

Advancing the Measurement of Quality of Care Using Electronic Medical Records

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Abstract

Electronic medical records (EMRs) provide a tremendous opportunity to advance the measurement of the quality of care. This opportunity, though, remains largely unproven.

EMRs have an advantage over the current main sources of health services data, the large billing and prescription databases in the level of detail, depth, breadth and linkages of information. Well developed EMRs have direct, time stamped linkages among important, discrete data fields, for example diagnosis and prescriptions, prescriptions and laboratory results, and demographics and health maintenance advice. These technical linkages allow for stronger inference regarding the evaluation of appropriateness of care. The diagnostic standard to which current practice is compared involves a separate complex clinical process of application of the best current evidence to the specific patient at hand.

The COMPETE project is computerizing community-based independent family practices in the Hamilton-Wentworth region of Ontario in order to measure health services and outcomes data and to provide computerized decision support. We have developed an explicit programmable tool (Appropriateness of Prescribing Evaluation Questionnaire or APEQ) to evaluate the appropriateness of prescribing. This has been through a series of reliability and validity appraisals which will be presented. Explicitly evidence-based programmable tools for the evaluation of prescribing could significantly advance the rigour and the scope of application of quality of care evaluation.