

Exploration of Differences between Medication Dispense Data and Pharmacy Claim Data in Estimating Proportion of Days Covered (PDC) for Statins

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Background

Pharmacy claims data are the gold standard for assessing adherence, but most healthcare systems do not have access to these data in a way that supports point-of-care management. Medication dispense data (MDD) identify medications filled at pharmacies, regardless of claims status. As MDD become increasingly available in electronic health records (EHR), it is important to understand how they compare to claims data for assessing adherence, which we explore in this study.

Methods

We completed a retrospective analysis from 1/1/2017–12/31/2017 on claims and MDD for primary care patients with dyslipidemia who were ≥ 35 years, enrolled in a managed care program in an open healthcare system, and had evidence of statin medication dispenses in the EHR. The proportion of days covered (PDC) was calculated for each patient using each data source. Patients were divided into three groups: equal (claims PDC=MDD PDC), higher MDD PDC, and higher claims PDC. A logistic regression model was applied to estimate how demographics and the number of statin dispensed from claims were associated with each group.

Results

Among 1,035 patients (average age, 58 years), 64%, 56%, and 79% were white, male, and non-Hispanic, respectively.

The equal group (mean PDC, 0.8 [SD=0.3]) comprised 566 (55%) patients, with 9,505 and 8,833 dispenses recorded in MDD and claims data, respectively. Patients with more dispenses (31-40) were more likely to have the same PDC from both claims and MDD (OR=1.7; 95%CI: 1.1-2.4) compared with reference level (1-10 dispenses).

There were 279 (27%) patients in the higher-MDD PDC group, with significantly fewer dispenses compared with the equal group (5,562 MDD and 4,078 claims dispenses). PDC mean value was 0.8 (SD=0.2) for MDD and 0.6 (SD=0.2) for claims. Patients with low dispenses (1-10) were more likely to have higher PDC from MDD compared with higher number of dispenses (31-40) (OR=2.4; 95%CI: 1.4-4.0).

Conclusions

A surprising 27% of patients had higher PDC derived from MDD than claims data. This difference could not be explained by demographic factors, but is significantly associated with a lower number of dispenses. Additional studies are needed to understand the differences and quality of MDD PDC measure.