ABSTRACT

Improving the Accuracy of Narrative Patient Notes

The Role of Documentation Specialists in Supporting Physician Use of EMRs

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Background

The HITECH Act invests $20 billion to fund development of a nationwide health information technology infrastructure and encourage the electronic use and exchange of health information. The Act includes financial incentives to assist hospitals and physicians in transitioning from paper-based charts to electronic medical records (EMRs). Over 1.2 billion patient encounters[1] are documented by physicians each year. The majority of these notes are dictated by physicians and then transcribed or edited by medical documentation specialists (a.k.a. medical transcriptionists). Many EMRs seek to replace this popular documentation method with direct physician entry of patient information.

Objective

This study was conducted to examine the role of medical documentation specialists in improving the accuracy of patient notes. We examined how often dictation errors are found by documentation specialists while transcribing and editing dictation files, and identified the most common types of errors.

Methods

Sixty two medical documentation specialists recruited from seven different organizations throughout the US participated in a one day study on May 21, 2009. They processed 2,051 physician dictations, of which 39% were hospital inpatient notes such as history and physicals, consults, discharge summaries and radiology reports, and 61% were outpatient notes such as new patient exams, progress notes and consults. Sixty percent of dictations were transcribed directly from voice files while 40% were processed through speech recognition software and then edited. Errors were defined according to standard industry definitions.[2] Critical errors are those which could compromise patient safety or continuity of care. Major errors are those which could compromise the integrity of a note without risk to patient care. Study participants were instructed to tally each occurrence of a critical or major error and to determine whether the error was due to physician misstatement ("dictation error") or to a mistranslation by speech recognition software ("speech recognition error"). Minor errors such as punctuation and grammar errors were not included in the study.

Results

Dictation errors: Medical documentation specialists identified 689 dictation errors in 2,051 dictations, an average of 0.33 errors per dictation. Critical errors accounted for one-third and major errors for two-thirds of all dictation errors. The most common critical errors were wrong patient, wrong drug name or dosage, and left/right discrepancy; the most common major error was use of made up words or acronyms.

Speech recognition errors: The 823 dictations initially processed through speech recognition software contained 1,215 speech recognition errors before editing, or an average of 1.48 errors per dictation. Critical errors accounted for 43% and major errors for 57% of all speech recognition errors. The most common critical errors were wrong patient, wrong drug name or dosage, and wrong lab value; the most common major errors were use of made up words or acronyms and gender mismatch.

Discussion

This study demonstrates that the accuracy of medical records is improved when medical documentation specialists verify information dictated by physicians. Documentation specialists edit reports as part of their job, correcting obvious errors and flagging others for physician clarification. Dictation is the preferred method of documentation for most physicians because it aids clinical decision making,[3] makes efficient use of physician time, and produces narrative notes ideal for sharing with other clinicians.[4] This study showed that error rates were 22% for dictation and 52% for dictation with speech recognition translation before transcription and editing. Direct data entry by clinicians (typing into EMR templates and free text fields) has been shown to have high error rates as well. Weir et al. found 84% of all notes had at least one documentation error, with an average of 7.8 errors per inpatient chart, and concluded physicians made more errors than other clinicians even after controlling for number of notes.[5] By contrast, final reports produced by documentation specialists have been shown to consistently achieve accuracy rates higher than 99%.[6]

Conclusion

Electronic medical records have the potential to improve health care delivery by enabling patient information to be easily shared and accessed by physicians. However, physician entry of patient information without editing, whether dictated or typed, can result in errors that compromise the usefulness of EMR notes. Medical documentation specialists enable physicians to concentrate on clinical activities, by assisting with documentation tasks in the same way nurses assist with patient care. They serve as a second set of "eyes and ears" for physicians, and help to ensure the accuracy of clinical information in both paper charts and electronic medical records.

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