



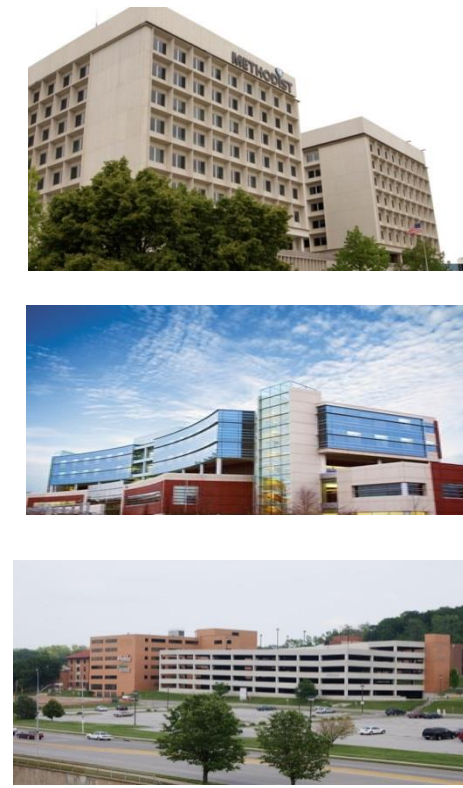
NEWS (National Early Warning Score) Patient Risk Stratification Speaking the Same Language

Marie Kozel, MBA, BSN, RNC-BC



Organizational Background

- Methodist Health System
Omaha, Nebraska
- 3 Acute Care Facilities
Methodist Hospital
Jennie Edmundson Hospital
Methodist Women's Hospital
- 740 Licensed beds
- 59,525 Discharges



History

- Early detection, timeliness and competency of clinical response positively impacts patient outcome
- The use of 'early warning scores' (EWS), to identify and respond is advocated
- A number of EWS systems exist, no standard in the industry
- Organization had NO EWS Tool**



Methodology

- Clinical Team Assembled
 - Bedside RN's, APRN's, unit leaders, Informatics
 - Literature search for EWS tools
 - Reviewed tools and evidence related to each
 - Tool Selection
- Project team for implementation
 - Clinical, Informatics, Leadership, Electronic Medical Record (EMR) Vendor, IT Analysts
 - Defined Project Objectives



Objectives

- Implement an **Automated** Early Warning tool within the EMR
- Decrease # of unplanned transfers to ICU by 30%
- Decrease # of inpatient medical emergencies by 50%
- Decrease # of medical emergencies outside of ICU by 30%



1 Tool Criteria

National Early Warning Score

- Royal College of Physicians Acute Medicine Task Force commissioned group to develop in 2007
- Published in 2012/ revised 2015
- Only research/evidenced base tool published
 - Alerting Parameters
 - Interventions
- Excluded Populations
 - OB, Under age 18, ICU

PHYSIOLOGICAL PARAMETERS	3			2			1			0			1			2			3		
	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
Respiration Rate	≤8			9-11			12-20									21-24			≥25		
Oxygen Saturations	≤91	92-93	94-95	96																	
Any Supplemental Oxygen		Yes		No																	
Temperature	≤35.0		35.1-36.0	36.1-38.0	38.1-39.0	≥39.1															
Systemic BP	≤90	91-100	101-110	111-219																	≥220
Heart Rate	≤40		41-50	51-90	91-110	111-130	≥131														
Level of Consciousness					A															V, P, or U	

Royal College of Physicians. *National Early Warning Score (NEWS): Standardising the assessment of acute illness severity in the NHS*. Report of a working party. London: RCP, 2012.

2 Document in EMR

Vital Signs	10/28/2016	10/28/2016	10/28/2016
Temperature Oral	DegF		98.5
Temperature Tympanic	DegF		
Temperature Axillary	DegF		
Temperature Temporal Artery	DegF		
Temperature Rectal	DegF		
Heart Rate Per (Monitor)	bpm	132	!
Pulse Rate (Radial)	bpm		
Respiratory Rate	br/min	26	↑
Respiratory Rate per Monitor	br/min		
SBP/DBP Cuff	mmHg	148/90	↑
MAP (Auto Calculated)	mmHg	109	
MAP (Mean Arterial Pressure)	mmHg	96	
Blood Pressure Location			
Oximetry Reading	%		
Oxygen Via			
O2 Liter Flow	L/min		
FiO2 (Fraction of Inspired Oxygen)	%		
ETCO2			
Level of Consciousness			
Automatic NEWS Score			Alert

3 Visibility in EMR

NEWS	Alert	Del.	Cont.	Actable
NEWS	Alert			
Alert				
Del.				
Cont.				
Actable				

4 NEWS Alert in EMR

NEWS Alert in EMR interface showing patient NEWS score of 5 and 13. Includes a 'Consider' section with actions like 'Increase frequency of assessments', 'Transfer to higher level of care', 'Call RRT', and 'Notify charge nurse to validate assessment'.

5 Document Action Taken

NEWS Action Taken - Medium Risk and High Risk interface. Includes checkboxes for actions like 'Check nurse validation', 'Increase frequency of assessments to Q1h', 'Provide a bedside assessment', 'Call RRT', and 'Notify charge nurse to validate assessment'.

New "NEWS" Evidence

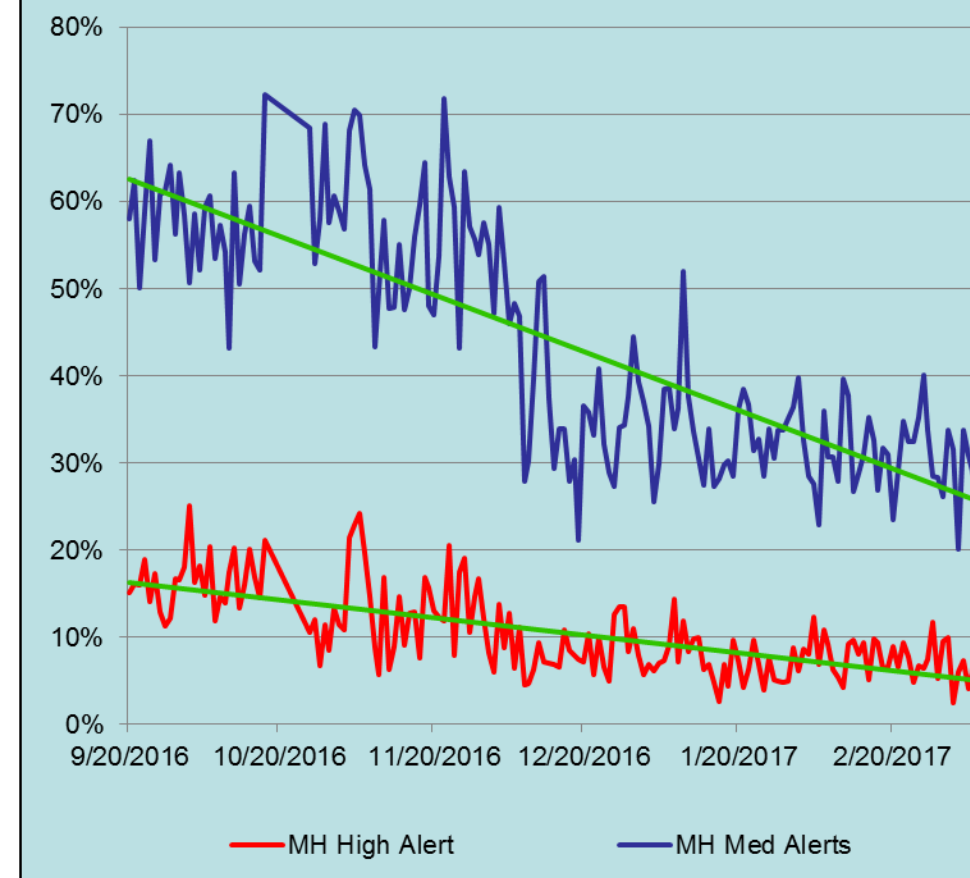
qSOFA, SIRS, and early warning scores for detecting clinical deterioration in infected patients outside the ICU

"Commonly used early warning scores are more accurate than the qSOFA score for predicting death and ICU transfer in non-ICU patients. These results suggest that the qSOFA score should not replace general early warning scores when risk-stratifying patients with suspected infection."

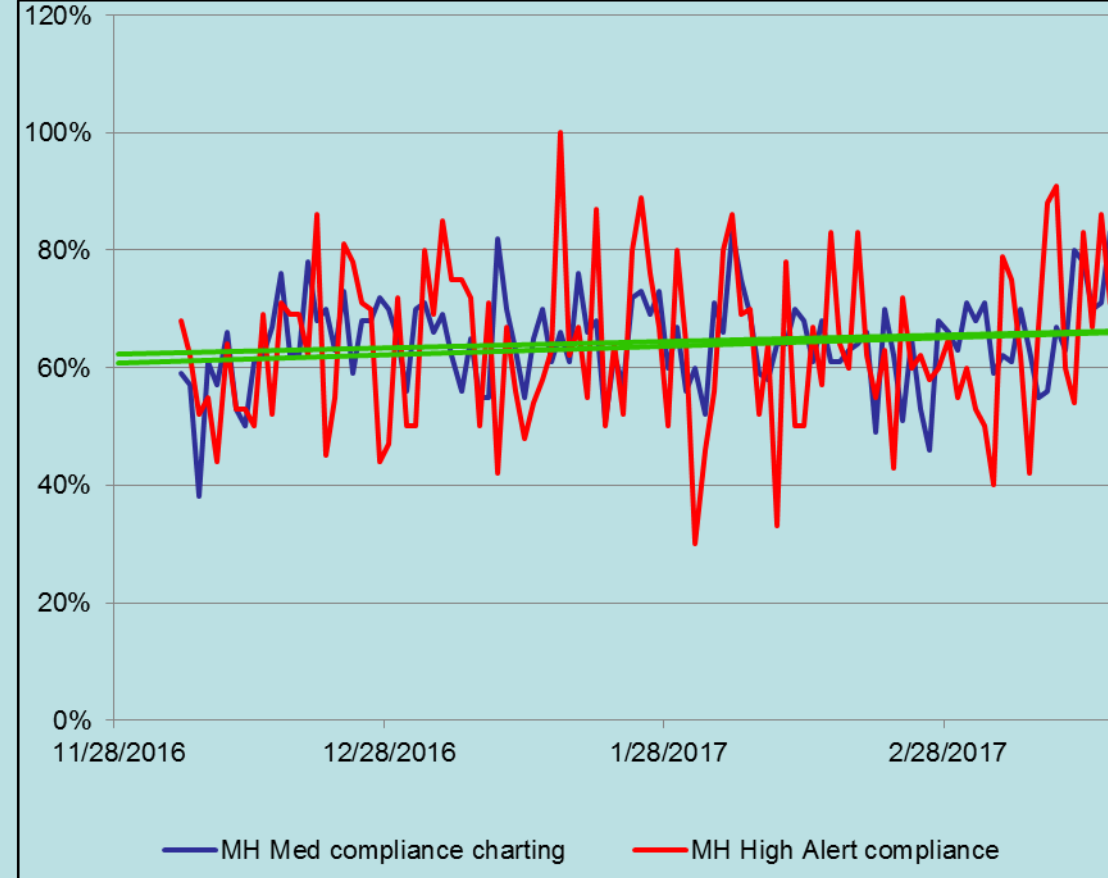
Churpek M, Snyder A, Han X, Sokol S, Pettit N, Howell MD, Edelson DP. qSOFA, SIRS, and early warning scores for detection clinical deterioration in infected patients outside the ICU. *American Journal of Respiratory and Critical Care Medicine*. September 20, 2016.

Results

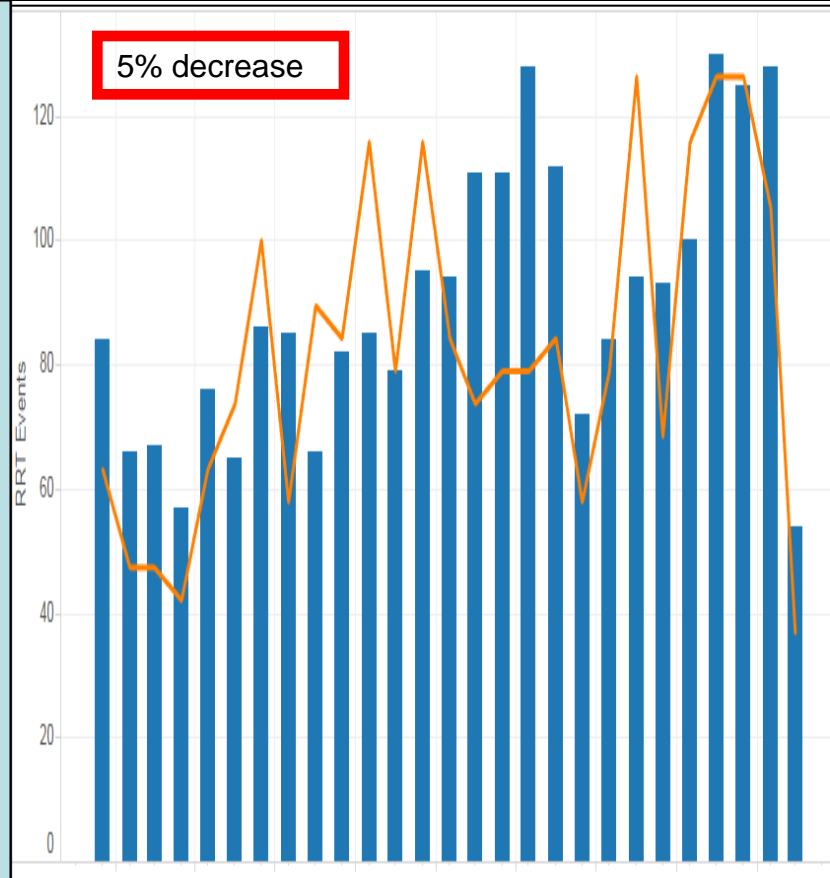
NEWS Alerts by Level



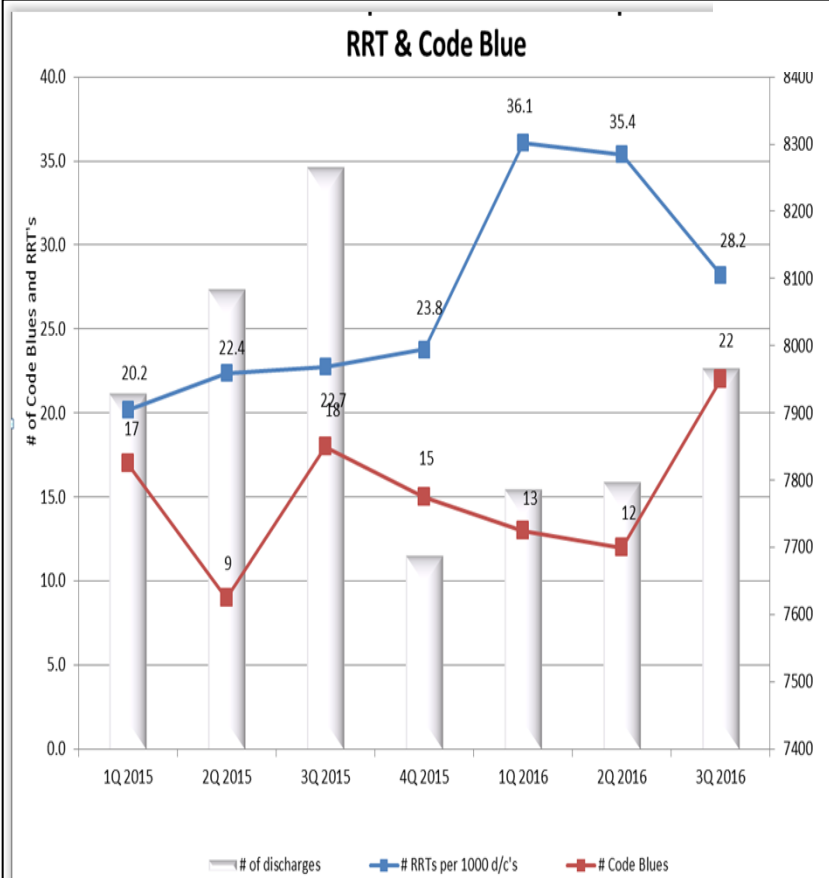
Documentation Compliance



RRT-ICU Transfer



RRT-Code Blue



Implications for Practice

- Education essential
 - Value of risk scoring tool
 - New LOC assessment
- Reduce burden of alerting
 - Too many alerts
- Staff not trained in alert tool
- No policy for addressing alerts/alert management
- Monitoring for compliance not assigned
 - Alert management
 - Implementation of interventions with alert
 - Staff accountability plan lacking