

Using Outpatient Prescription Claims to Evaluate Medication Adherence In An Acute Myocardial Infarction Population

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Abstract

We have previously shown that using computerized alerts and academic detailing results in significant improvement in physician adherence to secondary prevention guidelines for acute myocardial infarction. However, information about patient medication adherence after hospital discharge was not previously available. Using electronic outpatient prescription claims data, medication adherence for a coronary artery disease population is described.

INTRODUCTION

We have previously reported a system developed to improve adherence to evidence-based guidelines for secondary prevention medications following acute myocardial infarction (AMI).¹ The system, called Automated Guideline Monitor (AGM), uses clinical alerts and academic detailing to promote inpatient prescribing of aspirin, angiotensin converting enzyme-inhibitors (ACE), beta-blockers, and statins unless contraindications are present.

In 2004, Barnes-Jewish Hospital (BJH) entered into an agreement with RxHub LLC making it possible to electronically acquire in real time outpatient prescription claims for patients admitted to the hospital. RxHub provides medication claims data for patients served by three pharmacy benefit managers (PBMs)—AdvancePCS, Express Scripts and Medco Health Solutions. An estimated 75% percent of all U.S. pharmacy benefits for commercial insurance carriers are served by these PBMs.

Using AGM data in combination with RxHub claims data, we investigated medication adherence of patients readmitted after a previous admission for AMI.

METHODS

Historical data from AGM and RxHub were collected for patients hospitalized at BJH. The data from AGM described AMI secondary prevention medications at discharge or valid contraindications for these medications. RxHub provided the past 12 months' outpatient prescription medication usage for the patient's current health plan PBM. AGM patients

readmitted after February 16, 2004 and having an RxHub report were included in the analysis. The patient was considered to be adherent if the time between the last fill date and admission date was less than the scheduled supply plus 20 percent. Aspirin was excluded from this analysis since claims data are rarely available for non-prescription drugs.

RESULTS

Of 491 AMI patients readmitted between February 16, 2004 and January 14, 2005, RxHub claims were available for 87 (18%) patients. Table 1 lists the adherence at readmission for the patients discharged on the medication. Patient adherence was 72% for Beta Blockers, 70% for ACEI, and 57% for Statins.

Table 1: Medication adherence at readmission

Drug	Discharged with Rx after AMI	Adherent at readmission
ACEI	56	39 (70%)
Beta Blocker	76	55 (72%)
Statin	56	32 (57%)

CONCLUSIONS

Integration of inpatient discharge medications and outpatient pharmacy claims at one academic hospital revealed room for improvement in outpatient adherence to secondary prevention medications for myocardial infarction. Claims data were useful in assessing adherence to medication regimens but limited by the relatively small proportion of patients having data available. Further investigation is needed to determine whether claims data are incomplete due to medication samples, non-US pharmaceuticals purchases or other reasons.

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References

1. Noiro LA, Blickensderfer A, Christensen E, et al. Implementation of an automated guideline monitor for secondary prevention of acute myocardial infarction. Proc AMIA Symp. 2002;;562-6.