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ORIGINAL RESEARCH & CONTRIBUTIONS

Special Report—2012 Transfer Projects Lawrence Patient Safety Award

The Readmission Reduction Program of Kaiser Permanente Southern California—Knowledge Transfer and Performance Improvement

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Abstract

In 2011, Kaiser Permanente Northwest Region (KPNW) won the Lawrence Patient Safety Award for its innovative work in reducing hospital readmission rates. In 2012, Kaiser Permanente Southern California (KPSC) won the Transfer Projects Lawrence Safety Award for the successful implementation of the KPNW Region's "transitional care" bundle to a Region that was almost 8 times the size of KPNW. The KPSC Transition in Care Program consists of 6 KPNW bundle elements and 2 additional bundle elements added by the KPSC team. The 6 KPNW bundle elements were risk stratification, standardized discharge summary, medication reconciliation, a postdischarge phone call, timely follow-up with a primary care physician, and a special transition phone number on discharge instructions. The 2 additional bundle elements added by KPSC were palliative care consult if indicated and a complex-case conference. KPSC has implemented most of the KPNW and KPSC bundle elements during the first quarter of 2012 for our Medicare risk population at all of our 13 medical centers. Each year, KPSC discharges approximately 40,000 Medicare risk patients. After implementation of bundle elements, KPSC Medicare risk all-cause 30-day Healthcare Effectiveness Data and Information Set readmissions observed-over-expected ratio and readmission rates from December 2010 to November 2012 decreased from approximately 1.0 to 0.80 and 12.8% to 11%, respectively.

Introduction

According to a study published in the *New England Journal of Medicine,* 19.6% of Medicare patients discharged from the hospital were rehospitalized within 30 days.[1] In 2007, the Medicare Payment Advisory Commission and the Senate Finance Committee reported to Congress that almost 78% of Medicare hospital readmissions may be avoidable.[2] Subsequently, the Patient Protection and Affordable Care Act designated reduction of avoidable hospital readmissions as a target for health care cost savings.[3]

In early 2011, Kaiser Permenante Southern California (KPSC) hospital leaders were given the daunting task of trying to improve readmission rates for more than 40,000 Medicare risk discharges per year at 13 medical centers. In 2011, the Kaiser Permanente Northwest (KPNW) Region won the Lawrence Patient Safety Award for the new project category on the basis of its work in developing and implementing a transitional bundle of care that has resulted in a substantial reduction in avoidable hospital readmissions. As a result, KPNW reduced its 30-day readmission rates at a single medical center to less than 10%.

In an effort to improve the delivery of care and decrease readmission rates, KPSC assembled a multidisciplinary team that evaluated scientific literature, visited KPNW, and reviewed other evidence pertaining to readmission reduction.[4-6] The team developed a strategy that focused on the social aspects of an individual admitted to the hospital that, if unresolved, may result in an avoidable readmission to the hospital. The KPSC Transition in Care Program consists of eight bundle elements (Table 1), which are discussed in detail later in this article. The KPSC Transition in Care Program includes six bundle elements from KPNW and two additional bundle elements developed by the KPSC team. The KPNW bundle elements were risk stratification, standardized discharge summary, medication reconciliation, a postdischarge phone call, timely follow-up with a primary care physician (PCP), and a special transition phone number on discharge instructions. The two additional bundle elements added by KPSC were palliative care consult if indicated and a complex-case conference.

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KPSC implemented most of the KPNW and KPSC Transition in Care bundle elements at its 13 medical centers during the first quarter of 2012. Since that time, we have seen a reduction in readmission observed-over-expected ratio and readmission rates. Figure 1 shows KPSC Medicare all-cause 30-day Healthcare Effectiveness Data and Information Set (HEDIS) readmissions from December 2010 to November 2012. During this time, readmission observed-over-expected ratio and readmission rates, as defined by the National Committee for Quality Assurance,[7] decreased from 1.0 to 0.80 and 12.8% to 11%, respectively. In 2012, KPSC was awarded the Lawrence Patient Safety Transfer Award for knowledge transfer of a best practice from KPNW to KPSC and for substantially reducing readmission rates in a program that has approximately 40,000 Medicare risk hospital discharges per year.

The Readmission Reduction Program Of Kaiser Permanente Southern California

The readmission reduction program of KPSC was developed in 2012. The program consisted of a steering committee, project work groups, and local implementation groups. Project work groups focused on developing and refining key bundle elements on the basis of a review of the literature and of the KPNW experience. The project work groups report to the steering committee on bundle elements that have been tested and standardized. The steering committee reviews, approves, and sponsors bundle elements that are ready for implementation. Once approved and funded, the bundle elements are reviewed with the local implementation groups.

In KPSC, there are 13 unique service areas. Each service area has a local readmission reduction team that is responsible for implementation of the key bundle elements. Leaders from each service area meet monthly with regional leaders to review readmission rates and the barriers to successful implementation of key bundle elements at their respective medical centers. The bundle elements described in the next section represent the key elements used in KPNW and the 2 new elements added by KPSC. The description of each of the KPNW elements has been modified to show how the bundle element was modified for implementation at the 13 KPSC medical centers. KPSC added 2 bundle elements to allow for person-focused care that may have not have been addressed in the bundle elements from KPNW. These include a palliative care and complex-case conference element. The specific reason for adding these elements will be addressed.

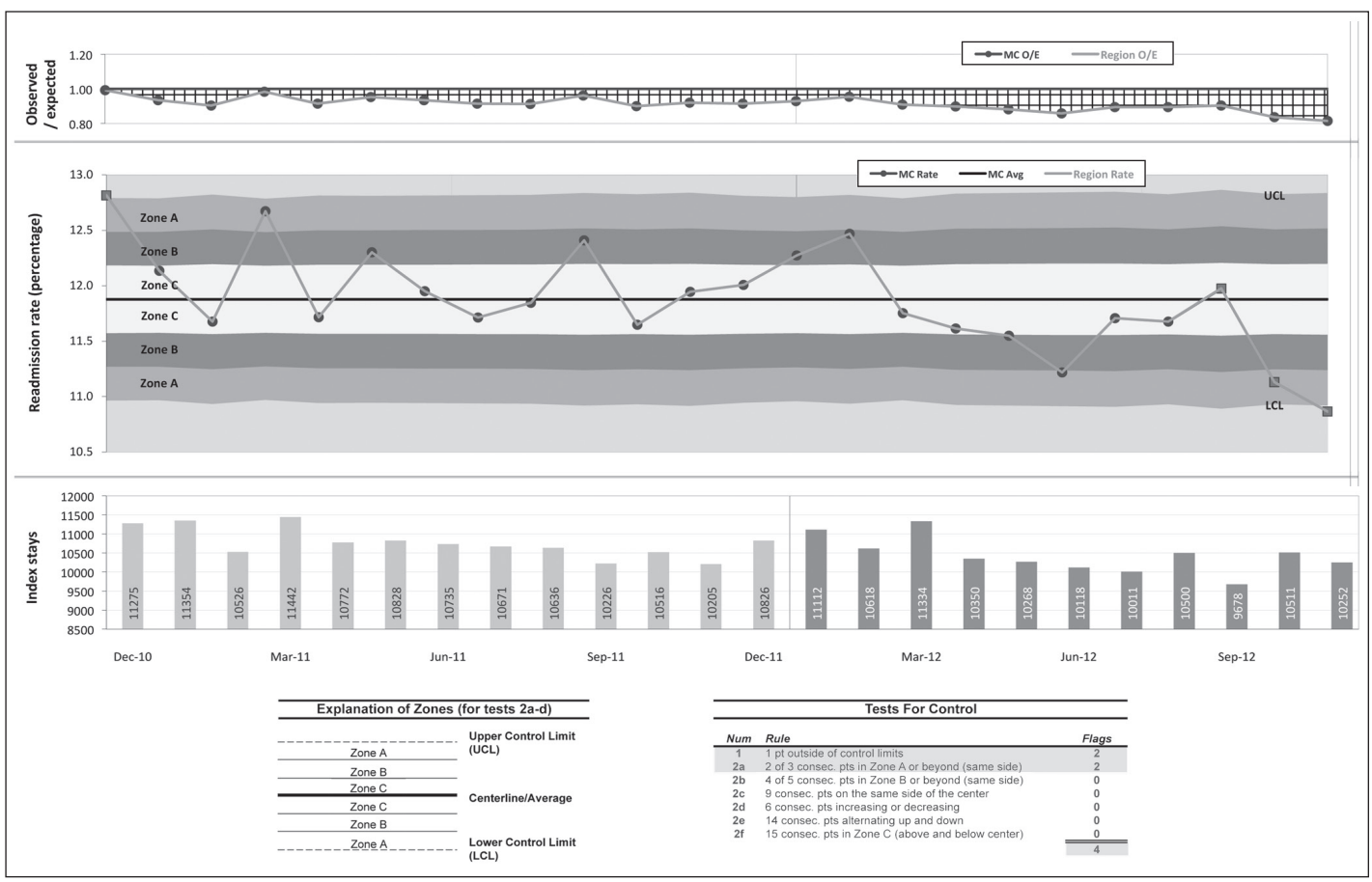

Figure 1. Kaiser Permanente Southern California Region 30-Day, All-Cause Medicare Risk HEDIS Readmissions (December 2010 to November 2012)

Avg = average; consec = consecutive; HEDIS = Healthcare Effectiveness Data and Information Set; MC = Medical Center (data not shown); O/E = observed/expected ration; pts = patients.

Kaiser Permanente Northwest Bundle Elements

Risk Stratification

The KPNW key to reducing readmission rates was developing a system that determines which patients are high risk of readmission at the time they are admitted for the index admission. KPNW used a low-, medium-, and high-risk stratification system that focused on comorbidities and social factors of the patient at the time of admission. For KPSC, we decided to develop a risk stratification program that we could standardize and integrate into our electronic medical record (EMR). In 2010, van Walraven and colleagues[8] reported that a new risk stratification tool called LACE (Length of stay, Acuity of admission, Comorbidities, and Emergency room visits in last 6 months) could be used to predict patients at risk of an unplanned 30-day readmission and death.

When we retrospectively applied the LACE strategy to more than 300,000 KPSC Health Plan discharges over a 12-month period, we found that readmission prediction curves reported by van Walraven et al[8] were almost identical to readmission curves seen in KPSC. Our analysis included the results for all discharges and for discharges that met HEDIS criteria. These excluded: 1) acute care to acute care transfers, 2) same-day admissions, 3) maternity and age younger than age 18 years, and 4) patients who have not been a member of the Health Plan for more than 12 months.

Once we validated the LACE risk stratification tool for our population, we wanted to determine if we could reasonably divide the LACE scores into 3 groups (low, medium, and high risk) to determine the patients who were at most risk of readmission. On the basis of data reported by van Walraven et al,[8] we assigned the 3 groups as follows: low risk, LACE score of 0 to 6; medium risk, LACE 7 to 10; and high risk, LACE 11 to 19. When we looked at the observed-over-expected readmission ratio as defined by the National Committee for Quality Assurance in 2012,[7] we found that the high-risk group for all 13 KPSC medical centers had an observed-over-expected ratio much greater than 1.0. The low-risk group had an observed-over-expected ratio much lower than 1.0.

We concluded that the LACE tool could be used to identify high-risk and low-risk populations. A LACE calculator was made available in our EMR. The tool automatically generates a "readmission risk" score that can easily be added to the hospital EMR in the daily note and discharge summary. As shown in Table 1, implementation of transition in care bundle elements have been assigned to low, medium, and high LACE scores. This table is used throughout KPSC to help medical centers focus their resources on patients who are high risk of readmission after discharge from the index hospital admission.

Standard Discharge Summary

Once the risk stratification tool was available to all hospitalists at the time of admission, we worked on developing a standardized discharge summary to help close the gap between the time the patient is discharged from the hospital and when seen by his/her PCP. Direct communication between the hospitalist and the PCP is important to prevent avoidable readmissions. However, a review by Kripalani et al[9] showed that discharge summaries often lacked important information needed to help the PCP understand what should have been done to prevent an avoidable readmission. This included pending test results, medications reconciled or changed in the hospital, equipment the patient had been provided at the time of hospital discharge, and referrals to specialists or chronic disease case managers.

KPSC recognized an opportunity to improve on the transition handoff from the hospitalist to the PCP via the discharge summary. Using the EMR system, the KPSC hospitalist agreed to standardize the discharge summary to include a specific section that outlines for the PCP what needs to be done during the posthospital visit. This discharge summary includes 1) a brief description of why the patient was hospitalized and the LACE score at the time of discharge, 2) tests and results pending at the time of discharge, 3) hospital findings requiring further workup, 4) durable medical equipment, 5) code status, 6) reconciled medications including a comment on why medications before admission may have been discontinued and why new medication regimens were started, and 7) follow-up with specialists or chronic-disease case managers. These discharge summaries were completed in the EMR before the patient left the hospital so the summary would be available to the PCPs immediately after discharge. To improve compliance on this important initiative, we developed a program that monitors hospitalist completion of the discharge summary before the time the patient leaves the hospital in addition to making sure the discharge summary includes the seven key components of the discharge summary as just outlined.

Table 1. Transitional care bundle and interventions based on LACE risk stratification score

	Risk (LACE score)		
Bundle element	**Low (0-6)**	**Medium (7-10)**	**High (11-19)**
KPNW bundle elements			
Risk stratification	X	X	X
Standardized discharge summary	X	X	X
Medication reconciliation	X	X	X
Transition hotline	X	X	X
Posthospital visit with physician		≤ 14 days	≤ 7 days
Phone call ≤ 72 hours after discharge			X
KPSC new bundle elements			
Palliative care consult (if indicated)			LACE ≥ 15
Complex-case conference			X

KPNW = Kaiser Permanente Northwest; KPSC = Kaiser Permanente Southern California; LACE = Length of stay, Acuity of admission, Comorbidities, and Emergency room visits in last 6 months; X = indication to implement bundle element.

Medication Reconciliation Across the Continuum of Care

Medication reconciliation is an extremely important intervention to reduce avoidable readmissions.[10] Even in the age of EMRs, it still has been a challenge to

update and reconcile medication lists. Successful development of a program that has accurate medication lists requires coordination of all physicians and patients across the health care continuum. Because the patient's medication list can be changed every time s/he accesses care, physicians need to be diligent to reconcile medications each time they come into contact with a patient. Schnipper et al[11] reported that pharmacist medication review, patient counseling, and telephone follow-up were associated with a lower rate of preventable adverse drug events (ADEs) 30 days after hospital discharge. In addition, one-fourth of patients in the study had an ADE after hospital discharge, and half of the ADEs were preventable or ameliorable. The authors and others concluded that medication discrepancies before and after discharge were common targets of intervention.[11,12]

Our current strategy is to increase awareness to staff and patients of the importance of both quantitative and qualitative medication reconciliation. The focus of quantitative medication reconciliation is on making sure the medications the patients are prescribed are actually the medications they are taking. This includes eliminating duplicate medications and expired medications while adding new medications. The focus of qualitative medication reconciliation is on making sure the patients understand the potential adverse events associated with their medications and what to do if they have an adverse drug reaction. To improve medication reconciliation across the continuum of care, we developed a program that monitors physician medication reconciliation during admission to the hospital, at the time of discharge from the hospital, and when the patient visits his/her PCP after discharge from the hospital. After starting this monitoring process and giving feedback to physicians on their outcomes, we have seen a decrease in the percentage of times that medications are not reconciled during key physician-patient encounters.

Posthospital Discharge Hotline

Dharmarajan et al[13] recently reported that approximately one-third of 30-day readmissions occur in less than 7 days after hospital discharge. Patients are extremely vulnerable during this period. The causes are many but may include social issues such as inability to afford discharge medications, failure in treatment, noncompliance to treatment plans, and side effects of medications.

Patients discharged from the hospital may call for emergency medical response or have families take them to the emergency room if they have difficulty accessing their PCP. To allow direct access to hospitalists, we piloted a 24-hour transitional care phone call program with the KP San Diego Medical Center. Patients are given a unique transitional phone number at the time of discharge and are advised to use the number if they have a question related to their recent hospitalization. When patients call the transitional phone number, they are connected to an advice nurse who is made aware that the patient was recently discharged from the hospital. The advice nurse will try to answer the patient's questions but, if needed, the advice nurse has access to the hospitalist on call. The hospitalist will then talk with the patient to determine the need for emergency room evaluation or bridge therapy until the patient can be seen by the PCP. The program has recently been implemented in all KPSC medical centers. The program has been well received by patients and the hospitalist. Preliminary results from the KP San Diego Medical Center show that readmission rates are lower for high-risk patients who participate in the posthospital discharge hotline program compared to those who do not.

Posthospital Discharge Phone Call

Follow-up phone calls after hospital discharge have been shown to reduce readmission rates.[14] To further reduce the risk of an avoidable readmission in the first week after discharge, we developed a program to call all high-risk patients within 72 hours after hospital discharge. These calls are designed to identify risk factors for return to the hospital by focusing on education and review of the recent hospitalization. Physicians and nurses need to understand that patients are often medicated, stressed, and fatigued after being in the hospital. They may not remember any of the discharge instructions. The goal of the posthospital phone call is to provide reliable high-quality clinical phone support for our patients after discharge from the hospital. Registered nurses make these phone calls and focus on identifying early treatment failures, medication adverse reactions, social issues, treatment plan compliance, and reconciling all medications. To optimize use of KPSC resources and to provide the right care for our patients, the regional team recommends a posthospital phone call for all patients at high risk of readmission (as identified by using the LACE score) within 72 hours of discharge.

Posthospital Discharge Visit with a Primary Care Physician Less than Seven Days after Discharge

Hernandez et al[15] reported a correlation between time of posthospital visit with a PCP and risk of 30-day readmission. Our experience confirmed this finding. In 2008, we found that 30-day readmission rates were 31% for patients who did not see a PCP after hospital discharge vs 10% for patients who saw a PCP after discharge. Future work will be centered on looking at readmission rates for patients with chronic disease who follow-up with a specialist at least 1 week after hospital discharge. In addition, the hospitalist and PCP are working together to develop a standardized postdischarge clinic note that is aligned with the key components of the standardized discharge summary already described.

Kaiser Permanente Southern California New Bundle Elements

Palliative Care Consultation for High-Risk Patients

It has been reported that 68.9% of Medicare patients who were discharged with a medical condition were readmitted or died within a year of discharge from the index admission.[1] End-of-life-care planning and consultation with a physician offers an important opportunity to improve the care we provide patients at risk of readmission or death. These consults give patients and their families the opportunity to discuss the detailed information about the patient's illness and prognosis while they may be receiving aggressive care. Because many patients and their families might choose palliative care or hospice after having an end-of-life discussion, there is a potential that this compassionate care intervention may help to reduce future admissions to the hospital[16] and future cost of care.[17]

Many patients and their families have difficulty with end-of-life decisions when confronted with complex medical problems in the hospital setting. Sometimes their goals and expectations seem to conflict with their treatment plans. Without appropriate consultation, aggressive treatment plans may result in expensive tests and interventions with little or no benefit. Inpatient palliative care consultation for end-of-life-care planning allows patients to receive maximal benefit from person-focused care without wasting precious medical resources. For these reasons, we asked hospitalists to consider an inpatient palliative care consultation for all patients who have an extremely high risk of readmission or death (LACE score ≥ 15).

… two key reasons for multiple readmissions: complex underlying medical conditions and complex social issues.

Complex-Disease Case Conference

Many of the patients who are readmitted to the hospital have multiple hospital admissions over a one-year period. When these cases are reviewed, we find two key reasons for multiple readmissions: complex underlying medical conditions and complex social issues. For example, patients with multiple chronic conditions such as chronic kidney disease and congestive heart failure are often managed by more than one physician and may receive conflicting information. A patient with a low ejection fraction and congestive heart failure may progress to acute kidney injury after aggressive diuretic management. When this occurs, the management becomes complicated because the renal team may recommend hydration whereas the cardiology team may recommend continued diuretic therapy.

As a result of these observations, KPSC developed a complex-disease case conference program that has been implemented at all 13 service areas. The multidisciplinary team includes physicians, nurses, and staff from the hospital and outpatient setting. Key team members include PCP, case managers, social workers, hospital or clinic administrative leaders, and patients and their families. Conferences occur monthly. PCPs can attend by teleconference if they are unable to attend in person. During the conferences, high-risk cases (LACE score ≥ 11) that have multiple hospital admissions within the last 6 months are reviewed. Before the conference, a case manager uses the Institute for Healthcare Improvement readmissions[18] worksheet to identify social issues that may have resulted in a readmission. The results obtained using this tool are reviewed and shared with the multidisciplinary team. Preliminary results suggest that high-frequency readmissions can be reduced after physicians, nurses and patients implement treatment plans outlined at the end of the complex-disease case conference. Data from 3 of our Medical Centers showed that hospital admissions in the 6 months before the complex-case conference and 6 months after the complex-case conference decreased by 68%.

Discussion

We have learned both from the literature[19] and through surveys of our readmitted patients that readmissions are often related to social issues that we did not identify or resolve during the index admission. The key social issues identified include inability to afford medications, inability to make posthospital visits, and impaired functional ability (eg, inability to feed or bathe oneself). The key to reducing readmission rates in this population is to identify key social issues early and to develop a patient-focused plan to reduce the risk of readmission before the patient is discharged from the hospital.

Inpatient hospital discharge is a complex process. The discharge planning process should begin at admission and continue throughout a patient's hospital stay. On discharge, a nurse presents and explains written instructions to the patient or family. Discharge instructions provide critical information for patients to manage their own care when they leave the hospital. Studies have shown that "not comprehending discharge instructions" may result in noncompliance to treatment and that many patients do not fully understand or recall discharge instructions.[20]

At the time of discharge, patients may experience physical and emotional discomfort. They may be eager to leave and less interested in the instructions.[21] The bundle elements discussed in this article are designed to address the social issues that may result in an avoidable readmission to the hospital. It appears that a bundle of elements will be needed to successfully reduce readmission rates in the Medicare risk contract population. In a large service area such as KPSC, the challenge will be to ensure that each element of the bundle is implemented to perfection while ensuring that we also remember that each discharge may have unique social issues not identified during the transition of care from the hospital to home environment.

Conclusion

In this article, we reviewed bundle elements developed by KPNW and KPSC to reduce avoidable readmissions to the hospital. These elements when combined appear to be related to reduction in readmission rates for both a Region with a single Medical Center (KPNW) and a Region with multiple Medical Centers (KPSC). These initiatives are focused on social aspects of care that, if unaddressed during the index admission, may result in an avoidable readmission to the hospital. The findings from both KPNW and KPSC bolster support for us to move from a disease-focused effort to reduce readmission rates to a person-focused approach. A person-focused approach should involve implementation of a patient-centered transition-of-care program that engages the patient with all members of the health care team. For example, one of our future goals will be to ensure that once we identify patterns of social reasons for readmission to the hospital, we implement programs to resolve these issues before the patient is discharged from the hospital on the index admission. Efforts moving forward should also include the use of quality-improvement methods such as statistical process control programs to identify interventions and quickly spread best practices.[22]

Developing new programs aimed at reducing hospital readmissions can be a daunting task. However, with collaboration and teamwork across the continuum, this task is achievable and will be rewarding. As a result, we may be able to reduce avoidable days in the hospital and make a substantial impact on reducing avoidable costs associated with the care of patients with chronic disease. The key to reducing readmissions and avoidable hospital days may be as easy as doing the right thing for our patients. This means being person focused and understanding the unique

social issues of each high-risk individual admitted to the hospital.

To be successful in reducing health care costs, we will need to focus on both mechanism and context of health care. The mechanism is the production system or key bundle elements outlined in this article. The context is the social aspect of these bundle elements that may result in a readmission even if all the bundle elements are implemented to perfection. During the next few years we will be asked to do more with less. The key to reducing health care costs is to change our paradigm of care to one where the person or patient is our focus. Providing person-focused care will help to prevent and treat disease in a timely manner. This, in turn, will result in reducing avoidable costly care that is currently provided in hospitals and emergency rooms. Our journey to developing programs to help reduce health care costs will involve teamwork and innovation. The main innovation will be removing barriers to success through collaboration and communication among physicians and patients. Our ultimate goal should be to always take care of the patient, not just the disease. ❖

Disclosure Statement

The author(s) have no conflicts of interest to disclose.

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References

1. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. N Engl J Med 2009 Apr 2;360(14):1418-28. DOI: http://dx.doi.org/10.1056/NEJMsa0803563 Erratum in: N Engl J Med. 2011 Apr 21;364(16):1582.
2. Chapter 5: Payment policy for inpatient readmissions. In: Report to the congress: promoting greater efficiency in Medicare [monograph on the Internet]. Washington, DC: The Medicare Payment Advisory Commission; 2007 [cited 2012 Sep 9]. Available from: www.medpac.gov/chapters/jun07_ch05.pdf.
3. The Patient Protection and Affordable Care Act of 2010. Public Law 111-148, 111th Congress, 124 Stat 119, HR 3590, enacted 2010 Mar 23.
4. Goldfield NI, McCullough EC, Hughes JS. Identifying potentially preventable readmissions. Health Care Financ Rev 2008 Fall;30(1):75-91.
5. Hansen LO, Young RS, Hinami K, Leung A, Williams MV. Interventions to reduce 30-day rehospitalization: a systemic review. Ann Intern Med 2011 Oct 18;155(8):520-8.
6. Jack BW, Chetty VK, Anthony D, et al. A reengineered hospital discharge program to decrease rehospitalization: a randomized trial. Ann Intern Med 2009 Feb 3;150(3):178-87.
7. 2012 insights for improvement: reducing readmissions: measuring health plan performance [monograph on the Internet]. Washington, DC: National Committee for Quality Assurance; 2012 [cited 2013 Jan 21]. p 12-3. Available from: www.ncqa.org/Portals/0/Publications/2012%20BI_NCQA%20ReAdMi%20_Pub.pdf.
8. van Walraven C, Dhalla IA, Bell C, et al. Derivation and validation of an index to predict early death or unplanned readmission after discharge from hospital to the community. CMAJ 2010 Apr 6;182(6):551-7. DOI: http://dx.doi.org/10.1503/cmaj.091117
9. Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. JAMA 2007 Feb 28;297(8):831-41. DOI: http://dx.doi.org/10.1001/jama.297.8.831
10. Gleason KM, McDaniel MR, Feinglass J, Baker DW, Linquist L, Liss D, Noskin GA. Results of the Medications at Transitions and Clinical Handoffs (MATCH) study: an analysis of medication reconciliation errors and risk factors at hospital admission. J Gen Intern Med 2010 May;25(5):441-7. DOI: http://dx.doi.org/10.1007/s11606-010-1256-6
11. Schnipper JL, Kirwin JL, Cotugno MC, et al. Role of pharmacist counseling in preventing adverse drug events after hospitalization. Arch Intern Med 2006 Mar 13;166(5):565-71. DOI: http://dx.doi.org/10.1001/archinte.166.5.565
12. Forster AJ, Clark HD, Menard A, et al. Adverse events among medical patients after discharge from hospital. CMAJ 2004 Feb 3;170(3):345-9.
13. Dharmarajan K, Hsieh AF, Lin Z, et al. Diagnoses and timing of 30-day readmissions after hospitalization for heart failure, acute myocardial infarction, or pneumonia. JAMA 2013 Jan 23;309(4):355-63. DOI: http://dx.doi.org/10.1001/jama.2012.216476
14. Dudas V, Bookwalter T, Kerr KM, Pantilat SZ. The impact of follow-up telephone calls to patients after hospitalization. Am J Med 2001 Dec 21;111(9B):26S-30S. DOI: http://dx.doi.org/10.1016/S0002-9343(01)00966-4
15. Hernandez AF, Greiner MA, Fonarow GC, et al. Relationship between early physician follow-up and 30-day readmission among Medicare beneficiaries hospitalized for heart failure. JAMA 2010 May 5;303(17):1716-22. DOI: http://dx.doi.org/10.1001/jama.2010.533
16. Quill TE, Arnold R, Back AL. Discussing treatment preferences with patients who want "everything". Ann Intern Med 2009 Sep 1;151(5):345-9
17. Nelson C, Chand P, Sortais J, Oloimooja J, Rembert G. Inpatient palliative care consults and the probability of hospital readmission. Perm J 2011 Spring;15(2):48-51. DOI: http://dx.doi.org/10.7812/TPP/10-142
18. Readmissions diagnostic worksheet. Cambridge, Massachusetts: Institute for Healthcare Improvement; modified 2011 Oct 7 [cited 2012 Jan 21]. Available from: www.ihi.org/knowledge/Pages/Tools/ReadmissionsDiagnosticWorksheet.aspx.
19. Townsend J, Piper M, Frank AO, Dyer S, North WR, Meade TW. Reduction in hospital readmission stay of elderly patients by a community based hospital discharge scheme: a randomized controlled trial. BMJ 1988 Aug 20-27;297(6647):544-7.
20. Hwang SW, Tram CQ, Knarr N. The effect of illustrations on patient comprehension of medication instruction labels. BMC Fam Pract 2005 Jun 16;6(1):26. DOI: http://dx.doi.org/10.1186/1471-2296-6-26
21. Clarke C, Friedman SM, Shi K, Arenovich T, Monzon J, Culligan C. Emergency department discharge instructions comprehension and compliance study. CJEM 2005 Jan;7(1):5-11.
22. Williams MV. A requirement to reduce readmissions: take care of the patient, not just the disease. JAMA 2013 Jan 23;309(4):394-6. DOI: http://dx.doi.org/10.1001/jama.2012.233964

What You Will Find

Here, at whatever hour you come, you will find light and help and human kindness.

— Inscribed on the lamp outside Albert Schweitzer's hospital at Lambaréré.
Albert Schweitzer, OM, 1875-1965, German theologian, musician, philosopher, physician, and medical missionary in Africa