

## Rescue Improvement Conference Innovation Summary

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<https://psnet.ahrq.gov/innovation/rescue-improvement-conference-innovation-summary>

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### Summary

The Rescue Improvement Conference (RIC)<sup>1</sup> was designed at the University of Michigan to address failure to rescue with a particular focus on communication and complication management. [Failure to rescue](#) typically refers to a health system's slow or ineffective response to clinical deterioration resulting from an underlying illness or a medical or surgical care complication. Failure to rescue can lead to a significant adverse event, such as death or disability.<sup>2</sup>

The RIC is an adaptation of the commonly practiced Morbidity and Mortality (M&M) conference.<sup>2,3</sup> The RIC builds upon the M&M conference by addressing frequent contributors to failure to rescue—poor communication and insufficient complication recognition and management—while involving all stakeholders who may provide unique insight into the event. RIC was designed and implemented within the surgical service at the University of Michigan.

RICs invite all types of hospital staff to attend one-hour case review sessions, which focus on breakdowns in communication, problem recognition, management of pre- and postoperative care, and overall patient care processes with the goal of improving failure to rescue rates and overall patient safety.<sup>1</sup>

The Innovation Team evaluated the RIC process by surveying 140 conference attendees, using a 7-point Likert scale evaluation, and interviewing 12 surgical faculty and staff.<sup>1</sup> The survey results demonstrated that RICs allowed adequate time for discussion, leading to strong educational benefits with clear takeaways and action items relevant to health care and patient safety. Most importantly, the participants noted the critical importance of having a diversity of voices available to discuss and learn about the cases.

### Contact the Innovator

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### Date First Implemented

2018-01-01

## Description of the Innovative Activity

The RIC is an every other month forum in which a diverse group of hospital staff come together to conduct case reviews on failure-to-rescue events.<sup>1</sup> Unlike traditional M&M conferences, which have historically focused on individual errors, RICs focus on the systems that contribute to the error or near miss, with specific attention paid to early diagnosis of surgical and management of perioperative complications that may arise from major surgery.<sup>1</sup> Furthermore, traditional M&M conferences often focus on understanding the contribution of technical aspects of an operation or management of a common or esoteric surgical condition. Additionally, the session moderator is a collaborative participant who prepares discussion points to help direct and guide the conversation.<sup>1</sup> The cases discussed are usually submitted by the hospital staff to support buy-in for the innovation.<sup>1</sup> All members of the care team are invited to attend, including staff, nurses, anesthesiologists, surgeons, etc., as relevant to the case.<sup>1</sup> For the RIC, members of the care team prepare a presentation with potential solutions for the failure to rescue with the support of RIC champions (such as the head of surgery).<sup>1</sup> The presentations usually recommend changes to hospital processes or policies to improve failure to rescue and therefore can take several weeks to prepare.<sup>1</sup>

## Context of the Innovation

The Institute for Healthcare Policy and Innovation at the University of Michigan reports that at least 100,000 people die each year from major complications like blood clots, infections, and heart attacks following elective surgery.<sup>5</sup> Adverse events associated with failure to rescue following surgical procedures can contribute to preventable deaths. The work of Silber and colleagues in 1992 was the first documented attempt to measure failure to rescue.<sup>6</sup> Work to improve failure to rescue has since been ongoing.

## Results

The RIC innovation was evaluated using a mixed methods design to analyze 20 conferences that took place between August 2018 and August 2020 in a single hospital.<sup>1</sup> Myriad clinical cases and surgical complication types were reviewed, including but not limited to delayed recognition of and deterioration following breakdown of an anastomosis, patient fall risk and staff injury, deterioration following issues with postoperative fluid management, and decompensation during bedside tracheostomy.<sup>1</sup>

The evaluation of the innovation included qualitative semi-structured interviews with 12 surgical faculty and staff plus surveys of 140 conference attendees on five indicators using a 7-point Likert scale. Respondents had positive perceptions of all five indicators: educational value (mean=6.07 with SD 0.96), actionable changes (mean=5.89 with SD 1.21), changes to practice (mean=5.58 with SD 1.06), clear conference takeaways (mean=5.52 with SD 1.09), and adequate discussion time during conference (mean=5.07 with

SD 1.24).<sup>1</sup>

Interview findings revealed the RIC innovation is a venue for diverse voices and ensures that multiple practice roles and varying perspectives are heard. Dialogue is encouraged across disciplines and stakeholder groups. These two aspects of the innovation allow for multilevel problem-solving. The resulting strengths of RIC go beyond a more traditional M&M model and include improvements to communication and problem-solving. For example, the RIC has led to changes in patient positioning and equipment in the operating room that have positively impacted the safety of patients and the surgical team. The innovation has resulted in at least 15 such changes in practice, with important effects on perioperative outcomes.

### **Innovation Patient Safety Focus**

A study was conducted on 84,730 patients from 2005 to 2007 using data from the American College of Surgeons National Surgical Quality Improvement Program.<sup>4</sup> The study found widely varied rates of mortality across hospitals. For patients with major complications, the mortality rate in some hospitals was double the mortality rate in other hospitals.<sup>4</sup> The RIC was developed to combat failure to rescue and close the mortality gap among hospitals in Michigan.<sup>4</sup> Innovations like RIC may promote ongoing improvement, learning, and growth by shifting our shared mindset in the perioperative period. This shift in mindset can promote patient safety.

### **Planning and Development Process**

Key steps in planning and implementing the innovation include:

- Identifying champions from the department of surgery for the innovation
- Obtaining buy-in from the department of surgery as a whole
- Garnering strong leadership endorsement from executive staff
- Ensuring participation of leaders (e.g., surgical leadership, nursing leadership) in the RIC events
- Promoting stakeholder engagement from all levels and specialties
- Building strong social relationships among interprofessional leaders

### **Resources Used and Skills Needed**

- A quality review committee to champion the RIC
- A skilled moderator who prepares topics for discussion around specific clinical cases and surgical complications
- A multilevel and interdisciplinary staff assembled to review and discuss the case
- A venue to bring people together for the discussion
- Adequate discussion time
- Clear and actionable takeaways

- Mitigation strategies to address failure to rescue
- Follow-up by email or in person after the RIC with clear changes to clinical practice
- Evaluation using a short online survey accessed via QR code post-RIC

Other clinical pathways developed alongside the RIC included an expected postoperative course (EPOC) tool to give clinicians postoperative milestones for their patients and an interactive online application to help identify and reduce various forms of bias in clinical decision-making.

## **Funding Sources**

This innovation was funded with an AHRQ KO8 award and an AHRQ P30 award.

## **Getting Started with This Innovation**

When getting started with this innovation, it is essential to obtain buy-in from key surgical, nursing, and clinical leaders. This can be done by thoroughly describing the severity of the problem at the organization, and by leveraging interprofessional social relationships. It may be helpful to frame the problem as a continuous quality improvement opportunity that builds on the existing M&M structure that all surgical departments and hospitals are required to have. Data is also helpful when getting started with this innovation. Benchmark the hospital's rate of failure to rescue by comparing it with state or national rates. Lastly, to champion the RIC, select a core singular leader who is passionate about failure to rescue. Some recommendations include the vice chair of surgical quality, or any surgeon, anesthesiologist, or nurse who can get strong buy-in from staff and is seen as a leader.

## **Sustaining This Innovation**

*The following elements are key to sustaining this innovation:*

- Incorporate the innovation with other current and co-occurring strategies to become a part of practice as usual.
- Hospitals can maintain buy-in by developing a feedback loop to share positive results from RICs. For example, at the innovating organization, a patient fell due to a bed that was identified as not being structurally sound and hurt their arm while a nurse was trying to catch their fall. The team worked with the facilities department to ensure proper bed assembly, security, and safety and shared the improvements with the entire RIC team.
- When the innovation is fully realized, it may become a standard operating procedure in the hospital. At the innovating organization, all M&M reviews include the core principles of the RIC—namely, review of systems, team, and cognitive factors that may impact the complication. Creating an environment where a culture of safety is incorporated into daily practice is the ultimate goal of the innovator's work.

## Adoption Considerations Use by Others (Use By Other Organizations)

At this time, the innovator is not aware of any other institution that has implemented RICs, however, there has been a lot of interest and outreach from other institutions.

### Footnotes

1. Ervin JN, Vitous CA, Wells EE, et al. (2023). Rescue improvement conference: a novel tool for addressing failure to rescue. *Ann Surg.* 2023;277(2):233–237. [\[Available at\]](#)
2. Kwok ES, Calder LA, Barlow-Krelina E, et al. Implementation of a structured hospital-wide morbidity and mortality rounds model. *BMJ Qual Saf.* 2017;26:439-448. [\[Available at\]](#)
3. Calder LA, Kwok ES, Cwinn AA, et al. Enhancing the quality of morbidity and mortality rounds: the Ottawa M&M Model. *Acad Emerg Med.* 2014; 21(3):314-321. [\[Free full text\]](#)
4. Ghaferi AA, Birkmeyer JD, Dimick JB. (2009). Variation in hospital mortality associated with inpatient surgery. *N Engl J Med.* 2009;361(14):1368-1375. [\[Available at\]](#)
5. Better care for surgical patients: recognizing and responding to the unexpected to save lives. University of Michigan IHPI Policy Briefs. December 4, 2019. [\[Free full text\]](#)
6. Failure to rescue. PSNet. Agency for Healthcare Research and Quality. September 7, 2019. [\[Free full text\]](#)