

## Introduction

- Physician led multidisciplinary rapid response teams can potentially reduce adverse patient outcomes through early recognition of deteriorating clinical status, prompt intervention with standardized protocols and collaborative workflows 1,2.
- The Halifax Critical Assessment Team (HaliCAT) responds to emergency situations within the hospital.
- The process for notifying physicians of emergent events through paging was found to be complex and an inefficient system.
- Technology options that could streamline physician notification of changes in patient status were examined.

## Objectives

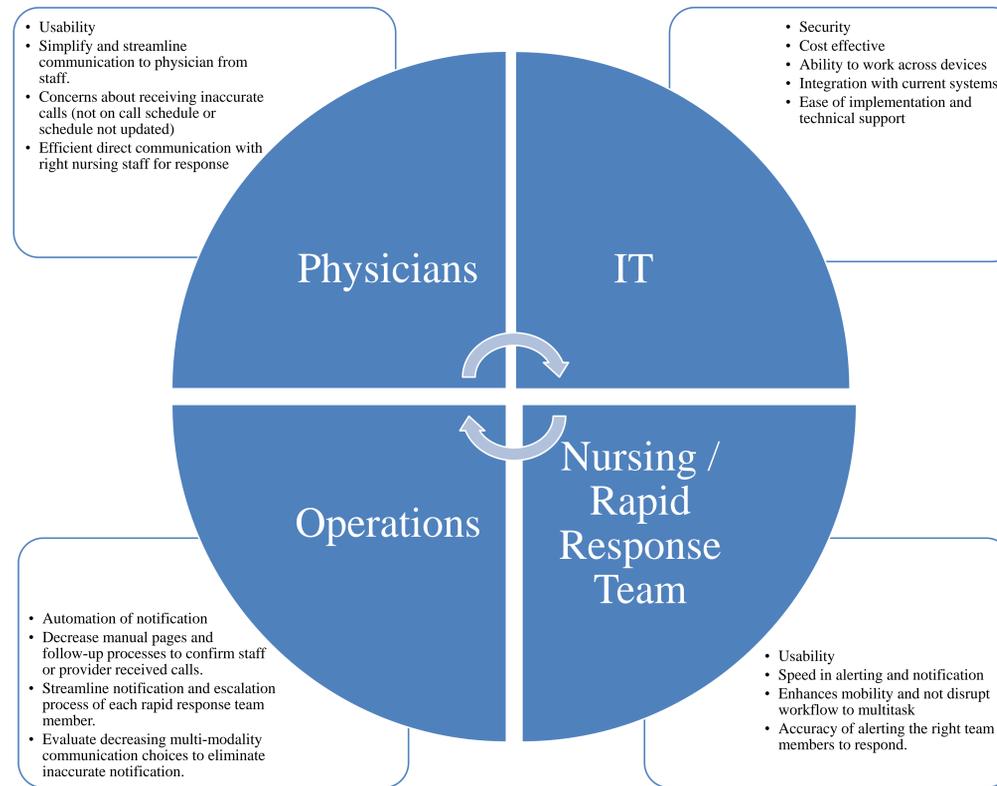
- To describe the decision making process of choosing a secure messaging voice-activated alerting and communication system.
- To present the adoption of new communication technology by mapping the current state terrain identifying barriers and by designing effective communication process for future state change management for coordinated deployment.
- To review the collaborative approach between clinicians, physicians, operations, and IT in merging optimized workflow processes in product development of an effective rapid response notification system.

## Methods

A multidisciplinary committee was formed to ensure that all stakeholders were represented and fully participated in the decision making process.

Current State/Identified Challenges	Opportunity/ Solutions
Communication Inefficiency	Automation
Duplicative efforts in notification	Communication Accuracy and Efficiency
Complexity in coordination of calls and alerting	Security
Physician leading HaliCAT not on call schedule or schedule not updated	Usability Versatility
Overhead pages may be missed/not heard	Enhanced provider satisfaction
Inconsistency process of notification	Improved coordination of care with technology
Multiple communication notification systems and devices	Cost Effective

## Results



In mapping the process and workflows, opportunity identified to

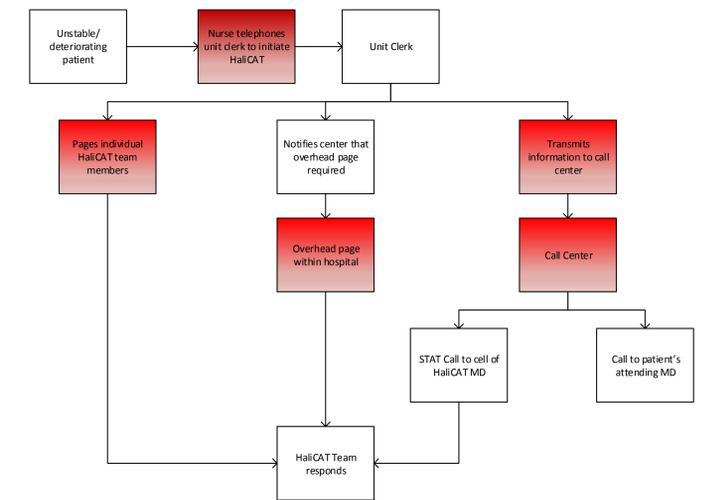
- Improve the notification process
- Decrease the time between recognition of patient deterioration and the communication alert to notify the HaliCAT physicians and team.



### References

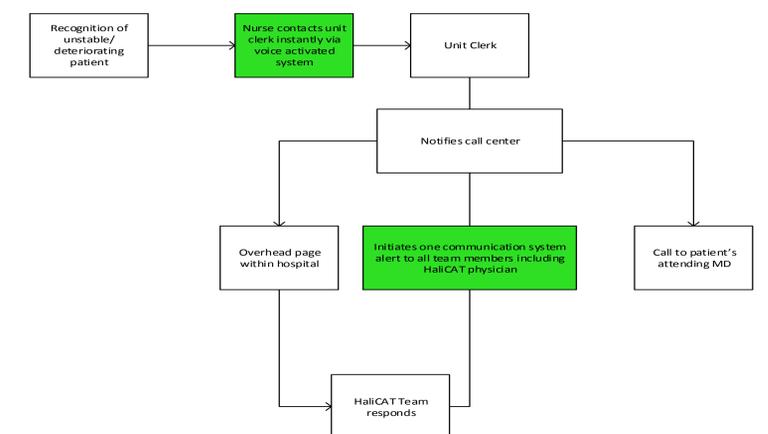
- Barwise A et al. (2018). Delayed Rapid Response Team Activation Is Associated With Increased Hospital Mortality, Morbidity, and Length of Stay in a Tertiary Care Institution. *Critical Care Medicine*; 44 (1): 54-63.
- Avis E et al. (2016). Rapid Response Teams Decreasing Intubation and Code Blue Rates Outside the Intensive Care Unit. *Critical Care Nurse*; 36 (1):86-90.

### Previous Workflow for Notification of HaliCAT to Team



Time: up to 10 minutes

### Current Workflow After Deployment



Time: < 1 minute

## Conclusions

- This process provides a good example of a multidisciplinary collaborative approach to determine a communication technology solution for a real world clinical problem to streamline the process, increase efficiency, increase accuracy and reduce time between recognition and response.
- Each of the stakeholders had different legitimate concerns and priorities that the technology needed to address.
- The next step is to continue to collect and analyze data, using both quantitative and qualitative methods, that can be used to review the process and to continue to optimize user satisfaction and effectiveness of rapid response notification system.