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A New Look at Aggregated Reviews

By Kathleen Dropp, Aartee Ignaczak, Jim Turner, Paula Allstetter, and Ryan Wilson, NCPS program analysts; and Scott McKnight, NCPS biostatistician

Background

Since 2002, more than 5,000 Aggregated Root Cause Analysis (RCA) reviews have been recorded in the NCPS Patient Safety Information System database, commonly known as "SPOT."

The majority of facilities submit fiscal year aggregate reviews, though some submit on a quarterly basis. The reviews serve two important purposes: first, they provide a way to reveal trends not evident in individual case analysis; second, they make wise use of an RCA team's time.

NCPS program analysts began categorizing all aggregate reviews in fiscal year 2009. Through categorization, aggregated reviews can be classified in the same manner as the 10,000 RCAs currently in the SPOT database. Prior to this, the reviews were examined only during SPOT database searches, based upon specific requests, or for special projects.

Our categorization effort has led to a much closer look at aggregated reviews' root cause statements, actions, and the "Focus of Review of the General Process Involved" (SPOT question 9b). This article offers what we have learned during our initial efforts to categorize aggregated reviews.

Tips on Data Gathering

- Counting events can be helpful when used as a starting point to focus on systems issues surrounding the problem, but causal relationships are more important than the number of each type of event
- The day of the week, shift, time, and staffing acuity can lead to identifying the source(s) of the problem. For instance, an adverse medication event may have happened on the night shift, but the problem was due to an event on the day shift

Tips on Managing and Recording

To make aggregated reviews easier to manage:

- Review monthly or quarterly, rather than at the end of the fiscal year
- Review the components of one or more of the care systems being examined and ensure each component is briefly summarized in SPOT question 9b and addressed in the Action Plan
- Narrow the focus whenever possible. Here are some ideas, as applied to medication events:
  - Review one system of care in the medication continuum each quarter, adding subsequent events surrounding it throughout the fiscal year
  - Rather than review one-to-ten medication dispensing events, review all of the systems involved in dispensing medications (another review in that same year could examine how all omissions happened)

Make sure everything pertinent is recorded:

- At the end of the fiscal year, the final product should reflect each component of every system of care that was evaluated
- Action plans should incorporate all actions implemented for each system of care evaluated during the year
- Remember some close-outs will occur with leadership review/concurrence at the end of the review process, while others will be monitored over time
- Be sure to include the fiscal year date range

Focusing In

Unlike an individual RCA based upon a close call or actual event, a successful aggregated review relies on determining what part of a large set of data can best be mined for solutions to a specific problem. SPOT question 9b is where teams select a *section* of a specific problem on which to concentrate.

When assessing how best to answer SPOT question 9b, we noticed a lack of uniformity: Some contained the date range of the review and a short sentence or two about the number of events; others included a number of pages of information on many topics. The *best* provided in-depth information, succinctly gathered statistics, and offered a summary statement explaining how the team used the information to establish an action plan.

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Evaluating a "Hand-Off Communication Checklist" Process

By Mary E. Cooper, B.S., MBA/HCM, patient safety fellow, VISN 8 Patient Safety Center of Inquiry, James A. Haley Veterans' Hospital, Tampa, Fla.

The Joint Commission's National Patient Safety Goal #2, "Improve the effectiveness of communication among caregivers," [1] requires standardized communication processes between caregivers during patient hand-off, to include the opportunity for feedback.

James A. Haley Veterans Hospital developed a hand-off checklist in the winter of 2005 and rolled it out in the spring of 2006. This year, after three years of use, the patient safety staff felt it was time to review this document, to see if its daily use was sustained or to edit it, if needed.

The Quality Review

A quality improvement review was accomplished by using mixed-method observations and interviews of the staff that use the document during patient transport and hand-offs to ancillary departments.

Doctor-to-doctor, nurse-to-nurse, and shift hand-offs were not considered in this review. A number of hand-off documents from other facilities including "A Ticket to Ride" from Pittsburgh [2] and SBAR[3] checklists were reviewed, as well as the current literature on hand-off communications.[4,5] Because the checklist incorporated many elements of these other documents that were apparently working well, the current format was retained.

Qualitative and quantitative information was gathered through observations and informal interviews of 103 staff members in several medical units, including the spinal cord injury units, the emergency department, and in ancillary departments, such as x-ray, interventional radiology, and the radiation oncology/therapy unit.

Fifteen volunteer escorts were added to the interview list when it was observed that they provided much of the actual transport services.

The interviews were recorded and transcribed to identify common threads, patterns of use, and sustainability of the hand-off checklist. An additional 50 completed and retained checklists from the emergency department were reviewed for comparison.

The Results

The staff was in general agreement that the checklist was valuable for improving communication and patient safety.

Statements by the interviewees indicated that signatures by both the sending and receiving departments were valued as adjuncts to the hand-off procedure and improved patient safety. Nurses considered the signatures valuable because they considered them *feedback*. The percentage of checklists observed to be signed by at least one department was 50 percent. The review also indicated that checklist use was sustained over time, and continues to be used in most departments.

The checklists contained privileged health information, yet during observations were often carried openly and visible by others. Some suggestions for making the checklists confidential were:

- Fold the sheet in half
- Put it in an envelope
- Place it face down beside or on the patient
- Put it in a reusable folder

Per the question of putting the checklist on the computer, some interviewees were adamant about the value of an *on-hand* checklist in emergent situations.

Staff was questioned about their use of the checklist in preventing patient safety incidents. These incidents continue to be perceived as rare events.

Many staff did not report "close calls" because they thought of them as "part of the job." For example, when a medication dosing error was caught before it was administered, the staff felt it wasn't something that should be reported, but that it was part of their job as a good caregiver to catch the error before it occurred.

On the other hand, one caregiver commented: "I can think of one time … because of the [checklist] they found out the patient didn't receive the medication he was supposed to get [prior to contrast for an x-ray]." In another incident, *not* having the checklist prevented a possible adverse event – a procedure was stopped until the missing checklist was received and the patient's identification and current condition were verified.

We observed that patients occasionally were delivered to receiving departments and left in waiting areas or hallways with no formal hand-off to a technician and no apparent provision for continuity of care during waiting periods. When a patient is left alone, opportunities for problems can arise, such as:

- Delays in detecting adverse events (e.g., missing a scheduled medication)
- Disruptions in treatments (e.g., continuity of oxygen therapy)
- Failure to receive a scheduled procedure (e.g. a patient who gets tired of waiting and leaves the area)

Observers also noted that the voluntary escorts were not used to their optimum. Discussion revealed escorts sometimes serve as "memory-joggers" for other staff members, such as asking for the checklist if it is not provided.

Lessons Learned

Lessons learned from this project may be applicable to other facilities and patient safety in general. Analysis of the data led to the following recommendations:

- Foster a better understanding of the importance of completion and signatures to increase the value of the checklist and close the "feedback loop"
- Involve the escorts in the process for patient hand-offs. Include the volunteer services coordinator as part of the planning team for procedures that include his/her staff
- Implement a process for caring for/checking on a patient awaiting a procedure following a hand-off
- Make small changes to the checklist to accommodate the needs of various departments
- Improve protected health information privacy compliance with a confidential method for transmittal of a hand-off checklist during transport

Conclusion

Both quantitative data and qualitative information gathered from users are important parts of a periodic evaluation of this tool.

It is important to remember that patient safety should cross all barriers when enhancing the VA's Culture of Safety – input from all departments involved is important and should be solicited.

A facility should not be deterred from making changes or additions to a checklist that makes it a better fit for their staff. The more perceived value, as well as the better the fit, the greater the sustainability of this mandated communication tool.

References and Checklist

Available in the online edition of *TIPS*.

Summary of Root Cause Analyses Concerning Sleep Apnea

By Joe Murphy, APR, NCPS public affairs officer

Sleep disorders have become an increasingly well-recognized health concern, underlined by the fact that the VA has 85 sleep labs across the nation (Note 1).

A PolyAnalyst search of the NCPS Patient Safety Information System, commonly referred to as "SPOT," located 12 root cause analyses (RCAs) associated with sleep apnea. PolyAnalyst is a "data mining" software used to derive specific information from large databases, such as SPOT.

The RCA teams developed 19 root causes, of which 10 can be categorized as "the usual suspects":

- Communication problems
- Absence of policy/guidelines/procedures

The veteran's age was noted in eight of the 12 RCAs involved. Five of the eight were 60 years old or older, which is in line with the large portion of older veterans the VA serves.

Here is a sample of "familiar" root causes:

- Communication between clinics concerning the treatment received and the patient's response would facilitate continuity of care and decrease the likelihood of injury
- The absence of established practice guidelines for the perioperative management of patients with Obstructive Sleep Apnea (OSA) increased the probability of a patient with OSA being at a significantly increased risk of perioperative complications when undergoing ambulatory surgery

A number of RCA team actions concerned machines used to abate sleep apnea. A Continuous Positive Airway Pressure (CPAP) machine is a portable, low-pressure air generator connected by tubing to a nasal or full-face mask, meant to be worn while at rest. A bi-level Positive Airway Pressure (BiPAP) machine delivers two different positive pressure levels, inspiratory and expiratory. The increased pressure created by these machines makes it easier for air to flow into the lungs.

Actions included:

- Pre-anesthesia evaluations will include sleep apnea/CPAP documentation, using sleep apnea/CPAP documentation fields within the current electronic pre-surgical anesthesia progress note. Checking these fields will create an alert and consult to respiratory therapy
- Surgical service will educate all surgeons and surgical residents on the process for ordering oxygen (respiratory) therapy, including CPAP and BiPAP
- Develop a policy for the perioperative management of patients with OSA using the American Society of Anesthesiologists "Practice Guidelines for the Perioperative Management of Patients with Obstructive Sleep Apnea" (Note 2)
- Develop an automated process to attach all test results and findings to the original consult, eliminating the need for paper communications to providers and the improper location of results within the medical record

Outcome measures included:

- Conduct a random medical record review to monitor compliance with the policy for perioperative management of patients with OSA. Sample size = 50
- Upon completion of the education program, review Training Education Management Program Office records for 100 percent compliance. During the next patient safety rounds, 100 percent of anesthesiologists and certified registered nurse anesthetists will be able to discuss precautions and plan of care issues related to sleep apnea

Conclusion

Becoming more aware of problems associated with the treatment of sleep apnea – including issues surrounding BiPAP and CPAP machines – is an important new issue for VA caregivers.

Notes

1. A list of VA sleep labs accompanies the online edition of this story.

2. The publication is available online: *www2.asahq.org/publications/*
A second publication of interest is also available from ASA online: "What You Should Know About Sleep Apnea"

TiPS® ONLINE

www.va.gov/ncps/pubs.html#tips

A New Look at Aggregated Reviews

Continued from page 1

We recommend when developing material for SPOT question 9b, teams ask questions like: What were the system issues? Why were these things important? What were the fixes? Can all or part of this information benefit other facilities?

Lessons Learned

We combined information from a number of fiscal year 2009 aggregated reviews (SPOT question 9b) to create the examples below: These are de-identified and none are from a specific facility.

Medications

Fiscal year aggregated review of actual and close-call medication events. This review includes data from 04/01/2008 to 03/31/09. XX events are included in this review. Director concurrence is due by 5/01/09.

Review of the medication process identified variances in XX% of Bar Code Medication Administration (BCMA) bar coding procedures, such as: circumvention (work-around) of the BCMA scanning system, because it was quicker for the nursing staff; manually entering a patient's social security number (as a contributing factor to wrong patient/dose/medication); inability to scan a patient's medication; inconsistent verification of the five rights (right patient, right drug, right dose, right route, right time); and delay in administering medication.

Installation of a BCMA patch in April required the end user to document why the BCMA scanning system was bypassed and will allow for consistent monitoring of the system. Reduction in errors were noted. Medication administration events at Community Living Center (CLC) units involved X% of patients standing in line by the medication cart, increasing the number of wrong-dose and wrong-patient events. The cart is located in the medication room and patients line up outside the door.

During the first quarter, IV procedures were closely monitored following an increase of X% of new events when IVs were scanned and/or hung but never infused. No correlation was found between staffing, patient acuity, new admissions, and/or discharges in relation to these administration events.

The events occurred for a variety of reasons, with interruptions being the most frequent common denominator. Early in the year, a diagram was developed noting the pathways nurses follow when executing medication passes on the medical/surgical unit. It depicted a complex pattern, to include many duplicate pathways and wasted steps that contributed to X% of the events. The team felt that simplifying the current medication process would increase efficiency, benefiting the nurse and patient.

The "Good Catch" training program, implemented last year, had a positive effect on reporting. The committee believes this effort resulted in a XX% increase in reported medication events, and will continue to be monitored. All care systems evaluated during the year were reviewed.

Falls

Anticipated physiological-related patient fall events. XX events are included in this review. XX falls were inpatient falls and X were outpatient. Director concurrence is due by 12/01/09.

We used the nursing assessment model to examine what steps we plan to take to reduce inpatient falls. Of all XX inpatient falls, XX% took place in or on the way to the lavatory. Of the XX inpatient falls, XX% were accidental, XX% were unanticipated physiological, and XX% were anticipated physiological.

According to the definitions in Morse's "Preventing Patient Falls" (Note 1), this distribution is to be expected. When we examined only the anticipated physiological falls, we determined that XX% of those falls were deemed preventable by our falls team. Of the XX falls deemed preventable, X were related to toileting. We chose to focus on reducing preventable anticipated physiological falls by targeting nursing interventions specific to toileting issues.

Missing Patients (Elopement)

Elopements from inpatient units and review of pertinent Veterans Health Administration (VHA) directive actions. This review includes data from 01/01/2008 to 12/31/2008. XX events are included in this review. Director concurrence is due by 03/01/2009.

XX events classified as missing patients (elopements) were evenly disbursed throughout the week. A majority of the events, XX%, occurred on the day shift. The remaining XX% occurred in the evenings. XX% of the elopements were from inpatient medical/surgical units; XX % from the locked inpatient psychiatric unit; and two involved patient transport from the CLC to the outpatient clinic. XX% of the veterans that eloped (a majority) were classified as low risk at the time of elopement.

Some of those classified as low risk were improperly classified. In XX% of these events, the veteran was found off campus and returned. None of the events resulted in patient injury. The majority of patients reported as missing were subsequently found to be at home or in the building smoking or socializing. These kinds of patients require an intervention to stop them from leaving without notifying staff and a way to differentiate them from those who go absent with intent. The VHA Directive 2008-057, Management of Wandering and Missing Patient Events, was reviewed (Note 2).

Conclusion

The more concise and informative the material presented in SPOT question 9b, the easier it will be for RCA teams to develop root causes, actions, and outcomes (Note 3). One method of doing this is to develop a statistical approach to a problem with a care system, which can then be used to clarify the solution(s) developed in the Action Plan.

Clearly written root causes, actions, and outcome measures not only aid making categorization efforts more efficient, but help us provide the field – you – with a broader range of information.

Notes

1. Morse, J.M. (1997). *Preventing Patient Falls*. Thousand Oaks, CA: Sage Publications

2. VHA Directive 2008-057

3. Aggregate review schedule, 2009-2010