Public reporting of HAIs

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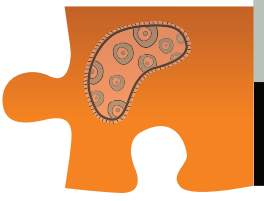
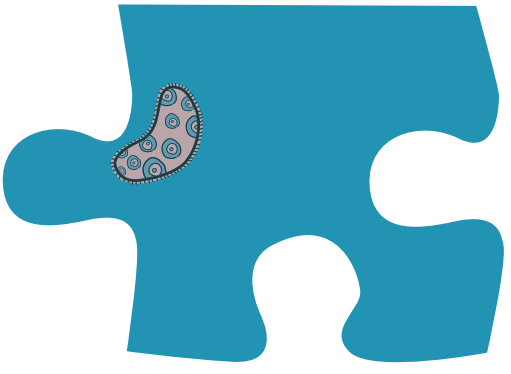
Preventing surgical site





By Linda R. Greene, RN, MPS, CIC

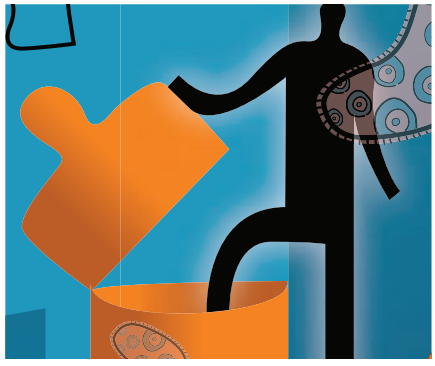
Consumer demand for healthcare information has increased steadily over the past decade. Healthcare organizations are facing increasing demands for transparency from patients, healthcare payers, and the federal government. This move toward public reporting in healthcare was spurred by a number of events that not only focused on medical errors as a major contributor to increased morbidity, mortality, and length of stay, but the awareness that many of these adverse events were largely preventable through the application of evidence-based practices and known safety measures.

The shift in the perception of patient harm started with the publication of the 1999 Institute of Medicine report, *To Err is Human*.[1] This report revealed that thousands of patients in U.S. hospitals were injured or died each year because of medical errors—many of which may have been prevented. Simultaneously, this report fueled interest in real-life stories reported in the press regarding patients who were harmed as a result of receiving medical care. The public response to these reports led to subsequent demands by consumers and legislators for greater transparency in healthcare, primarily through the enactment of legislation requiring the reporting of certain adverse events and process of care measures. Central to this theme was the idea that real improvement would only take place in an atmosphere of openness and transparency where executives and healthcare workers

infections and improving patient safety

would take real steps toward harm prevention if they had to openly disclose these adverse events.[2]

Healthcare-associated infections (HAIs) became an increasing area of concern as one of the most common sources of preventable harm, particularly in light of recent evidence suggesting that many of these infections were preventable through the implementation of evidence-based practices. Estimates of the national morbidity and mortality burden of HAIs have clearly demonstrated that HAIs represent a major public health problem.[3]



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Reports in the media have spurred consumer groups and legislators to take action. Many state legislatures began to pass laws mandating the public reporting of HAIs. The majority of states have now enacted statutes with HAI public reporting mandates.

Federal initiatives

The federal government has also recognized that HAIs are not only a sign of healthcare quality but a huge economic burden to the healthcare system. The Deficit Reduction Act's passing in 2005 required the Secretary of Health and Human Services to select at least two conditions that are high cost, high volume, or both. This resulted in the assignment of a case to a diagnosis-related group that has a higher payment when present as a secondary diagnosis and could have reasonably been prevented through the application of evidence-based guidelines. The Centers for Medicare and Medicaid Services (CMS) pushed for the Fiscal Year 2008 Inpatient Prospective Payment System in August 2007. Of the six healthcare-acquired conditions originally selected, three were related to infections not considered present on admission: catheter-associated urinary tract infection, vascular catheter-associated infection, and mediastinitis after coronary artery bypass graft surgery. The goal of CMS's value-based purchasing (VBP) is to improve quality, safety, and efficiency of care to CMS beneficiaries.

In 2010, Congress incorporated HAI prevention into the VBP program of the Affordable Care Act (ACA). CMS has elected to implement the requirement by requiring national public reporting of HAIs through the CDC's National Healthcare Safety Network (NHSN) into the Inpatient Quality Reporting (IQR) Program. CMS now requires reporting of postoperative surgical site infections (SSIs) in colon surgery and abdominal hysterectomies in addition to reporting of Central Line Associated-Bloodstream infections and Catheter-Associated Urinary Tract Infections in ICUs.[4] The ACA specifies that measures included in the VBP must first be reported in the IQR. These measures must be reported on the Hospital Compare website for at least 1 year prior to their inclusion in the VBP program. In summary, data collected as part of the CMS requirements will move from "pay for reporting" into "pay for performance," with target thresholds established by CMS based upon a predefined measurement period. What does this mean for healthcare facilities? Under this Program, CMS will make value-based incentive payments to acute care hospitals, based either on how well the hospitals perform on certain quality measures or how much the hospitals' performance improves on certain quality measures from their performance during a baseline period.[5] The higher a hospital's performance or improvement during the performance period for a fiscal year, the higher the hospital's value-based incentive payment for the fiscal year would be. What does this mean for healthcare facilities? It connects financial incentives to HAIs. In other words, facilities will be recognized and rewarded for their HAI reduction efforts. This could accelerate the momentum toward HAI prevention and elimination programs already occurring within healthcare facilities across the country. One of the major economic challenges with transparency is that data need to be valid, reliable, and meaningful. Monitoring both process and outcome measures as well as assessing their

correlation is a model that "connects the dots" between evidence-based practices and improved patient outcomes.

What does reporting mean for the OR?

The surgical arena represents a fast-paced environment that can be prone to errors based upon the complexity, specialization, and interdependence required among the various processes and systems. From an economic perspective, HAIs represent a significant cost to the organization and an economic burden to the economy as a whole. It is estimated that SSIs are responsible for approximately 30% of the total cost of HAIs.[6] Reducing HAIs is seen as a patient safety measure. Patient safety initiatives aimed at creating a safe OR culture is increasingly being adopted although OR staff may not fully understand how their individual role impacts infection prevention. Maintaining sterile technique, appropriate preoperative skin prep, delivery of preoperative antibiotics, and maintaining normothermia are all evidence-based practices in which the OR nurse may directly or indirectly influence.

Understanding the reporting

The OR nurse should understand what data are being reported at the state and national level. Individual states have specific reporting requirements, many of which are much more comprehensive than federal mandates. However, there are currently two surgical site measures that are reported to CMS through the NHSN:

- Deep or organ space SSIs in colon resections occurring within 30 days of the operative procedure.
- Deep or organ space SSIs in hysterectomies occurring within 30 days of the operative procedures.

It is expected that more procedures will be added to the reportable list in the future. SSI results are currently reported on the Hospital Compare website using what is known as a standardized infection ratio (SIR). The SIR is a measure used to track HAIs at a national, state, or local level over time. The SIR is calculated by dividing the number of observed infections by the number of expected infections. In the surgery module, the number of expected infections is derived from a logistic regression model, adjusting for risk factors from patients in a given operative category compared to a baseline U.S. experience, known as the referent period.[7] In other words, an expected number of SSIs in each of the colon and hysterectomy procedures would be calculated based upon the available data from all surgeries performed in each of these categories. This would then be compared to the actual number of observed infections. An SIR of 1.0 means the observed number of infections is equal to the number of expected infections.

- An SIR above 1.0 means that the infection rate is higher than that found in the "standard population." The standard population for HAI reports comes from data reported by the hundreds of U.S. hospitals that use the NHSN system. The difference above 1.0 is the percentage by which the infection rate exceeds that of the standard population.
- An SIR below 1.0 means the infection rate is lower than that of the standard population. The difference below 1.0 is the percentage by which the infection rate is lower than that of the standard population.[7] Individual hospital information is available on the Hospital Compare website (medicare.gov/hospitalcompare/search.html?)

It is important that perioperative nurses are aware of their infection rates and SIRs and share the results with all perioperative team members in order to identify opportunities for improvement. As these measures transition from pay for reporting into pay for performance for fiscal year 2016, they not only affect quality, but also the hospital's bottom line.

In addition, the hospital's bottom line could now be adversely impacted by the addition of SSI's to the Hospital-Acquired Conditions (HAC) reduction program. Under the HAC reduction program, hospitals performing in the worst quartile will have their Medicare Reimbursement reduced to approximately 99% of the available payment.

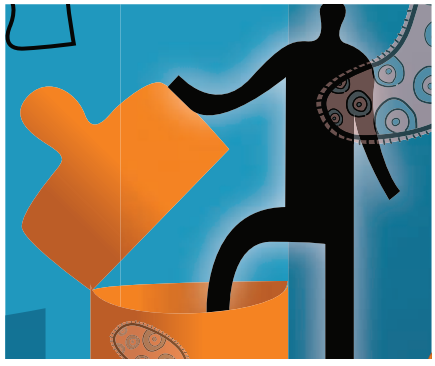
CMS has added the inclusion of SSIs for colon surgery and abdominal hysterectomy in its HAC reduction program beginning in Fiscal Year 2016. There will be a single SIR calculated by pooling the abdominal hysterectomy SIR and the colon surgery SIR (sum of all observed infections among abdominal hysterectomy and colon procedures divided by the sum of all predicted infections among abdominal hysterectomy and colon procedures). The SSI measures will be combined with the Central line Associated Bloodstream and Catheter Associated

Urinary Tract Infection Measures to develop a single SIR. This can translate into hundreds of thousands of dollars that may be at risk.

Process measures

In addition to outcome measures, certain process measures are considered to be closely linked to improved patient outcomes. The Surgical Care Improvement Project (SCIP) process of care measures are aligned with the CMS Quality Inpatient Reporting Program and VBP.[8] (See *SCIP measures.*) However, CMS issued its final rule for fiscal year 2017 in the Federal Register published on August 22, 2014. They announced that they will remove the following SCIP measures from their requirements for the Hospital Value Based Purchasing Program:

- SCIP-Inf-1: Prophylactic antibiotic received within one hour prior to surgical incision
- SCIP-Inf-2: Prophylactic antibiotic selection for surgical patient
- SCIP-Inf-3: Prophylactic antibiotics discontinued within 24 hours after surgery end time (48 hours for cardiac surgery)
- SCIP-Inf-6: Surgery patients with appropriate hair removal (previously suspended)
- SCIP-Inf-9: urinary catheter removed on postoperative day 1 (POD1) or postoperative day 2 (POD2).



Reducing variation via standardization helps nurses identify when a potential harm event may occur.

According to CMS, these processes are considered "topped out" due to extremely high adherence. CMS did indicate, however, that organizations could decide to voluntarily report these measures electronically. Although this decreases the data collection burden for organizations, it is important for OR managers to ensure continued adherence to these measures through the development of processes that continue to make these measures the routine standard of care.

SCIP measures[8]

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SCIP INF-2: Prophylactic antibiotic selection for surgical patients

SCIP INF-3: Prophylactic antibiotics discontinued within 24 hours after surgery end time (48 hours for cardiac surgery)

SCIP INF-4: Cardiac surgery patients with controlled 6 a.m. postoperative serum glucose

SCIP INF-9: Postoperative urinary catheter removal on postoperative day 1 or 2 with day of surgery being day zero

SCIP INF-10: Surgery patients with perioperative temperature management

SCIP-cardiovascular-2: Surgery patients on a beta-blocker prior to arrival who received a beta-blocker during the perioperative period

Opportunities for improvement

Evidence suggests that a gap exists between the best evidence and practice with regards to SSI prevention from an OR quality perspective.[9] Translating the evidence-based practice guidelines into bedside practice is a major challenge facing healthcare providers. Despite the published evidence that supports the consistent use of the guidelines and the reported success stories of the Institute for Healthcare Improvement 100,000 Lives Campaign, the Keystone Project, and others, adherence rates vary considerably; evidence awareness is the first step in implementing evidence-based practices. Strategies used in hospitals that have achieved improvement in the recommended SCIP measures include practices that increase reliability and minimize practice variation. These changes, along with efforts to improve teamwork and communication, are essential for reducing surgical complications.

Tips for improvement

- A gap analysis should be conducted; evidence-based practices and areas where gaps might be occurring should be identified. Are best practices aligned across services, or are they provider specific?

It is important to note that current measures will continue to expand as infections and other adverse outcomes draw more and more attention.

- Open dialogue regarding gaps in practice should be promoted.
- Reducing variation via standardization helps nurses identify when a potential harm event may occur.
- Scores should be visible, as transparency is key.

Clearly, the move toward public reporting has considerable implications for the perioperative nurse. The link between quality, patient safety, and finance has never been more important. It is important that external reporting be coupled with internal dissemination of data. Infection rates, adherence to process measures, and gaps in practice should be shared widely. Reporting requirements are expected to increase along with pressure to continually improve the quality and efficiency of services as perioperative nurses look toward the future. The perioperative nurse plays a key role in this transition to a culture where data dissemination and transparency, infection prevention, and patient safety are of the utmost importance. **OR**

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The author and planners have disclosed that they have no financial relationships related to this article.

DOI-10.1097/01.ORN.0000455901.47712.3d