

Rapid Response to the Call for More METs

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Rapid response teams (RRTs), also known as medical emergency teams (MET), are used as an effort to avoid “failure to rescue” situations in which patients unknowingly deteriorate in acute care facilities. Particularly in children, deterioration is usually not sudden, and we often have missed opportunities along the way to intervene before emergent resuscitation is needed. In fact, one of the 2008 National Patient Safety Goals was to “improve recognition and response to changes in a patient’s condition,” and several organizations created toolkits to aid institutions in formation of RRTs.¹⁻³

The American Heart Association’s (AHA) Get With the Guidelines-Resuscitation (GWTG-R) registry is a database of >300 hospitals including information before, during, and after cardiac arrest.⁴ In 2000, this began with the AHA’s national registry for cardiopulmonary resuscitation, and this transitioned to GWTG-R in 2010. The first publication from the GWTG-R MET module described by Raymond et al contains data from 3647 MET events in 151 hospitals from January 2006 to February 2012, certainly the largest cohort of such events published in children.⁵

The data contained in this registry represent an exciting opportunity as assess MET events on a scale not previously seen in pediatric patients. Robust registries like GWTG-R and ImproveCareNow for inflammatory bowel patients have the ability, on a multicenter level, to combine diverse and complex patient information. Because of this, they represent a unique opportunity to answer questions about relatively uncommon diseases and events such as MET events. With the information gained from these powerful tools, such collaboratives and registries will continue to improve the standard and quality of care for our pediatric patients.

Using the GWTG-R MET module, Raymond et al provide us with a powerful descriptive study of pediatric MET events with the usual limitations of a large multicenter data set. The authors sought to characterize the events before and during pediatric MET events, duration of time spent at MET events, interventions during MET events, and outcomes of patients cared for by METs.

MET interventions may have stabilized the patients in many cases (assuming the 39.8% that stayed on their unit did not have another MET event or ultimately transfer). An alternate explanation for the results presented is that MET event may have been a false alarm, not actually representing deterioration in the setting of limited resources. Certainly providers want to encourage calling for help. This is less likely given that Raymond et al describe a high-risk cohort, with 6.7% mortality being higher than even most PICUs, certainly justifying further quality improvement research in this population. However, many METs suffer from cultural undertones involving resentment against those who call the MET, putting future patients at risk for failure to rescue. It is plausible that institutions without a freestanding MET are more likely to be afflicted by such cultural issues, although this has not been studied. Appropriate counterbalance measures to codes outside the ICU or mortality might include

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culture of safety scores or even “false-positive” MET activations. In fact, one could argue why limit our metrics to codes outside and MET activations outside the ICU; the patients would prefer not to deteriorate no matter their location.

It is well established that transitions of care are risky, and Raymond et al offer areas of focus for further research: handoff and triage. Notably, 47% of the MET events represented patients transferred from PICU, postanesthesia care unit, or emergency department within 24 h. It is worth evaluating through such a large quality improvement network whether use of Pediatric Early Warning System scores, iPASS, or other standardized approaches to transitions of care can decrease unplanned escalation in care and MET utilization without compromising outcomes.^{6,7}

To effectively implement or fine-tune pediatric METs, future studies might focus on whether use of MET standing orders (and any particular content contained therein), specific MET composition, use of free-standing MET versus team members pulled from their primary assignment for each MET call, Pediatric Early Warning System as a MET trigger, or family activation of METs correlated with improved outcomes. Additionally, common basic interventions during or as a result of a MET such as suctioning, airway positioning (particularly jaw thrust during seizures), and adjustment

in nursing assignment (ratios or expertise) were not cataloged in GWTG-R, although these inevitably occurred during or after MET events.

Raymond et al have provided us with a robust contribution to the literature on MET events in children and a tool to aid us in justifying further resources to reduce serious safety events due to failure to rescue in both freestanding children’s hospitals and children’s hospitals within a hospital. Although we do not know the exact formula for preventing codes outside the ICU or decreasing mortality, we are 1 step closer to understanding MET resource allocation, and the need to sharpen our focus on future improvement in culture, triage, and transitions of care.

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