Electronic Health Record Systems: The Authors Reply

We fully agree with the interpretation of our data (Mar 2012) offered by Clement McDonald and William Tierney, whose work in computer medicine we’ve long admired.

Jonas Green suggests a longitudinal study comparing physicians’ test ordering before and after they acquired an electronic health record (EHR) system. Unfortunately, the data required for such a study are not available for a representative sample of practices.

Similarly, Kenneth Mandl and coauthors suggest potentially interesting analyses, but the data required to perform them are not available. However, informative these data would be in delineating the mechanisms linking health information technology to increased testing, they would not change our basic findings. Mandl and colleagues also argue that a more nuanced analysis focused on model physicians using optimal computer systems would unearth evidence of technology’s cost-effectiveness. In effect, they’d prefer an analysis of efficacy—that is, the best-case scenario—rather than our study, which examined effectiveness—the real-world impact of the technology. Evaluation of the effectiveness of psychoanalysis requires more than a review of Freud’s outcomes.

Lynne Gordon urges a wider view of EHRs’ benefits. We agree that test ordering, with its associated costs, is just one of many important dimensions on which to judge health information technology. Although our study focused on test ordering, several analyses of nationwide data have found little correlation between technology use and quality measures; none has demonstrated improvement in patient outcomes. Although, as clinicians, we value the improved data availability possible through technology, the increased clinician time spent on data entry and large-scale privacy breaches are also part of the picture.

Convincing data from a few institutions with noncommercial, clinician-led systems indicate technology’s potential. But our study and others suggest that widely used commercial, off-the-shelf products don’t achieve similar results.

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