

Project Submission:
2009 Delaware Valley Patient Safety Award

HAHNEMANN UNIVERSITY HOSPITAL

“Evaluation of an Existing Rapid Response Team”

Abstract**Evaluation of an Existing Rapid Response Team**

An evaluation of our Rapid Response Team was initiated in July 2009. In existence since 2005, our RRT was evaluated and revised in 2006 in conjunction with our participation in a Robert Wood Johnson Foundation grant for development of RRTs. At that time we re-educated both clinical and non-clinical areas. We added a supply pack “the RRT backpack”, and initiated a new documentation form to better assist with documentation of the event and ease of data collection for the National Registry of Cardiopulmonary Resuscitation database. Since that time new patient care areas have been opened and new non-clinical areas have been activating the RRT. Recently there have been inquiries about the supplies in the RRT backpack. Having been able to sustain our outcome measures we have recently encountered some challenges related to team satisfaction and communication. We have decided to re-evaluate our RRT in the categories of response time and length of event, RRT supplies, and satisfaction from both the caller and the responder.

Evaluation of an Existing Rapid Response Team

In 2005 our institution initiated a Rapid Response Team (RRT) in response to the Institute for Healthcare Improvement's 100,000 Lives Campaign to quickly evaluate and triage patients who exhibited signs of deterioration. In 2006 we were invited to participate in a corporate wide grant awarded by the Robert Wood Foundation for initiation of RRT. With a team currently in existence we chose this opportunity to evaluate our entire RRT process. At that time we re-educated all clinical and non-clinical areas with respect to the team's purpose and examples of scenarios that might warrant calling the RRT. We developed a pack of supplies for use during the Rapid Response event based on initial feedback from team members. Finally we revised our documentation form to improve documentation of the event and ease of data entry into the National Registry of Cardiopulmonary Arrest database (NRCPR).

Since these interventions the number of RRT calls has increased. Physician leadership at our institution felt strongly that our patients would benefit from a system that deployed based on the service that the patient was assigned to. Deployment of the RRT in our institution is unique in that we actually have 2 RRTs, one for "medicine" patients and one for "surgical" patients. Each clinical and non-clinical area is assigned to either the medicine beeper or the surgical beeper based on the types of patients who are seen in those areas. These response teams are not exclusive and frequently consult each other for patient evaluation and intervention. For example the medicine team can consult the surgical team when central line IV access is needed. The surgical team can consult the medicine team for cardiac arrhythmias. Calls from non-clinical areas have increased which prompted additional education specifically geared to these areas.

An evaluation of RRT calls to our radiology department prompted the addition of medication to the Pyxis® system in that area for treatment of contrast reactions and relocation of the code cart. An evaluation of RRT calls from our hemodialysis unit which treats both in-patients and out-patients prompted a new process for facilitated patient registration if an out-patient is in need of emergency care. Analysis of RRT events is presented monthly to the critical care committee and reported to the hospital's board of governors. Specific education was provided to our telecommunications department who page the team when activated.

We developed scripting for our telephone operators to quickly determine the nature of the emergency call subsequently improving the dispatch of the correct team to the correct area. A double-check system was implemented by the quality department and the telecommunications department to capture a log of all emergency calls for entry into the NRCPR database. As a result of our participation in the NRCPR database we developed review triggers based on patient placement prior to the event and relation to procedural sedation/general anesthesia.

Recognizing that a patient's transition from one area to another is a risk factor, we chose to evaluate the following types of events: events that occur within 24 hours of admission, 24 hours of transfer outside of an ICU, and 24 hours of receiving procedural sedation or general anesthesia. These cases are reviewed for factors that may have contributed to the event by the physician directors of the ICUs, the emergency department, the departments of surgery and medicine, and the department of anesthesiology.

In 2007, resulting from these interventions we saw a 66.4% increase in the number of RRT calls with a decrease in the number of cardiac arrests occurring outside of the ICU by 7.4%. To date we have been able to sustain this success and the number of cardiac arrest events occurring outside of the ICU has remained lower than the number of cardiac arrests occurring in the ICU.

With these successes we have had some challenges recently which has prompted a re-evaluation of our RRT. The quality department receives a copy of every RRT documentation form which includes an evaluation of the RRT call. The evaluation includes questions about timely response of the team members, availability of equipment and medications, deviation from protocol, and leadership during the event. The quality department received feedback about the RRT backpack not being fully stocked. The backpack replacement process includes the pharmacy and the ICUs who carry the backpack. Through event evaluation we have received comments about team leadership with regard to identification of team leader, team member response, and length of RRT call. The RRT policy states that if a patient is to be transferred to critical care unit the responding critical care nurse will attend the patient until transfer to an intensive care unit. If a critical care bed is not immediately available or the patient requires diagnostic testing the RRT call can last in excess of an hour. During RRT reviews there have been a number of RRT calls immediately followed by a cardiac arrest or Code 99 call. Here at our institution we have made a distinction between the RRT and the Code 99 team. These types of "stacked" calls require individual review to look for opportunities where the RRT may have been called earlier. Other challenges include feedback related to activation of the RRT from both the telecommunications department and the areas calling the RRT. Since 2006 we have opened 2 new patient care areas which required communication to team members. On the positive side a new team member has emerged. The staffing office employs a transfer center nurse who is a critical care nurse. When not involved in transferring a patient to our institution the transfer nurse responds to the RRT call. She not only helps during the RRT call but relieves the RRT critical care nurse when calls become lengthy. We hired an additional senior educator who is assigned to the night shift. As a critical care nurse, she responds to RRT calls at night in a similar way to the transfer center nurse does on day shift. These two positions have emerged as support for the RRT. As with most hospitals, we have a steady influx of new staff including physician residents. In the beginning of July four new chief residents began their tenure for the next year. Nurses from patient care areas have become interested in analyzing their own RRT calls and data. With this increased interest a more formal communication process between the quality department and patient care areas need to be developed.

As we have been able to sustain our outcomes our evaluation focuses on two general topics: satisfaction and communication during the event. We developed surveys for both the caller and the responder. (Attachments A and B) We feel strongly that all responders should be included in the survey in order to get a clear picture of effect on hospital operations. Responders include the critical care nurse, medical/surgical resident, and the respiratory therapist. Ancillary team members include the telecommunications department, the transfer center, the staffing office, staff education, the pharmacy, and the chief residents. An interview will be conducted with these areas to determine if their current input is the same as our policy. RRT support from the transfer center and staffing office has prompted a query into the possibility of staff positions dedicated to responding to both RRT and Code 99 emergencies.

Our plan is to analyze our results and then begin to develop a list of strengths and opportunities for improvement to be addressed by our team.

Rapid Response Team Evaluation

Requesting Personnel

DVPSA-2009-21

1. The team's response time to my call was:

A. Satisfactory

B. Unsatisfactory

Why: _____

2. The team was respectful of my call for help:

A. Yes

B. No

Explain: _____

3. The patient's outcome was impacted by the arrival of the rapid response team:

A. Positively

B. Negatively

C. Not Sure

4. My overall satisfaction with the rapid response team was:

A. Very satisfied

B. Satisfied

C. Not Satisfied

Comments: _____

5. Hero story: Tell us about a time when the Rapid Response Team assisted you in saving a life. _____

Rapid Response Team Evaluation

DVPSA-2009-21

Team Member

1. The requesting nurse effectively facilitated my deployment to where the help was needed:

A. Yes

B. No

2. Being a member of the rapid response team has impacted my daily work:

A. Positively

B. Negatively

C. Not at all

Explain: _____

3. When I arrived in the patient care area it was clear who had requested my assistance.

A. Yes

B. No

4. When I arrived in the patient care area it was clear which patient needed clinical assistance.

A. Yes

B. No

5. My feelings on the effectiveness of the rapid response team are:

A. Positive

B. Negative

Why: _____

6. Hero story: Tell us about a time when the Rapid Response Team assisted you in saving a life. _____

