Effecting change with the virtual “Breakthrough Series” model

By Priscilla West, NCPS health science specialist

Respiratory failure following surgery is a high risk, but potentially preventable adverse event, making it a prime target for a “Breakthrough Series,” using Agency for Healthcare Research and Quality (AHRQ) Patient Safety Indicators.

In a recent large-scale study of general surgery procedures, the rate of post-operative respiratory failure was three per 1,000 surgeries. Its association with increased patient mortality and increased readmission rates makes it a prime target for patient care improvement efforts.

Background

The Institute for Healthcare Improvement (IHI) “Breakthrough Series Collaborative Model” was developed in 1995 to help health care organizations improve the quality of medical care while reducing costs. The model focuses on applying cutting-edge scientific knowledge to everyday problems. It involves a short-term (6-to-15 month) intervention, focused on solving very specific clinical problems.

Teams of clinicians from a group of health care institutions are taught to improve health care delivery using “change packages,” which are evidence-based processes related to outcomes selected for the individual collaborative. The model encourages facilities that are the “top performers” to teach and coach the “low performers” so that they can learn about innovative ways to improve care that have been successful in other facilities.

The model has an impressive success record. The IHI reports that, “Since 1995, IHI has sponsored over 50 such collaborative projects on several dozen topics involving over 2,000 teams from 1,000 health care organizations.”

The VA has adapted the model for its own quality improvement purposes. In this project, we used a “virtual” breakthrough series model, which allows teams to meet by phone or video conference, rather than face-to-face. Such a series allows for effective sharing of ideas while avoiding travel expenses and staff time lost in travel.

The effort was conducted June 2011 to Jan. 2012: Surgical teams from 16 VA medical centers located in 16 different VA Integrated Service Networks developed projects to improve clinical care related to prevention of post-operative respiratory failure.

Patient Safety Indicators are evidence-based measures AHRQ developed to provide information on potential in-hospital complications and adverse events following surgeries, procedures and childbirth. AHRQ offers free software for hospitals that want to use it for quality improvement initiatives, to include benchmark data for a nationally representative sample of hospitals.

The three phases

Pre-work (June-July 2011)

Having enlisted senior management in support of the project, the sites participated in a one-hour conference call and developed a core team consisting of a surgeon or ICU specialist, a coder and nursing staff. Some teams also included an anesthesia provider and/or a respiratory therapist.

With the assistance of NCPS and other breakthrough series faculty, the teams developed specific aims related to patient care improvement and collected baseline data.

All teams received a “pre-work package” describing how to accomplish these steps and a change package containing interventions to reduce post-operative respiratory failure.

The change package included a detailed flowchart to assist the teams in assessing factors related to preventing post-operative respiratory failure. Team members used this information to analyze their existing local process and establish ways to improve them.


Teams were supported by NCPS and other breakthrough series faculty via e-mail, individualized coaching, and conference calls as they implemented and evaluated specific interventions. Teams focused on “small cycles of change” and

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Building trust through communication
By Paula Allstetter, NCPS program analyst

Seek first to understand, then to be understood – Stephen R. Covey

Imagine you are a patient going into the hospital for an operation. While you are under anesthesia, a piece of equipment malfunctioned and your blood pressure drops along with your heart rate. The team works diligently to stabilize your condition while switching-out the equipment. Your condition improves and the surgery is successfully completed.

But what about the after effects from this event? If no one told you about the incident you might never know it had occurred. While it would be difficult to hear something like this regarding the health care of you or a loved one, you would want to know. A lot of what happens next depends on how you are informed:

- Are you told with cold clinical detachment? Or does the surgical team take the time to sit down and answer your questions?
- Does your doctor seem uncomfortable and in a hurry to get away? Or does he or she look at you and seem genuinely concerned about your physical and mental state?
- Does anyone provide support to you and your loved ones when your emotions are in turmoil?
- Does the thought of what happened scare you from consenting to further procedures or seeking necessary care?

Building trust

Some of the things that providers can do to enhance communication have been defined by the VA – much of which can be used to build trust when answering such questions:

- Active listening skills: Demonstrating attention to what a speaker is saying through non-verbal and verbal reassurance
- Questioning skills: Using open-ended, focused or probing questions to learn, clarify, gain understanding, or encourage a speaker
- Feedback skills: Discussing how an event occurred, openly, for the purpose of modifying it in the future to better its outcome
- Writing skills: Creatively organizing and communicating information that conforms to generally accepted rules of style appropriate for the intended audience and purpose
- Observation skills. Receiving and interpreting information accurately by understanding how a person communicates through body language, such as facial expression, eye contact and posture

Solving problems

Because the patient in the fictional event noted above suffered no harm, it is considered a close call, not an actual adverse event; however, facility staff would still want to know why the equipment malfunctioned and how to prevent such an incident from happening again.

To track adverse events and close calls, NCPS developed the Patient Safety Information System, an internal, confidential, non-punitive reporting system. Users can electronically document and analyze information from across the VA, so that lessons learned can benefit all caregivers.

Willingness and an avenue to report problems or potential problems are essential to safe care because one can’t fix what one doesn’t know about.

Many adverse events involve communication failure. In fact, “insufficient communication” was the most frequently cited root cause of nearly 3,000 sentinel events reported to the Joint Commission between 1995 and 2004; not surprisingly, over 70 percent of all OR-related sentinel events between 1995 and 2005 cited communication as a root cause.

A specific action category is assigned to each of the Root Cause Analysis reports that are entered into the system. The following are some of the action categories that highlight improving communication:

- Enhanced documentation/communication. Example: Improving documentation of patient information in electronic medical records through the use of assessments, flags and progress notes
- Communication. Example: Improving communication through the use of a standard communication tool, such as Situation-Background-Assessment-Recommendation, commonly referred to as “SBAR”
- Enhanced information display. Example: Reducing one’s reliance on memory and clarifying a process through the use of a checklist
- Coordination of care. Example: Standardizing the patient care process across disciplines to prevent failures in the continuity and coordination of care

Conclusion

Though each NCPS program or initiative is founded on the nationwide reduction and prevention of inadvertent harm to patients as a result of their care, not all adverse events can be prevented.

If an adverse event occurs, the VA has an ethical and legal obligation to communicate to patients how it occurred.

Communicating an adverse event to a patient should be done in a private place, with adequate time set aside and minimal interruptions. A social worker, chaplain or patient advocate should be present, in addition to the designated clinical staff members, to help the patient and/or family member cope with the news and offer support. Specific details are provided in a VA directive, “Disclosure of Adverse Events to Patients.”

References

4. Learn more about NCPS: http://www.patientsafety.gov/
6. VA employees can view the entire list online at the VA Intranet site.

Acknowledgement

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Patient Safety Assessment Tool (PSAT): An overview
By Mary Falcon, NCPS program analyst

In 2011, the Patient Safety Assessment Tool (PSAT) moved to a Web-based platform, which has ensured patient safety professionals have access to the most up-to-date version of the tool and allowed for more flexibility when conducting surveys.

More than 200 local and VA Integrated Service Networks-level surveys are currently in progress; over 40 have been completed since the beginning of this fiscal year. Some of the surveys are fairly simple and only require the involvement of the patient safety manager; other surveys appear to be quite in depth and need the participation of staff from specific areas throughout the medical center.

Background

PSAT was developed as a cognitive aid for use by patient safety professionals when conducting surveys. Prior to the development of PSAT, facilities performed Environment of Care (EOC) rounds with a bricks-and-mortar focus (“halls and walls; floors and doors”).

With the integration of patient safety managers into the EOC survey process, the need for a uniform tool that focused on a wider range of patient safety issues became evident. As a cognitive aid and survey instrument, PSAT features Joint Commission Standards and National Patient Safety Goals, as well as questions regarding industry best practices. Mandatory requirements derived from VHA directives, handbooks and federal regulations have also been included.

A rationale has been developed for each question to explain why it is relevant, with substantiating references included whenever possible. In addition, the Mental Health Environment of Care Checklist has been incorporated into PSAT, making that semi-annual requirement easier to fulfill.

Because it is Web-based, the new PSAT platform allows users to complete a survey at their computer or with a mobile device.

Patient safety managers are no longer required to do the “heavy lifting” alone; they can assign PSAT access to staff at the facility, design a survey to fit a given situation, and then track actions to completion, when necessary.

PSAT breaks a patient safety program down into small measurable components. These components pertain to elements of the work process that can be associated with the level of risk to which a patient might encounter.

Elements and sections

The elements in PSAT are grouped into two broad categories that address administration and implementation issues, such as:

• Management and leadership
• The patient safety program
• Procurement and equipment
• Patient safety policies and aids

The elements are subdivided into sections that are comprised of individual questions. The questions are related by subject matter; or, as in Element 7, by physical location within the hospital.

A new feature

A new feature in PSAT allows users to follow action plans in real time. Patient safety professionals are now able to immediately view the status of an action, which is required when a question has been identified as “partially met” or “not met.”

Conclusion

Moving to a Web-based platform has provided PSAT with unlimited growth potential. Questions and references can be updated much more quickly than in the past. The PSAT Advisory Committee meets regularly via teleconference to review and revise questions in an effort to help patient safety staff keep abreast of important patient safety issues.

If you have questions or suggestions for PSAT, or would like to serve on the PSAT Advisory Committee, please email me: mary.falcon@va.gov

References

1. PSAT is available to authorized users on the NCPS Intranet site; however, a sample version in Microsoft Excel can be downloaded from the NCPS Internet site: http://www.patientsafety.gov/Safety-Topics.html#mheocc

2. The Mental Health Environment of Care Checklist is also available on the NCPS Internet site: http://www.patientsafety.gov/SafetyTopics.html#mheocc

Acknowledgement

I would like to acknowledge former NCPS staff members Joe DeRosier and Lesley Taylor for their contributions to this article.
modified their response by carefully analyzing each new situation. Each was coached in the use of “run charts” and other statistical approaches to evaluate outcomes.

**Continuous improvement (Feb.-July 2012)**

Teams were not required to participate in calls or send reports during this phase. The goal was for them to continue implementing changes deemed appropriate.

**Achievements**

The teams reported process changes and outcomes monthly. At the end of the action phase, achievements were reviewed by colleagues from NCPS and the VA Boston Healthcare System. Three areas of focus were identified.

**Spirometry**

Four teams focused on improving the use of spirometry, the study of air volume and flow rate within the lungs. This included:

- Pre-operative teaching of spirometry (reminding patients to bring their spirometer on the day of surgery)
- Improving the supply of spirometers and creating standardized order sets
- Mouth care (ICU kits for the floor; standardized orders for mouth care)

Preliminary assessment of outcomes indicated better teach-back of spirometry, in-depth analysis of transfers to a higher level of care (such as the ICU), and decreased readmissions to SICU for respiratory failure.

**Early ambulation or ventilator-associated pneumonia**

Early ambulation or a ventilator-associated pneumonia bundle was focused on by five teams. Areas of work included:

- Developing order sets for ambulation; oral care and/or pre-operative spirometry teaching as part of the bundle
- Improving smoking cessation education; inviting family participation in teaching about early ambulation
- Marking the floor to measure ambulation distance
- Increasing nursing education about the bundle.

An initial assessment of outcomes pointed toward improved implementation and documentation of bundle elements and compliance with recommended spirometry techniques, which had not been measured before the breakthrough series. Another outcome indicated the importance of stocking oral hygiene items on the ward: None had been before the breakthrough series.

**Multidisciplinary rounds**

Seven teams focused on a wide range of issues associated with multidisciplinary rounds, such as:

- Oral rinsing for all general anesthesia patients
- Adding oral care to the Computerized Patient Record System pulmonary order set as a mandatory item
- Ventilator weaning protocols being completed and implemented
- Ambulation documentation and compliance
- Formalized multidisciplinary rounds for daily goals
- Standardized hand-off communication for OR/ICU/PACU nurses and physicians

Preliminary outcomes included the addition of an automatic pulmonary consult if a patient had been on a ventilator more than 24 hours, decreased ventilator-associated pneumonia, and increased pre-operative education on spirometry.

**Conclusion**

Preliminary information from the sites participating in the series indicates that the program was very effective. Teams consistently attended coaching calls and submitted reports as required by the program. In a post-event survey:

- 81 percent of the sites reported that their team implemented changes to help prevent post-operative respiratory failure
- 67 percent of teams have specific plans to spread the information learned from the effort to other parts of their health care system

I urge other VA providers to consider this cost-effective, collaborative approach to specific patient safety issues. This model can significantly enhance patient care. Want to learn more? Email NCPS@va.gov and your request will be forwarded to the appropriate staff member.

**References**


9. NCPS effort was led by Peter Mills, Ph.D., director, NCPS Field Office; at the Boston facility, Amy Rosen, Ph.D., a VA senior research career scientist.