ICU Rounds Redesign

The Problem

Interdisciplinary ICU rounds represent a critically important time for information consolidation and processing, and development and communication of care plans for critically ill patients. Rounds consist of multiple dynamic and complex interactions, handoffs, and updates during which inconsistent communication of information and variable inclusion of key stakeholders leads to suboptimal and inefficient implementation of the patient plan of care, thereby potentially exposing patients to preventable harm.

Aim/Goal

The goals of this project are:

1. To understand sources of variation leading to suboptimal rounds through surveying frontline staff and observing, mapping and comparing rounds across BIDMC's ICUs.
2. To engage frontline staff in using Lean principles to develop interventions for the issues identified as leading to suboptimal rounds.
3. To pilot and refine these interventions through a series of rapid experiments in ICUs across BIDMC
4. To develop a rounds "toolkit" of successful interventions that creates standardization of core principles and expectations while also remaining flexible and responsive to the different environments and requirements of each unit
5. To map the post-intervention rounds process in each unit to assess for improvement in inclusion, engagement, communication and efficiency

The Team

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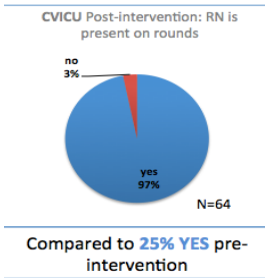
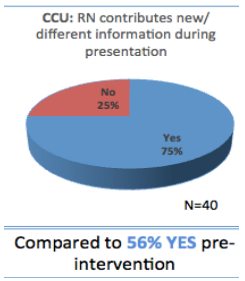
The Interventions

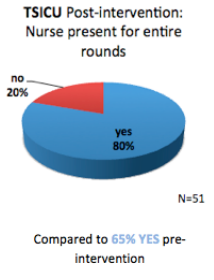
- **Fishbone diagram:** posted on all units - gathered free text data on what frontline staff saw as barriers to an optimal rounding process
- **Survey:** 18 question survey of frontline staff informed by data from the fishbone diagram, sent to 900 staff on all units with 236 respondents
- **Observations:** Developed a detailed, standardized rounds observation tool and did 120 baseline observations of rounds across units
- **Multidisciplinary workshop:** Held multidisciplinary meeting utilizing Lean principles to present the subjective and objective data to frontline staff, who then plotted barriers to effective rounds on impact/difficulty matrices, then split into 4 groups which each targeted one high-impact, low difficulty problem to address using lean principles and rapid experiments
- **Rapid experiments:** series of rapid experiments to address each identified issue with subsequent observations, data analysis and intervention modification
- **Generation of a preliminary toolkit**

The Results/Progress to Date

- Four groups of frontline staff selected the following issues to address after analyzing the baseline survey and observation data:
  - **Group 1:** The order of rounds is not clear to staff
  - **Group 2:** Uninterrupted nursing presence on rounds is suboptimal
  - **Group 3:** There is no clear, consistent time for RN input on rounds
  - **Group 4:** Teams sometimes fail to introduce themselves to the patient or family when entering a room
- Following interventions were designed:
  - **Group 1:** Pilot in the **TSICU** → Overnight resident uses information about acuity and new admission status to pre-order rounds and writes this on the board before rounds
  - **Group 2/3:** Pilots in the **CCU, SICU** and **CVICU**
    - **CCU:** Hard stop for nursing input/ concerns before patient exam
    - **SICU:** Initially RN summary of plan → modified to MD summary of plan of care and hard stop for RN input before patient exam
    - **CVICU:** RNs invited to participate in 6am midlevel rounds
  - **Group 4:** Two former ICU patients on BIDMC's Patient Family Advisory Council will be interviewed about their experiences with communication during critical care grand rounds. This will be video taped and made available to staff. (Also addressed by Room Entry Project)
- Results showed:
  - Increased RN presence, engagement and input of new/different information of rounds.
  - **Miscommunications/ clarifications** during the **summary of the plan of care in 48%** of observations (N=60)







Lessons Learned

- Process standardization requires detailed mapping of current processes and is critically dependent on input from frontline staff
- Toolkits for process standardization must be flexible and responsive to the different needs of different dynamic ICU environments

Next Steps/What Should Happen Next

- Refine toolkit for implementation across units
- Post-intervention survey and rounds observation

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