Using Computerized Physician Order Entry to Decrease Insurance Denials

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Abstract
Insurance denials delay payments for tests to medical institutions and can decrease patient satisfaction due to unexpected billing. Our institution utilizes an ambulatory electronic health record (EHR) for routine clinical care that includes computerized physician order entry (CPOE). At our institution as well as others, considerable cost is associated with inappropriate diagnostic coding of needed procedures and tests by the physician. We developed a series of CPOE alerts and order sets targeting specific tests to address this problem. As a result, preliminary data shows that insurance denials fell by up to 37% for the targeted tests.

Background Information
Insurance denials are a major problem for the health care industry. Resolving denials often requires a large amount of personnel effort since it involves chart reviews, discussions with the ordering physicians and resubmission. Patients whose tests are denied sometimes receive bills from both the insurance company and the medical facility. These bills add to confusion about the tests and can decrease patient satisfaction.

At our institution, an analysis of insurance denials was performed on radiology and gastroenterology tests. The results showed that up to 52% of the denials were occurring because certain tests were ordered for conditions not included in a list of allowable diagnoses. In 2000, EpicCare was implemented as the ambulatory electronic health record (EHR). From 2001 to 2005, most departments used the EHR for physician order entry with automated order transmittal. However, a legacy system was being utilized to manually transmit orders between our EHR and some clinical departments. In addition, as in common in many institutions our EHR did not interface directly to our billing system. Finally, in 2002, our institution also developed a database to track insurance denials from inception to resolution.

Methodology and Intervention
An analysis of denial database data was performed in late 2003 on denials from the first half of the year. Using this data, order sets were created in our EHR to facilitate order entry. These comprehensive order sets were developed with departmental experts and contained a list of most commonly used ICD9 diagnoses for the tests. When a targeted order was placed, an alert prompted the provider to optionally display the linked order set. Prior to order transmittal, an order validation check was performed to ensure that the tests were placed for valid clinical indications. Orders linked to “valid” diagnoses were accepted whereas an alert was displayed immediately displayed along with suggestions for resolution for those orders placed with inappropriate diagnoses.

All data regarding the orders placed, alerts received by physicians and their utilization of orders sets is captured in our EHR and was extracted for this IRB approved study.

Results and Conclusions
For the targeted tests, insurance denials decreased by at least one standard deviation from before the intervention. Certain MRI/MRA denials decreased by 37%. Colonoscopy denials decreased by 29%. The number of tests ordered during this period did not change. Our intervention successfully decreased insurance denials by assisting users in finding valid diagnoses and providing immediate feedback on invalid orders. We anticipate additional improvement as additional test interventions are implemented and the system is used for inpatient medical care. Furthermore, we plan to study and report physician behavior regarding the frequency of alerts and their acceptance of order sets.

References