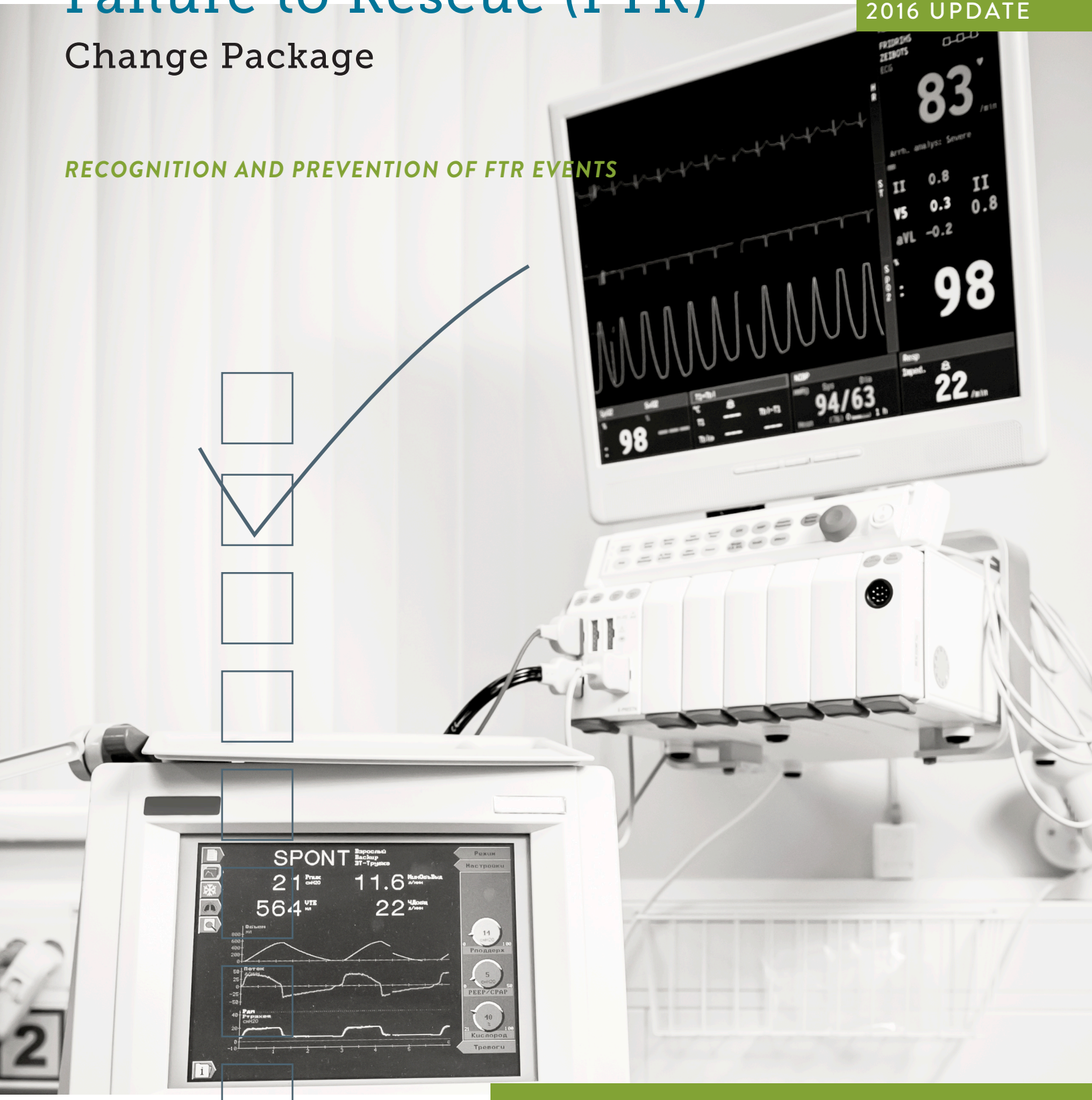
Failure to Rescue (FTR)

Change Package

2016 UPDATE

RECOGNITION AND PREVENTION OF FTR EVENTS



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Accessible at: www.hret-hen.org

Contact: hen@aha.org

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How to Use this Change Package

This change package is intended for hospitals participating in the Hospital Engagement Network (HEN) 2.0 project led by the Centers for Medicare & Medicaid Services (CMS) and Partnership for Patients (PFP); it is meant to be a tool to help you make patient care safer and improve care transitions. This change package is a summary of themes from the successful practices of high performing health organizations across the country. It was developed through clinical practice sharing, organization site visits and subject matter expert contributions. This change package includes a menu of strategies, change concepts and specific actionable items that any hospital can choose to implement based on need or for purposes of improving patient quality of life and care. This change package is intended to be complementary to literature reviews and other evidence-based tools and resources.

PART 1: ADVERSE EVENT AREA (AEA) DEFINITION AND SCOPE

Failure to rescue (FTR) or the inability of a hospital to quickly recognize and effectively respond when a patient develops an unexpected complication is a measure of hospital quality.[1] The incidence of failure to rescue reflects the degree to which an organization is equipped to anticipate and respond to adverse events. Failure to rescue speaks to both the quality of monitoring, as well as the effectiveness of actions taken once complications are recognized. A hospital's ability to implement and execute a comprehensive rapid response system that includes a mechanism for readiness, recognition, response and learning from events is critical to lowering rates of failure to rescue. Patients show signs of deterioration in many cases at least six to eight hours prior to cardiac arrest.[2] Early recognition of these signs has been shown to increase the effectiveness of clinical emergency response teams, such as rapid response teams.[3]

Magnitude of the Problem and Why This Matters

Recognition of these changes and the subsequent rapid response and treatment by trained teams in such situations has been shown to reduce mortality rates and code blue calls outside of the ICU in hospitals.[4,5,6]

The implementation of a rapid response system, which includes a trained rapid response team to do a bedside evaluation of a patient, is a proactive, comprehensive approach to reduce FTR. A rapid response system is designed to assist in the anticipation and prevention of cardiac arrest. A rapid response system has four components:

- A mechanism for crisis detection (the afferent arm)
- A mechanism for crisis response (the efferent arm)
- Data driven resources
- Leadership support[7]

Crisis response, the efferent arm, is typically implemented through a medical emergency team (MET) or a rapid response team (RRT) depending on an organization's resources, characteristics, culture and needs. In most hospital settings, a MET is physician-led and is able to (1) prescribe therapy, (2) use advanced airway management skills, (3) establish central vascular lines and (4) begin ICU level-of-care at the bedside. Alternatively, in hospital settings where response teams are not physician-led yet still possess advanced assessment skills and have quick access to higher-level resources, implementation of an RRT is another approach. In that type of response team, designated consultants can be called in by the RRT to triage high-risk patients and transfer care to an ICU.[8]

HEN 2.0 Reduction Goals

Reduce the incidence of failure to rescue by 40 percent by September 23, 2016.

PART 2: MEASUREMENT

A key component to making patient care safer in your hospital is to track your progress toward improvement. This section outlines the nationally recognized process and outcome measures that you will be collecting and submitting data as part of the AHA/HRET HEN 2.0. Collecting these monthly data points at your hospital will guide your quality improvement efforts as part of the Plan-Do-Study-Act (PDSA) process. Tracking your data in this manner will provide valuable information needed to study your data across time and help determine the effect your improvement strategies are having in your hospital at reducing patient harm. Furthermore, collecting these standardized metrics will allow the AHA/HRET HEN to aggregate, analyze and report its progress toward reaching the project's 40/20 goals across all AEAs by September 2016.

Nationally Recognized Measures: Process and Outcome

Please download and reference the encyclopedia of measures (EOM) on the AHA/HRET HEN website for additional measure specifications and for any updates after publication at: http://www.hret-hen.org/audience/data-informatics-teams/EOM-AdditionalTopics.pdf

HEN 2.0 EVALUATION MEASURE

- Failure to rescue in-hospital mortality (NQF 0352): percentage of patients who died with complications in the hospital
- Death rate among surgical inpatients with serious treatable complications (NQF 0351 and AHRQ PSI-04)

SUGGESTED PROCESS MEASURES

- Percentage of patients for whom documented evidence of use of modified early warning scoring systems appears in the chart
- Hospital adoption of the use of early response teams

PART 3: APPROACHING YOUR AEA

Key Resources, Suggested Bundles and Toolkits

- IHI How-to Guide: Deploy Rapid Response Teams, retrieved at: http://www.ihi.org/resources/Pages/Tools/HowtoGuideDeployRapidResponseTeams.aspx
- AHRQ Rapid Response Systems, retrieved at: http://psnet.ahrq.gov/primer.aspx?primerID=4
- 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science, retrieved at: https://circ.ahajournals.org/content/122/18_suppl_3/S920.full
- Duncan K, McMullan C, Mills B. Early Warning Systems: The next level of rapid response. Nursing Feb 2012. 42(2) 38-44, retrieved at: http://www.ihi.org/resources/Pages/Publications/EarlyWarningSystemsNextLevelofRapidResponse.aspx
- For key tools and resources related to preventing and reducing FTR events, visit www.hret-hen.org.

Investigate Your Problem and Implement Best Practices

Driver diagrams: A driver diagram visually demonstrates the causal relationship between your change ideas, secondary drivers, primary drivers and your overall aim. A description of each of these components is outlined in the table below. This change package reviews the components of the driver diagram to first, help you and your care team identify potential change ideas to implement at your facility and second, to show how this quality- improvement tool can be used by your team to tackle new process problems.

Aim	Primary Driver	Secondary Driver	Change Idea
		Secondary Driver	Change Idea
	Primary Driver	Secondary Driver	Change Idea

AIM: *A clearly articulated goal or objective describing the desired outcome. It should be specific, measurable and time-bound.*

PRIMARY DRIVER: *System components or factors which contribute directly to achieving the aim.*

SECONDARY DRIVER: *Action, interventions or lower-level components necessary to achieve the primary driver.*

CHANGE IDEAS: *Specific change ideas which will support/achieve the secondary driver.*

Drivers in This Change Package

Reduce The Incidence Of Failure To Rescue	Afferent Arm: Crisis Detection	Implement standardized assessment tools to identify patients at risk of a serious event or complication	Change Idea
		Develop standardized mechanisms for engaging patient family members In risk recognition	Change Idea
	Efferent Arm: Crisis Response	Develop a protocol or process for obtaining resources quickly	Change Idea
	Data Driven Resources	Collection of input and feedback from providers, care teams, patients and family members about experiences and evaluation or reviews of events	Change Idea
	Leadership Support	Implement and maintain a rapid response system structure	Change Idea

OVERALL AIM: REDUCE THE INCIDENCE OF FAILURE TO RESCUE

Primary Driver > Afferent Arm: crisis detection

Early recognition of an impending crisis is a key driver in reducing unexpected cardiac arrests. Recognition of potential crisis or patient deterioration can be done through physiologic assessments and the use of warning systems that use information already available, such as vital signs and pulse oximetry to assign a risk score to a patient.

Secondary Driver > Implement standardized assessment tools to identify patients at risk of a serious event or complication

In the absence of a risk assessment system, a crisis response team is generally activated by individual assessment changes, such as a significant change in one vital sign. A standardized method of systematically assigning risk of crisis to a patient utilizing a variety of patient findings is called an Early Warning Scoring (EWS) system. The EWS system assigns a risk score to each patient that is based on standard vital sign and other physiologic findings.[9] Based on the findings of the assessment, caregivers can make decisions as to appropriateness of nursing unit in the hospital. For patients with a standardized higher score, a response team can be activated to do a more in-depth evaluation of the patient at the bedside.

EWS systems have been shown to significantly reduce unexpected cardiac arrests in hospitals when used in conjunction with a rapid response system and in some places has reduced the code blue rate by as much as 50%.[10]

Change Ideas

+ Use a standardized risk assessment tool, such as the MEWS (Appendix III), to identify patients at risk for deterioration and complications.
+ Analyze current data on the use of rapid response teams and cardiac arrests outside the ICU in your organization to identify higher risk patient populations. Trial the use of an early warning risk assessment tool with that population.
+ Embed alerts within electronic medical record systems to identify changes in vital signs that may signal impending deterioration of a patient's condition.

Secondary Driver > Develop standardized mechanisms for engaging patients and family members in risk recognition

Patients and their families can often play a key role in the early recognition of an impending crisis. While the family members may not have objective clinical criteria on which to base their assessment, it is imperative to have a mechanism that allows for family activation of a crisis team response when warranted.

The hospital should design a method for family-triggered crisis response calls that is first, simple to access and activate and second, differentiated from staff-initiated calls. Hospital staff members should be trained in communication skills specific to responding to patient and family initiated calls. A family member will likely require more reinforcement and encouragement and explanations should be provided in non-technical terminology. A simple system may include a phone number posted within view from the patient's room and the active encouragement by staff members to call at any time if there is the perception that the patient is deteriorating or getting worse.

Change Ideas

+ Develop a simple system for activating the RRT or MET that is accessible to all staff members, patients and families.
+ Educate family members about the ability to activate a rapid response system if they feel the patient is in crisis.
+ To differentiate family calls from staff calls, use different names for overhead pages and different names for the description of the service such as "Code H" or "Code Help."
+ Identify the key staff members to respond to crisis calls and standardize the process for assuring those roles are identified each shift.

Suggested Process Measures for Your Test of Change

- Percentage of patients for whom documented evidence of the use of an early warning system assessment appears in the chart
- Rate of staff awareness of the presence of a policy and procedure that details the roles and responsibilities of a crisis response team; whether a rapid response team, medical emergency team or a team that is customized to the patient population

Hardwire the Process

Particularly when first implementing an RRT or MET, it is important to provide sufficient education to the medical staff including both describing the benefits and dispelling any myths. For example, teams should reiterate that such teams enable fast, accurate and critical patient assessment; promote clear and concise communication; are linked to fewer codes and lower mortality; and enhance a culture of safety.[11] Rapid response teams are not intended to replace immediate consultation with a physician when appropriate.

Primary Driver > Efferent arm: crisis response

The second component of a rapid response system is the efferent arm, i.e., the crisis response. Once a call is initiated, a trained response team must be able to respond immediately to assess the patient's condition and needs, make recommendations for treatment and intervene as appropriate. Crisis response to patients identified as high risk can take several forms but should be standardized for each hospital, taking into account the organization's patient population, clinical staff and resources. A common method utilized by hospitals is the rapid response team, which utilizes a critical care nurse and others identified by the organization to be able to assess the patient. The RRT team discusses with the physician the need for the patient to be transferred to a higher level of care or receive other treatment. Another type of crisis response team is the medical emergency team. An RRT is usually nurse-led whereas an MET is usually physician-led. There are advantages to both types of teams; hospitals should choose the model that will work best within the framework of the organization's resources and needs.

Secondary Driver > Develop a protocol or process for obtaining resources quickly

After choosing the type of emergency response team (i.e., Rapid Response Team or Medical Emergency Team), the hospital must also establish a process for activating the team. Examples include: direct pages via phones or beepers, overhead announcements or messages or in-house intercoms via cellular networks. When the team arrives at the patient's location and begins their assessment and intervention, they should use standardized communication with bedside staff regarding the patient's condition. Documentation of the team's interventions during the activation and event should also be standardized.

It is critical for an effective RRT or MET to be available 24 hours a day, 7 days a week. Code blue teams to respond to cardiac arrest are operational and accessible in hospitals 24 hours a day. Similarly, RRTs or METs must be functional day and night. Hospitals should develop protocols for RRT or MET activation that can be implemented quickly and easily. RRT or MET members are encouraged to educate other staff about these protocols and the benefits of immediate crisis response in patient outcomes. No calls to the teams should be regarded as "false alarms," even if the team assessment subsequently reveals that the patient is stable. Instead, a stable assessment affords team members the opportunity to support and mentor the staff in detecting and preventing events. Some researchers suggest that in order to avoid overlooking patients who need help, staff should demonstrate a high index of suspicion with as few as 40% of their RRT or MET calls ending up being 'critical'.[12]

Include in the protocol instructions for rapid communication to the designated physician, whether that be an ICU, ED or other physician utilizing a standardized communication format such as SBAR (Situation, Background, Assessment, Recommendation).[13]

Change Ideas

+ Staff an RRT or MET with clinical personnel with the expertise to (1) provide initial diagnoses, (2) undertake initial therapeutic interventions, (3) effectively make transfer decisions and (4) collaborate with specialists and other care providers to ensure the appropriate level of care.
+ Use standardized tools to document and review the effectiveness of assessments and treatment recommendations by the RRT or MET.
+ Establish and utilize standardized language to describe changes in patient condition. Use a standardized method of communicating changes in a patient's condition to the RRT or MET, such as SBAR.
+ Develop a process to ensure that the RRT or MET has all the equipment and supplies needed readily available.

Suggested Process Measure for Your Test of Change

- The number of RRT or MET calls per 1,000 hospital discharges
- The number of cardiac arrests that occurred despite RRT or MET activation per month per 1,000 discharges
- The number of RRT or MET interventions that escalated to a Do Not Resuscitate level per 1,000 discharges

Hardwire the Process

In addition to providing on-going education, teams should focus on standardizing tools, communication and documentation strategies. Key items such as information on the reason for the RRT or MET call, interventions required and follow up items will enable better planning and system-wide improvement.

Primary Driver > Data Driven Resources

The third component of the rapid response system is the patient safety/process improvement arm. The ultimate goal of a rapid response system is to save lives. Analyzing interventions and using the lessons from cases with both positive and negative outcomes may improve the rates of successful event prevention and rescues.

Once a hospital has implemented a rapid response system, it is imperative to continue to monitor data and improve processes that reduce harm. Organizations with an established rapid response system may focus additional efforts on prevention. For example, an experienced response team could pro-actively round on patients who have been transferred to the ward from the ICU in the past 12-24 hours and then study if the number of response team calls and codes decrease. Similarly, a hospital may implement a new approach to palliative care for patients with a history of multiple response team activations. Another intervention may include preemptive rounding on patients with a (spell out first) MEWS score of three, or patients with lab alerts that indicate sepsis or renal failure.

Secondary Driver > Collection of input and feedback from providers, care teams, patients and family members about experiences, evaluations and reviews of events.

Patients and family members can offer important insights about the rapid response system. RRT and METs should develop a systematic process for gathering and analyzing feedback from patients and their family members following a call. This data, in additional to other analyses by staff, will help the team identify areas to improve the process.

Change Ideas

+ Develop a feedback loop that enables hospital staff members and leadership to debrief after events with both good and disappointing outcomes and thereby share data, analyses and lessons learned.
+ Study the clinical signs and symptoms that preceded an RRT or MET call. Use information gleaned from these reviews to improve the effectiveness of the institution's event detection, response triggering and crisis response protocols.
+ Use data to review the effectiveness of assessments and treatment recommendations by the RRT or MET.

Suggested Process Measure for Your Test of Change

- The number of codes per 1,000 hospital discharges
- The utilization of the response team (i.e., how many calls were made?)
- The number of response team calls for patients who experienced pro-active rounding

Hardwire the Process

The patient safety and process improvement system that is applied to the rapid response system should be part of a larger organization-wide improvement culture that is applied to all areas of practice. Whether the organization uses PDSA, Lean, Six Sigma or some other methodology, the continuous application of the selected system will ensure that it becomes hardwired in the organization's culture.

Primary Driver > Leadership support

The active involvement of organizational leadership is essential to implement and maintain a successful rapid response system designed to decrease or eliminate failure to rescue. Medical staff and senior leadership provide guidance and support, mitigate obstacles and barriers and communicate necessary changes to hospital staff. In addition to publicly promoting quality improvement, senior leaders can ensure the availability of the resources necessary for program success such as sufficient equipment and skilled personnel.

To evaluate program effectiveness and sustainability, hospital and medical staff leadership should be provided with data, assessments, feedback and analyses on a regular basis. Additionally, hospital and medical staff leadership are instrumental in supporting a mechanism for ensuring that team members are clinically competent to perform the tasks required of the RRT.

Secondary Driver > Implement and maintain a rapid response system structure

The hospital and medical staff leadership must support the creation of an RRT or MET to assure sustained success. An effective RRT and MET requires both financial and human resources, both of which are difficult to secure and maintain without ongoing leadership support. It is important to secure buy in from leadership when the team is being formed. This buy in will be sustained and strengthened if the team provides leadership with ongoing data related to the effectiveness of the initiative.

Change Ideas

+ Obtain hospital leadership support in the development of an individualized hospital rapid response system that is sustainable and meets the needs of the organization.
+ Enlist hospital leadership support to ensure RRT and MET personnel clinical competencies are kept current.
+ Develop a reporting structure through hospital leadership that has oversight of the rapid response system to determine effectiveness in the areas of failure to rescue by measuring death rates among surgical inpatients with serious treatable complications, code blues outside of the ICU, availability of equipment and personnel and resources during RRT or MET calls, etc.

Suggested Process Measure for Your Test of Change

- Number of reports provided annually to hospital senior leadership detailing the effectiveness of the hospitals crisis detection and response plan
- Based on a standardized debrief process following an emergency response team call, the percentage of events that did not document equipment or personnel missing during the event

Hardwire the Process

Leadership and governance will expect evidence that the investment in a rapid response system is effective, either through lives saved, costs saved or both. It may be helpful to integrate a measure of success into the quality and safety dashboard that is reported on a regular basis.

PDSA IN ACTION | TIPS ON HOW TO USE THE MODEL FOR IMPROVEMENT

Choice of Tests and Interventions for FTR Reduction:

There are many potentially effective interventions to reduce the risks of FTR events. Improvement teams should begin their efforts by asking: "What is the greatest need at our facility? Where can we have the greatest impact?" Use data currently available in your organization to begin to assess the risk for failure to rescue. Analyze code blue data to identify common diagnoses, places in the hospital or day of the week, time of day that is frequently associated with both successful and unsuccessful codes. Compare that data to the same measures for the hospital's current rapid response system and mortalities. Use this information to identify potential patient populations to trial the use of an early warning scoring system to identify patients at risk for crisis. .

Implement Small Tests of Change

Test an Assessment

PLAN

Plan to implement a test to trial the use of a modified early warning scoring (MEWS) system.

DO

Utilize a paper version of the MEWS and have one nurse try the assessment on three patients during one shift.

STUDY

SAt the end of the shift, collect information from the nurse on the use of the form — what worked, what didn't — and make changes based on that feedback.

ACT

Gradually increase the number of nurses utilizing the form until the format is acceptable to those who will be utilizing it. Once widespread adoption is accomplished, the next step for some organizations will be to embed the form into the electronic medical record and automate the use.

Potential Barriers

One of the most common barriers reported by hospitals seeking to implement a rapid response system to reduce failure to rescue is the lack of available resources, especially clinical personnel. Hospitals have addressed similar challenges when creating and launching their code blue teams. However, developing and maintaining a functional rapid response system is critical to improving patient outcomes.

Enlist Administrative Leadership as Sponsors to Help Remove or Mitigate Barriers

A management executive sponsor, recognizing the value to the patients and the value to the organization of preventing delirium, can help brainstorm solutions to what may appear to be added work or provide resources to mitigate that additional work.

Change not only "The Practice," but also "The Culture"

Instituting a rapid response system can also impact professional relationships with care providers. Physicians may express concerns that decisions are being made for their patients without their consent. To address physician concerns and promote buy in, enlist a respected physician champion early in the development process. The champion can serve as an ambassador to transmit physician input and perspectives in the planning and implementation phases, as well as to serve as a mentor and educator for colleagues about the benefits of rapid response.

PART 4: CONCLUSION & YOUR NEXT STEPS

Medical care continues to increase in complexity, but the responsibility of health care organizations to keep patients safe has remained unchanged. Deaths that occur in our hospitals from treatable conditions and complications or "failures to rescue" are preventable. Reducing preventable deaths requires an organization wide commitment to patient safety, continuous re-assessments of data and institutional learning. A rapid response system that is fully integrated in the organization and takes a proactive response to identification of patients at risk, is a successful evidence-based approach to reduce failure to rescue events and support the commitment to improve safety.

APPENDIX I: FAILURE TO RESCUE (FTR) TOP TEN CHECKLIST

Associated Hospital/Organization: AHA/HRET HEN 2.0

Purpose of Tool: A checklist to review current or initiate new interventions for FTR prevention in your facility.

Reference: www.hret-hen.org

2016 FTR Top Ten Checklist

Process Change	In Place	Not Done	Will Adopt	Notes (Responsible and By When?)
Develop a simple system for activating the Rapid Response Team (RRT) or Medical Emergency Team (MET) that is easily accessible for all staff, patients and families.	☐	☐	☐	
To identify at-risk patients, use objective assessment criteria based on physiologic changes in patient status, e.g. the Modified Early Warning System (MEWS).	☐	☐	☐	
Establish an RRT or MET which includes clinical personnel with the skills to be able to (a) provide initial diagnoses; (b) undertake initial therapeutic interventions, (c) make transfer decisions, and (d) consult and collaborate with other care providers as appropriatel.	☐	☐	☐	
Develop and implement a process to inform staff, patients, and families of simple and accessible ways to activate the RRT or MET.	☐	☐	☐	
Utilize electronic medical record features to flag changes in vital signs that may signal impending deterioration of a patient's condition.	☐	☐	☐	
Use standardized tools to document RRT or MET assessments and treatment recommendations.	☐	☐	☐	
Establish and implement standardized language to describe changes in patient conditions.	☐	☐	☐	
Use a standardized method of communicating changes in a patient's condition to the RRT or MET, e.g. SBAR ("Situation, Background, Assessment, Recommendation".)	☐	☐	☐	
Establish and ensure that the RRT or MET has all needed equipment and supplies readily available.	☐	☐	☐	
Establish proactive rounding by the RRT or MET on all patients discharged from ICU within the last 24 hours to assess condition.	☐	☐	☐	

APPENDIX II: FAILURE TO RESCUE TOPIC CROSSWALK

Associated Hospital/Organization: AHA/HRET HEN 2.0

Purpose of Tool: This tool demonstrates the topic areas that can be contribute to FTR harm

Reference: www.hret-hen.org

Condition	How Condition Might Contribute to FTR	Ideas for Nursing/RTT/MET to Test
ADE	Over-sedation from opioids is one of the most common adverse drug events. Over-sedation is frequently seen post-operativelyn and in patients who are prescribed multiple pain medications.	+ Use sedation assessment scales regularly. + Implement pro-active rounding on recent post-op patients patients
Severe Sepsis and Septic Shock	Severe sepsis is not only a condition that develops in the ICU or is only diagnosed in the ED. Sepsis can develop with any number of hospital-acquired infections. Sepsis screening assessments can identify signs and symptoms of sepsis in its early stages.	+ Perform sepsis screening assessments on all patients at risk. + Ensure bundles of care are reliably followed for sepsis, CAUTI, CLABSI, and VAP.
Iatrogenic Delirium	Delirium is a condition that can develop within a very short period of time in the hospital, usually in ICU patients. Delirium is associated with sedation and may result in weakness and losses of function that can be permanent if not addressed in a timely manner.	+ Complete sedation assessment screening on all patients in the ICU. + Wean patients from ventilators as quickly as possible. + Follow evidence-based protocols from the ABCDEF bundle/PAD guidelines.
OB Harm	Death from stroke due to severe preeclampsia and shock due to post-partum hemorrhage are two of the most common causes of maternal death. Early identification of these conditions can improve patient outcomes.	+ Complete screening assessments on all mothers to determine the risks for hemorrhage. + Follow evidence-based protocols to identify and address hemorrhage and preeclampsia.
Airway Safety	Over-sedation from opioids is a common cause of airway or ventilatory compromise. Patients with a history of sleep apnea or those who are elderly are disproportionally at risk for airway compromise in the hospital setting.	+ Use sedation assessment scales regularly and designate a standard sedation level to trigger a call to the RRT. + Use capnography to assess patients at risk for airway or ventilatory compromise, and use abnormal results as a trigger to call the RRT.

APPENDIX III: EXAMPLE OF MODIFIED EARLY WARNING SCORING SYSTEM

Associated Hospital/Organization: Stony Brook University Medical Center / IHI

Purpose of Tool: Example of a risk assessment utilized to identify patients at risk for crisis

Reference: Duncan K, McMullan C, Mills B. Early Warning Systems: The next level of rapid response. Nursing Feb 2012. 42(2) 38-44

STONY BROOK UNIVERSITY MEDICAL CENTER

	3	2	1	0	1	2	3
Respiratory rate per minute		Less than 8	8	9-17	18-20	21-29	≥ 30
Heart rate per minute		Less than 40	40-50	51-100	101-110	111-129	≥ 130
Systolic blood pressure	≤ 70	71-80	81-100	101-159	160-199	200-220	> 220
Conscious level (AVPU)	Unrespon-sive	Responds to pain	Responds to voice	Alert	Agitation or confusion	New onset of agitation or confusion	
Temperature		< 95.0° F (35.0° C)	95.0-96.8° F (35.05-36° C)	96.9-100.4° F (36.05-38° C)	100.5-101.3° F (38.05-38.5° C)	≥ 101.4° F (38.55° C)	

Green = 0-1 Score

Yellow = 2-3 Score

Orange = 4-5 Score

Red = ≥6 Score

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Modified Early Warning Score (MEWS)

Scores	3	2	1	0	1	2	3
SBP	≤ 70	71-80	81-100	101-199		≥ 200	
HR		≤ 40	41-50	51-100	101-110	111-129	≥ 129
RR		≤ 8		9-14	15-20	21-29	≥ 29
Temp		≤ 95	≤ 97	97-99.5	99.6-100.4	≥ 100.5	
UO	zero	≤ 30 mL in last 2 hours					
CNS/AVPU				Alert	Rxn to Voice	Rxn to Pain	Unres-ponsive

Early Warning Score Referral Pathway

Total Score	Action
1-2	☐ Observe
3	☐ Repeat V/S ☐ Repeat CNS ✓ ☐ Calculate UO after 1 hour ☐ Inform CSM.
4	☐ Inform Attending MD if not already aware.
≥ 5	☐ Call Rapid Response Team and Attending MD
If no response, activate Chain of Command.	

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