

IMPACT OF RAPID RESPONSE SYSTEM

Director's blog

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THE IMPACT OF RRT & PACE SYSTEM ON OUR ICU

The NSW public health system has implemented a mandatory system called Between the Flags (BTF), comprising of 1) a single observation chart for acute care facilities, with a set of colour coded triggers for activating a rapid response team, 2) mandatory introduction of a rapid response system, 3) an education programme pertaining to recognition and

management of the deteriorating patient and 4) an audit and review process. This system-wide project is coordinated by the Clinical Excellence Commission.

(www.cec.health.nsw.gov.au). It followed the Garling Report on the Acute Care Health System.(*Garling P. Final report of the Special Commission of Inquiry: Acute Care Services in*

NSW Public Hospitals. Vol. 1–3. Sydney: NSW Government 27th November 2008). The audit and review process was not implemented at the same time as the interventions were “rolled out” and any results are not widely available.

Several Rapid Response System (RRS) models exist in Australia. There is debate over the “best” model. The St George Hospital has adopted the

1 Rapid Response System

2 Patient with Acute Condition For Escalation



prior to the introduction of BTF . Our ICU team (ICU registrar and senior nurse and orderly) attend Tier 2 calls 24 hours a day. PACE differs from the NSW state-wide BTF system. The PACE system has a single set of non – discretionary “track and trigger” criteria based on abnormal physiology with two levels of response. Our ward staff nominate the level of response required based on clinical assessment and observations recorded. Tier 1 response currently requires review by the admitting medical team (at least registrar level) within 30 minutes. Our PACE data indicates a significant number of responses occur by medical officers with experience below that of a registrar. Tier 2 requires an immediate response from the cardiac arrest team. Ie our ICU team. Additional resources were not allocated to implement the RRT for PACE.



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That is, there is not a separate “pod” of ICU staff available for PACE calls and a number of competing duties and pressures exist. We know that the peaks of PACE 2 calls occur during the morning ward round and in the early evening. This means ICU staff must leave the ICU and handover is interrupted.

The BTF system involves two “trigger” zones [yellow (early), red (late)] on the state-wide adult observation chart (SAGO). The response

time for yellow (clinical review) zone is within 30 minutes and the red (rapid response) zone requires immediate response. While also based on abnormal physiology , the zones have more “trigger criteria” or lower thresholds so involve greater utilisation of resources. Both systems have been established for over 12 months.

We have compared the impact of the 2 systems on our own hospital. We examined patient records to see how many would fall into the BTF criteria and followed these

patients to look at the incidence of death, cardiac arrest or ICU admission. Our results suggest some “yellow” zone thresholds are too “early”, BTF would involve additional RRS work with no additional outcome benefit demonstrated in our patient population. I believe further research should be conducted to determine the appropriate “trigger” and response for early deterioration.

There is still debate over the effectiveness of Rapid Response Systems including Medical Emergency Teams (P Chan et al Arch Int Med 2010;170(1):18-26 Rapid Response Teams A systematic review and Meta-analysis) and questions exist around the effectiveness and sustainability of a system wide change project. Braithwaite et al have studied a system wide intervention concerning culture and behaviour which promoted interprofessional collaboration and they have reported a failure in sustainable change in both.

Unresourced additional workload that has the potential to detract from other patient care may serve to alienate staff from imposed system wide projects.

We have already seen a downgrading of the Tier 1 PACE response to very junior medical staff. These staff often call ICU staff earlier as they are unsure of what action to take. We looked at our data for PACE 2 calls (MET equivalent) and following PACE 2 calls 33.6% (21% + 13.6%) of patients had a not for resuscitation or treatment limitation order documented. (paediatric and obstetric calls are excluded from the analysis as such orders very unlikely). Such end of life discussions take additional time as the ICU team have no knowledge of the patient and their family. Our ICU staff report interruption to their daily duties on the critical care floor. This increase in non-ICU work through PACE has training implications. We fear this will have greater implications if we move to the BTF system.



Our own studies, other evidence and consideration of the increase in non-ICU work impacting on our ICU patient care make us very worried about adopting the BTF system. In my opinion it would be wrong if the patients already under our care suffered by moving to a system that we are still waiting for evaluation. I believe a “robbing Peter to pay Paul situation” should be avoided when Peter is a critically ill patient and Paul may not need our attention.

By

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