How Adequate Is Care Following Hospital Discharge?

Moore C, McGinn T, Halm E. Tying up loose ends: discharging patients with unresolved medical issues. Arch Intern Med 2007;167:1305–11.

Study Overview

Objective. To determine how often patients are discharged from the hospital with recommendations for outpatient follow-up for unresolved medical problems as well as how often such follow-up is completed.

Design. Retrospective cohort study.

Setting and participants. Medical records were reviewed for all patients who were discharged from the geriatrics or medicine service of a large teaching hospital between June 2002 and December 2003 and who had an outpatient visit at the affiliated medicine or geriatrics practices within 2 months of hospital discharge. The hospital used a paper record system; however, discharge physicians had the option of completing electronic discharge summaries available to outpatient physicians.

Main outcome measure. Completion of recommended outpatient workup within 6 months of hospital discharge.

Main results. 191 of 693 (28%) eligible hospital discharges contained documentation of an unresolved medical issue and a recommendation for outpatient follow-up. Among 240 recommendations, 48% were for diagnostic procedures, with the remainder involving either subspecialty referrals (35%) or laboratory tests (17%). Recommended diagnostic procedures included repeat computed tomographic scans to follow-up on a documented abnormality (35%), cardiac stress tests for symptomatic patients (28%), and endoscopic examinations for gastrointestinal bleeding (24%). The laboratory tests most commonly recommended were for monitoring anticoagulation levels in patients receiving warfarin therapy (60%) and serum electrolytes in patients with a previously abnormal result (18%). Over one third (36%) of recommended follow-up care was not completed. Recommended laboratory tests were the most likely to be completed, and diagnostic procedures were the least likely to be completed, with 34% and 29% of outstanding procedures representing radiologic and cardiovascular studies, respectively. Although discharge summaries were available to outpatient physicians for nearly all cases (95%), recommendations for outpatient workups were only documented in 46%. In multivariate analyses, increased time to initial outpatient follow-up and longer hospitalizations were both inversely associated with receipt of recommended follow-up care, while documentation of recommended follow-up in the discharge summary was positively associated with receipt of recommended care.

Conclusion. Specific outpatient follow-up is recommended for a high proportion of patients discharged from the hospital; however, this care is not received in over one third of patients. Documentation of recommended care in the discharge summary is a strong predictor of receiving such care in the outpatient setting.

Commentary

Transitions in care are increasingly identified as a high-risk locus for medical errors and receipt of suboptimal care [1]. The transition from inpatient to outpatient care is a particularly high-risk time. Nearly one fifth of patients experience an adverse event following hospital discharge [2]. Perhaps not surprisingly, the majority of primary care physicians report that they were unaware of test results pending at the time of hospital discharge [3].

The study by Moore and colleagues adds important information regarding how patient care is transferred from the inpatient to outpatient setting, and the results provide insight as to how to focus quality improvement strategies to address this transition. A significant proportion of all inpatient stays necessitated outpatient follow-up that involved either further testing or specialty referral. Unfortunately, despite the fact that discharge summaries were available in nearly all cases, over one third of recommendations were not completed. The strongest predictor of whether recommended care was received was documentation of the recommendation in the discharge summary, which only occurred in less than half of cases. This finding highlights the importance of effective communication among clinicians during transitions in care as well as the need for developing systems that guarantee such communication takes place.

Despite the importance of the study findings, there are notable limitations. The study population was limited to patients who were cared for in a general medical service at an academic hospital and who received outpatient

follow-up within 2 months of discharge. Additional studies are needed to better characterize whether these findings are consistent across other hospital services, such as surgery or obstetrics, and whether nonacademic institutions exhibit similar patterns. In addition, longer follow-up will be necessary to determine the impact of missed follow-up care on health outcomes.

Applications for Clinical Practice

This study highlights the importance of developing systems to successfully transition care from the inpatient to the outpatient setting and emphasizes the need for effective communication between clinicians practicing in these 2 settings to ensure proper delivery of care.

—Review by Thomas D. Sequist, MD, MPH

References

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3. Roy CL, Poon EG, Karson AS, et al. Patient safety concerns arising from test results that return after hospital discharge. Ann Intern Med 2004;143:121–8.

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