

Rapid Response Systems: Team Systems for Safety

Residents on Trainee Education

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Should house staff be a part of the Rapid Response System?

- At academic institutions, house staff seem to be the logical choice to participate in a Rapid Response System
- They typically are the first responders in the management of patients

Should house staff be a part of the Rapid Response System?

- It is a great learning experience triaging and managing acutely ill patients.
- If the number of codes decrease, then house staff need experience in taking care of decompensating patients.

Who should lead an RRT?

- Attending – best for the patient
 - Intensivist, Hospitalist, Moonlighter
- Pulmonary/Critical Care Fellow
- Resident/Intern
 - Medicine, Pediatrics, Family Medicine, OBGYN, Surgery, Anesthesiology

Other institutions

- Academic Rapid Response Collaborative (data from 15 academic institutions)
 - Mostly internal medicine/peds residents, very few include interns
 - Some have pulmonary fellows either run or supervise residents

Other institutions

- Academic Rapid Response Collaborative (data from 15 academic institutions)
 - Few have no house staff (utilize intensivists, hospitalists, or moonlighters instead)
 - Some use house staff only during daytime, perhaps due to less overnight house staff available as a result of the 80 hours work week rules

Thomas Jefferson RRT Members

- House staff – many different members for expertise
 - Critical Care Fellow during day
 - Senior Medicine Resident during night
 - General Surgery Resident (trauma service) all day
 - Anesthesia Resident all day
- ICU Nurse
- Respiratory Therapist
- Patient Staff Nurse
- Primary Team House Staff

Thomas Jefferson Internal Medicine Teaching Hospitals

- Thomas Jefferson University Hospital (TJUH) -- 648 beds
 - **Only hospital with active RRT system**
- Jefferson Hospital of Neuroscience – 93 beds
- Methodist Hospital – 205 beds
- VA Hospital, Wilmington DE – 125 beds
- Frankford-Torresdale Hospital – 239 beds

Happy Birthday

- May 2, 2007 is the 1st Birthday of the Rapid Response Team at Thomas Jefferson University Hospital



Thomas Jefferson Questionnaire to House Staff

- Questionnaire sent to house staff via e-mail and in person
- 40 of the 134 house staff responded
- Response from
 - 8 PGY1 (primary team)
 - 13 PGY2 (primary team)
 - 14 PGY3 (evening RRT)
 - 5 Pulmonary Fellows (day RRT)

Thomas Jefferson Questionnaire on RRT and Code experiences

- Have you ever run an RRT?
 - 55% of house staff responded “Yes”
- Estimate number RRTs been a part of?
 - Average 6 over past year
- Estimate number of codes been part of?
 - Average 10 over past year
 - (Many affiliates do not have RRTs)

Thomas Jefferson Questionnaire on RRT and Education

- Have you ever called an RRT, why?
- How have RRTs improved patient care?
- Who do you think should be permitted to call an RRT?

Thomas Jefferson Questionnaire on RRT and Education

- Do you think that RRTs have limited your education?
- Do you feel comfortable running codes?
- Do you feel comfortable running RRTs?
- Who do you feel should run an RRT?

Have you ever called an RRT? Why?

- 50% of housestaff responded yes
- Majority needed respiratory or anesthesia assistance to intubate the patient
 - Over 70% of our RRTs called for respiratory issues
 - Around 30% require intubation at time of RRT
- Few RRTs called by housestaff to expedite transfer to higher level of care
 - 95% transfer to higher level of care
 - 60% to the ICU

How have RRTs affected patient care?

- Answer options: Improved, No difference, Hindered
 - 34 Improved
 - 6 No difference
 - 0 Hindered
- PGY3 -- "Quicker response to sick patients, more people empowered to call for help."
- Pulmonary fellow -- "only 50% of patients improved...30% of calls are for stable patients"

Who do you think should be permitted to call an RRT?

- Almost everyone responded that House Staff and Nursing staff should be allowed.
- Approximately 15% only wanted to allow House Staff.
- About 7.5% want to allow any clinician, but specifically want to exclude family members.

Do you think that RRTs have limited your education?

- 35/40 (88%) say "No"
- 5/40 (12%) say "Yes"
- Intern -- "I feel that I've learned techniques for handling urgent situations from watching the management of RRTs"
- Intern -- "...limits the amount of code type of situations that I've seen."

Do you feel comfortable running codes?

- 33/40 (83%) responded "Yes"
- 5 of the 7 that responded "No" are interns
- At Jefferson we have seen a gradual decline in codes since the start of RRT one year ago
- Question remains that as number of codes decrease will these interns who started after the advent of the RRT feel as comfortable in a code situation as prior residents.

Do you feel comfortable running codes?

- Intern – "...because there are no RRTs at the affiliates, I have seen more code situations during my affiliate months..."
- PGY3 – "Since the advent of RRT, code blue skills have gotten a bit rusty."
- Former TJUH resident, now fellow at an academic institution where residents don't routinely participate in RRT or codes, "The residents here are not comfortable running codes in the ICU."

Do you feel comfortable running RRTs?

- 30/40 (75%) responded "Yes"
- Same 5 now out of 10 who responded "No" are interns
- Pulmonary Fellow – "too much politics"
- PGY3 – "less clear what all residents roles are"
 - Confusion since it is new?
 - Confusion since residents on RRT and primary team both responding? Perhaps fellows or attendings are better suited to respond and lead RRTs?

Who do you feel should run an RRT?

- Answer options: Attending, Fellow, Senior Resident, Intern, or ICU nurse
- Overwhelmingly the majority of house staff wanted a fellow and a resident to run the RRT
 - A couple people wanted either senior resident or fellow alone

Who do you feel should run an RRT?

- Not one person wanted only an attending, but a few added an attending to the team with fellow and senior resident.
 - I did not specify intensivist vs other attending on the questionnaire
- One Pulmonary fellow wanted an ICU nurse alone to run RRT
- A few added an intern to the team with resident and fellow

Who do you feel should run an RRT?

- Clearly residents want to be a leader in the RRT to gain experience in these situations for educational purposes.
- Who is the best person to run an RRT from the patient's perspective? Intensivist, Fellow, Resident, Intern
- RRT was established as a patient safety measure not an educational initiative.

Who are we training?

- Internists likely to care for critically ill patients
 - Intensivists, Cardiologists, Hospitalists
- Most physicians practice in community hospitals and not academic universities.
- Community Hospitals will have Intensivists (24hrs/day?) and/or Hospitalists as the lead physician to run codes and RRTs.
- Will we sufficiently train these various internists to be competent to run RRTs or codes?
 - i.e. "Who is putting in the central line?"

Ways to Enhance Education at TJUH

- Stress the need of the primary team, usually an intern and resident, as part of the RRT– learn from experience.
- Review cases – Starting to implement reviewing RRT cases as part of intake for morning report and M&M conferences.
- RRT/Code Simulation – Weekly RRT and code simulation with the interns, run by chief medical residents, using SimMan.
- Feedback from residents and fellows involved in RRT.
 - Assess clinical areas to educate residents
 - Address need for new and improved hospital policies