

Rapid Response Team: Increases Patient Outcomes and Nursing Staff Satisfaction.

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Rapid Response Team: Increases Patient Outcomes and Nursing Staff Satisfaction

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Rapid Response Team (RRT) – Why Now?

- Institute for Healthcare Improvement
 - 70% (45/64) arrests with evidence of respiratory/neurological deterioration with 8 hours. (Schein, Chest 1990; 98:1388-92)
 - 66% (99/150) of patients show abnormal signs and symptoms within 6 hours of arrest and MD is notified in only 25% (25/99) of cases. (Franklin C, Mathew J. Critical Care Med. 1994;22(2) :244-247)
- 2009 National Patient Safety Goal (NPSG)

The Rapid Response Team

- ...is a team of clinicians who bring critical care expertise to the bedside (or wherever needed)
- Goal
 - Prevent deaths in patients who are failing outside intensive care settings by implementing Rapid Response Teams (RRT)

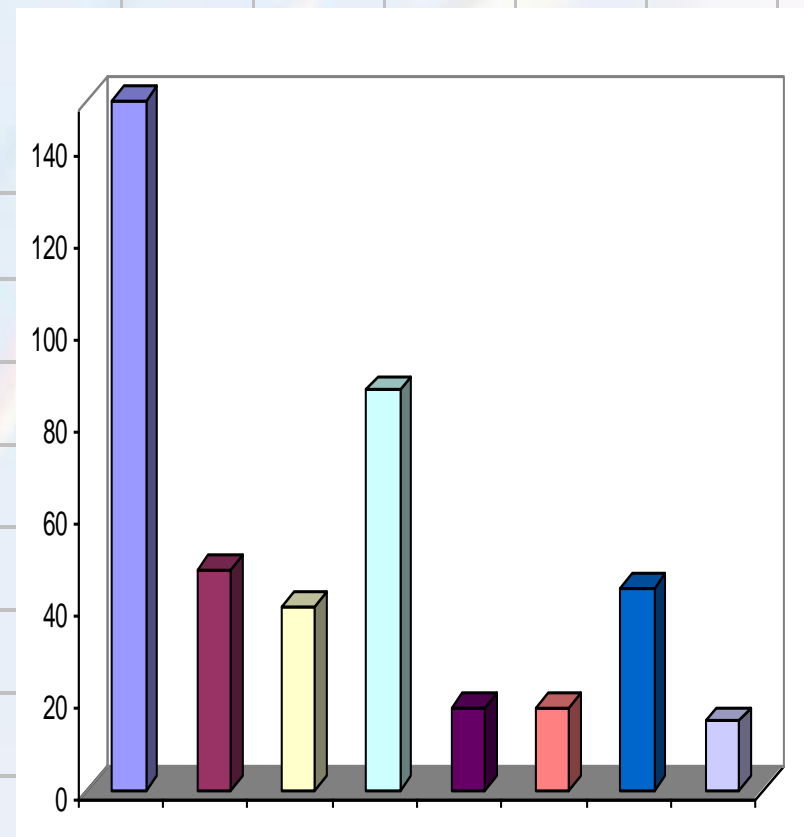
So How Did We Get Started?

- We developed the RRT committee
 - Team of nurse leaders, physicians, and respiratory therapists
 - Utilized the IHI 100 Thousand Lives Campaign's RRT Practical Implementation Strategies 2005 and the Getting Started Kit.
 - Conducted a literature review
 - Developed criteria for when to make a RRT call
- Training for the team members
- Staff education

Cedar Crest RRT Calls

What was the reason for the RRT?

Response	Number of Calls	Percentage of Calls
Respiratory	150	48.08
Heart Rate	48	15.38
Blood Pressure	40	12.82
Acute Neurological Change	87	27.88
Pain	18	5.77
Staff Concern	18	5.77
Other	44	14.10
Stroke Alert	15	4.81



Cedar Crest, Med – Surg/Low Level – Year 1 (2006-2007)

	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Totals
Unit														
TOHU		1			1	2	2			1	1	1		9
IPCU		4			5		1	2	1	3	1	2	2	21
PCU		1	2	3	1	1	3	2	2	2	3	3	6	29
4A	1		3		2	4	7	4	4	1		1	3	30
4C	4	4	8	4	1	5	1	1	1	1	2	3	1	36
5A		1	2	1	1		1	1	1	1			1	10
5B			2	1		3	1	1						8
5C	1		5	4	1	6	2	2	2	3	2	3	1	32
6B	1	8	2		2	2	2	4	1	3	2	4	1	32
6C		1	7	1	2	3	3	4	1	4		2	4	32
7A		3	7	4	4	2	4	7	1	8	4	3	4	51
7B	2	3	2			5		1	4	6	1	2	3	29
7C	2	4	4	3	4	6	1	2	2		1			29
EAU N								1	1				1	3
EAU S			1		1		2			1				5
Dialysis								1	1		2			2
Total	11	30	45	21	25	39	30	33	22	34	19	24	27	360

Stroke Alert	1	4	4	1	4	1	4	4	1	1	1	1	1	28
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Cedar Crest – Time of Call, Year 1 (2006 – 2007)

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Totals
Time														
0301-0700	2	7	6	3	2	6	4	3	5	4	3	3	5	53
0701-1100	2	4	7	5	6	6	7	9	4	4	2	4	4	64
1101-1500	1	2	7	3	5	4	4	4	3	9	4	1	1	48
1501-1900	2	6	9	3	7	8	7	4	6	4	4	5	5	70
1901-2300	2	6	11	0	2	9	4	6	2	6	3	5	4	60
2301-0300	2	5	5	7	3	6	4	7	2	7	3	6	8	65
Total	11	30	45	21	25	39	30	33	22	34	19	24	27	360

Cedar Crest – Med Surg Unit/Low Level, Year 2 (2007 – 2008)

2007	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Unit													
TOHU/3K	1	4	0	1	3	0	2	0	0	1	2	1	15
IPCU	1	1	3	0	4	1	6	0	2	3	1	0	22
PCU	6	2	4	3	3	5	0	2	2	3	1	1	32
4A	1	2	0	5	3	1	4	1	1	3	4	1	26
4C/4K	2	3	0	0	2	3	1	3	1	2	1	2	20
5A	1	1	0	1	1	0	0	2	0	0	0	0	6
5B	1	0	0	0	0	2	2	0	1	1	1	4	12
5C	5	1	0	1	0	2	1	1	0	1	2	1	15
6B	3	6	3	2	7	5	8	7	3	2	3	2	51
6C	2	2	3	2	5	1	6	6	0	4	2	4	37
6K											4	6	10
7A	1	3	7	1	2	2	0	3	3	3	2	3	30
7B/5K	3	5	1	2	6	3	4	4	2	5	3	4	42
7C	4	1	1	1	3	3	2	0	3	0	1	2	21
EAU N	0	1	0	0	1	0	0	0	1	0	0	0	3
EAU S	0	0	0	0	0	1	0	0	1	1	0	0	3
Dialysis	0	0	0	2	0	0	0	0	0	0	0	0	2
NSICU	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	32	34	24	22	42	30	36	31	21	31	29	35	367

Cedar Crest – Non-Med Surg Units, Year 2 (2007-2008)

	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Total
MSICU		1											1
SSA		1			1						1		3
OHU			2							1			3
PACU				1	1			1			1		4
MRI						1						2	3
CT								1					1
Radiology									1			1	2
PICU										1			1
ACU												1	1
Total		2	2	1	2	1		2	1	2	2	4	19

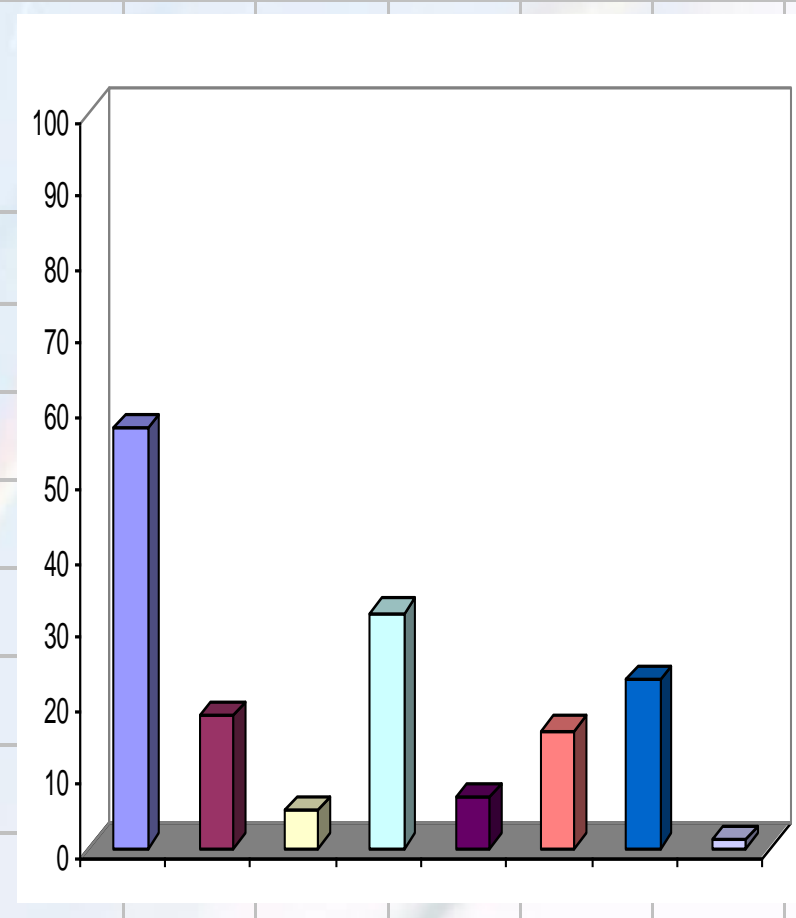
Cedar Crest – Time of Call, Year 2 (2007-2008)

	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Totals
Time													
0301-0700	4	10	4	8	10	9	10	5	5	6	7	6	84
0701-1100	5	4	4	6	5	2	3	3	4	9	3	7	55
1101-1500	5	5	6	3	2	2	6	3	2	3	7	10	54
1501-1900	7	4	5	2	9	6	8	7	5	3	2	3	61
1901-2300	5	6	3	2	10	11	3	11	2	6	5	8	72
2301-0300	6	5	2	1	6	0	6	2	3	4	5	1	41
Total	32	34	24	22	42	30	36	31	21	31	29	35	367

Muhlenberg RRT Calls

What was the reason for the RRT?

Response	Number of Calls	Percentage of Calls
Respiratory	57	48.72
Heart Rate	18	15.38
Blood Pressure	5	4.27
Acute Neurological Change	32	27.35
Pain	7	5.98
Staff Concern	16	13.68
Other	23	19.66
Stroke Alert	1	0.85



Muhlenberg – Med Surg Units, Year 1 (2007-2008)

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Totals
2nd	0	0	0	0	0	0	0	1	0	0	0	0	1
3T	2	1	8	8	7	6	6	9	7	3	4	1	62
4T	2	5	2	2	4	5	2	5	0	2	4	5	38
5T	2	1	2	2	1	0	1	3	1	3	4	2	22
6T	3	3	2	5	2	4	0	3	2	2	3	1	30
EAU	0	0	0	0	0	0	0	0	0	0	0	0	0
BH	2	0	0	0	2	1	1	2	1	0	0	0	9
CT scan	1	0	0	0	0	0	1	0	1	0	2	0	5
7T	2	0	3	2	1	1	2	3	5	0	0	3	22
Totals	14	11	17	20	17	18	14	27	17	12	17	12	204

Muhlenberg, Non Med-Surg Units, Year 1 (2007-2008)

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Totals
GSH													
Cath lab		1											1
Heart Station				1									1
Pre-op						1							1
MRI							1			1			2
Nuclear Med								1					1
IR										1			1
ASU												1	1
CT scan	1						1		1			2	5

Muhlenberg, Time of Call, Year 1 (2007-2008)

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Totals
Times													
0301-0700	4	0	3	4	1	2	2	3	3	2	3	1	28
0701-1100	3	0	6	5	4	1	2	3	2	3	3	2	34
1101-1500	1	3	1	4	1	2	2	5	3	2	1	3	28
1501-1900	1	3	4	4	5	2	3	4	2	1	4	1	34
1901-2300	2	1	1	1	4	7	4	6	5	2	4	6	43
2301-0300	3	4	2	2	2	4	1	6	2	2	2	0	30
Totals	14	11	17	20	17	18	14	27	17	12	17	13	197

Process Evaluation

- Debriefing Tool
 - Validate need for RRT
 - Identify reason for calls
- Peer Review
 - Necessity of call
 - Identify presence of earlier decompensation
 - Admission to appropriate level of care

Date: _____

PEER REVIEW
This information is protected from
discovery by PA State Law.

Rapid Response Team (RRT) Post-Response Debriefing

Purpose: To determine the team members' perception of the RRT process. This form is to be completed by the team immediately after the response.

Medical Record #: ____ - ____ - ____ - ____

Gender:

Date of Birth: ____/____/____

1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- Male
- Female

1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Hospital:

- LVH-CC
- LVH-M

Yes No

- | | | |
|--|-----------------------|-----------------------|
| 1. Did the alert meet the criteria? | <input type="radio"/> | <input type="radio"/> |
| 2. Did the team collaborate positively and provide appropriate feedback to the RN/staff who called the alert? | <input type="radio"/> | <input type="radio"/> |
| 3. Was there prior evidence of de-compensation prior to the event? | <input type="radio"/> | <input type="radio"/> |
| 4. Was the attending/designee aware of the patient's changing presentation prior to an alert being called? | <input type="radio"/> | <input type="radio"/> |
| 5. Were the interventions/tasks performed promptly? | <input type="radio"/> | <input type="radio"/> |
| 6. Is there any member of the team that feels that this case should be reviewed? | <input type="radio"/> | <input type="radio"/> |
| 7. Was the RRT order entered in CAPOE | <input type="radio"/> | <input type="radio"/> |
| 8. Was the patient on their current unit < 6 hours prior to the RRT being called? | <input type="radio"/> | <input type="radio"/> |
| 9. Medical-surgical nurse's satisfaction with the RRT response:
(1 = not satisfied through 5= highly satisfied) | | |
| <input type="radio"/> 1 | | |
| <input type="radio"/> 2 | | |
| <input type="radio"/> 3 | | |
| <input type="radio"/> 4 | | |
| <input type="radio"/> 5 | | |

10. What went well during the response?

11. What could have been improved during this response?

12. Who thinks this case should be reviewed?

- RN
- Physician

13. What is the reason for the review (Please write a brief explanation in question ten's box)?

- Patient related
- Process
- Quality
- Safety – Patient Safety Report must be completed

14. What was the reason for the RRT call?

- | | |
|---|-------------------------------------|
| <input type="radio"/> Respiratory | <input type="radio"/> Pain |
| <input type="radio"/> Heart Rate | <input type="radio"/> Staff Concern |
| <input type="radio"/> Blood Pressure | <input type="radio"/> Other _____ |
| <input type="radio"/> Acute Neurological Change | <input type="radio"/> Stroke Alert |

Cedar Crest -Peer Review

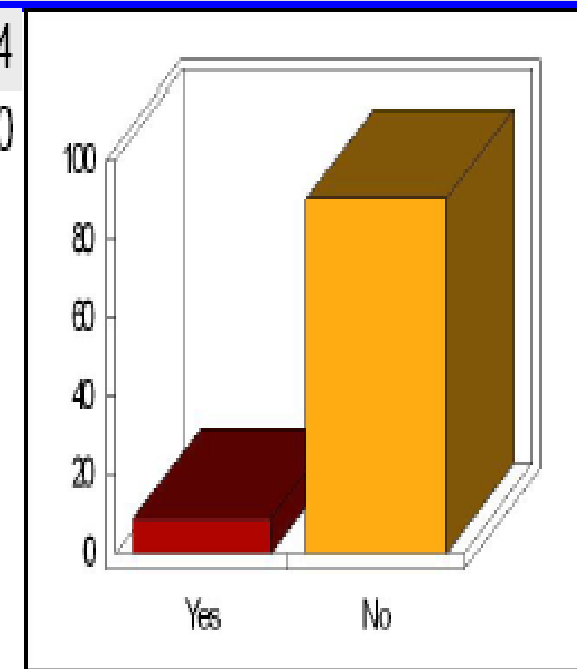
Is there any member of the team that feels that this case should be reviewed?

Mean: 9.04

Response	Value	Freq.	Percent	Cum. Percent	Valid Cum. Percent	Val. Percent
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Yes	100.00	66	8.98	8.98	9.04	9.04
No	0.00	664	90.34	99.32	90.96	100.00

Graph



Total Valid	730	99.32	100.00
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Missing	5	0.68	
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Total	735	100.00	
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Muhlenberg – Peer Review

Who thinks this case should be reviewed?

Mean: 1.18

Response	Value	Freq.	Percent	Cum. Percent	Valid Cum. Percent	Val. Percent	Graph
RN	1.00	18	6.10	6.10	81.82	81.82	
Physician	2.00	4	1.36	7.46	18.18	100.00	
Total Valid		22	7.46		100.00		
Missing		273	92.54				
Total		295	100.00				

Cedar Crest- Nurse Satisfaction

Med/Surg nurse's satisfaction with the RRT response (1-not satisfied to 5-highly satisfied)

Mean: 96.87

Response	Value	Freq.	Percent	Cum. Percent	Valid Cum. Percent	Val. Percent	Graph
1	0.00	2	0.27	0.27	0.28	0.28	
2	25.00	1	0.14	0.41	0.14	0.42	
3	50.00	7	0.95	1.36	0.99	1.41	
4	75.00	64	8.71	10.07	9.01	10.42	
5	100.00	636	86.53	96.60	89.58	100.00	

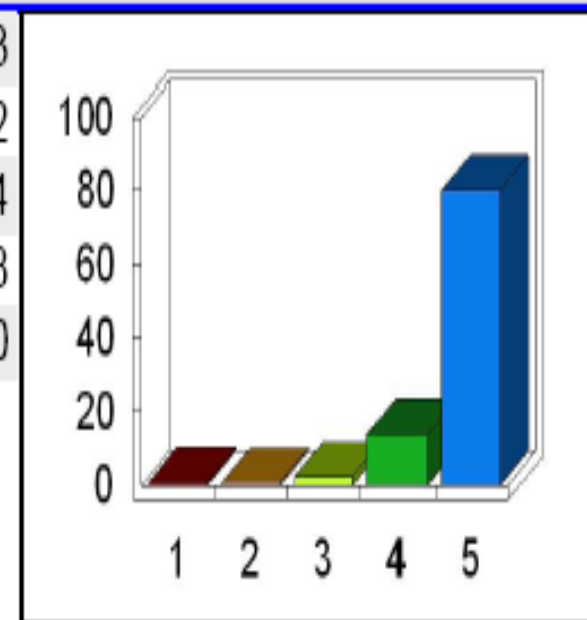
Total Valid	710	96.60	100.00
Missing	25	3.40	
Total	735	100.00	

Muhlenberg – Nurse Satisfaction

Med/Surg nurse's satisfaction with the RRT response (1-not satisfied to 5-highly satisfied)

Mean: 93.71

Response	Value	Freq.	Percent	Cum. Percent	Valid Percent	Cum. Val. Percent
1	0.00	3	1.02	1.02	1.03	1.03
2	25.00	2	0.68	1.69	0.69	1.72
3	50.00	7	2.37	4.07	2.41	4.14
4	75.00	41	13.90	17.97	14.14	18.28
5	100.00	237	80.34	98.31	81.72	100.00



Total Valid	290	98.31	100.00
Missing	5	1.69	
Total	295	100.00	

Nursing Staff Satisfaction Survey

RRT Feelings & Beliefs Survey Condensed Item Analysis - 0608

Have you ever called the Rapid Response Team?

Response	Frequency	Percent	Mean: 69.49
Yes	164	69.49	
No	72	30.51	
Missing	0	0.00	

If you have not called the Rapid Response Team, were you ever involved in a Rapid Response Team call?

Response	Frequency	Percent	Mean: 71.65
Yes	91	38.56	
No	36	15.25	
Missing	109	48.19	

If "No", who did not treat you positively?

Response	Frequency	Percent	Mean: 2.38
CC RN	6	2.54	
RT	1	0.42	
Hospitalist	14	5.93	
Missing	215	91.10	

What campus do you work at?

Response	Frequency	Percent	Mean: 1.00
LVH-CC	233	98.73	
LVH-M	1	0.42	
Missing	2	0.85	

If you have been called, how many times?

Response	Frequency	Percent	Mean: 2.41
1	45	19.07	
2	48	20.34	
3	32	13.58	
4	18	7.63	
5 or more	14	5.93	
Missing	79	33.47	

Did you feel that Rapid Response Team members treated you in a positive manner?

Response	Frequency	Percent	Mean: 90.73
Yes	186	78.81	
No	19	8.05	
Missing	31	13.14	

Do you feel that the Rapid Response Team is beneficial to your delivery of patient care?

Response	Frequency	Percent	Mean: 99.57
Yes	229	97.03	
No	1	0.42	
Missing	6	2.54	

What shift do you work?

Response	Frequency	Percent	Mean: 1.85
Days	115	48.73	
Evenings	37	15.68	
Nights	81	34.32	
Missing	3	1.27	

Patient Outcomes – Cedar Crest

	Total Codes	Total Codes Outside ICU	Total Mortality	Total Discharges	Total RRT Calls
Jan – Dec 06	156 (0.43%)	55 (0.15%)	715 (1.99%)	35,987	309 *Began Feb 06
Jan – Dec 07	209 (0.54%)	77 (0.20%)	678 (1.76%)	38,509	354

Patient Outcomes - Muhlenberg

	Total Codes	Total Codes Outside ICU	Total Mortality	Total Discharges	Total RRT calls
Jan - Dec 06	19 (0.43%)	8 (0.18%)	112 (2.52%)	4,439	97
Jan - Dec 07	57 (0.62%)	30 (0.33%)	256 (2.77%)	9,226	189

Expansion and Enhancement of Services

- Ancillary Services
 - Radiology
 - Diagnostic Care
 - MRI
- Stroke Alert Response
- Support to Mother/Baby Unit
- 17th Street – transport to ED
 - TSU, Sleep Center, Short Stay Hospital
- Clinical Resource Nurses
 - Monitor and evaluate patient during the off shift status post RRT call

Future Plans for the RRT

- Develop a second RRT for the Cedar Crest site
- Support for the Pediatrics RRT
- Family Involvement
- Physician satisfaction survey
- Staff satisfaction survey
 - Muhlenberg
 - Ongoing for both sites

RRT Committee Members

- Anne Rabert, RN, Director, Co Chair
- Georgiann Morgan, RN, Director, Co Chair
- Mary Sebastian, RN, VP Clinical Services, Sponsor
- Anne Panik, RN, Administrator Clinical Services
- Holly D. Tavianini, RN, Director
- Uzma Vaince, MD
- Maryann Krobath, RN, Nursing Supervisor
- Steven Pyne, RRT
- Elizabeth Karoly, Clinical Information Analyst
- Stephanie Pacelli, Quality Analyst
- Kristie Lowery, RN, Risk Management - Patient Safety