2021 Fourteenth National Doctors of Nursing Practice Conference

Protecting the Heart of the Veteran

Implementation of a Modified Early Warning Scoring System (MEWS) on Acute Care Remote Telemetry Units in a Large Veterans Administration Hospital

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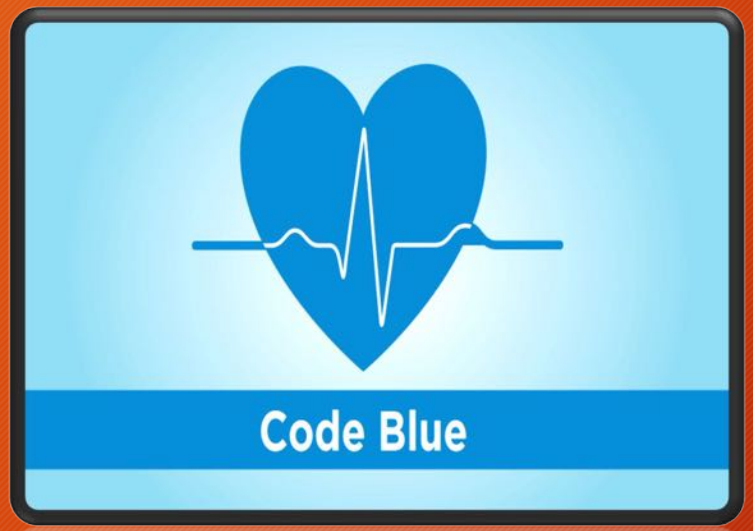
Background

- In-hospital cardiac arrests
- Diminished Quality of Life
- Vital Sign Trending

Problem



Aim

The aim of this project is to increase the use of a MEWS by nursing staff on acute care medical-surgical telemetry units at a large Veterans hospital from 0% to 90% with 3 months to increase proactive identification of deteriorating patients.

Methods

- ❑ Team assembly
- ❑ Baseline data collection
- ❑ Education
- ❑ Plan, Do, Study, Act (PDSA)

VANTHCS 6c Pilot Modified Early Warning System Tool &Action Algorithm

Score	3	2	1	0	1	2	3
HR		≤40	41-50	51-100	101-110	111-129	≥130
Systolic BP	<70	71-90	91-100	101-180	181-200	201-220	>220
RR		<8	8-11	12-24	25-29		≥30
Temp F	<93.2	<93-95		95-100.4	100.6-101.3	>101.3-104	104
C	<34	34-35		35.1-37.5	37.6-38.5	38.6-40	>40
CNS/LOC **Any change in baseline neuro status requires notification of provider**	Unresponsive	Responds to pain only	Responds to Voice	Alert		Confused or agitated	

MEWS Score	Inpatient Action	
0-2	Green	Re-Score using routine vitals. Observe Q2-4
3	Yellow	☐ VS and reassessment in 2 hours. Calculate MEWS ☐ Inform charge RN ☐ Obtain order to place telemetry
4	Orange	☐ VS and reassessment in 1 hours. Calculate MEWS ☐ Inform charge RN ☐ Notify provider ☐ Call RRT if Veteran clinical picture is deteriorating
5-6	Red	☐ VS and reassessment minimum every 30 minutes with MEWS score ☐ Inform charge RN ☐ Notify MD ☐ Call RRT

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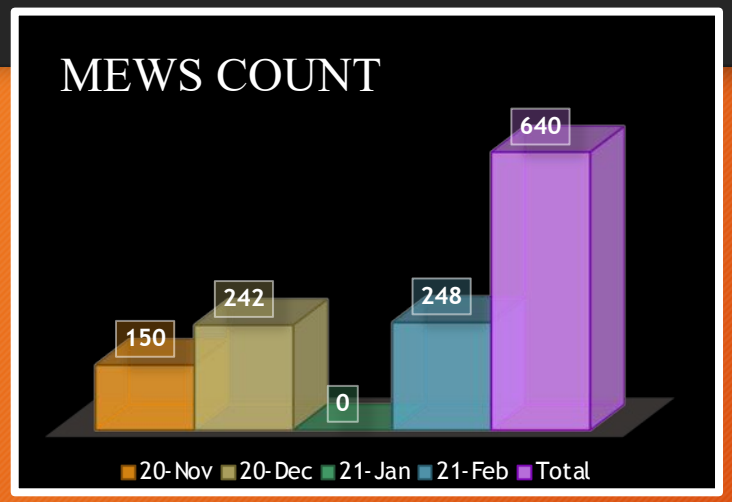
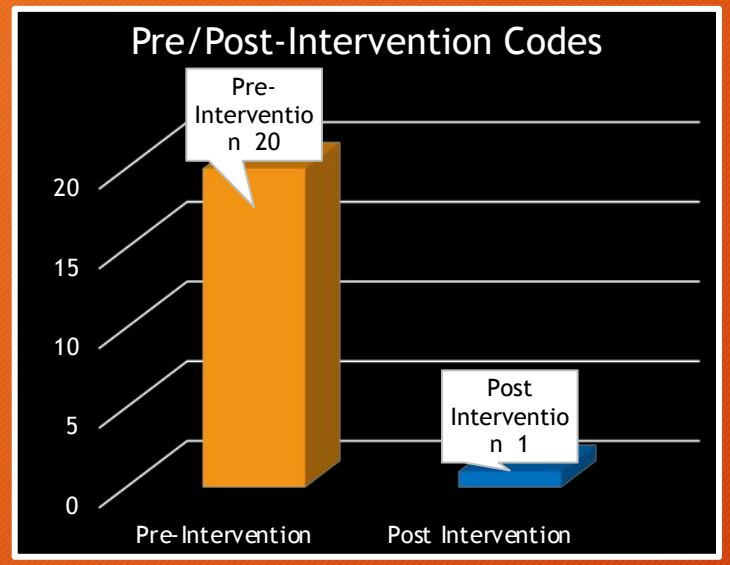
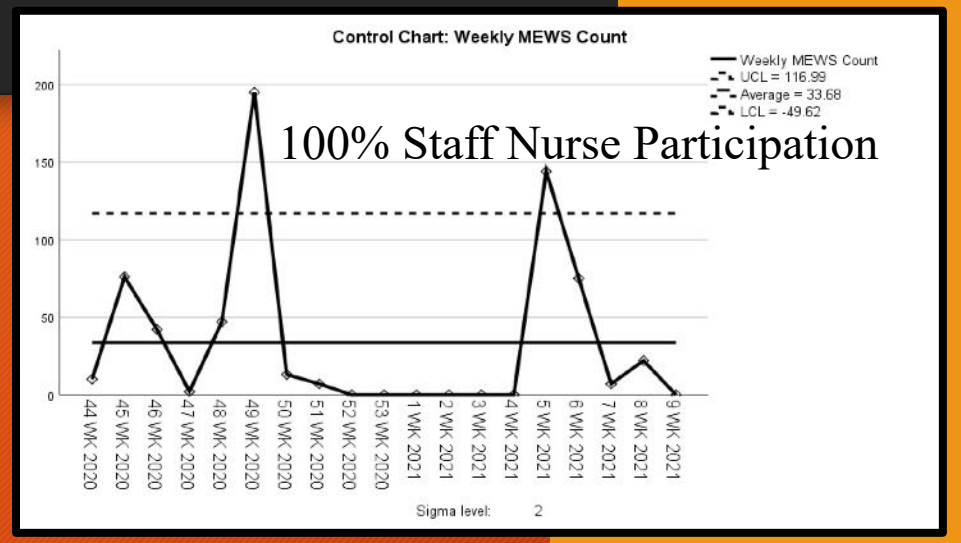
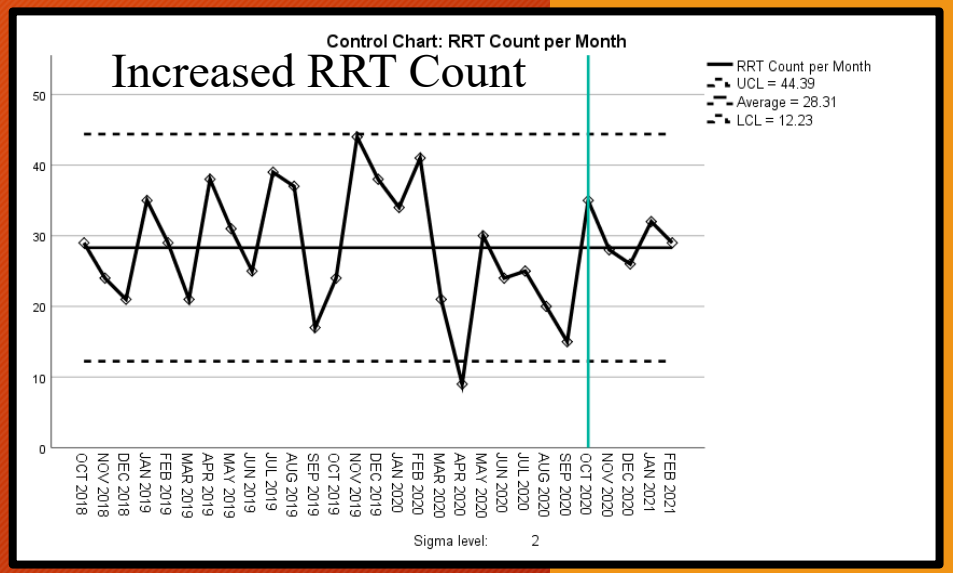
Results


MEWS COUNT
150
242
0
248
640
20-Nov
20-Dec
21-Jan
21-Feb
Total


Pre/Post-Intervention Codes
Pre-Intervention 20
Post Intervention 1
20
15
10
5
0
Pre-Intervention
Post Intervention

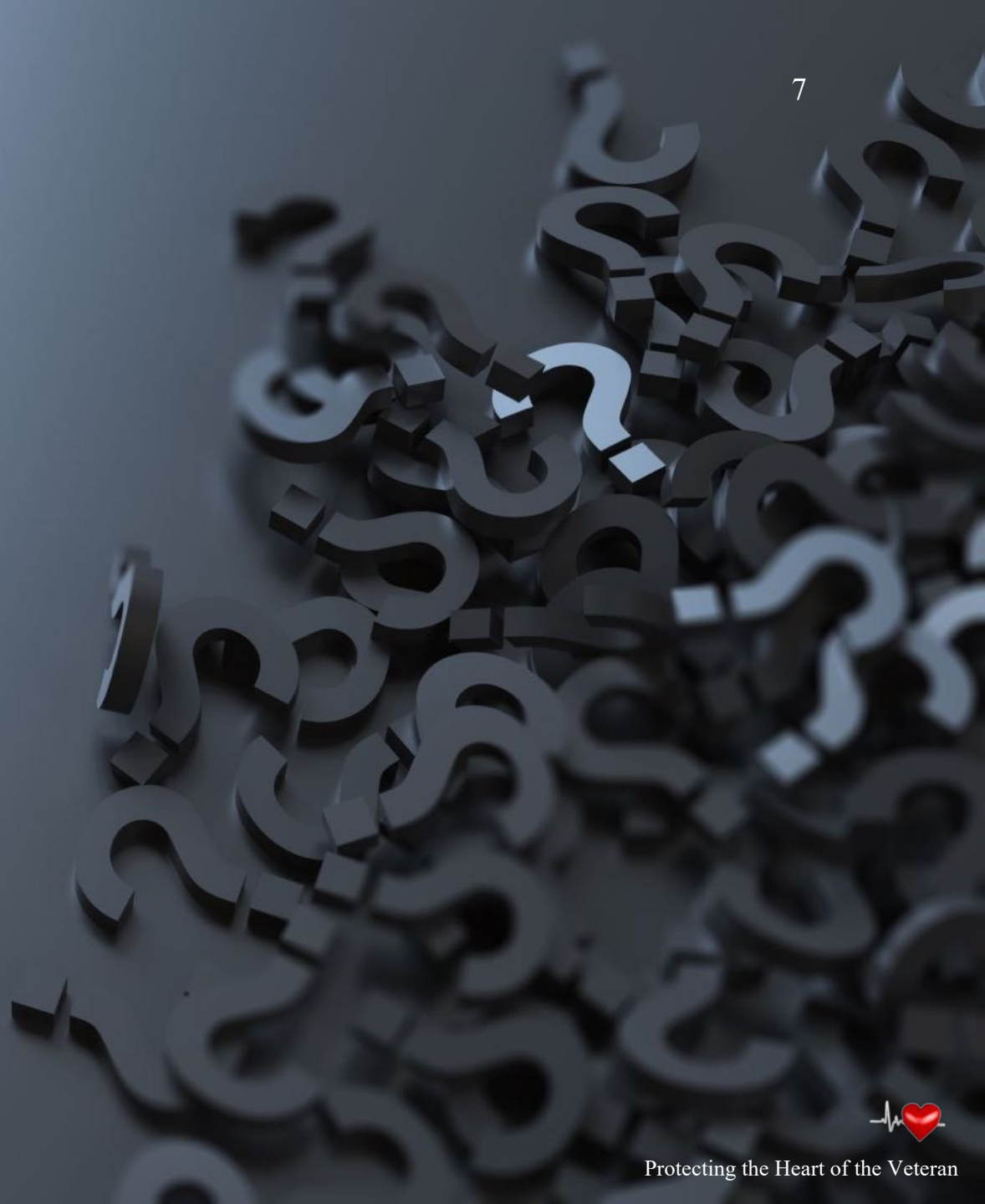

Control Chart: Weekly MEWS Count
100% Staff Nurse Participation
Weekly MEWS Count
UCL = 116.99
Average = 33.68
LCL = -49.62
200
150
100
50
0
44 WK 2020
45 WK 2020
46 WK 2020
47 WK 2020
48 WK 2020
49 WK 2020
50 WK 2020
51 WK 2020
52 WK 2020
53 WK 2020
1 WK 2021
2 WK 2021
3 WK 2021
4 WK 2021
5 WK 2021
6 WK 2021
7 WK 2021
8 WK 2021
9 WK 2021
Sigma level: 2


Control Chart: RRT Count per Month
Increased RRT Count
RRT Count per Month
UCL = 44.39
Average = 28.31
LCL = 12.23
50
40
30
20
10
0
OCT 2018
NOV 2018
DEC 2018
JAN 2019
FEB 2019
MAR 2019
APR 2019
MAY 2019
JUN 2019
JUL 2019
AUG 2019
SEP 2019
OCT 2019
NOV 2019
DEC 2019
JAN 2020
FEB 2020
MAR 2020
APR 2020
MAY 2020
JUN 2020
JUL 2020
AUG 2020
SEP 2020
OCT 2020
NOV 2020
DEC 2020
JAN 2021
FEB 2021
Sigma level: 2

Conclusion

- Limitations
- Office of Nursing Service Directive
- HRO Principle - Preoccupation with Failure
- Improved
  - Staff Nurse Confidence in delivery of Quality Care
  - Veteran safety

Questions ?



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