Reducing Hospital Readmissions After Surgery
A Brief for Preferred Provider Organizations

This is the American Association of Preferred Provider Organization’s Brief, “Reducing Hospital Readmissions – Focus on Preventing Surgical Readmissions.” Every health care network and payer in the U.S. needs to be concerned about unplanned rehospitalization. Up to 20% of patients discharged from the hospital for all reasons are unexpectedly readmitted and about 10% of patients are readmitted following a surgery. Many readmissions are preventable, thus the costs of rebound admissions are also preventable. Employers and other purchasers are scrutinizing these costs and the preventable morbidity for covered beneficiaries. They want their health care delivery providers to take action.

This Brief describes the importance and impact of surgical readmissions on the health care system and focuses specifically on the potential impact of increasing evidence-based use of laparoscopic surgery on reducing readmissions.

A laparoscopic approach (also called minimally invasive surgery or MIS) is the preferred approach for many surgical procedures. MIS advantages include a shorter length of stay, lower rates of infections, less pain for patients and lower overall costs. MIS produces fewer or equivalent readmission rates when compared to open surgery. Increased use of laparoscopic surgery is a key variable recommended for surgical quality improvement. The rate of open surgeries remains higher than recommended for many reasons including payment, training, time and other factors. Closing this surgical quality gap is one way to improve safety and quality of care, while reducing preventable costs and morbidity.

PPOs have an important role in leveraging their contracting and purchasing power to reduce rehospitalizations (also called readmissions). The information and resources in this Brief will help PPO executives understand the scope of the readmissions problem related to surgeries, and start to develop a plan that meets expectations of employer customers and patients served by the preferred provider organization. More information is available on AAPPO’s web site and through resources listed at the end of this Brief.

Why Readmissions Matter to PPOs

Reducing preventable readmissions has become an important target in national efforts to reduce waste and inefficiency in health care. Most large commercial payers are taking action to prevent readmissions through patient education, hospital incentives, coordinated care programs and participation in national collaboratives. Payers commonly require metrics from hospitals showing the hospitals’ rate of readmission for high priority conditions. Major commercial payers including WellPoint and Aetna have announced payment initiatives to incentivize hospitals into reducing readmissions.

Public payers are also looking at readmissions as a cost and quality problem. Effective October 2012, the Centers for Medicare and Medicaid Services (CMS) ranks hospitals based on 30-day readmission rates after initial admissions for heart attack, heart failure and pneumonia. This list will be expanded to seven conditions
by 2015. Poor performing hospitals will have payments reduced by an amount equal to the value of payments for excess readmissions. Although readmission metrics are risk adjusted, CMS considers a hospitalization to be a readmission even if the patient is admitted to a different hospital or for a different condition\(^1\) – which means hospitals and payers must be attentive to addressing all health care needs of patient, whether the admission was medical or surgical. CMS is also evaluating hospitals on Surgical Care Improvement Program (SCIP) measures described below.

PPOs need to demonstrate to customers and patients that they are addressing the quality gaps and cost inefficiencies related to preventable readmissions. PPOs cannot afford to be silent on this major policy and programmatic push to address unnecessary hospitalizations.

**Scope of the Medical and Surgical Readmission Problem**

**Frequency and Cost of All Readmissions**

Preventable medical and surgical hospital readmissions are an important driver of avoidable health care costs:

- Almost 20% of Medicare patients discharged from a hospital are rehospitalized within 30 days, and 34% are rehospitalized in 90 days.
- Experts believe that about 10% of readmissions overall are planned, with the remaining readmissions due to unplanned complications.
- For medical readmission, part of the problem may lie in an inadequate primary care infrastructure or missed hand-offs from inpatient to outpatient care. For example, 50% of patients readmitted within 30 days after a medical discharge have no physician visit during that time.\(^2\)

A readmission problem has also been documented across multiple types of surgeries. Some readmissions are expected. For example, cancer treatments are often staged over a period of time. For unplanned readmissions, underlying factors include infections, complications, choice of surgical approach and patient factors. For example:

- In a study examining colorectal surgery in a commercially insured population, the 30-day readmission rate was 11.4%, and readmission between 31 and 90 days occurred in an additional 11.9% of patients. The average additional length of stay was eight days, with a median additional cost of almost $9,000.\(^3\)
- A study of general surgery patients across multiple types of surgeries found an overall 11.3% 30-day readmission rate with the most predictive variable of readmission being postoperative complication.\(^4\)
- A study of spinal surgery readmissions found that about 91% of readmissions were unplanned. Infections underlay 32% of unplanned readmissions.\(^5\)
- A study of early discharge following colectomy found independent risk factors for readmission that included “older age, male sex, black race, lower socioeconomic status, urgent/emergent surgery, comorbidities, complications, open (versus laparoscopic) surgery and longer length of stay for the index hospitalization.”\(^6\)

These findings illustrate the cost and quality burden of surgical readmissions and also suggest pathways for quality improvements.
Open Versus Minimally Invasive Surgery: Cost and Readmission Implications

Many surgeries – hysterectomy, colectomy and various orthopedic procedures – can be carried out either laparoscopically or via open incision. A strong body of evidence exists on the quality and outcomes of MIS for individual surgeries. For many procedures, MIS is the evidence-based preferred approach recommended by specialty societies, yet it remains underutilized. Closing this gap represents an opportunity to improve patient experience while improving patient outcomes. Research findings include:

- The use of open surgical techniques (versus laparoscopic) has been repeatedly identified as a risk factor for prolonged length of stay and depending on the type of surgery, open surgical technique has also been found to be a risk factor for readmission.\(^7\)\(^8\)\(^9\)
- In a large sample of patients undergoing appendectomy and colectomy, significantly more patients undergoing an open procedure experienced infections and post-surgical complications. Length of stay was longer for the open surgical patients and readmission rates were approximately the same. In all, minimally invasive surgery was $700 less expensive for appendectomy patients, and $15,000 less for colectomy patients.\(^11\)
- A study of hospital reimbursement data demonstrated that hospital-acquired infections raised costs for cholecystectomy by $4,794, hysterectomy by $4,528 and appendectomy by $6,108. Laparoscopic cholecystectomy and hysterectomy resulted in statistically significantly fewer hospital readmissions compared to open surgery.\(^12\)

A key factor influencing surgically related readmissions is the rate of surgical infections. Use of minimally invasive surgery has been demonstrated to reduce nosocomial infection rates.\(^13\) It can be expected that greater appropriate use of MIS will reduce infections - one of the key underlying factors in readmissions. Shorter length of stay and reduced infections attributable to MIS also contribute to lower costs.\(^1\)

In the studies cited above, researchers recommend reducing surgical readmission through pre-emptive discharge planning to address patient-related risk factors such as age, income or lack of social support, factors that present challenges to sustained hospital discharge. They also recommend increased use of laparoscopic surgery to reduce length of stay.\(^14\)

National Initiatives That Address Surgical Readmissions

Preventable surgical readmissions are a source of inefficiency and additional costs in the health care system. They also reflect added morbidity and cost for patients. National initiatives are under way to improve hospital safety, often focusing on reducing preventable infections and complications. Examples are:

**Partnership for Patients:** The federal Department of Health and Human Services has announced a major voluntary patient safety initiative, the Partnership for Patients, which includes a focus on reducing readmissions. The Partnership for Patients engages hospitals, physicians and health care systems to take on systematic improvements. The Partnership includes grants to communities to develop safety networks and initiatives that contribute to two main goals:

- **Keep patients from getting injured or sicker.** By the end of 2013, preventable hospital-acquired conditions would decrease by 40% compared to 2010. Achieving this goal would mean approximately 1.8 million fewer injuries to patients with more than 60,000 lives saved over three years.
- **Help patients heal without complication.** By the end of 2013, preventable complications during a transition from one care setting to another would be decreased so that all hospital readmissions would be reduced by 20% compared to 2010. Achieving this goal would mean more than 1.6 million patients would recover from illness without suffering a preventable complication requiring re-hospitalization within 30 days of discharge.\(^15\)

\(^1\)Many hospitals/surgeons are adopting “Robot Assisted” surgery as a further evolution of MIS. As with MIS, many types of procedures can be performed using the robot-assist. The level of available evidence on operating time, cost, complications, and outcomes varies for each type of procedure. Typically, outcomes following robot assisted surgery are comparable to laparoscopic surgery, but costs are higher due to longer operating time and equipment costs. For considerations in evaluating robot assisted surgery, see: A Consensus Document on Robotic Surgery," available at: http://www.sages.org/publication/id/ROBOT/
**Surgical Care Improvement Project (SCIP):** SCIP is a national multi-year initiative developed initially by the Centers for Medicare and Medicaid Services (CMS) and the Centers for Disease Control and Prevention (CDC) but managed collaboratively to include national surgical organizations, researchers, practitioners, hospitals and others. SCIP has developed standard measures of surgical quality that are reported by most hospitals. SCIP is credited with prompting significant improvements in hospital quality processes related to surgery and in reducing rates of surgical infections and other complications. SCIP measures are now used in CMS’s Value Based Purchasing initiative that rewards hospitals for higher quality care and penalizes them for errors. It is noteworthy that SCIP focuses downstream at ways to reduce infections for any route of surgery. Not addressed in SCIP, and an issue that could influence the rate of infections, are efforts to shift surgeries away from open procedures and over to MIS – a strategy that would reduce nosocomial infections, length of stay and readmissions.

**FAST-Track Surgery:** Fast-Track surgery is an evidence-based approach to surgery that focuses on reducing stressors to the body before, during and after surgery in order to improve outcomes and discharge patients more quickly from the hospital. Fast Track - also called Enhanced Recovery After Surgery (ERAS) - involves surgeons, anesthesiologists and a multi-disciplinary care team. It includes a standard patient assessment to identify risk factors for increased length of stay or complications and standardized interventions related to patient nutrition, control of pain and reduction of stress. While Fast Track processes can be applied to either open or minimally invasive surgeries, results from randomized, controlled trials show that use of laparoscopy is the key variable that predicts reduced length of stay and patient morbidity.

At the hospital level, pre-surgical assessment is an important factor needed to ensure the appropriate level of care. At both the hospital and health plan levels, predictive modeling is supporting efforts to proactively identify patients at risk. High-risk patients can be channeled into more intensive care management programs during surgical procedures and supported more effectively in the transition to home and outpatient services.

**PPO-specific Tactics to Address Surgical Readmissions**

Health plan and PPO interventions to reduce rehospitalizations focus on key levers: care management programs, information management/payment realignment and network management. PPOs are in a position to support and incentivize improvements in three key stakeholder groups: patients, payers and health care providers. PPO-lead strategies to improve surgical quality and reduce readmissions for these three stakeholder groups are outlined here.

**PPO Care Management**

**Goal:** Align medical management strategies with the goal to reduce readmission by deploying utilization management, care management, disease management and wellness programs to support this goal.

1. Use the organization’s care management program to ensure a safe transition from hospital to home.
   - Develop systems for *timely referral* to care management for high-risk patients undergoing surgery. This may include using the precertification process to trigger discharge follow up or developing collaborative programs with the hospital for discharge notifications.
   - Develop protocols for *post-discharge outreach* calls to members 48-72 hours after discharge from the hospital or ambulatory surgical center following surgery. Identify surgical procedures or co-morbidities associated with significant readmission rates - CHF, COPD, joint replacement, asthma, pneumonia, etc.

2. Develop protocols to *identify and target the highest risk members* by engaging trained care management staff and supporting members during care transitions. The “Coleman Model” is widely used to improve patient transitions between various levels of care to ensure no missed handoffs. Tactics can include:
   - Discharge notification program
   - Proactive pre-admission discharge planning
   - Medication reconciliation
   - Supporting hospital-designed fast track programs
   - Enhanced integration with social work programs, behavioral health and pharmacy
   - Ensuring clinical outpatient follow up appointments
   - Ensuring home care needs met and devices are in place
3. **Engage members** to support more pro-active decision making before surgery. Implement and incentivize use of pre-hospital decision support programs for surgical patients to help patients make choices about safe, effective surgical procedures. This may include offering web based tools to educate members and care givers on:
   - Choosing a safe and effective hospital
   - Understanding and choosing among treatment recommendations
   - Options for open versus minimally invasive surgical techniques
   - Choosing the right surgeon
   - Understanding what to expect from surgery
   - The importance of follow-up in the post-operative period

4. **Help patients understand their benefits**, and the financial impact of choices related to surgery, including:
   - **Co-pay and deductible differences** for the patients using ambulatory versus inpatient facilities and the patient cost-share implications under different scenarios using varying procedures and lengths of stay.
   - Implications of using **Centers of Excellence** and preferred facilities, particularly where there are financial incentives for the member.
   - Availability of a **home health skilled nursing benefit** (and ensuring that physicians are aware of the benefit so this can be incorporated at the time of discharge if needed.)

5. Use **wellness programs and member education strategies** to educate members about surgical options and shared decision-making.

6. Implement **predictive models or pre-admission assessment** to identify members at risk for poor surgical outcomes. Patient risk factors may include:
   - Skilled nursing home residency
   - High risk disease states
   - Prior admission
   - Long stay admission
   - Patient barriers such as limited family support or limited understanding
   - Lower socioeconomic status

7. Ensure that **utilization review** (whether in-house at the payor or performed through an external vendor) differentiates between minimally invasive, open and robotic surgeries and uses the opportunity to educate providers and patients. Utilization review can identify procedures where the evidence suggests a preference for MIS. Ongoing trends or concerns can be addressed through the provider network for review and potential action.

**Information Management / Payment Realignment**

**Goal**: Position your organization for leadership on the topic of preventing readmissions and their associated costs. PPOs, both network and payer organizations, have valuable data and knowledge of payment strategies that can support employer / payer needs. The PPO can become a consultant to clients on best practices.

8. Provide **payer specific data** on the scope of the readmission problem:
   - Percentage of hospital patients readmitted within 30, 60, and 90 days
   - For patients readmitted, reasons for readmission: medical versus surgical
   - For patients readmitted with surgical conditions, rates of infections, drainage and other complications
   - Efficiency of surgical procedures: percentage of procedures eligible for MIS that are carried out that way

9. Encourage self-insured employers to consider **health plan designs** that have incentives for providers and members to use the least invasive surgical approach proven effective for management of the member's condition.
   - Clients should consider adopting **benefit incentives for patients** to promote their use of the best quality facilities and least invasive surgeries.
   - Recommend that payers create **hospital/provider incentives** to use minimally invasive surgeries where appropriate. (The utilization review process can incorporate an element of benefit determination as part of the pre-certification for the requested surgery.)
10. **Leverage** available opportunities in hospital and physician payments to reduce readmissions.
   - Adopt a **hospital payment** model consistent with evidence on what works to reduce readmissions and is consistent with the PPO’s hospital contract. For example, the PPO may be able to require measures, improvements or programs linked to financial incentives.
   - Offer **physician and/or hospital incentives** for surgical performance improvement and greater adoption of MIS. Improvements linked to incentives could include obtaining certification, performing the majority of procedures using minimally techniques or shifting practice patterns towards MIS.

**Network Management**

**Goal:** Use network design and management to increase availability and use of providers following best surgical practices and supporting patients in decision-making.

11. Review literature and consensus guidelines to **develop evidence-based medical policy** on open, minimally invasive and robotic surgery. Policy should be shared with hospitals and providers and guide medical management decision-making.18

12. Increase **availability of MIS trained surgeons** in the network. Contract with surgeons skilled in minimally invasive procedures and highlight their availability in the physician directory and other member communications.

13. Designate high performing hospitals that promote the evidence-based least invasive approach as “**Surgical Centers of Excellence**” and develop preferred strategies to increase their volume. Advertise and promote hospitals or outpatient facilities that perform a majority of procedures minimally invasively and have exemplary quality metrics.

14. **Improve referrals** for evidence-based MIS by educating primary care practitioners on the patient’s benefits for undergoing minimally invasive surgery compared to open procedures.

15. Participate in collaborative **hospital patient safety initiatives** at the local and national level. Engage with local Surgical Care Improvement Program or hospital readmission reduction initiatives. Encourage local hospitals to address other factors that influence outcomes, such as the use of MIS.

16. Support a **robust primary care and community infrastructure**. Link to community resources to support transitions of care. Implement protocols for coordinating services of PPO/plan/hospital care managers.

**PPO Action Items**

PPO plans and networks cannot sit out the issue of reducing readmission. Readmission is a safety issue, along with an important opportunity to improve efficiency in the health care system. Regardless of the PPO’s business model, PPO leaders have a role to play in controlling this unnecessary cost. PPOs can use contract leverage, clinical expertise and payments to drive hospital activities. They may also offer care management solutions that support improved transitions and reduced rehospitalizations.

PPOs, take action:
- **Evaluate** the scope of the readmission problem
- **Review** the evidence on surgical readmissions and factors that can reduce it
- **Educate** payers on the impact of readmission and their role in improving care
- **Use** utilization management to educate patients and providers on the least invasive approach
- **Deploy** care management staff to improve transitions of care
- **Engage** patients and physicians in understanding the link between safer surgery and reduced hospitalization
- **Manage** the network to increase use of surgical best practices and high-value hospitals
- **Participate** in national safety initiatives
- **Reward** hospitals and physicians for safer, more efficient care
There is an extensive array of information, case studies and educational opportunities available to support PPO plans and networks in developing a program to reduce readmissions in participating hospital providers.

**Resources for Next Steps**

- American College of Surgeons - National Surgical Quality Improvement Program
  
  [http://site.acnsqip.org/about/](http://site.acnsqip.org/about/)

- Center for Health Care Quality and Payment Reform
  

- Congressional Research Service. “Medicare Hospital Readmissions: Issues, Policy Options and PPACA”
  

- HHS Action Plan to Prevent Healthcare-Associated Infections
  

- Institute for Healthcare Improvement – “Improvement Map for Hospitals and State Action on Avoidable Rehospitalizations (pilot)”
  
  [www.ihi.org/offerings/Initiatives/Improvemaphospitals/Pages/default.aspx](http://www.ihi.org/offerings/Initiatives/Improvemaphospitals/Pages/default.aspx)

- Partnership for Patients. Roadmap to Better Care Transitions and Fewer Readmissions
  

**References**

1. See more information at: Hospital Compare, [http://www.hospitalcompare.hhs.gov/About/HOSInfo/RCR.aspx](http://www.hospitalcompare.hhs.gov/About/HOSInfo/RCR.aspx)
15. Excerpted from Partnership for Patients website, [http://www.healthcare.gov/compare/partnership-for-patients/](http://www.healthcare.gov/compare/partnership-for-patients/)

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