

Higher acuity patients and less experienced nurses:

Implementation of a rapid response team to support non-critical areas

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Learning Outcomes

By the end of this session, the Critical Care Nurse will be able to:

- Explain the purpose of a rapid response team (RRT)
- Describe the benefits of a RRT in terms of both patient care and nursing satisfaction
- Identify the indications for activating the RRT
- Describe the impact of the RRT on the incidence of code blue calls in non-critical care areas



Queen Elizabeth Hospital

- Located in Charlottetown, PEI
- The main acute care referral centre in the province
- 243 bed facility
- Provides emergency, surgical, inpatient, and ambulatory care services

Definition

Rapid Response Team (RRT) – To support healthcare staff in the management of a clinically deteriorating adult patient in a non-critical care area. Composed of clinicians who bring critical care experience to the patient's bedside. The RRT includes the patient's primary RN and Most Responsible Physician (MRP), a certified ICU RN, and an RT. The MRP maintains responsibility for the patient's care.

Purpose

- To support nursing staff in the recognition and management of acutely deteriorating patients
- To provide immediate stabilization and resuscitative measures to the acutely ill patient

Analyzing Hospital Deaths

- Mortality Diagnostic – 2 x 2 Matrix

		ICU Admission?	
		Yes	No
Comfort Care Only?	Yes	Box #1	Box #2
	No	Box #3	Box #4

Three Fundamental Problems

- Failures in planning
- Failure to communicate
- Failure to recognize



Clinical Instability Prior to Arrest

- 70% of patients show evidence of respiratory deterioration within 8 hours of arrest
- 66% of patients show abnormal S/S within 6 hours of arrest and the MRP is notified in 25% of cases

Warning Signs

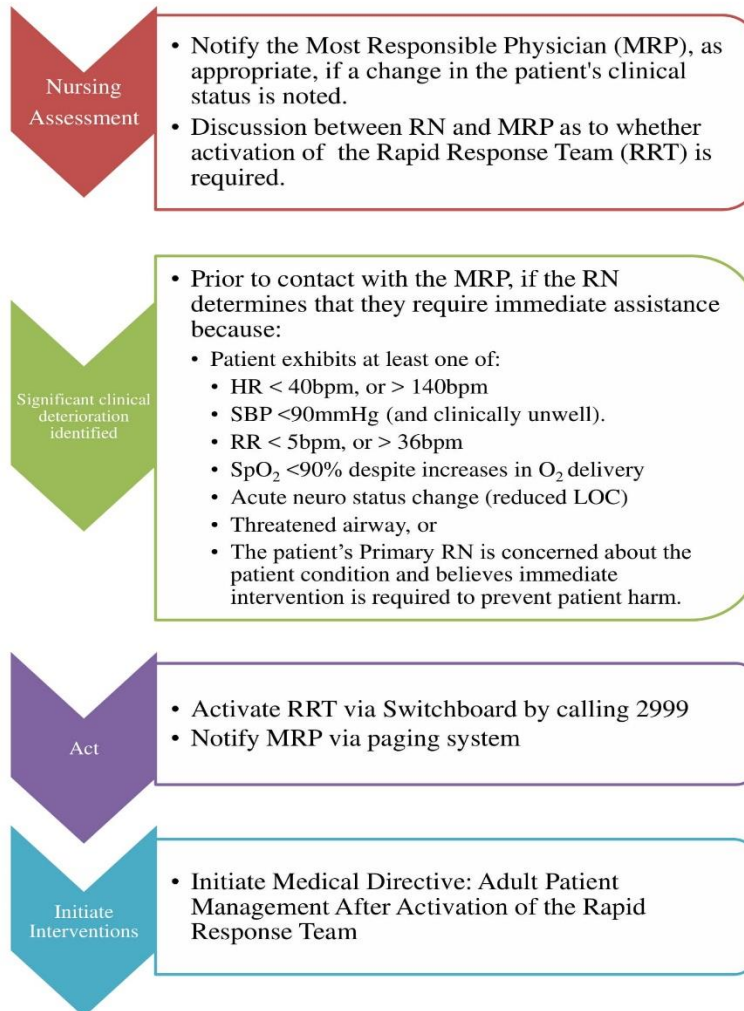
- MAP <70 or >130 mmHg
- HR <45 or >125 bpm
- RR <10 or >30 bpm
- Chest pain
- Altered mental status



Implementation Process at QEH

- Increasing patient acuity and less experienced nursing staff
- A negative patient outcome
- 12-18 months developing
- Literature review
- Environmental scan

QEH Rapid Response Team



Indications for Activating the RRT

- HR less than 40 bpm or greater than 140 bpm
- SBP less than 90 mmHg and clinically unwell
- RR less than 5 bpm or greater than 36 bpm
- SpO₂ less than 90% despite increases in oxygen delivery
- Acute change in neurological status (decrease LOC)
- Threatened airway
- The patient's Primary RN is concerned about the patient condition and believes immediate intervention is required to prevent harm

Medical Directive

- Initiate at least one large bore peripheral IV and commence an infusion of 0.9% NaCl at 30ml/hr
- Administer a fluid bolus of 500mL 0.9% NaCl, and repeat x 1 prn, if no signs or symptoms of heart failure are present
- Order a 12 lead ECG stat
- Initiate high flow O₂ to maintain SpO₂ greater than 92%
- Order and draw appropriate blood samples for testing. This may include ABG, Blood Cultures, and Lactate

Medical Directive con't

- Order a portable CXR
- Administer the following medications:
 - Heliox for threatened airway with stridor
 - Oxygen-titrate
 - Naloxon 0.1mg-0.2mg IV q2-3min if RR less than 8 bpm and somnolent/difficult to arouse, with a recent narcotic administration
 - Diphenhydramine 50mg IV once, if anaphylaxis is suspected
 - Nitroglycerin 0.4mg SL spray q 5min for chest pain
 - Salbutamol 400mcg q15min
 - Ipratropium 80mcg

Challenges

- IM anticipated an increase in referrals
- Physician groups worried about their role
- Worried it would be launched then left to run on it's own



RRT Audit

- RRT was launched at the QEH July 4th, 2017
- Data was collected from:
 - Switchboard logs
 - Process evaluation forms completed by med-surg nurses
 - Patient charts

RRT Audit Results

- 28 calls from July 4-January 3, 2018
- Indication for RRT calls:
 - Severe hypotension/severe hypoxia (8)
 - Seizure (5)
 - Hypoxia/apnea (4)
 - Unknown (3)
 - Reduced LOC or unresponsive (3)
 - Vasovagal episode (2)
 - Acute SOB (1)
 - Bradycardia and/or chest pain (1)
 - Choking (1)

	Averages
Time from call to RRT arriving	2.3 min
Time to first MRP contact	5 min
Did MRP attend if requested?	100%
Code Blue called?	100%: No
Duration RRT present at bedside	28 min
Patient transferred to ICU	7/28
Was the RRT beneficial for RN and patient?	100%: Yes
Difficulty determining who was the MRP?	100%: No
The hour of day call for RRT was made	Average: 1206 Median: 1142

Impact on Code Blue Calls

- Pre-RRT: 11 code blue calls in non-critical care inpatient areas
- Post-RRT: 4 code blue calls in non-critical care inpatient areas

63% reduction in code blue calls!!!

Is it really down 63%?

- RRT calls have likely replaced some of the code blue calls that were “peri-arrest” situations
- RRT calls have certainly resulted in the prevention of code blue calls



Five Keys to Success



- Organizational culture
- Team structure
- Expertise
- Communication
- Teamwork

Moving Forward

- Ongoing education:
 - When to activate the RRT
 - Roles during the event
 - Documentation
- Updating and/or modifying the Policy and Medical Directive as needed



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