

Crossing the Quality Chasm: Patient and Family Activated Rapid Response Methods

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Following a shocking report on the number of medical errors in United States hospitals, the Institute of Medicine released Crossing the Quality Chasm in 2001, which called on health care leaders and policy makers to implement change through systems approaches and new principles.¹ One of those principles was creating a patient-centered health care system.² Massachusetts recently passed new patient-centered legislation requiring hospitals to establish a rapid response method (RRM) that allows patients, family members, or staff to directly request additional assistance from a specially-trained individual if it appears that a patient is deteriorating and needs immediate attention.³ Massachusetts joins South Carolina as the only two states to take the very critical next step in the RRM arena: providing patients with the power to demand immediate attention from medical personnel.

Background

An RRM is designed to help patients who suffer major complications outside of the Intensive Care Unit (ICU). Studies have shown that patients often have physiological symptoms leading to significant deterioration several hours prior to a cardiac or respiratory arrest. RRM's are designed to identify these symptoms and allow for medical personnel to intervene early enough to prevent a critical event. The Joint Commission has recently recognized the importance of RRM's in improving patient safety by making it a hospital standard.⁴

The most widely-implemented RRM is the rapid response team (RRT). The makeup of a RRT can vary, but often includes a respiratory therapist, a critical care nurse, a physician, a physician's assistant, and a pharmacist. The team is available 24/7 to respond to deteriorations in a non-ICU patient's condition. RRT's are traditionally triggered by nursing staff, but some hospitals have allowed patients and their families to trigger a RRT. While many hospitals have experienced a decrease in cardiac arrest and mortality rates following RRT implementation, a recent study in the Journal of American Medical Association (JAMA) found that a RRT was not associated with reductions in hospital-wide code rates or mortality.⁵ While the debate over RRT effectiveness as the main RRM vehicle continues, this article urges the healthcare community not to lose sight of

¹ COMMITTEE ON QUALITY OF HEALTH CARE IN AMERICA, INSTITUTE OF MEDICINE, CROSSING THE QUALITY CHASM: A NEW HEALTH SYSTEM FOR THE 21ST CENTURY (Nat'l Acad. Press, 2001).

² *Id.*

³ 105 CODE MASS. REGS. 130.1600 (2009).

⁴ The Joint Comm'n on Accreditation of Healthcare Organizations, *2010 Prepublication Standards*, available until 12/1/09 at http://www.jointcommission.org/NR/rdonlyres/FC01E2E0-A0CB-4A71-AF0B137AA77D1BD6/0/AllChapters_HAP.pdf.

⁵ Paul S. Chan, M.D., *et al.*, *Hospital Wide Code Rates and Mortality Before and After Implementation of a Rapid Response Team*, 300:21 JAMA 2506 (2008).

the patient-centered approaches implemented by South Carolina, Massachusetts and various hospitals around the United States. No matter the RRM method employed by a hospital, the trend toward allowing patient activation of a RRM should continue to grow.

Recognizing the importance of RRM's: a 2010 JC standard

The Joint Commission acknowledged the importance of RRMs in improving patient safety by making 'improving recognition and response to changes in a patient's condition' a National Patient Safety Goal in 2008 and 2009.⁶ Starting in 2010, the Joint Commission will make RRMs a standard rather than a goal and require that hospitals recognize and respond to changes in a patient's condition. To meet the RRM standard, a hospital should have the following elements in place:

1. The hospital has a process for recognizing and responding as soon as a patient's condition appears to be worsening.
2. The hospital develops written criteria describing early warning signs of a change or deterioration in a patient's condition and when to seek further assistance.
3. Based on the hospital's early warning criteria, staff seeks additional assistance when they have concerns about a patient's condition.
4. The hospital informs the patient and family how to seek assistance when they have concerns about a patient's condition.⁷

Importantly, the Joint Commission notes that hospitals are not required to create a RRT nor does the existence of a RRT mean that all of the elements of performance are automatically achieved.⁸

Legislation in South Carolina and Massachusetts: Providing Patient Access to RRMs

Although the Joint Commission provides that patients and family must be informed of how to seek assistance when concerns arise, it does not explicitly provide them with the ability to summon help on their own.

South Carolina became the first state to allow a patient to demand immediate medical attention.⁹ The Lewis Blackman Hospital Patient Safety Act was passed in 2005 after the unfortunate death of 15-year-old, Lewis Blackman. Following chest surgery, Blackman began to experience complications including severe abdominal pain, a drop in temperature, and paleness.¹⁰ His mother repeatedly asked for a senior doctor, but her requests were not granted. Lewis Blackman died the next day from internal bleeding.

⁶ Joint Comm'n on Accreditation of Healthcare Organizations, *2009 National Patient Safety Goals Hospital Program*, (Oct. 31, 2009), available at: http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/09_hap_npsgs.htm.

⁷ *2010 Prepublication Standards*, supra note 4.

⁸ *Id.*

⁹ 27 S.C. CODE REGS. 44-7-3410 (2005).

¹⁰ Laura Landro, *Patients Get Power of Fast Response*, WALL ST. J., Sept. 1, 2009, <http://online.wsj.com/article/SB10001424052970204047504574384591232799668.html>.

The Act gives the patient, or the patient's lawful representative, the right to contact the patient's attending physician or request a nurse do so on the patient's behalf. A mechanism which allows for prompt assistance for the patient's medical care concerns must be provided by the hospital and procedures must be established for initiation of contact with administrative or supervisory clinical staff. A description of this mechanism and the patient's right to contact his or her attending physician must be included in information provided to the patient prior to or at the time of the patient's admission.

Starting in 2009, all Massachusetts' acute care hospitals were required to adopt the RRM most suitable for the hospital's needs for staff members, patients, and family members to directly request additional assistance from a specially-trained individual(s) when a patient's condition appears to be deteriorating. The hospital shall ensure that the RRM is available 24-hours per day, seven days per week. Written policies and procedures that address the criteria for activating the RRM, the education of staff, patients and family members who might activate the RRM, and a mechanism measuring the effectiveness of the RRM must be developed and implemented by hospitals.¹¹

Rapid Response Teams as RRM

Although neither the Joint Commission standards nor the South Carolina or Massachusetts' legislation require the use of a RRT, the RRT has become the RRM of choice for many hospitals. Initially, a RRT was activated only by the medical staff but increasingly hospitals are allowing patients and families to activate a RRT.

One such example is the University of Pittsburg Medical Center System (UPMC), which has implemented "Condition H" allowing patients and their families to call an emergency hotline which triggers UPMC's RRT.¹² Allowing patients and family members to signal a RRT was initially met with concern that patients and families would overuse the system with some going so far as to say "you can't trust they won't call for bedpans."¹³ Based on hospital experiences following implementation, the concerns turned out to be misplaced.¹⁴ UPMC data shows that 69 percent of Condition H calls helped prevent harmful patient situations.¹⁵ As Jordan Erickson, a hospital quality analyst, states: "parents would never call 911 from home for something trivial. Why would they do it here?"¹⁶

¹¹ CODE MASS REGS., *supra* note 3.

¹² Landro, *supra* note 10.

¹³ Shirley S. Wang, *Teaming Up to Prevent Crashes*, WASH. POST, Sept. 4, 2007, <http://www.washingtonpost.com/wp-dyn/content/article/2007/08/31/AR2007083101788.html#>.

¹⁴ *Id.* See also Inst. for Healthcare Improvement, *North Carolina Children's Hospital: Where Parents Are Considered Part of the Medical Team*, (June 1, 2008), available at <http://www.ihl.org/IHI/Topics/CriticalCare/IntensiveCare/ImprovementStories/NorthCarolinaChildrensHospitalWhereParentsareConsideredPartoftheMedicalTeam.htm>.

¹⁵ UPMC, *Condition H Program*, available at <http://www.upmc.com/aboutupmc/QualityInnovation/CenterforQualityImprovementandInnovation/Pages/ConditionH.aspx>.

¹⁶ Inst. for Healthcare Improvement, *supra* note 14.

Despite the success of programs like Condition H, the case for a RRT as the most effective RRM is being questioned. Two recent studies on RRT effects on mortality and code rates in JAMA reached different conclusions. A November 2007 study of a RRT at a pediatric hospital found that implementation of the RRT was associated with a significant reduction in hospital-wide mortality and code rate outside of the pediatric ICU setting.¹⁷ The study estimates the lives of 33 children were saved during the 19 month study through use of a RRT.¹⁸ However a December 2008 study of a RRT at a large single institution in Kansas found that RRT implementation was not associated with lower hospital wide code rates or hospital wide mortality rates.¹⁹ This study bolsters the findings of a previous multi-center study that also found no statistically significant arrest or mortality improvement.²⁰

Critics point out that RRTs are only one way to reduce patient deterioration and urge hospitals to use restraint until more research shows the overall effectiveness, cost effectiveness, composition and optimal implementation of a RRT.²¹ Without this data, hospitals are unable to compare RRT with other RRM alternatives such as hospitalists, an increased nurse to patient ratio, or monitoring systems on medical units.²² The debate thus centers on RRT effectiveness and not RRM effectiveness.

Conclusion

Nine years ago the Institute of Medicine released To Err is Human, which concluded that between 44,000 and 98,000 deaths per year occur in U.S. hospitals as a result of errors.²³ Its follow up report, Crossing the Quality Chasm, issued six aims to improve the healthcare system: safe, effective, patient centered, timely, efficient and equitable health care.²⁴ The aims of effective and patient centered care are the only two barriers preventing RRM implementation from reaching each of the six laudable aims.

Much of the debate over RRMs, namely the use of RRTs as the principle method, centers over the aim of being effective. Effectiveness speaks to evidence-based medicine rather than blindly following tradition.²⁵ As evidenced by conflicting studies, the exact effectiveness of RRTs has not been pinpointed, yet by engaging in dialogue over RRT effectiveness and through further studies and hospital experiences, the aim of

¹⁷ P.J. Sharek, *et al.*, *Effect of a Rapid Response Team on Hospital-Wide Mortality and Code Rates Outside the ICU in a Children's Hospital*, 298:19 JAMA 2267 (2007).

¹⁸ *Id.*

¹⁹ Chan, *supra* note 5.

²⁰ K. Hillman, *et al.*, *Introduction of the Medical Emergency Team (MET) System: A Cluster-Randomised Controlled Trial*, 365 LANCET 2091 (2005).

²¹ Bradford D. Winters, *et al.*, *Rapid Response Teams—Walk, Don't Run*, 296 JAMA 1645 (2006).

²² *Id.*

²³ COMMITTEE ON QUALITY OF HEALTH CARE IN AMERICA, INSTITUTE OF MEDICINE, *TO ERR IS HUMAN: BUILDING A SAFER HEALTH SYSTEM*, (Linda T. Kohn, Janet M. Corrigan, and Molla S. Donaldson, eds., Nat'l Acad. Press, 2000).

²⁴ *CROSSING THE QUALITY CHASM*, *supra* note 1.

²⁵ Institute for Healthcare Improvement, *Across the Chasm Aim #2: Health Care Must Be Effective*, <http://www.ihp.org/IHI/Topics/Improvement/ImprovementMethods/ImprovementStories/HealthCareMustBeEffective.htm> (last accessed Nov. 15, 2009).

effectiveness is satisfied by identifying appropriate RRM. Lost in the fight over effectiveness is the aim to be patient-centered. The Institute for Healthcare Improvement regards patient-centered care as that which puts responsibility for important aspects of self-care and monitoring in patients' hands — along with the tools and support they need to carry out that responsibility.²⁶ Outside of Massachusetts and South Carolina, the primary method of providing patient and family activated RRM has been through RRTs. If RRTs are not found to be a one size fits all solution for hospitals, the patient centered trend seen in RRTs should continue to be seen in whichever RRM the hospital employs. Whether the RRM employed by a hospital is a RRT or increased use of hospitalists or nurses, the patients and their families should have the ability to access this critical patient safety system. It is only through legislation, such as those bills passed in South Carolina or Massachusetts, or through a program that puts patient at the forefront such as “Condition H” that RRMs can satisfy the 3rd aim and be seen as truly patient-centered.

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²⁶ Institute for Healthcare Improvement, *Across the Chasm Aim #3: Health Care Must Be Patient-Centered*, <http://www.ihi.org/IHI/Topics/Improvement/ImprovementMethods/ImprovementStories/AcrosstheChasmAIM3HealthCareMustBePatientCentered.htm> (last accessed Nov. 15, 2009).