Electronic health records can measure patient-centered care

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Although electronic health records (EHR) are primarily used to store patient clinical data, the non-clinical data they collect may be used to measure patient-centeredness of primary care practices, finds a new study in Health Services Research. In addition, two of the process of care measures collected via EHRs, volume of between clinician e-messages and frequency of in-person patient visits, were associated with better patient health outcomes.

"We were looking for ways to leverage the amount of operational information in a practice's EHR and find measurements of the process of care," said Ming Tai-Seale, Ph.D., MPH, a senior staff scientist at the Palo Alto Medical Foundation Research Institute in Palo Alto, CA, and

lead author on the study. "We were pleasantly surprised to see we could do that," she said.

The study collected data on more than 15,000 people with diabetes and more than 49,500 patients with high blood pressure who were patients at a large group practice in Northern California during 2010. The clinical data collected included blood glucose and blood lipid levels and blood pressure readings. Then they examined the relationship between that clinical information and various nonclinical types of EHR information, including the volume of secure electronic communication (e-messages) between physicians and patients, e-messages about patients within the practice, and the time to the third-next-available appointment, a measure of how easy it is to schedule non-urgent visits.

The volume of e-messages, the number of days to the third-next-available appointment, and the volume of internal communications were found to be reliable measures of the processes of care within a patient-centered practice. In addition, better blood lipid management and blood pressure control was associated with frequent e-messaging between doctors and patients with diabetes. Practices with more in-person visits had better blood pressure control in patients with high blood pressure.

[These non-clinical] data are the type often evaluated by those looking at how well a large practice operates, but had not necessarily been linked to a clinical outcome, Tai-Seale noted. "The reason we also looked at process-of-care measures—emailing, e-messages with staff, and continuity of care—is because these have not been used to study their linkages with patient health outcomes before," she said.

"It seems they are trying to solve a problem kind of backwards," said Jason Mitchell, M.D., director of the American Academy of Family Physicians Center for Health IT in Leawood, KS. The researchers are looking at operational activities and trying to correlate them with clinical

outcomes, he commented. "Yes, there is an association, but there isn't any evidence of a cause and effect." There may be other variables that can change this association, he explained.

Many health policy organizations are trying to measure the value of [health](#) care-and not just the cost; but, not every area of medicine has clinical outcomes as clear cut as blood glucose and [blood pressure](#) levels, commented Mitchell. Most organizations are frustrated that they are not able to get such direct information and are seeking proxies they can measure. "We really need to be looking at those outcomes and use EHRs to get that directly instead of [using] proxies," he noted.

  More information: Tai-Seale M, Wilson CJ, Panattoni L, et al. (2013). "Leveraging electronic health records to develop measurements for processes of care." *Health Services Research*.

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