Implementing Rapid Response Teams (RRT)

National Call & Webinar
October 1, 2008
Purpose

• By the end of this call, participants will have:
  – Understanding of SHN results related to RRT
  – An overview of different models and challenges for smaller centres
  – Heard stories from Faculty learning from abroad
  – An overview of emerging Issues
  – Questions answered
Teams Continue to Enroll

Safer Healthcare Now! Overview Total # Enrolled Teams
September 2005 to July 2008

Total at July, 2008

Total # of Enrolled Teams

- Sep-05
- Nov-05
- Jun-06
- Nov-06
- Jan-07
- Mar-07
- Jun-07
- Aug-07
- Oct-07
- Jan-08
- Mar-08
- Apr-08
- May-08
- Jun-08
- Jul-08
- Aug-08

October 1, 2008
### Safer Healthcare Now!
#### Enrollment by Intervention

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Number of Teams</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deploy Rapid Response Teams</strong></td>
<td><strong>55</strong></td>
</tr>
<tr>
<td>Improve Care for Acute Myocardial Infarction</td>
<td>121</td>
</tr>
<tr>
<td>Prevent Adverse Drug Events through Medication Reconciliation</td>
<td>334</td>
</tr>
<tr>
<td>Prevent Central Line-Associated Bloodstream Infection</td>
<td>92</td>
</tr>
<tr>
<td>Prevent Surgical Site Infection</td>
<td>175</td>
</tr>
<tr>
<td>Prevent Ventilator-Associated Pneumonia</td>
<td>118</td>
</tr>
<tr>
<td>Antibiotic Resistant Organisms (AROs)/MRSA</td>
<td>27</td>
</tr>
<tr>
<td>MedRec (Long Term Care)</td>
<td>49</td>
</tr>
<tr>
<td>Venous Thromboembolism</td>
<td>10</td>
</tr>
<tr>
<td>National Collaborative on Falls in Long-Term Care</td>
<td>39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,021*</td>
</tr>
</tbody>
</table>

*Total at August 29, 2008*
## Teams Working on Each Intervention

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Nov /05</th>
<th>Jul /08</th>
</tr>
</thead>
<tbody>
<tr>
<td>RRT</td>
<td>41</td>
<td>55</td>
</tr>
<tr>
<td>AMI</td>
<td>43</td>
<td>121</td>
</tr>
<tr>
<td>Med Rec</td>
<td>82</td>
<td>334</td>
</tr>
<tr>
<td>Central line</td>
<td>35</td>
<td>92</td>
</tr>
<tr>
<td>SSI</td>
<td>53</td>
<td>175</td>
</tr>
<tr>
<td>VAP</td>
<td>42</td>
<td>118</td>
</tr>
<tr>
<td>ARO/MRSA</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>MedRec (LTC)</td>
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<td>49</td>
</tr>
<tr>
<td>VTE</td>
<td></td>
<td>10</td>
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<tr>
<td>Falls</td>
<td></td>
<td>39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>296</strong></td>
<td><strong>1021</strong>*</td>
</tr>
</tbody>
</table>

*Total at August 29, 2008*
Enrollment of SHN! Participants

- Health Regions
- Hospitals/Community Services

Health Regions grouped into Nodes
- Western Node
- Ontario Node
- Quebec Campaign
- Atlantic Node

Notes: If both a health region and a hospital within that health region enrolled, only the former will be indicated on the map by a yellow box.
Codes per 1,000 Discharges

INTERVENTION - RRT MEASURE: 1.0 Codes per 1000 Discharges

![Chart showing codes per 1,000 discharges over time]

October 1, 2008
Codes per 1,000 Discharges

Codes per 1000 Discharges

x Chart

UCL = 7.83
Mean = 5.54
LCL = 3.25
Percent of Codes outside ICU

INTERVENTION - RRT MEASURE: 2.0 Percent of Codes Outside ICU

Month

Percent

Local Team
National
Goal
INTERVENTION - RRT MEASURE: 3.0 Utilization of Rapid Response Team

Number of RRT Calls

Local Team vs. National vs. Goal

Month

Number of Calls

October 1, 2008
Number of RRT Calls

Number of RRT Calls

x Chart

UCL = 34.75
Mean = 27.64
LCL = 20.53
Different Models of RRT and Challenges for Smaller Centres

Mike Cass
RRT Models and challenges

• Ramp up versus ramp down
• Leadership
  – physician led
  – nurse led
  – respiratory therapy led
• Staffing
• Intensive care model
The Ontario model

In order to be funded by the MOHLTC the facility must provide a team that is

• Ramp down-everyone sees the patient, then those that aren’t needed can peel back
• Intensivist led-ICU physician free from other duties who will see patients within fifteen minutes
• Dedicated critical care nurse-cannot have an assignment or other duties (eg code team nurse)
• Closed ICU-All patients are cared for/admitted by intensivist
Ontario Model (cont)

Organization also commits to following all critical care discharges for 48hrs
This includes CCU, CVICU, MED/Surg/Neuro
The Trillium Experience

- Large community hospital
- Provides tertiary care for Neurosurgical, Cardiac, and Vascular populations
- 20 bed CCU, 26 bed ICU, 14 bed CSICU
- CCRT is usually following 15-20 patients/day
- CCRT currently averaging 40-70 calls per month
The Trillium Experience

- Initially ramp up, nurse led
- Now ramp down, intensivist led
- Ramp down works better in a large organization but may not be feasible in smaller centres
Ramp down

• All team members see patient in expeditious manner
• Intensive care team is thus ‘in the loop’ immediately, able to plan for admission, etc
• Eliminates physician issues for ward staff
• i.e. When MRP or service doesn’t feel that patient is sick
Challenges for Smaller Centres

- Staffing issues may preclude using ramp down model therefore some form of ramp up with RT or RN as primary responder, working with MRP or on call

- “Open” ICU-who ‘owns’ the patient and who do staff go to if patient is getting sicker in spite of care? Eg septic pt, team contacts on call, orders 500 NS over two hours
Challenges for Smaller Centres

**Support/Buy in from other services**

- The ramp down model (Intensivist/RT/RN) is self-sufficient (i.e., can provide the entire spectrum of critical care)
- The ramp up model (RT/RN) is not
- Who supports team when find patient that needs ETT, Aggressive Fluid resuscitation etc,
- In our experience neither code team, nor other services are eager to support CCRT if it means extra work
Challenges for Smaller Centres

DATA!

- Data collection is extremely difficult to get right
- Prior to implementing team must know cardiac arrest rate on wards, ICU admission rate, ICU LOS, mortality of ICU admissions from wards, percentage of admissions with terminal disease, rate of DNR conversations pre ICU admission
- Must apply same degree of energy to data as to clinical in order to show benefit and understand if team is working
Lessons learned

- *Any* team is better than *no* team
- Ramp down has significant advantages
- Bringing critical care expertise to the bedside represents a huge culture shift
- Staff outside of ICU are not used to dealing with situations in a rapid manner-this is a huge value add
- Data collection, analysis, management are critical
Learning from Abroad: Emerging Research and Experience

Dr. Ann Kirby
Emerging Issues & Common Questions

Dr. Sherissa Microys
SHN Communities of Practice

- www.saferhealthcarenow.ca

- Discussions
- Share files and examples
Canadian ICU Collaborative

- ICU2@telus.net

- Additional resource to ask questions on any critical care topic

- Often referred to as one of the ‘best values’ of joining the CIC (ICU Manager)
Team Training

• CRI Critical Care Education Network
  – Formerly known as the Canadian Resuscitation Institute
  – www.criedunet.ca
  – Offer a 2 day course for RNs and RTs

• Classroom, Simulator, Mentorship components should be included

• Consider teaching hospitals in your area with simulators
SBAR

• Effective communication ensures that the thoughts and opinions of the speaker are conveyed in a clear, succinct manor, ensuring the receiver has understood the impact of the situation.
• SBAR is a structured communication tool intended to add predictability and consistency to critical points of information transfer.
**SBAR**

**Situation:** what is going on

**Background:** brief hx, relevant context

**Assessment:** what I think, conclusions

**Recommendation:** What I need, in what time frame

*SBAR education tools on SHN and CIC websites*
Following the Data

IHI (from the GSK):

The implementation issues embedded in the MERIT study emphasize the need for hospitals to attend carefully to the training, support, encouragement, and monitoring of the RRT process, itself.

Good target rates of RRT calls may be in the range of 15 to 25 per 1000 admissions to ensure proper uptake of the RRT process.
Building the Business Case

Return on investment = Financial value

- Cost of intervention: equipment, personnel
- Reduced costs: ICU care, hospital length of stay
- May be difficult to show a positive ROI (ie costs may be greater then savings) depending on who pays/benefits, time interval

But even with a negative ROI, there are many reasons to pursue a RRT besides the moral imperative that ‘it is the right thing to do”….
Building the Business Case

Consider the **Full Value** to the organization

- **Financial**
  - Cost avoidance resulting from decreased length of stay
  - Productivity gains from reduced readmissions/codes, appropriate use of other services such as Palliative Care

- **Clinical**
  - Improved patient and family satisfaction
  - Ongoing staff education during calls
  - Decreased codes and ICU admissions

- **Organizational**
  - Improved staff satisfaction and reduced nurse turnover in ICU and on wards
  - Improved accreditation compliance and public perception of commitment to excellence
Your Questions

Facilitated by Leanne Couves
Resources

• RRT Getting Started Kit & Worksheets
  http://www.saferhealthcarenow.ca/Default.aspx?folderId=82&contentId=186

• Communities of Practice

• Canadian ICU Collaborative Improvement Guide – available when enrolled
About the Canadian ICU Collaborative
RRT Faculty Contacts

- Mike Cass
  mcass@thc.on.ca
- Dr. Ann Kirby
  ann.kirby@calgaryhealthregion.ca
- Dr. Sherissa Microys
  smicroys@rogers.com