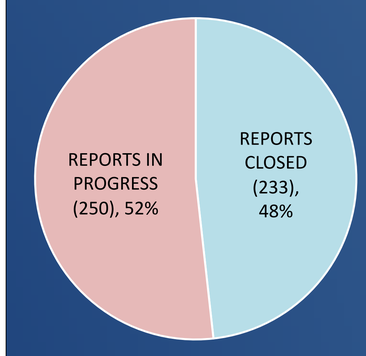
MONTH	REPORT COUNT (N)	MEAN REPORT-TO-ACTION TIME (RAT, IN DAYS)	EVENT REPORTING FIDELITY QUOTIENT (ERFQ)
MARCH	56	25	2.28
APRIL	118	22	5.43
MAY	55	12	4.49

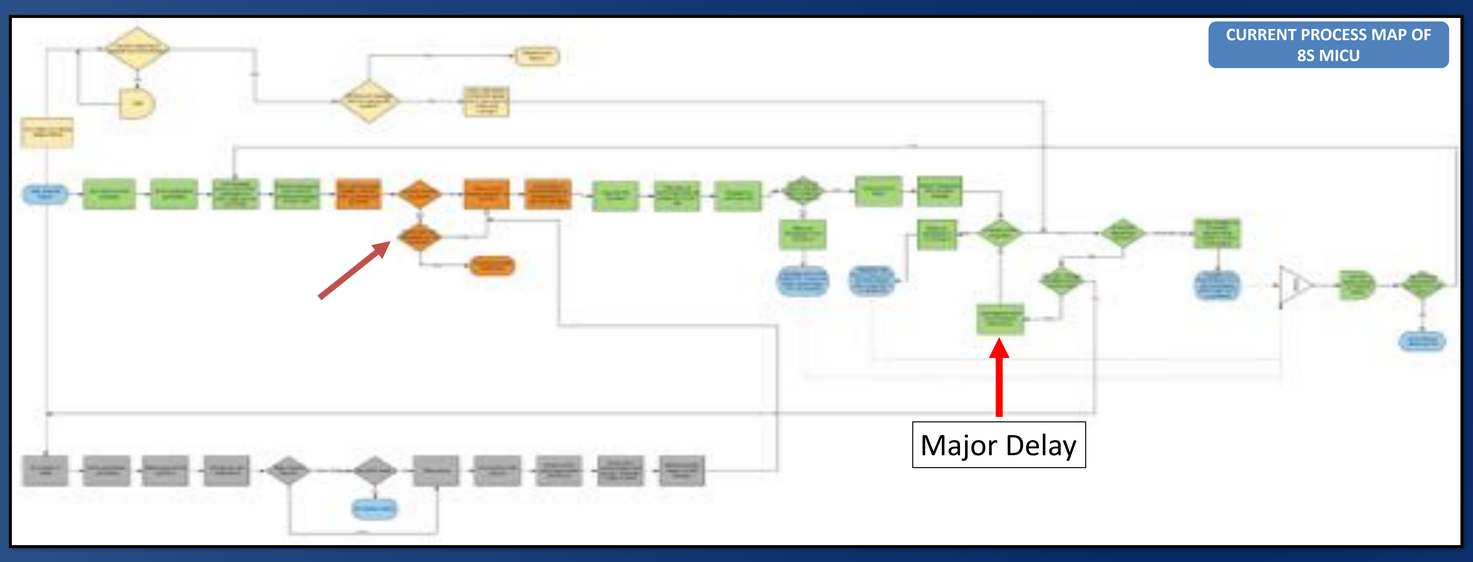


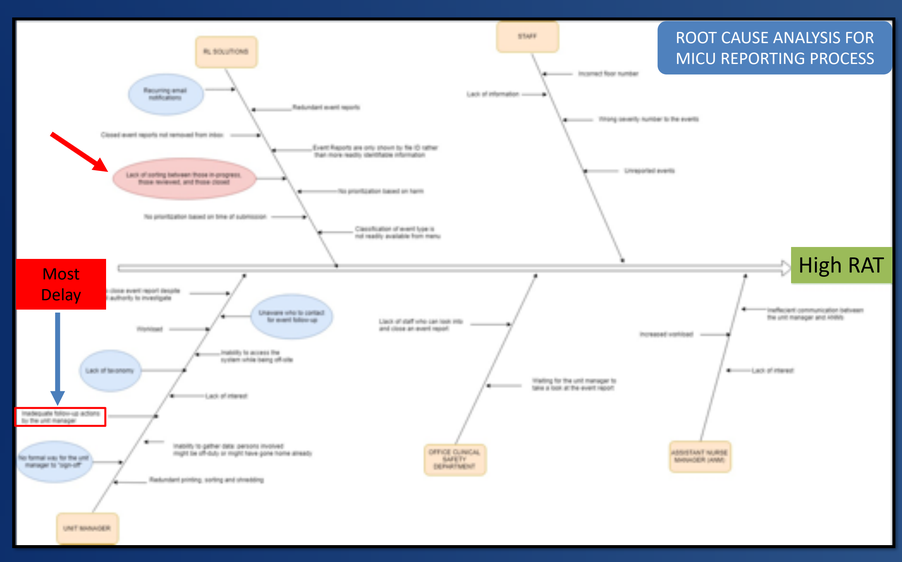
Plan	• Collect baseline data in the MICU • Develop robust measures of event reporting process: Report Count (n), Report-to-Action Time, and ERFQ • Map the event reporting process in the MICU
Study	• Is the event reporting process effective? • Is the process controlled?
Do	• Root cause analysis of increased RAT and process variation
Act	• Standardize event reporting process in MICU and develop unit manager training for event reporting











Measures and Methods

A) Measures:

1. **Monthly Event Count** (outcome): Total number of event reports submitted in a hospital unit in a 30 day period.
2. **Report-to-Action Time [RAT]** (outcome): Number of days between submission of an event report and the Office of Clinical Safety at CUH marking the report "closed" after completing required follow.
3. **Event Reporting Fidelity Quotient [ERFQ]** (outcome): Number or Event Reports in a month / Mean Report-to-Action Time for the month
4. **Percentage of Reports Closed in a Month** (outcome): **Numerator**=Number of event reports that were submitted in a month in a given unit **AND** were closed by the Office of Clinical Safety. **Denominator**= Monthly Event Count.

B) Intervention: Our root cause analysis indicates that adjustments in the event reporting software (RL solutions) should eliminate redundant steps in the reporting process.

- Because the process is uncontrolled, our primary intervention is to standardize the event reporting process. This new protocol will be integrated in a unit manager training module on event reporting to facilitate implementation of the new process

C) Predictions: The improved process, which increasingly relies on RL solutions, should improve unit manager workflow, and unit manager training should facilitate standardization of the event reporting process. Both of these changes are likely to decrease RAT and lead to a subsequent increase in ERFQ.

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Results/Conclusions

- The mean ($\bar{x}$) RAT in 8S was 19.7 days (n=233, s=18.3) between March and May of 2018.
- The process is uncontrolled, with 5 points outside of 3 standard deviations (reports 177,178, 179, 180, 181 with a RAT of 78)
- Only 48% of the total reports are closed ('in-progress' > 'closed')
- The Event Reporting Fidelity Quotient (ERFQ) increased by 141% from March 2018 to April 2018 (from 2.25 to 5.43), while the event count only increased by 111%.
- The ERFQ is significantly higher in May 2018 than in March 2018 (increase of 99.6%) despite an almost identical event count (55 vs. 56). This is due to changes in the RAT.
- Based on initial sample data, the ERFQ reflects variations in the event reporting process.
- Financial Impact: Based on a unit manager's average annual salary and non-productive time = $8350 per annum
- Future Direction: Collect more historical data from multiple CUH units (7s, 8s, 9s, etc.) and continue monitoring this data for trends. Include additional event report markers such as harm level.
- Next Improvement Cycle: Develop standardization protocol and unit manager training. Following implementation of the protocol in the MICU and CVICU, measure improvement in the event reporting process (RAT, ERFQ)

Lessons Learned

- **Positive Factors:**
  1. Electronic event reporting system: this project used response time as a metric for evaluating event reporting. The electronic reporting system made it possible to accurately collect time data, since the software retains submission logs.
  2. Unit Manager Cooperativity: provided an in-depth explanation of the event-reporting process. This information was very useful during the mapping process.
- **Barriers:**
  1. Multiple departments: the event reporting process involves multiple departments which complicates information localization.
  2. Sensitive nature of event reporting data: obtaining event reporting data proved to be a significant barrier because of its sensitive nature.
- **Lessons:**

The event reporting process is complex and requires coordination between multiple departments. Nonetheless, the unit manager retains most of the responsibility for reviewing event reports within his or her hospital unit. As a result, training unit managers on dealing with event reports should impact the process significantly. Secondly, the event reporting review process is not standardized across the hospital, in order to allow for unit manager flexibility. However, this results in significant increases in RAT and creates variability in the process.

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