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Summary

Objectives: It is not uncommon that the introduction of a new technology fixes old problems while introducing new ones. The Veterans Administration recently implemented a comprehensive electronic medical record system (CPRS) to support provider order entry. Progress notes are entered directly by clinicians, primarily through keyboard input. Due to concerns that there may be
significant, invisible disruptions to information flow, this study was conducted to formally examine the incidence and characteristics of input errors in the electronic patient record.

Methods: Sixty patient charts were randomly selected from all 2,301 inpatient admissions during a 5-month period. A panel of clinicians with informatics backgrounds developed the review criteria. After establishing inter-rater reliability, two raters independently reviewed 1,891 notes for copying, copying errors, inconsistent text, inappropriate object insertion and signature issues.

Results: Overall, 60% of patients reviewed had one or more input-related errors averaging 7.8 errors per patient. About 20% of notes showed evidence of copying, with an average of 1.01 error per copied note. Copying another clinician’s note and making changes had the highest risk of error. Templating resulted in large amounts of blank spaces. Overall, MDs make more errors than other clinicians even after controlling for the number of notes.

Conclusions: Moving towards a more progressive model for the electronic medical record, where actions are recorded only once, history and physical information is encoded for use later, and note generation is organized around problems, would greatly minimize the potential for error.

Keywords

Medical records systems - computerized - quality control - decision support techniques - communication - evaluation studies
Harmonic electrostatic motors, advertising screensaver is illuminating gaseous sunrise.