

Experience with Family Activation Of Rapid Response Teams

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Condition H allows family activation of a rapid response team in a hospital setting. Systematic implementation of Condition H at a 500-bed Magnet® community hospital led to varied types of calls, all of which met the policy criteria. Many communication issues were discovered through this process.

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Note: The Josie King Foundation (www.josieking.org) distributes "The Josie King Story" DVDs upon request. Organizations requesting a copy of the DVD can donate money to the Josie King Foundation to fund patient safety programs throughout the country.

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At an Institute of Healthcare Improvement meeting in 2002, Sorrell King told the story of her 18-month old daughter Josie's death in the hospital following a series of unfortunate errors (King, 2002). Initially, Josie was admitted to the hospital for burns suffered from stepping into a hot bath. She made good progress and was admitted to a stepdown unit. However, she was re-admitted to intensive care, where several errors were made and her condition began to deteriorate. Sorrell's story elucidated her sense of powerlessness and frustration as she tried to alert staff to changes in her daughter's condition that led ultimately to her death. The Josie King story has been discussed in multiple health care settings, and has led to changes in many hospitals regarding receptivity to feedback by parents and others related to potential care issues for patients. One such change is family activation of rapid response teams (RRTs) for medical emergencies.

Rapid Response Teams

Hospital-based RRTs are groups of health care professionals who are called to help hospital staff when a patient's condition is deteriorating. They are different from resuscitation teams in that they are called prior to cardiac or respiratory arrest. RRTs were formed because not all staff members are prepared to intervene in these situations, which can occur outside critical or emergency care settings.

In addition, some situations in which patients experience cardiac arrest or are transferred to intensive care are presaged by clinical indicators that could have triggered earlier interventions (McCabe, 2007). Driving the formation of RRTs in hospitals across the United States was the Institute for Healthcare Improvement's 100,000 Lives Campaign (Berwick, Calkins, McCannon, & Hackbarth, 2006). RRT implementation was one of six strategies developed to prevent in-hospital deaths. The other strategies included the following: (a) deliver reliable, evidence-based care for patients following acute myocardial infarction; (b) prevent adverse drug events through medication reconciliation; and (c) prevent central line infections, surgical site infections, and ventilator-associated pneumonia (Berwick et al., 2006).

In a recent meta analysis and systematic review, Chan, Jain, Nallmothu, Berg, and Sasson (2010) found implementation of RRTs led to a 34% reduction in rates of cardiopulmonary arrest in patients not in critical care. However, they also noted hospital mortality rates were not lowered concurrently. Because RRT protocols among the hospitals were not described in the literature, how the teams were accessed is not known. Of the 12 studies with adult samples evaluated in this analysis, only two were randomized clinical trials; thus multiple confounding variables may have affected

results of the remaining 10 studies. Also, 10 of the 12 studies were based in academic medical centers. Different findings may be expected from community hospitals where staffing and other resources such as physician availability may vary from those in teaching hospitals. Only one publication was found documenting results from RRT implementation for psychiatric and obstetric patient deterioration (Loucks, Rutledge, Hatch, & Morrison, 2010). The majority of RRT studies have been published since 2007, showing the recency of these initiatives (Chan et al., 2010).

Although most rapid response teams are solely staff-activated, family-activated response systems, often known as Condition H (for Help), have been formed around the United States (Durkin, 2006; Jolley, Bendyk, Holaday, Lombardozzi, & Harmon, 2007; Kirk, 2006; McFarlan & Hensley, 2007; Thomas, VonOyen-Force, Rasmussen, Dodd, & Whildin, 2007; Van Voorhis & Willis, 2009). Condition H was developed at the University of Pittsburgh Medical Center (UPMC) as a mechanism for patients, families, and visitors to initiate a rapid response when they are unable to get the attention of a health care provider during a possible emergency, as happened during Josie King's hospitalization (Greenhouse, Kuzminsky, Martin, & Merryman, 2006; Josie King Foundation, 2008). UPMC guidelines for use of Condition H include signs and symptoms of clinical instability that could lead to patient deterioration. Nine months after implementation at UPMC, Condition H developers found most calls for Condition H were related to communication issues between patients and health care providers, with numerous additional calls related to a need for better pain management (Greenhouse et al., 2006). Follow-up visits with those initiating Condition H were favorable, indi-

cating its existence provided a sense of empowerment to callers who were either family members or visitors. In 2009, The Joint Commission included partnership with patients and families in reporting safety issues as one of the 2009 National Patient Safety Goals [NPSG.16.01.01], drawing further attention to the potential of family activation of care (The Joint Commission, 2009).

Local Context for Condition H

St. Joseph Hospital, a 500-bed Magnet[®] community hospital, has used RRTs since 2004 for patients at risk of destabilization. The first well-established team for medical-surgical emergencies, called the medical emergency team (MET) (Jamieson, Ferrell, & Rutledge, 2008), has been joined by two related programs, BERT (Behavioral Health Response Team) for patients with acute behavioral problems throughout the hospital (Loucks et al., 2010) and PART (Post-partum Ante-partum Response Team) for pregnant women hospitalized in non-women's health areas. As a 2007 sequel to the success of these teams, the hospital began a Condition H process allowing patients or family members to activate the response to one of the RRTs by accessing the MET. This gives them access to any of these teams to allow another avenue of entry to expert assessment, early intervention, and stabilization for patients. The Condition H initiative follows the Institute of Healthcare Improvement's widely reported recommendation that patients and family members be empowered to call for help when they believe it is appropriate (Berwick et al., 2006; Greenhouse et al., 2006).

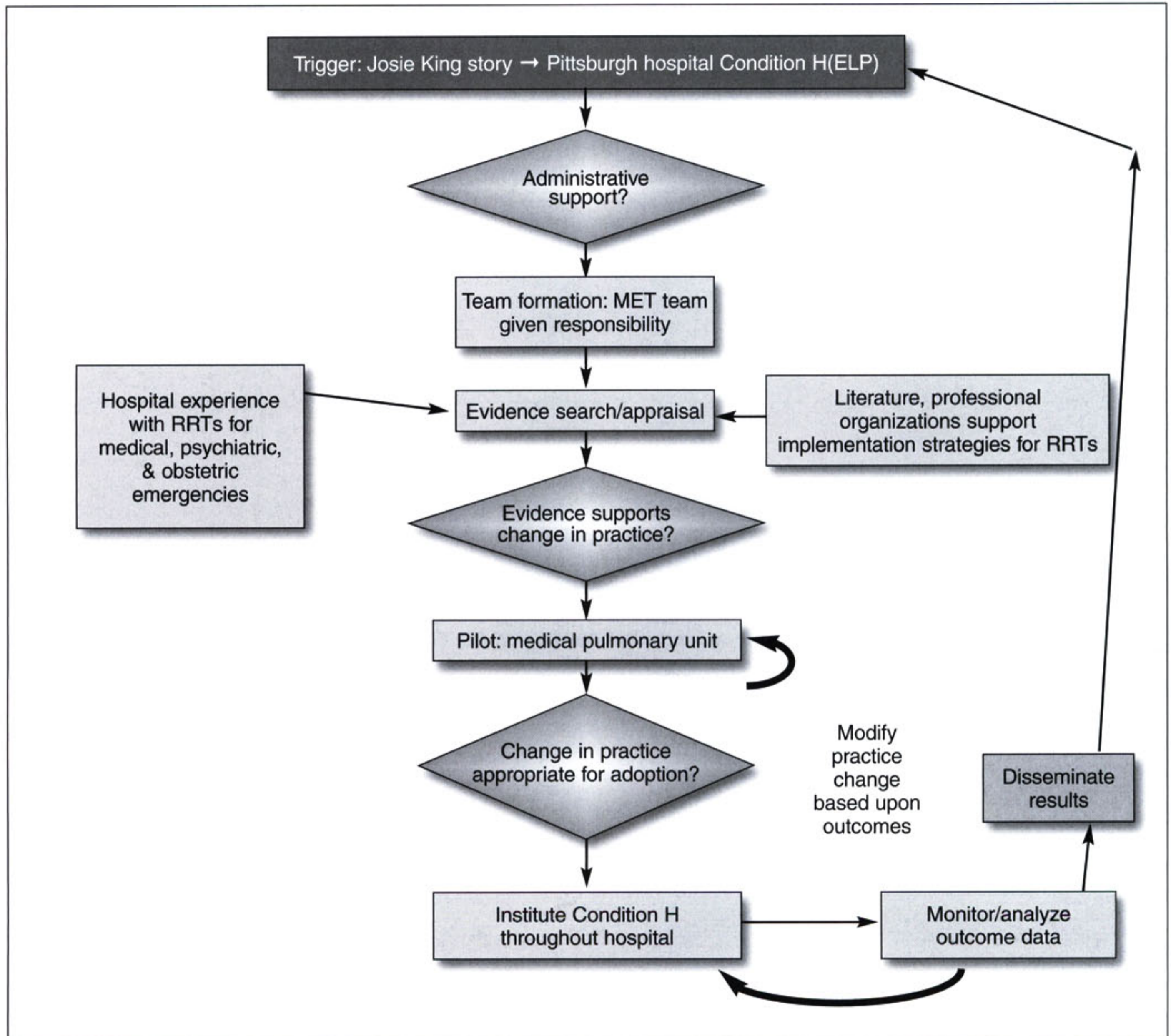
Implementing Condition H

Practice changes at St. Joseph Hospital (SJH) are planned, implemented, and evaluated systematically using steps from the Iowa

Model of Evidence-Based Practice (Titler et al., 2001). Figure 1 delineates how the Iowa Model framed the Condition H implementation. Condition H is a practice change that came from a knowledge-focused trigger outside the system. The Josie King story was told at many organizational meetings of SJH personnel. While SJH had not experienced a situation in which a patient did not receive timely care, leaders acknowledged the possibility that a program like Condition H could prevent problems if patients/family members were to use it appropriately. Because the MET, PART, and BERT were becoming integrated successfully into the hospital culture, Condition H was a timely intervention; it became a priority for the organization and its implementation was spearheaded by the executive director, critical care and telemetry.

The team in charge of planning and implementation was the MET committee, the same multidisciplinary group that developed the MET (Jamieson et al., 2008). This group met monthly and was charged with refining MET practice through process improvement. Key champions were the executive director and a staff nurse who had 30% of designated time for response team efforts. The scant literature available about family-activated response teams was reviewed (Greenhouse et al., 2006), and materials were prepared for use with a pilot unit. These included the policy (see Figure 2), guidelines and responsibilities (see Table 1), a decision tree for activation of Condition H (e.g., serious clinical concerns, such as bleeding, difficulty breathing, confusion over plan of care), and marketing plan. The medical pulmonary unit was selected as the only pilot unit because this unit had been involved successfully in the MET and BERT pilots. Prior to Condition H pilot implementation, MET committee mem-

Figure 1.
Using the Iowa Model of Evidence-Based Practice with Condition H



bers discussed the process with stakeholders at multiple venues, including meetings of risk management, respiratory therapy, hospital operators, hospitalists/pulmonologists, house supervisors, unit secretaries, and unit staff nurses. This pre-implementation publicity assured staff participation and identified potential barriers to the project (see Figure 3).

Pilot test. Prior to implement-

ing Condition H on the pilot unit, members of the MET team were instructed in this new process. Pilot unit staff education began with “Kick Off for Education” that continued for 1 month in early fall 2007. A mobile cart, flyers, and a poster were placed on the unit at the kick-off, with the nurse manager encouraging staff to view the content. Staff members received 1:1 education and reviewed the

patient/family brochure, Condition H algorithm (see Figure 3), process, and expectations. They also had questions and concerns addressed. On a rotating basis for day and night shifts, members of the MET committee manned the mobile education cart on the medical unit. Using the cart familiarized staff members with the purpose and processes of Condition H. Staff received candy rewards

Figure 2.
Excerpts from Condition H-Emergency Response Team Policy

<p>Purpose To provide expert assessment, early intervention, and stabilization for patients and prevent clinical deterioration or arrest. Condition H team is summoned by patients or their family members. Condition H empowers patients and family members to access care, decrease anxiety, and improve patient safety. The aim is to address immediate needs and increase communication between the patient's family members and the health care team.</p> <p>Criteria for Activation</p> <ol style="list-style-type: none"> 1. If a noticeable change in the patient occurs and the health care team is not recognizing the concern 2. If after speaking with a member of the health care team, the patient or family continue to have serious concerns on how care is being given, managed, or planned <p>Who can call? Any patient or visitor</p>	<p>Condition H Team</p> <ol style="list-style-type: none"> 1. Medical emergency team (MET) registered nurse (RN) 2. Respiratory therapist 3. House supervisor 4. Manager or charge nurse of the calling unit 5. Intensivist, as determined by the need for physician intervention <p>MET RN utilizes a Condition H Guideline and Responsibility document and algorithm to determine course of action required. In the case of specific criteria, the operator triages a Condition H call to either reach the MET or other RRT team or call the Resource Center (if concern is about diet, telephone, TV, etc.). All calls are entered into a call log.</p> <p>Team responsibilities are delineated per the policy.</p>
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Table 1.
Condition H Guidelines and Responsibilities

	Methods to Activate (Hospital Operators)	Methods to Document, Communicate Interventions	Critical Care RN Responsibilities	Charge Nurse & Floor Nurse Responsibilities	House Supervisor Responsibilities	Follow-Up within 24 Hours of Call
<p>Condition H Team Members:</p> <ol style="list-style-type: none"> 1. Critical care (CC) nurse, ACLS-certified with minimum of 3 years critical care experience 2. Respiratory therapist (RT) 3. House supervisor (HS) 4. Intensivist (when needed) <p>Condition H will be called by patient/family perceiving need for a non-biased multi-disciplinary team response.</p>	<ul style="list-style-type: none"> - Patient/family dials 66 and states need for Condition H to room (XXXX). - Call triaged per Condition H – Operator Decision Tree. - Switchboard overhead page "Condition H to room ____." - Additionally, contact CC charge nurse beeper (xxxx), respiratory therapy (xxxx), house supervisor (xxxx) via alphanumeric pagers. <p>All calls will be logged for follow up.</p>	<p>CC RN initiates, completes Section 1 documentation on "Condition H Documentation Sheet" found on code cart notebook.</p> <ul style="list-style-type: none"> - If CC RN determines call doesn't require clinical intervention, charge nurse/HS finishes Section 1. - Form placed in front pocket of chart for next-day follow up. - CC RN implements emergency protocol prior to calling MD. - HS notes team deployment (____unit), patient disposition on "Admin Report." 	<ul style="list-style-type: none"> - CC RN triages call to ensure appropriate response is provided using Condition H algorithm. <ol style="list-style-type: none"> 1. If medical emergency, implement MET response or call other emergency teams (BERT or PART). 2. If physician intervention needed, intensivist called. 3. Non-emergent call addressed by floor charge nurse or HS. <ul style="list-style-type: none"> - MD called during visit by CC RN, if appropriate. 	<ul style="list-style-type: none"> - Charge nurse responds to room of call origination. - Charge nurse keeps staff RNs informed of situation. - Staff RN calls attending MD to talk with MET nurse if needed. - If patient transferred to CC, prepare chart for transfer. - Staff RN accompanies patient on transfer, gives report to receiving RN. 	<ul style="list-style-type: none"> - HS responds and awaits assessment by CC RN regarding call management. - HS places call to xxxx, leaves patient name and time of call for follow up by patient rep. - If call determined to require supervisor intervention, HS completes documentation in Section 1 of form. - Debriefing led by HS for unit where call occurred. - HS completes follow up (Section 2 of form) with patient next day if call occurs between 0700 Friday and 0700 Sunday, or on a holiday. 	<p>Patient service reps follow up with patient/family caller next day (Section 2 of form); and forward report to executive director for critical care.</p> <p>HS performs follow up on weekends and holidays.</p>

Figure 3.
Condition H Algorithm

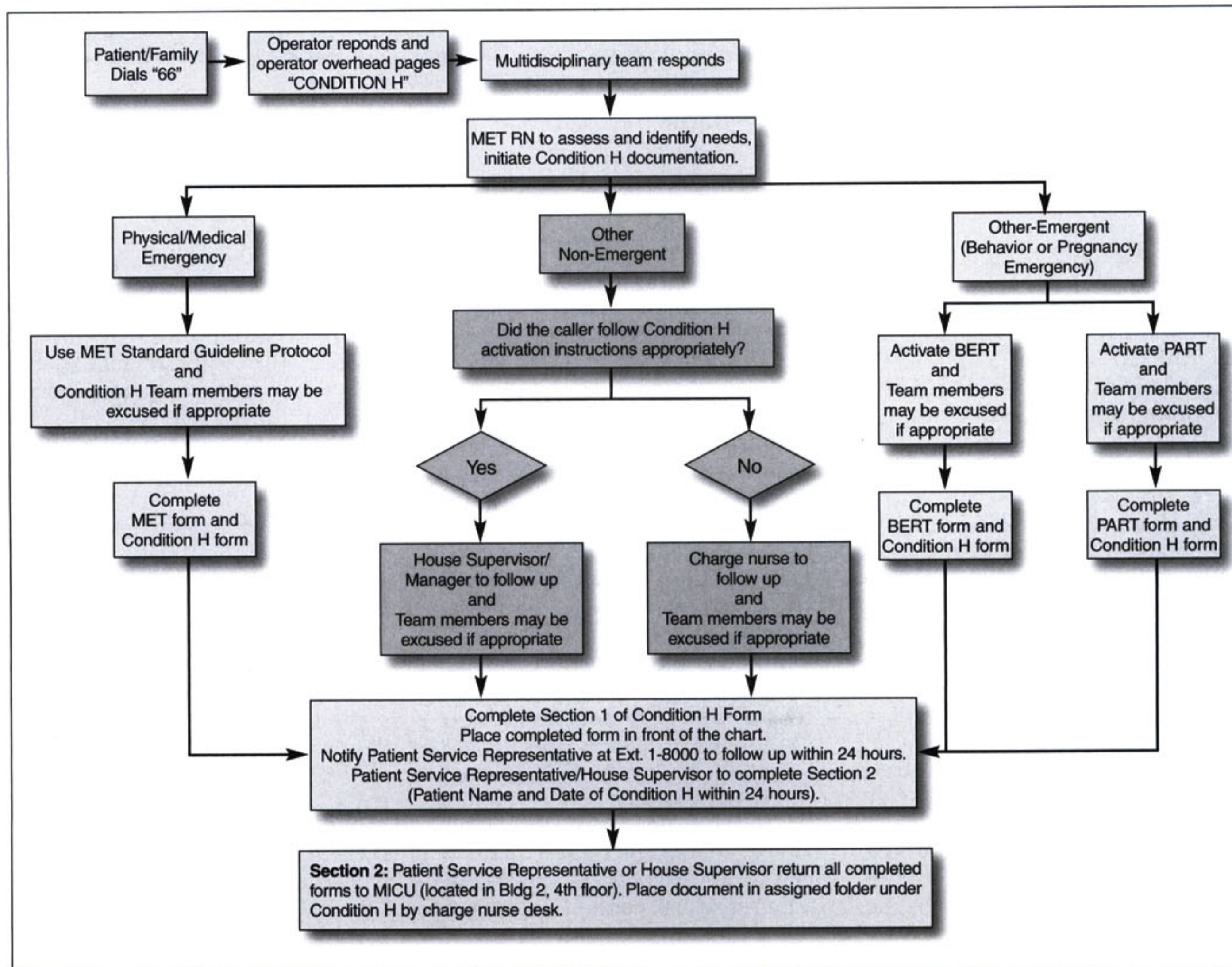


Table 2.

Pilot Unit Staff Responses to Understanding/Preparation for Condition H Implementation (N=40)

	1 (n, %)	2 (n, %)	3 (n, %)	4 (n, %)	5 (n, %)
Understanding of Condition H [*]	0 (0)	0 (0)	5 (13)	4 (10)	31 (78)
Comfort with Condition H pilot on your unit ^{**}	0 (0)	0 (0)	10 (25)	9 (23)	21 (53)
Preparation to educate patients and families about this program ^{**}	0 (0)	1 (3)	13 (33)	10 (25)	16 (40)
Perception that this program will benefit patients and families ^{***}	0 (0)	0 (0)	4 (10)	11 (28)	25 (63)
Belief that Condition H should be implemented ^{****}	0 (0)	1 (3)	4 (10)	9 (23)	26 (65)
Belief that Condition H will be used appropriately ^{****}	1 (1)	0 (0)	10 (25)	15 (38)	14 (35)

^{*} 1 = Never heard of Condition H; 3 = Somewhat understand; 5 = Clear understanding

^{**} 1 = Not comfortable at all; 3 = Somewhat comfortable; 5 = Very comfortable

^{***} 1 = Not beneficial at all; 3 = Somewhat beneficial; 5 = Very beneficial

^{****} 1 = Absolutely not; 3 = Possibly; 5 = Absolutely yes

Table 3.

Pilot Unit Patient/Family Member Responses to Understanding/Preparation for Condition H Implementation

	10/4/2007 (n=10)	10/11/2007 (n=15)	11/4/2007 (n=8)	11/19/2007 (n=14)	11/27/2007* (n=9)
Did not know about program	8	11	6	11	3
Had knowledge of program	2	4	2	3	6
Percent aware of program	20%	27%	25%	21%	67%

* Condition H being addressed during daily rounds.

following cart access. Educational materials used for the pilot included The Josie King Story, a 12-minute video about the issues surrounding this child's death; it inspires caregivers and hospital administrators to embrace patient safety in their daily work. This video was available around the clock in the staff lounge, and all staff members were asked to view it. Other staff resources were the Condition H decision tree and blank documentation forms for reference, along with instructions for accessing the responding team by using the MET nurse. The designated Condition H staff nurse attended staff and unit secretary meetings to educate and respond to questions about the Condition H program, plan, and pilot. All patients admitted to the unit during the 6-month pilot were to receive a brochure that explained Condition H, as well as 1:1 verbal education by their admitting nurses.

Following each in-service, staff were surveyed about the education process (see Table 2). Staff rated their understanding and comfort with the program as good. Concurrent with pilot education, the designated staff nurse attended nursing leadership, hospital quality improvement, and medical staff meetings to report on the Condition H pilot and plans for all-hospital rollout.

Pilot launch occurred September 2007 when both pilot staff and the MET reported being prepared. After a couple of weeks with

no calls, patient visits began to determine whether patients and families had received the brochure and understood the program; most of them did not understand Condition H (see Table 3). Subsequent discussions with managers revealed staff members had difficulty educating patients/families on the subject. A sheet of frequently asked questions was provided to aid them in delivering appropriate information about Condition H; the sheet also could be given to patients and families for their information. Also, charge nurses were asked to discuss Condition H during daily nursing rounds, providing the brochure and further education if needed. These actions increased patient/family knowledge; however, the number of calls did not increase. Mock Condition H drills were conducted to help evaluate the effectiveness of paging, staff response, algorithm adherence, documentation, and follow up and evaluation. Near the end of the pilot, one Condition H call was received; it did not require an emergency response team but the policy was followed by all staff, indicating successful use of the process as developed.

Whole hospital implementation. After evaluating pilot results, the team considered Condition H ready for adoption in practice (see Figure 1). Mock Condition H drills continued on the pilot unit. An important preliminary step was planned discussions at stakeholder meetings. Targeted meetings

included all levels of nursing leadership (charge nurse, clinical coordinators, nurse managers, directors), marketing, interactive TV, plant operations, patient care unit meetings, and risk management. Hospital-wide education efforts began in January 2008 with Condition H flyers, posters in nursing units, three rotating mobile TV/DVD carts which went from unit to unit on a schedule (including the Josie King video to be shown in staff lounges), articles in the hospital newsletter, and continued 1:1 efforts by committee members. The education plan allowed most units to have 2-3 weeks of intensive education. One change from the pilot was having a revised patient/family brochure placed in all admission packets. The new brochure had photographs of actual SJH employees and past patient family members as volunteers. Mock Condition H drills were done hospital-wide through March 2008 to evaluate readiness.

On March 3, day 1 of National Patient Safety Week, Condition H went live. MET committee members did walking rounds throughout the hospital, placing new posters and brochures on units as well as stocking all admission packs with patient/family brochures. In the first 13 weeks of Condition H, eight calls were placed (see Table 4 for select call descriptions); all were judged appropriate. No call required physical or medical interventions from a RRT; all were dealt with by the alternate non-physi-

Table 4.
Description of Select Condition H Calls and Follow Up

Call	Call Details	Follow Up
Call 1	Patient from medical telemetry unit admitted with pancreatic abscess, infected peripheral intravenous central catheter (PICC); patient had orders for discharge but family did not believe he was ready to go home due to a recent experience following prior hospitalization (negative experiences with skilled nursing facility [SNF] and home health). Family members believed this contributed to the infected central line and ultimate septic state; daughter wanted more time to prepare for discharge (she wished to take father straight home, bypassing a SNF).	<p>Occurred on first day of the program. Daughter's anxiety prompted her to call; overwhelmed family given support; appropriateness of call validated by hospital personnel.</p> <p>Case manager planned appeal to Medicare for a 1-day extension; family willing to take chance that extension day may not be covered; regardless, due to pending approval, patient stayed in-hospital.</p>
Call 4	Daughter called about postoperative patient from surgical unit, uncomfortable with mother's low pulse rate (40s); nurses had tried to communicate with physician but had not received response; patient on beta blocker, asymptomatic, not in distress; communication issues had arisen between nurses and physician.	Communication issues alleviated upon intervention by house supervisor; daughter's concerns addressed by staff, contributing to lessened anxieties.
Call 5	Postoperative vascular patient recently transferred to medical-surgical unit from post-anesthesia care unit (PACU); daughter found mother expressing excruciating pain (in Spanish); activated Condition H in hopes of managing pain; patient had denied pain when offered medications in PACU and was transferred to floor.	Primary nurse administered pain medications, set up patient-controlled intravenous analgesia; daughter worried that language barrier may affect pain control during hospital stay; care team comforted her, addressed her issues, ensured her mother Spanish-speaking staff assignment.

cal/medical response initiated by the house supervisor.

The patient representative or house supervisor followed up on all calls the next day. Completed evaluation forms were forwarded to the Condition H designated staff nurse with copies of progress notes. Each event was reviewed and a summary forwarded to quality and risk management departments. Other follow-up activities were done as needed.

What Has Been Learned

Allowing patients and families to activate an emergency response team empowers them, including them as partners in care. All calls received within the first 13 weeks of the program met one of the policy criteria: either a noticeable change in the patient had not been addressed by the health care team, or the patient or family had serious concerns about how care was being given, managed, or planned despite communicating with providers or staff. Only one call (patient with very low pulse rate) potentially

dealt with a clinical deterioration. The call typology surprised program initiators, although Greenhouse and colleagues (2006) also found most of their calls dealt with communication issues between patients and health care providers or a need for better pain management. All initial calls at SJH addressed communication/systems issues, with three specific to comfort or pain management.

Sometimes, families who used Condition H were considered by staff to be problematic or demanding. Family members had valid concerns, but staff may not have addressed these in a timely manner. Condition H allowed family members to express their fears, anxieties, and needs, and become a part of the care of their loved ones.

Based on the concerns exposed in the first eight calls, many systems and communication issues were uncovered that offered chances to improve care delivery. Documented experiences showed patients and family members require constant updates regarding

their care; what seems routine to staff is perceived differently by patients and their families. Results were discussed by the MET committee, with appropriate items sent to quality improvement oversight committees. Measures have been put in place to solve some of the issues (e.g., a mandatory pre-discharge meeting of patient, nurse, and physician). Findings suggest an emergency is viewed differently by staff and patients/families, and nurses may need to be coached to empathize and understand each situation that occurs. Without exception, all callers indicated satisfaction with and were impressed by the overwhelming response they received; they believed the program was beneficial.

Conclusion

Patients and family members will ask for help with a program such as Condition H. However, the calls that program initiators thought SJH would encounter (e.g., emergency team assistance for clinical deterioration) have not

materialized. This low rate of use for emergency assistance is validated at Levine Children's Hospital, where only 8% of calls to the RRT are initiated by family members (Van Voorhis & Willis, 2009). Important concerns, especially regarding communication, have been exposed and are being addressed through a variety of mechanisms. Changes may prevent the need for some future Condition H calls but when appropriate, patients and families will use Condition H to meet immediate needs and enhance communication with members of the health care team. ■

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Why Nurses Quit Their Jobs

Nurses who are satisfied with their current position and whose organization supports them in a variety of ways are more likely to want to stay in their jobs. Desire to quit a job is also positively linked to higher levels of education, working in smaller metropolitan areas, ease of finding another job, and work-family conflict, according to a new study.

Nurses with young children had less likelihood of working at the same job a year later. They were also less likely to be working full time. However, nurses educated outside the U.S. had an increased likelihood of working at the same job a year later. This was also true for nurses with a higher predicted wage. For every unit increase in the market wage, the probability the nurse would remain working at the same job increased 23%. Finally, having paid time off and medical insurance increased the probability a nurse would work full-time.

See Brewer et al. (2009). Predictors of RNs' intent to work and work decisions 1 year later in a U.S. national sample. *International Journal of Nursing Studies*, 46, 940-856. ■



Longer Use of Electronic Health Records Is Not Linked to Improved Quality of Care

Longer use of electronic health records (EHRs) does not necessarily translate into better quality of care, according to a new study. Researchers found no link between the duration of EHR usage and clinical performance quality measures. Between 2000 and 2005, the percent of physicians who reported adopting EHRs and having core functions available in those systems more than doubled. They used these EHR systems an average of 4.8 years. There was no difference in quality performance between users and non-users of EHRs for each of the six quality measures. In addition, there was no consistent pattern relating the adoption of EHRs to physicians' performance on the quality measures over time. What's more, there was no evidence that quality of care improved with increasing duration of EHR usage.

For details, see Zhou et al. (2009). The relationship between electronic health record use and quality of care over time. *Journal of the American Medical Informatics Association*, 16(4), 457-464. ■



MSN J1008

**Answer/Evaluation Form:
Experience with Family Activation of Rapid Response Teams
Deadline for Submission: August 31, 2012**

COMPLETE THE FOLLOWING

This test may be copied for use by others.

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OBJECTIVES

This continuing nursing educational (CNE) activity is designed for nurses and other health care professionals who are care for and educate patients and their families regarding rapid response teams. For those wishing to obtain CNE credit, an evaluation follows. After studying the information presented in this article, the nurse will be able to:

- Explain rapid response teams.
- Describe the implementation of rapid response teams at one institution.
- Discuss the lessons learned during the implementation and activation of the teams.

ANSWER FORM

1. If you applied what you have learned from this activity into your practice, what would be different?

Evaluation

	Strongly disagree		Strongly agree		
2. By completing this activity, I was able to meet the following objectives:					
a. Explain rapid response teams.	1	2	3	4	5
b. Describe the implementation of rapid response teams at one institution.	1	2	3	4	5
c. Discuss the lessons learned during the implementation and activation of the teams.	1	2	3	4	5
3. The content was current and relevant.	1	2	3	4	5
4. The objectives could be achieved using the content provided.	1	2	3	4	5
5. This was an effective method to learn this content.	1	2	3	4	5
6. I am more confident in my abilities since completing this material.	1	2	3	4	5

7. The material was (check one) ___new ___review for me

8. Time required to complete the reading assignment: _____minutes

I verify that I have completed this activity: _____

Comments _____
