Qatar Early Warning System

Launched Across HMC

Early Detection Saves Lives

QEWS Steering Group and Project Team

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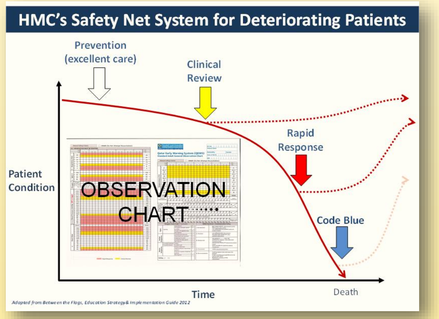
Introduction

Background

A significant body of studies have demonstrated that patients often exhibit signs and symptoms of clinical deterioration for several hours prior to cardiopulmonary arrest.[1]

Unintentional harm occurs to patients through failure to recognize and respond to the signs of clinical deterioration.[2] Therefore, there is a need to rescue patients early in their decline before a crisis occurs.

We describe the initial experience and results of the Qatar Early Warning System (QEWS), which is a key element of the HMC Quality Strategy



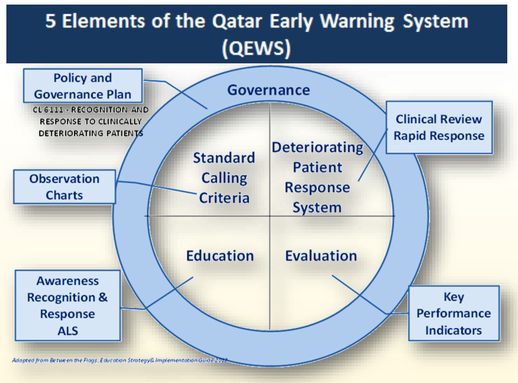
slippery slope[3]

Objectives:

•To reduce the rate of unexpected cardiac arrests outside ICU & Emergency by 20% over 2 years
•To increase Rapid Response Team (RRT) utilization to 30 calls per 1000 discharges over 2 years

Indirectly, this program also aims to provide a foundation on which to develop other safety systems, such as sepsis pathways.

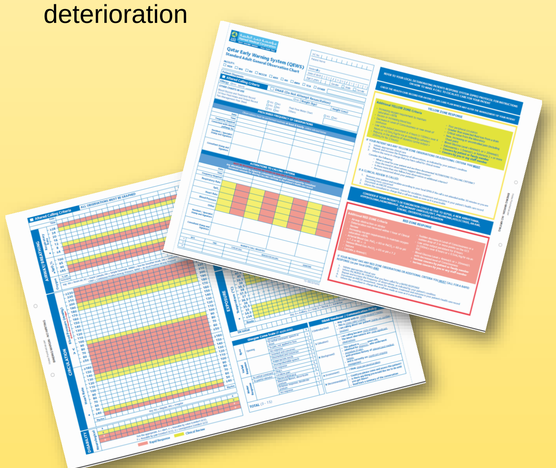
Methods



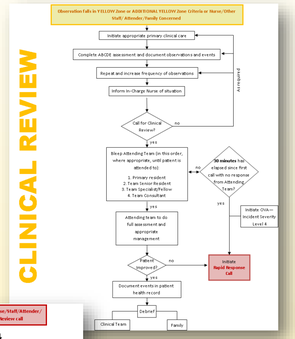
A systems approach was utilized to ensure effective delivery of the program across the organization – establishing and embedding 5 core elements into HMC's health system.

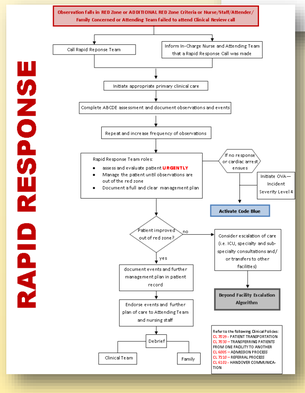
Governance. A corporate steering group and local governance systems for each hospital identified were established. Along with this, a corporate policy on the standards of managing deteriorating patients was authorized.

Standardized Calling Criteria. Evidence based track and trigger charts were identified and modified for local use. These were tested using a PDSA approach in various settings. Modifications were made to Cerner to alert clinicians to deterioration



Deteriorating Patient Response System. Clinical Review(CRT) and Rapid response (RRT) teams were identified and structured for each facility. Algorithms and activation pathways for CRT and RRT calls were also designed and localized per facility.





Education. A tiered approach to education was utilized:

- Level 1 – Awareness (eLearning, bedside teaching, didactics)
- Level 2 – ALERT
- Level 3 – Advanced Life Support

Evaluation. 2 KPIs were agreed to determine effectiveness:

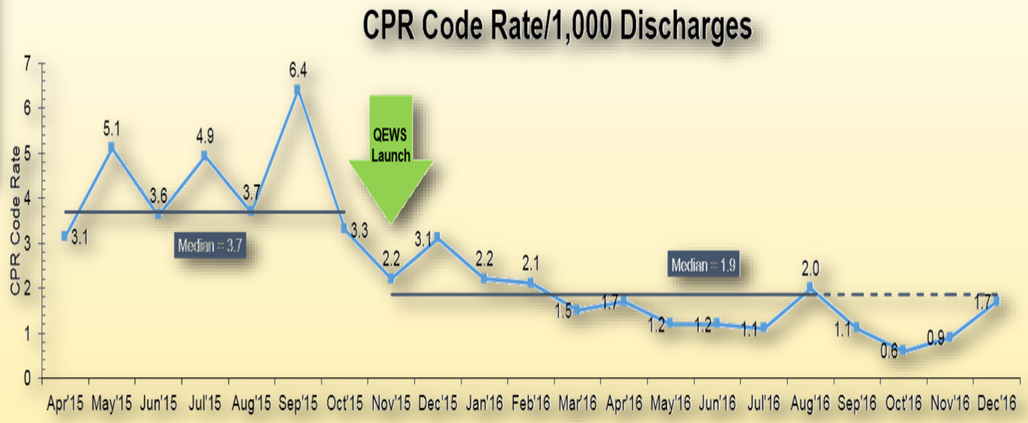
- RRT call rate per 1000 discharges
- CPR rate per 1000 discharges

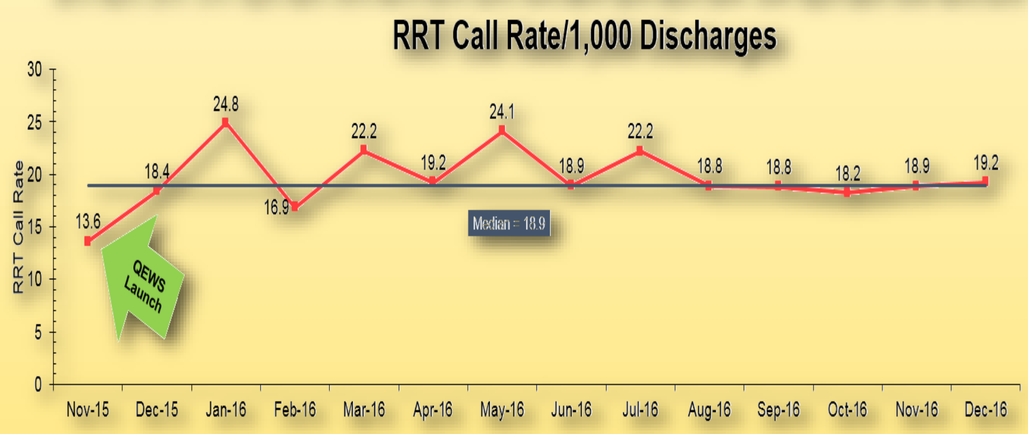
The system was implemented across all facilities in stages over a 7-week period (Nov-Dec 2015) in both paper and electronic formats utilizing PDSA methodology.

Results

There has been a ~***60% reduction in unexpected cardiac arrest*** across HMC since implementation as evidenced by median shift for code blue rate from 3.7 to 1.9 Codes per 1000 discharges.

The Average Rapid Response Team Calls was 20 calls per 1000 discharges during 2016 with range of 16.9 - 24.8 RRT calls per 1000 discharges





Conclusion

Implementing QEWS at HMC has provided its patients a safety net that allows for the early detection of deterioration, and prompt management and escalation of care.

The successful implementation of QEWS across HMC has provided a model for the design and development of other system wide transformations, such as HMC Sepsis Care Pathway.

References

1. Jacques, T., Harrison, G. A., McLaws, M.-L., & Kilborn, G. (2006). Signs of critical conditions and emergency responses (SOCCER): a model for predicting adverse events in the inpatient setting. Resuscitation, 69(2), 175–183.
2. Quirke, S., Coombs, M., & McEldowney, R. (2011). Suboptimal care of the acutely unwell ward patient: a concept analysis. Journal of Advanced Nursing, 67(8), 1834–1845.
3. Clinical Excellence Commission. (2008). Greater Metropolitan Clinical Taskforce, NSW Department of Health. Between the Flags Project.