FACT SHEET Tips from the real world

The intensive care specialist

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In this fact sheet, Daryl Jones shares his experiences of working as an intensive care registrar, then specialist, in large tertiary Intensive Care Units (ICUs) that operate a Medical Emergency Team (MET). Daryl has a particular interest in Rapid Response Systems and has published a number of papers about their effectiveness and operation. He is currently completing doctoral studies looking at aspects of METs and the epidemiology of MET patients.

I work as an intensive care specialist at the Austin Hospital in Melbourne, in a 20 bed ICU that provides tertiary intensive care services to more than 2100 patients a year. The Austin Hospital has 400 acute beds and is a teaching hospital of the University of Melbourne.

The Austin established an ICU-led Medical Emergency Team (MET) toward the end of 2000 after a year long education and preparation phase. The Austin operates a two-tier rapid response system: a cardiac arrest team for patients who are thought to be suffering cardio-respiratory arrest; and the MET for patients who are experiencing all other medical emergencies. MET calling criteria are based on the derangement of commonly measured vital signs and include a 'staff member worried' criterion.

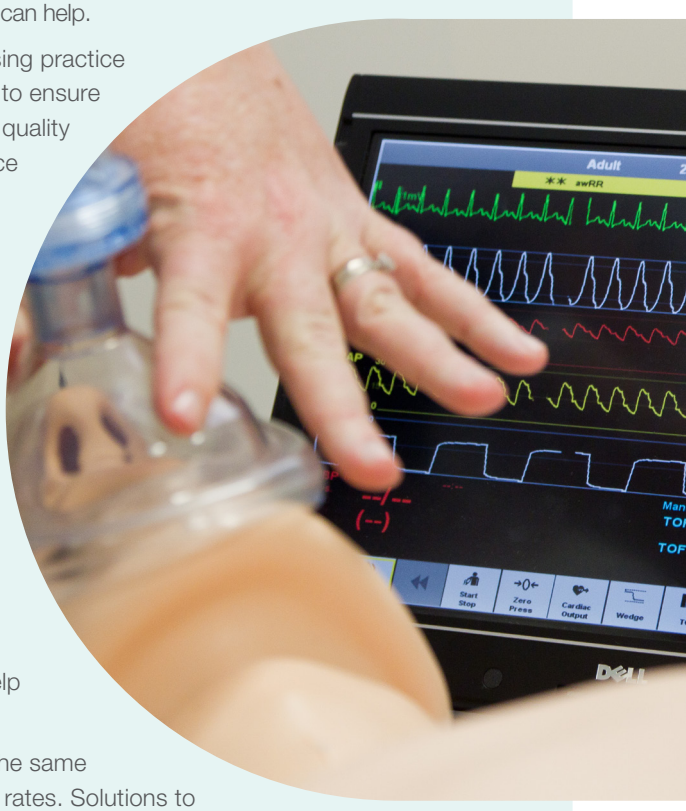
The MET is available 24 hours per day and the team is made up of an ICU registrar and nurse, and a medical registrar when available. After 10 years of operating the MET with no extra resourcing, partial additional funding was secured for the team in 2011. The MET now responds to more than 1700 calls a year. Studies into the long-term effect of the MET at Austin Hospital have demonstrated significant reductions in cardiac arrest rates, and in the rate of serious adverse events and in-hospital mortality experienced by surgical patients.

My top tips for implementing a Medical Emergency Team:

- Collect some baseline data - we audited adverse events and collected patient stories.
- You need to obtain the support and sponsorship of the hospital executive to succeed.
- Actively seek the support of key senior medical staff and heads of units and explain why you are doing what you're doing.
- Education of the users of the system is imperative – staff at all levels need to understand and endorse the system.
- Spend time teaching the MET staff about the 'rules of engagement' – emphasise the importance of a positive attitude to all calls, and the importance of keeping the parent teams in the loop. The most important rule of engagement is to never criticise a staff member for calling the MET or for their management of the patient.
- Equipment necessary to treat MET patients needs to be available at the right time and in the right place – we initially started with a back pack carried by the ICU team members. Over time, this has evolved such that we now have a trolley that contains sufficient equipment for commencing ICU level care at the patient bedside.
- Consider incremental introduction of the MET with initial implementation on a limited number of wards – this helps with education and allows you to build on success.
- Audit and collect data from day one, but keep it simple. Don't try to collect too much information – aim for high quality capture and a high percentage of cases audited. Collect what you need to know, not what is nice to know. If you want to answer a specific question then do a specific audit or study.
- Expect that you might be victims of your own success – we saw a marked increase in ICU workload and it took many years before additional resources were obtained. eaching myself Excel so I could manage data and design an observation chart, data collection tools, patient assessment forms, spreadsheets etc.

The next phase: problems to expect in a mature MET system

- The MET system at the Austin is a mature system with consistent activation rates but despite its successes, problems continue to occur.
- Achieving adequate resourcing for staff and equipment is a perpetual challenge. Continuously audit MET activity so you can make a case for additional staff and resources.
- Teamwork amongst MET members can be poor due to turnover of staff and a lack of opportunity for training and induction. ICU nurses on the team can sometimes feel disempowered as they are often more experienced than the registrars, yet the doctor is the leader. Proper resourcing for comprehensive induction, training in crisis resource management and simulation training is an ongoing challenge.
- Communication can be problematic with poor handovers from ward staff to the MET, the MET to parent teams, or the MET to other ICU staff. Structured communication tools and adequate resourcing can help.
- The MET members may identify issues with poor medical and/or nursing practice or other issues affecting patient safety – systems must be developed to ensure the right information is collected and fed into clinical governance and quality improvement systems. The MET should not be the clinical governance mechanism, and should avoid criticising care.



- Approximately 40% of MET calls occur outside of working hours. This may be due to unplanned after-hours admissions, reduced staffing levels, decreased availability of senior staff, and sub-optimal handover between shifts. There is potential to address this through pre-emptive day-time review and management planning for 'at risk' patients and better resourcing of the hospital at night.
- Missed and delayed MET calls remain common and can potentially result in increased patient mortality - continued education about the importance of MET calling criteria and adequate monitoring of patients is vital to improving and sustaining the system.
- Unwanted practice variation can potentially lead to preventable morbidity in MET reviewed patients – we developed guidelines for approaching the assessment and management of MET patients to help reduce this.
- Approximately 20% of MET patients have more than one call during the same admission and these patients have markedly higher hospital mortality rates. Solutions to reduce repeat MET calls may lie in improving communication processes and the documentation of management plans and any limitations in treatment, increasing the available number of ICU beds, and improving follow up after MET calls.
- End of life care issues are frequently encountered during MET calls. At the Austin approximately 20% of MET calls involve a pre-existing issue with a limitation of therapy and approximately 10% of MET calls result in a newly instituted limitation of therapy. Strategies are needed to improve advance care planning and the education of junior medical staff about end of life care discussions with patients and family. The Austin has implemented the Respecting Patient Choices® program to help address these issues.

Further information

Further information about implementing recognition and response systems can be found in the Australian Commission on Safety and Quality in Health Care publication *A Guide to Implementation of the National Consensus Statement: Essential Elements for Recognising and Responding to Clinical Deterioration* (2012). This can be downloaded from:

www.safetyandquality.gov.au

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