White Paper: How Hospitals Can Reduce Cardiology Readmissions Through Effective Peer Review

For Hospital Groups, ASCs, and Specialty Medical Facilities

The Centers for Medicare & Medicaid Services (CMS) Hospital Readmissions Reduction Program

About 20% of Medicare patients are readmitted within 30 days of hospital discharge, costing Medicare about $17.5 billion in additional hospital bills. Some readmissions are planned and some are unplanned, and others are unrelated to the initial reason the patient came to the hospital. Identifying and reducing avoidable readmissions can improve patient safety, enhance quality of care, and lower healthcare spending.

In the Affordable Care Act (ACA), Congress enacted the Hospital Readmissions Reduction Program (HRRP). Under this program, effective for discharges beginning on or after October 1, 2012, Medicare will penalize hospitals for higher-than-expected rates of readmissions. CMS defined readmission as an admission to a subsection(d) hospital within 30 days of a discharge from the same or another subsection(d) hospital.

The CMS hospital quality-of-care measures, which compare patient outcomes across different hospitals, include hospital 30-day risk-standardized readmission measures for: acute myocardial infarction (AMI), heart failure (HF), and pneumonia (PN). The measures focus on AMI, HF, and PN because they are common conditions with substantial mortality and morbidity, imposing a substantial burden on patients and the healthcare system.

A methodology was established to calculate the excess readmission ratio for each condition, which is used, in part, to calculate the readmission payment adjustment. A hospital’s excess readmission ratio for AMI, HF, and PN is a measure of the hospital’s readmission performance compared to the national average for the hospital’s set of patients with that applicable condition.

CMS established a policy of using the risk adjustment methodology endorsed by the National Quality Forum (NQF) for the readmissions measures for AMI, HF, and PN to calculate the excess readmission ratios, which includes adjustment for factors that are clinically relevant, including patient demographic characteristics, comorbidities, and patient frailty.

Conclusions Factors Driving Cardiology Readmissions

Hospital-Related Factors

Readmission rates vary greatly from state to state, with the highest five states seeing rates 45% higher than the lowest five. Areas with poor access to primary care and lack of continuity of care may be more likely to have higher rates of readmission. In addition, higher numbers of available hospital beds may also correlate with higher rates of rehospitalization.

Lack of care transition strategies that ensure continuity and coordination between providers and timely access to follow-up services increases the likelihood for readmissions. The transition from the inpatient to the outpatient setting is a critical point along the care continuum in which there is a real opportunity to prevent readmissions. Although patients may receive discharge plans, they may not fully understand follow-up care instructions or have the ability to appropriately self-manage their care. In many cases, patients do not receive physician or nurse follow-up calls or do not visit their primary care providers in a timely manner following discharge. Clinicians are often faced with the challenges of limited access to data and limited communication and information systems that support performance reporting and decision-making.
Patient-Related Factors

Pre-procedure predictors that have been shown to be correlated with a patient’s risk for readmission include the individual's age, sex, and American Society of Anesthesiologists (ASA) class. In addition, patients with congestive heart failure and chronic kidney disease are more likely to be readmitted.

Post-procedure predictors for readmission include medication-related adverse events, medication nonadherence, vascular/bleeding complications, and infections. Some studies have reported that extended length of stay (LOS) may be associated with lower rates of readmission. An observational study of nearly 7 million Medicare fee-for-service hospitalizations for HF between 1993 and 2006 examined whether decreases in the LOS for patients with HF affected patient outcomes. The study found that for patients admitted for HF during these years, reductions in LOS were seen, along with reductions in in-hospital mortality and less-marked reductions in 30-day mortality. These changes were accompanied by increases in 30-day readmission rates. In another study, countries with longer LOS for HF hospitalizations had significantly lower rates of readmission within 30 days of randomization. However, some studies show no association between readmission rates and initial hospitalization LOS.

Interventions to Reduce Readmissions

Calculate Patient Risk

In a recently published study, investigators developed prediction models to identify patients at high risk of readmission 30 days after percutaneous coronary intervention (PCI), potentially enabling clinicians to target them for prevention. Table 1 shows the variables for risk-score calculation.

Table 1. Calculating 30-Day Readmission Risk Score After PCI Using Pre-PCI Variables

<table>
<thead>
<tr>
<th>Pre-PCI Patient Variable</th>
<th>Points Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female sex</td>
<td>2</td>
</tr>
<tr>
<td>Previous coronary artery bypass graft (CABG) surgery</td>
<td>1</td>
</tr>
<tr>
<td>Current congestive heart failure (CHF)</td>
<td>2</td>
</tr>
<tr>
<td>Chronic lung disease</td>
<td>2</td>
</tr>
<tr>
<td>Peripheral arterial disease (PAD)</td>
<td>1</td>
</tr>
<tr>
<td>Cardiogenic shock</td>
<td>2</td>
</tr>
<tr>
<td>Age &lt;50 years</td>
<td>0</td>
</tr>
<tr>
<td>Age ≥50 years</td>
<td>-1</td>
</tr>
<tr>
<td>GFR &lt;30 mL/min</td>
<td>4</td>
</tr>
<tr>
<td>GFR 30-60 mL/min</td>
<td>1</td>
</tr>
<tr>
<td>GFR &gt;60 mL/min</td>
<td>0</td>
</tr>
<tr>
<td>Admission status: Transfer from acute care facility</td>
<td>3</td>
</tr>
<tr>
<td>Admission status: Transfer from nursing home</td>
<td>4</td>
</tr>
<tr>
<td>Admission status: Emergency department</td>
<td>4</td>
</tr>
<tr>
<td>Insurance status: Medicare/state</td>
<td>3</td>
</tr>
<tr>
<td>Insurance status: Unknown</td>
<td>4</td>
</tr>
</tbody>
</table>

<6 points = low risk
6-10 points = intermediate risk
≥11 = high risk
Reducing Cardiology Readmissions Through Effective Peer Review

Improve Hospital Processes

Studies have shown that administering prophylactic preoperative antibiotics significantly reduces infectious complications in patients undergoing cardiac surgery. The prophylactic regimen should be appropriate for the specific procedure. Common pathogens in cardiothoracic surgery include Staphylococcus aureus and coagulase-negative staphylococci.

Recommended antimicrobials include Cefazolin, cefuroxime sodium (Zinacef), or vancomycin. The Society of Thoracic Surgeons recommends administering prophylactic antibiotics and continuing for: 24 hours after implantation of a pacemaker or defibrillator; 48 hours after the completion of cardiothoracic surgery.

Pre-discharge interventions that can help to lower readmissions include effective discharge planning, better communication between hospital physician, patient, and community providers, improved patient education, and medication reconciliation. Post-discharge interventions, such as timely communication and appointments, follow-up calls, and home visits, may also help prevent rehospitalizations.

Challenges That Hospitals Face in Reducing Readmissions

Many hospitals see large numbers of patients who are at high risk of admission and readmission. These patients include those with certain conditions or multiple conditions: heart failure, diabetes, obesity, asthma, and/or stroke. Older patients, African Americans extremely poor patients, and patients living in rural areas are also at increased risk. In some cases, preventing initial admission could help to reduce readmission.

Discontinuities in the care continuum create a fragmented system of care. Community-based physicians may not be aware that their patients have been admitted to the hospital, or physicians may be unfamiliar with a patient’s health history. Primary care physicians may be unfamiliar with the rationale behind care provided in the inpatient setting. In many cases, a lack of systems impedes information exchange.

The Role of the Hospital Peer Review Committee in Reducing Readmissions

The traditional approach to assessing efficacy and safety of care has focused on looking at LOS, complications arising from surgery, unplanned reoperations and readmissions, and mortality. Examining these criteria remains crucial, but additional measures are needed in order for hospitals to establish effective best practices for reducing readmissions. Hospitals must identify trends and patterns in indications for readmission, examine how quickly patients were seen after their procedure (Can this time be shortened?), and determine when cardiac rehabilitation was initiated.

Ongoing evaluation of hospital practitioners ensures excellence in physician performance and the highest standard of care for patients. External peer review allows hospitals to perform not only in-depth evaluation of sentinel events, but also (re)credentialing, (re)privileging, proctoring, and ongoing measurement and monitoring of physician performance.

Peer review committees composed primarily of in-house hospital personnel often lack the resources to help the hospital achieve its performance improvement goals, and social and professional relationships lead to conflicts of interest. External peer review avoids conflicts of interest that can arise from economic, professional, or social ties among physicians within a single institution. It may also be an effective solution for hospitals that lack adequate physician resources to conduct timely performance analyses.

When properly executed, external peer review can reduce medical errors through objective evaluations performed in a nonpunitive, educational context that supports a healthy culture of continuous improvement. This results from physicians knowing that their work will be objectively evaluated at regular intervals by board-certified specialists with the same credentials and from similar practice settings, thereby leading to improved quality of care and patient safety. Ongoing evaluation of physicians can also uncover problematic practice patterns, as well as physician- and hospital-level issues that need to be addressed.

External peer review can also play a key role in reducing or eliminating risks associated with increased malpractice claims. Unlike internal peer review, which only looks at sentinel events, external peer review can help hospitals to discover, highlight, and deal with physician performance issues quickly and efficiently before they turn into claims.
Conclusions

Since the CMS enacted the HRRP in 2012, hospitals continue to face the challenge of bringing down their readmission rates. Readmissions, which can be costly and potentially harmful, are often avoidable. Evidence suggests that improving hospital processes can reduce the rate of avoidable readmissions.

Bibliography


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