FINANCIAL IMPLICATIONS OF EXCESS HOSPITAL READMISSIONS

JOSEPH B. HENDERSON, J.D.

Executive MHA Candidate, 2013
University of Southern California
Sol Price School of Public Policy
Abstract

A 2007 Medicare Payment Advisory Commission report to Congress determined that in 2005 17.6% of all Medicare hospital admissions were readmissions (return hospitalizations), which accounted for $15 billion annually in expenditures. Furthermore, $12 billion of these expenditures were labeled as potentially preventable. The 2010 Patient Protection and Affordable Care Act (PPACA) seeks to reduce excess hospital readmissions for Medicare patients by penalizing hospitals with “excess readmissions ratios” for three medical conditions which account for half of all readmissions. This paper will illustrate the financial implications of excess readmissions, analyze the problem of excess admissions as well as the PPACA’s Hospital Readmissions Reduction Program, identify patient populations at risk for readmissions and discuss alternative cost-effective strategies to reduce readmissions. This paper was originally submitted as coursework for the course HMGT 540 Healthcare Economics, Financing and Reimbursement taught by Professor Glenn Melnick.
Introduction

The Patient Protection and Affordable Care Act (PPACA) seeks to improve access, quality of care and, at the same time, reduce the cost of care (Centers for Medicare and Medicaid Services, 2011). In an effort to achieve these challenging goals, the legislation seeks to reduce excess hospital readmissions for Medicare patients by penalizing hospitals with “excess readmissions ratios” for three specified medical conditions (PPACA, § 3025). This paper will illustrate the financial implications of excess readmissions, analyze the problem of excess admissions as well as the PPACA’s Hospital Readmissions Reduction Program, identify patient populations at risk for readmissions and discuss alternative cost-effective strategies to reduce readmissions.

What are Readmissions and Why do They Matter?

A readmission is defined as a return hospitalization to an acute care hospital that follows a prior acute-care admission within a specified time interval called the “readmission time interval.” If a patient’s readmission occurs within the readmission time interval, i.e. 30 days after discharge, and is “clinically related a prior admission, it is considered a potentially preventable readmission” (Goldfield et al., 2008).

It is important to appreciate that a certain number of hospital readmissions are to be expected even under the best of circumstances and are not indicative of substandard care (MedPAC, 2007). Furthermore, the longer the time interval between the initial admission and the readmission, the less likely the probability that the readmission was related to the care and treatment rendered during the initial hospitalization. Conversely, if there is a very short interval between the discharge from the original admission and the subsequent admission, the probability increases that the readmission was related to the care and treatment rendered during the initial hospitalization. For instance, if a patient is admitted for a surgical procedure and receives a Foley catheter perioperatively and is rehospitalized in short succession for a urinary tract infection, it is probable that the infection was hospital acquired and that the readmission was potentially preventable. (Goldfield et al., 2008).

Certain patient populations are at an increased risk for readmissions:

- **Failure to Present to Initial Outpatient Visit**: Jencks et al., (2009) found that more than half of the non-surgical 30-day readmissions involved patients who failed to follow up with a physician after discharge.

- **Age**: The readmission rate steadily increases with age capping at “47% for seniors 85 years and older” (Office of Statewide Health Planning and Development, 2010).

- **Race**: Several studies have concluded that African-American men have the highest readmission rates (Jweinat, 2010). In California, African-American patients are more likely to have at least one readmission (42%) and have a larger number of readmissions (2.5 per patient per year) (Office of Statewide Health Planning and Development, 2010).
• **Payment Source:** Several studies have determined that “dual-eligibles” (a vulnerable and socioeconomically-challenged patient population comprised of individuals with Medicaid and Medicare) are at a higher risk for readmissions (MedPAC, 2007) and that Medicaid insured patients have higher readmission rates than individuals with private health insurance (Jweinat, 2010). In California, Medi-Cal patients have the highest average readmission rates (2.5 per year) (Office of Statewide Health Planning and Development, 2010).

• **Acuity:** According to MedPAC (2007), "readmission is generally more likely the more severely ill a patient is -- even within the same DRG [diagnosis-related group].” Goldfield et al., (2008) noted that 15-day potentially preventable readmission rates increased dramatically as patients’ severity increased from level 1 to level 4. The authors noted at least a threefold increase for medical patients and a fourfold increase for surgical patients (Goldfield et al., 2008). Severely ill patients whose length of stay exceeded the applicable diagnosis-related group by a factor of two were 26.6% more likely to be readmitted (Jweinat, 2010).

• **Mental Health and Substance Abuse Problems:** Goldfield et al., (2008) found that patients with mental health or substance abuse problems were more likely to be readmitted.

• **Co-morbidities:** Patients with a number of co-morbidities are at an increased risk for readmission. (Jweinat, 2010).

• **Disposition:** Patients discharged to a skilled nursing facility or long-term care facility had twice the risk of 30-day hospital readmission (Jweinat, 2010).

It is well worth noting that Jencks et al., (2009) opined that because “the typical patient has almost two chances in three of being rehospitalized or of dying within a year after discharge” all Medicare patients should be considered at high risk of readmission and that discharge planners should act accordingly rather than simply focusing their attention on the high risk subset of this patient population.

**Financial Implications of Excess Hospital Readmissions**

The financial implications of excess hospital readmissions are absolutely staggering:

• A 2007 Medicare Payment Advisory Commission (MedPAC) report to Congress determined that in 2005 17.6% of all Medicare admissions were readmissions which accounted for $15 billion annually in expenditures. Furthermore, $12 billion of these expenditures were labelled as potentially preventable (MedPAC, 2007).

• MedPAC’s analysis of 2005 Medicare discharge claims data revealed that four medical conditions (chronic obstructive pulmonary disease [COPD], pneumonia, acute myocardial infarction [AMI], and heart failure) and three surgical procedures (coronary artery bypass graft [CABG], percutaneous transluminal coronary angioplasty [PTCA] and
“other vascular”) accounted for 28.8% of Medicare spending on 15-day hospital readmissions totalling $2.296 billion (MedPAC, 2007).

• A study by Stephen F. Jencks et al., (2009) published in New England Journal of Medicine involving a cohort of Medicare patients discharged between October 1 and December 31, 2003, revealed that 19.6% of all Medicare patients discharged from hospitals were re-admitted within 30 days. Furthermore, the cost to Medicare for these readmissions was $17.4 billion (Jencks, Williams, & Coleman, 2009).

• According to the California Office of Strategic Health Planning and Development, the state’s 30-day readmission rate is 18.4% for Medicare patients and 15% for Medi-Cal patients. Readmissions accounted for $31 billion of Medicare charges for California hospital services -- 50% of the total Medicare charges for the state. Furthermore, readmissions added close to $10 billion to California's Medi-Cal bill -- 49% of the Medi-Cal total” (Office of Statewide Health Planning and Development, 2010).

Role of Medicare’s Reimbursement Model in Excess Readmissions

Under Medicare’s current reimbursement model, there is no real economic incentive to reduce hospital readmissions. Rather, under the DRG-based fee structure, “hospitals and physicians may be more likely to discharge patients earlier and accept a higher risk of readmission” (MedPAC, 2007). This practice of discharging patients “sicker and quicker” is enabled by the current Medicare regulations, which will pay for a rehospitalization as long as the patient is readmitted at least 24 hours after discharge. If a patient is readmitted within 24 hours of discharge for the same medical condition, the hospital will only be reimbursed for one DRG unless the two admissions are unrelated.

Under the current reimbursement structure readmissions are yet another billing opportunity for the hospital and the treating physicians. Quite frankly, from the perspective of a hospital, readmissions are a service line much like total joints or CABGs. Perversely, the only way that a hospital would be financially rewarded for reducing readmissions would be if it were to find an alternative – and more profitable – service line in order to fill the beds formerly occupied by readmitted patients (MedPAC, 2007). Given the foregoing, it is not surprising that a report recently issued by the Dartmouth Atlas Project, argued that little progress has been made in reducing readmission rates between 2004-2009 (Goodman, Fisher, & Chang, 2011).

The PPACA’s Hospital Readmissions Reduction Program

Patient Protection and Affordable Care Act (PPACA) section 3025 is designed to address the problem of excess readmissions. It provides that during a fiscal year beginning on or after October 1, 2012, Medicare will reduce payments to hospitals with excessive readmissions ratios for three medical conditions – acute myocardial infarction, heart failure and pneumonia. These outlier hospitals have readmissions rates about the nationwide 75th percentile. According to CMS data, 30-day readmissions statistics are as follows: heart attack (19.9%), heart failure (24.5%) and pneumonia (18.2%). The foregoing three diagnoses accounted for more than half of all readmissions (MedPAC, 2007).
Excess readmissions are determined by a risk-adjusted calculation of a hospital’s actual readmissions compared to a national benchmark. Using risk-adjusted rates is designed to prevent hospitals from shying away from admitting high acuity patients who will necessarily have higher rates of readmissions.

The mechanism in which hospital payments will be reduced is summarized as follows: The adjustment factor for a hospital in a fiscal year is equal to the greater of (1) a floor adjustment factor equal to a reduced percentage of the discharge payment or (2) the excess readmissions ratio for the applicable fiscal year. The floor adjustment factor will be 0.99 of the discharge payments in fiscal 2013, 0.98 in fiscal year 2014, and 0.97 in fiscal year 2015 and in subsequent fiscal years. The excess readmissions ratio is equal to 1 minus the ratio of the aggregate payments for a hospital’s excess readmissions divided by the aggregate payments for all discharges (PPACA, § 3025).

Rather than simply seeking a monetary reimbursement for excess re-hospitalizations, this legislation is designed to penalize outlier hospitals. Specifically, this penalty is based on the “aggregate payments for all discharges” i.e., “the sum of the base operating DRG payment amounts for all discharges for all conditions from such hospital for such applicable period.” As such, if a hospital is found to be an “outlier” for pneumonia readmissions, the penalty would be calculated based on all of the hospital’s admissions (PPACA, § 3025). In fiscal year 2013, this penalty for excessive readmissions will equal 1% of the hospital’s total Medicare billings. This penalty will increase to 2% in 2014 and 3% in 2015 (Goodman, Fisher, & Chang, 2011).

Beginning in 2015, four additional conditions originally referenced in the June 2007 Medicare Payment Advisory Commission’s report to Congress will be included in the hospital readmissions reduction program. These conditions are as follows: acute myocardial infarction (AMI), coronary artery bypass graft (CABG), percutaneous transluminal coronary angioplasty (PTCA) and “other vascular” surgical procedures (PPACA, § 3025).

While the Hospital Readmissions Reduction Program is laudable, it fails to harvest all of the low hanging fruit. The 2007 MedPAC report to Congress listed three medical conditions and one surgical procedure with high volumes and wide variations in readmission rates: CHF, COPD, pneumonia and CABG surgery. In fact, the authors opined that there is considerable potential for reductions in readmission rates for these items with the adoption of evidence-based medical practices. Excess readmissions for pneumonia and CABG surgery will be penalized in 2012 and 2015, respectively. Inexplicably, CHF and COPD are excluded from the Hospital Readmissions Reduction Program.

Another shortcoming of the Hospital Readmissions Reduction Program is that it does not penalize outlier physicians with high readmission rates. As such, the effectiveness of this program is limited, as independent physicians who are not employed by a hospital currently do not have any real economic incentives to alter their practice patterns in order to reduce readmissions.

Finally, there is a very real possibility that the Hospital Readmissions Reduction Program will disproportionately affect safety net hospitals. Hospitals in the top quartile of risk-adjusted
readmission rates for 2005 through 2007 – roughly 400 acute-care hospitals and critical access hospitals – have, on average, a significantly higher percentage of minority Medicare patients than all other on hospitals (MedPAC, 2010). Hospitals with higher underlying admission rates generally have higher readmission rates. In medically-underserved communities with a shortage of primary healthcare providers a local hospital is the de facto primary “site of care” (Goodman, Fisher, & Chang, 2011). The end result is that individuals present to the emergency department sicker than individuals who are fortunate enough to live in wealthier communities with an abundance of primary healthcare providers.

The Hospital Readmissions Reduction Program employs a “stick” to modify the behavior of outlier hospitals. However, "hospitals with more poor patients may have fewer financial reserves because of lower reimbursement rates in the higher costs associated with caring for a population with greater socio-economic impediments” (Jha, Orav, & Epstein, 2010). As such, the authors question whether employing a stick is the best approach for reducing readmission rates for safety net hospitals that treat a disproportionate number of poor patients. The authors point to the Premier Hospital Quality Incentive Demonstration program to show that pay-for-performance programs, i.e. “carrots,” “seem to improve quality among hospitals that treat this challenging patient population (Jha, Orav, & Epstein, 2010).

Cost Effective Models to Reduce Readmissions

In March 2009, the Institute for Healthcare Improvement published a study titled “Effective Interventions to Reduce Hospitalizations: A Compendium of 15 Promising Interventions.” The authors found that four of these interventions were supported with "very strong trial or evaluation data" (Boutwell et al., 2009). Three of these four models, involve nurses or nurse practitioners who visit patients in their homes after discharge:

1) In the Transitional Care Model (“TCM”), an advanced practice nurse (called a Transitional Care Nurse) "provides pre-and post-discharge coordination of care for high-risk elderly patients with chronic illnesses” (Boutwell et al., 2009). In this model, the Transitional Care Nurse provides "regular home visits" and is available telephonically on a 24/7 basis for approximately two months post-discharge. Two randomized controlled trials have documented that the use of the TCM results in “fewer rehospitalizations, lower overall health costs, and improved patient satisfaction with care” (Boutwell et al., 2009). Specifically, patients in the TCM group were significantly less likely than control patients to be rehospitalized after six months -- 20.3% versus 37.1%. Furthermore, “[p]atients in the TCM group incurred half the average total healthcare costs at six months than control patients ($3,630 vs. $6,661).” (Boutwell et al., 2009).

2) In the Care Transitions Program, a nurse or a nurse practitioner, called a Transition Coach, conducts a home visit within 72 hours of hospital discharge and telephones the patient on post discharge days 2, 7, and 14 (Boutwell et al., 2009). In a study involving 158 elderly patients, it was discovered that the “[p]atients who participated in the Care Transitions Program were significantly less likely to be rehospitalized” when compared to a control group gathered from a computerized database (Boutwell et al., 2009). The authors of the Care Transition Program have not performed a formal cost analysis;
however, they estimate a cost savings associated with the intervention or 350 patients would be $296,000 over 12 months. (Boutwell et al., 2009).

3) Evercare is a health care coordination program involving more than 300,000 dual-eligible people who with long-term or advanced illnesses. If the individual resides in the community, his or her care is coordinated by a case manager. Nurse practitioners provide care to those who reside in skilled nursing facilities. Under the Evercare Care Model, hospitalizations are reduced by 45% and emergency department visits are reduced by 50%. Evercare estimates that cost savings are $103,000 a year in hospital costs for each nurse practitioner (Boutwell et al., 2009).

Under the current fee-for-service based payment system, a hospital’s responsibility for a patient generally ends at time of discharge. A patient is provided with an office appointment with his or her treating physician and is instructed to contact this individual should any problems arise prior to the first office visit. However, under the PPACA, a hospital could be on the hook for excess 30-day readmissions. Given the fact that a large majority of readmissions involve patients who never presented to their physician post-discharge, it behooves the hospital to ensure that patients are seen by their treating physicians. This could be simply a matter of coordinating efforts with treating physicians to ensure that patients keep their first office appointment.

According to the Dartmouth Atlas Project, the likelihood of an emergency department presentation within 30 days of hospital discharge varied considerably across the United States, but was as high as 25% in some regions for certain medical conditions (Goodman, Fisher, & Chang, 2011). Furthermore, roughly 60% of all readmissions occur through the emergency department (Office of Statewide Health Planning and Development, 2010). As such, one potential method to reduce readmissions would be to station a nurse practitioner with expertise in hospice and/or palliative care in a hospital's emergency department. To the extent that a frail elderly patient is going to be admitted through the emergency department to the hospital's intensive care unit for what may very well be his or her final hospitalization, the patient’s family members should be educated as to the benefits of hospice and/palliative care and be asked to consider an alternative disposition for the patient.

No matter which model is used, when a hospital-employed nurse practitioner provides a post-discharge home visit, the patient should appreciate that the doctor-patient relationship remains with the treating physician. Furthermore, it is important for the physician of record to not abrogate his or her responsibility to the patient and assume that the hospital's nurse practitioner will manage the patient after discharge. Presumably, continuity of care would be insured in an integrated model where all of the treating physicians and nurse practitioners are employed by the same healthcare organization as opposed to the current model in which a physician is generally an independent contractor and is not regarded as the hospital's employee or agent.

Conclusion

This paper illustrated the financial implications of excess readmissions, analyzed the problem of excess admissions as well as the PPACA’s Hospital Readmissions Reduction
Program, identified patient populations at risk for readmissions, and discussed alternative cost-effective strategies to reduce readmissions.

Given the staggering financial implications of excess readmissions, the Hospital Readmissions Reduction Program represents only a tentative first step. There is much more low hanging fruit to be harvested. There is a wealth of data indicating that inadequate discharge planning which leads to excess readmissions. Did the patient understand his or her medication regimen? Was there a home health referral to ensure that the patient’s activities of daily living were being met? Did the patient understand his or her discharge instructions? What mechanism was put into place to ensure that the patient follows up with a community healthcare provider after discharge? Furthermore, why doesn’t Medicare pay for patients who are at a high risk for readmissions to receive at least an initial home visit by a midlevel practitioner after hospital discharge? Finally, we need to move beyond the “death panel” rhetoric and incentivize our healthcare providers to have meaningful, caring and ongoing end of life discussions with their patients.
References


