



“RRTs” to

Rapid Response Teams
Make Sure Patients
Get What They Need,
Right When They
Need It

the

Rescue!

by Debbie Bunch



Missouri Baptist Medical Center's rapid response team members (from left) Diane Spence, RN, CCRN, BSN, critical care nurse manager; Richard Becker, PAC, physician assistant; and Carla Edge, RRT, respiratory coordinator, assess a patient's condition.

Floor nurses see it all the time: patients who are going downhill fast and ought to receive immediate attention. But much of the time immediate assistance doesn't materialize because staff are either unsure whether enough criteria really exist to call for help or they call and help just doesn't arrive quickly enough to make a difference. Enter the rapid response team. In places where they've been implemented, these teams are taking the uncertainty and delay out of the call process, bringing life-saving care to the bedside within minutes. And the respiratory therapist is a key member of the team.

RRTs are getting a lot of buzz in hospitals these days, but it's not what you think. These "RRTs" are "rapid response teams," and they're being driven by an organization called the Institute for Healthcare Improvement (IHI) as part of its "100,000 Lives Campaign" to improve the safety and effectiveness of medical care in hospitals nationwide. The goal: quickly reach patients who are rapidly failing outside of the ICU with proven interventions to treat the decline and ensure the patient is receiving the proper level of care.

But our RRTs — registered respiratory therapists — are a big part of the picture, as are certified respiratory therapists, in some cases. In fact, the IHI specifically calls on hospitals to include respiratory therapists on the two- or three-member teams, along with physician's assistants, nurses, and physicians. At two of the earliest hospitals to adopt the rapid response team concept, therapists have played an integral role

from the outset. Missouri Baptist Medical Center in St. Louis, MO, and Baptist Memorial Hospital in Memphis, TN, both rely on RTs to be on teams that have been in place since 2003 and are now leading the way for the development of other teams in facilities across the United States.

Thanks to the efforts of quick-response team members at Baptist Memorial in Memphis, including Nicole Covey, RN, and Richard Martin, RRT, mortality rates have dropped about 32 percent.

The right skill set

In St. Louis, the team consists of an RT, nurse, and physician's assistant. "The rapid response team models that we looked at in the literature seemed to identify that the majority — 50 percent or greater — of the patients requiring intervention were respiratory patients," says Carla Edge, RRT, respiratory clinical coordinator at the hospital. "The role of the respiratory therapist in the calls has been proven through analysis of our own data."

She says a recent spot check revealed that nearly 70 percent of all the calls received by the team included a respiratory component, which means having an RT there is essential to ensuring the patient receives appropriate care. Michael Cox, MD, medical director of the intensive care units at the hospital, agrees. "The respiratory therapist on the rapid response team is uniquely qualified to provide a necessary view in assessing our patients. The use of a three-member team allows for a more comprehensive discussion in which the respiratory therapist's input is specialized and offers an important contribution to the whole patient picture."



Dr. Cox's colleague in Memphis echoes those sentiments. "RTs should always play a role in any rapid response team that is responding to patients in an acute distress situation," says Baptist Memorial Medical Director Emmel Golden, MD. "The RT skill set and expertise truly make a difference for those patients with a respiratory complaint, and we find that many of the calls clearly include patients who have deterioration due to respiratory complications."

Larry Hopper, RRT, director of RT services at Baptist Memorial, says, "RTs' role in any medical response team concept is inevitable due to the nature of our business, where responding to acute situations is a way of life." The difference between the role respiratory therapists usually play in these situations and the rapid response team concept (or "medical response team," as the teams are dubbed in Memphis) lies in the official nature of the teams and the instructions floor personnel receive on using them.

According to the IHI, the teams are designed to arrive at the bedside within five minutes of a call, and calls should be issued by nurses or other staff members in response to the following "trigger" list:

- Staff member is worried about the patient
- Acute change in heart rate below 40 or above 130 bpm
- Acute change in systolic blood pressure below 90 mm Hg
- Acute change in respiratory rate below 8 or above 28 per minute
- Acute change in saturation below 90 percent despite oxygen
- Acute change in conscious state
- Acute change in urinary output to less than 50 mL in four hours.

Edge says her facility has added several additional measures as well, including acute significant bleed;

fraction of inspired oxygen (FIO₂) of 50 percent or greater; new, repeated, or prolonged seizures; and failure to respond to treatment for an acute problem or symptom. She believes it's the quick response with qualified assessors that makes the difference. "Having an RT at the bedside in 1.5 minutes (the average response time at her facility) allows for early intervention in our patients' situations. For instance, arriving in the room of

a floor patient who is in respiratory distress secondary to an exacerbation of COPD or acute congestive heart failure while the patient's pH is moderately acidotic and respiratory rate is in the 30s allows for the application of noninvasive positive pressure ventilation." Contrast that, she continues, to the typical scenario (the IHI says most patients show signs of decline for an average of 6.5 hours before interventions occur),

Who Is the IHI?

As the experiences of Baptist Memorial Hospital in Memphis, TN, and Missouri Baptist Medical Center in St. Louis, MO, illustrate, including respiratory therapists on the rapid response teams touted by the Institute for Healthcare Improvement's (IHI) "100,000 Lives Campaign" is helping to improve care for patients and raise the stature of RTs at the same time.


But just who, exactly, is the IHI? And where did its "100,000 Lives Campaign" come from?

According to the IHI's web site, the group was founded in 1991 to serve as "a reliable source of energy, knowledge, and support for a never-ending campaign to improve health care worldwide." The



"100,000 Lives Campaign" was launched last December with the goal of enlisting at least 2,000 hospitals to implement five proven strategies aimed at preventing avoidable deaths, including the rapid response teams and the "ventilator bundle" to prevent ventilator-associated pneumonia. The group surpassed that goal this spring and is now well on its way to making these life-saving measures ubiquitous in hospitals nationwide.

How did the campaign make such quick headway? A look at the key supporters tells the story. Partners range from the Centers for Disease Control and Prevention to the American Medical Association and just about every other national health care policy group in-between, including the Centers for Medicare and Medicaid Services and the Joint Commission on Accreditation of Healthcare Organizations.

You can learn much more about the IHI and its "100,000 Lives Campaign" online at www.ihl.org.

when the respiratory therapists may not arrive at the bedside until the patient is “tired out with a more severe pH, suffering from complete respiratory failure and requiring invasive mechanical ventilation.”

“The quick-response team gives us the opportunity to offer interventions before the patient’s condition spirals to a code situation,” Hopper points out. Outcomes collected in his program bear that out. Since implementing the response team concept, Baptist Memorial has seen a marked decline in codes occurring outside the ICU; and codes altogether have dropped about 28 percent, suggesting the team is helping to get patients to the appropriate level of care quicker. “As is the nature of health care in a hospital setting, we know that there will be those patients who will deteriorate and code during their stay. It has been discovered that the best possible way to alleviate worsening mortality rates and offer a way of actually decreasing mortality is to make sure patients are in the right level of care when they do code,” says the director. Outcomes from his hospital indicate that is happening too. Mortality rates have dropped about 32 percent since the response team and other IHI initiatives (see sidebar) went into effect.

Team members make a big difference

What’s it like to work on one of these rapid response teams? Kim Martin, RRT, is a lead RT at Baptist Memorial assigned to the team. “It is rewarding to me in the fact that I am able to utilize my skills of assessment and decision-making to assure that the patient is receiving appropriate care.” She says working with the ICU nurse assigned to the team — Baptist Memorial goes with a two-person team, bringing in an intensivist when needed — has been a pleasure as well. “The ICU RNs and the RTs at this

The Ventilator Bundle

The rapid response team isn’t the only Institute for Healthcare Improvement (IHI) initiative involving respiratory therapists. As a key member of the ICU team in most hospitals, RTs are also working to help implement the organization’s plan to prevent ventilator-associated pneumonia (VAP). Dubbed the “ventilator bundle,” the strategy involves four simple measures:

1. Elevation of the head of the bed (HOB) to between 30 and 45 degrees
2. Daily “sedation vacation” and daily assessment of readiness to extubate
3. Peptic ulcer disease prophylaxis
4. Deep venous thrombosis prophylaxis (unless contraindicated).

The ventilator bundle has been implemented at both Missouri Baptist Medical Center in St. Louis, MO, and Baptist Memorial Hospital in Memphis, TN; and, again, RTs are an important part of the mix. Says Missouri Baptist’s Carla Edge, “We, as RTs, are members of daily multidisciplinary rounds in our ICUs and step-down units in which we address, with nursing, physicians, pharmacy, palliative care, and social work, all of our patients’ needs and also create goals. We review our ‘ventilator bundles,’ ensuring our patients who are intubated have their HOB at 30 degrees, appropriate ulcer prevention medications are being delivered to reduce the chance of stomach contents being aspirated during times of reflux, and that all intubated patients are being assessed routinely for readiness to wean.”

Baptist Memorial’s Larry Hopper believes the latter component is really the key to reducing the incidence of VAP. “The main factor I think that will inevitably affect VAP rates is to ensure that patients are evaluated daily for weaning and RTs maintain an assertive role in ensuring that patients are given the opportunity to wean when applicable. This drives down your ventilator length of stay and, in turn, minimizes the opportunity for VAPs to occur.”

The IHI’s other four initiatives deal with adverse drug event prevention, acute myocardial infarction (AMI) care, surgical site infections, and central line infections. The AMI care plan also opens the door to greater respiratory therapist involvement by calling specifically for smoking-cessation counseling for heart attack patients. 🦋

facility have a very good relationship and are respectful of each other’s skills. We recognize that we both provide valuable input to the plan of care for the patient.”

Kim Goodwin, CRT, says serving on the Missouri Baptist team has helped her grow as a therapist. “As a member of the team, I actively assess

the patient’s condition and give my expertise to the team to help develop a treatment plan. This has allowed me to hone my leadership skills in interacting with other department personnel while increasing their confidence in my overall respiratory skills, decision-making, and department protocols.”

Goodwin relates one case in particular that she believes illustrates the benefits the team — and having an RT on board in particular — brings to patients. “Once, when I was the rapid response team respiratory therapist, our patient was in respiratory distress. I found her lethargic, in bed on a non-rebreather mask.” The team obtained an arterial blood gas, which showed the patient had an arterial oxygen tension (PaO₂) in the 60s. Her fellow team members thought that was acceptable, but she quickly pointed out that the patient’s PaO₂/FIO₂ (P/F) ratio was also in the 60s and “that a P/F ratio of less than 200 can be an indicator of acute respiratory distress syndrome.”

Thanks to Goodwin’s input, the patient was placed on noninvasive positive pressure ventilation (NPPV) and transferred to a step-down unit. She says, “The next day her oxygenation had improved dramatically, and she was weaning from the NPPV. I believe she avoided intubation because of the early detection of her worsening oxygenation and the aggressive treatment we delivered.”

A boon for respiratory therapy departments

Both hospitals have one response team available at all times, but they differ somewhat on who within the respiratory therapy department serves on the team. At Baptist Memorial, the lead RT or supervisor on duty is the official team member. Larry Hopper says this works well for his department because these therapists are able to float throughout the hospital, and they also have a lot of experience with the department’s protocol/consult process. In the event the lead respiratory therapist or supervisor is on another call when a response team is requested, senior staff RTs serve as alternates.

At Missouri Baptist, respiratory therapists must meet specific criteria to serve on the team, including training and competency-verification in

patient assessment skills within the department’s protocol program, ACLS (advanced cardiac life support) certification, and a minimum of two years’ ICU experience. So far, 24 out of 37 staff members have met the criteria and are assigned to the team on a rotating basis.

Whatever the staffing paradigm, however, Carla Edge and Larry Hopper agree that including RTs on the response teams has been beneficial for their departments. “I believe the professional stature of the RTs in our department has been raised by having a system in place that truly places our best assessors at the bedside when they are most truly needed,” says

Edge. Hopper says stepping outside of traditional departmental boundaries and into this new role is educating fellow staff about the profession. “I often tell RTs that involvement is what really makes a difference when you want to raise the eyebrows of others and let them know what you bring to the team. Being involved with such processes as the response team opens the eyes of many who thought they knew what we do and how important it is — it lets them know that respiratory therapy is far more important than they thought.” 🙏

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