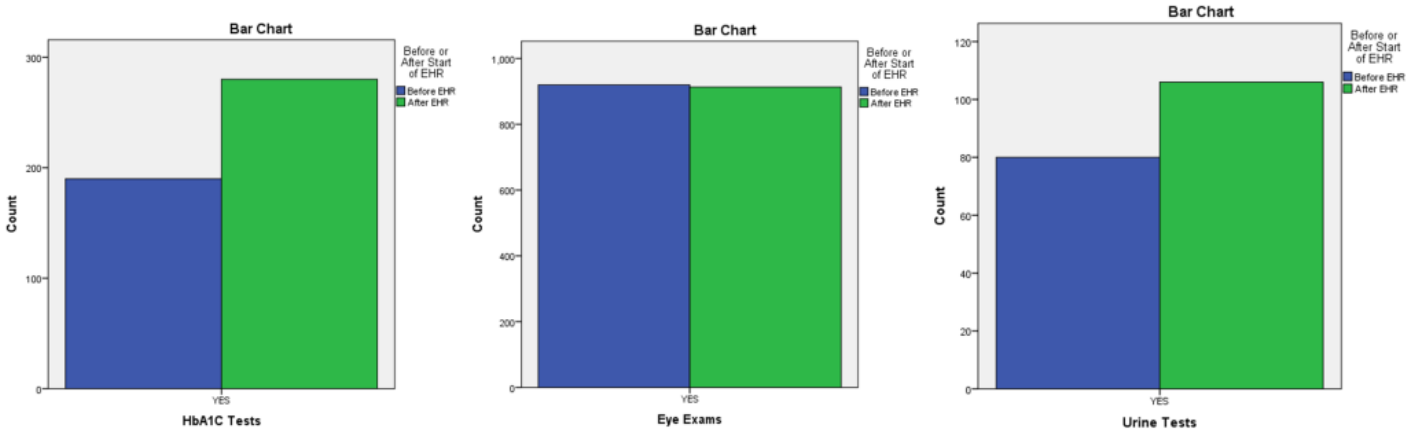
Mixed effects of electronic health records on low income adults with diabetes

Since the passage of major acts by Congress, the federal government has offered large financial incentives for healthcare providers practicing in office clinics to increase their use of electronic health records (EHR) when caring for patients. Although it's long been recognized that the office ordering of nationally-advocated tests for patients with diabetes using paper medical records has been inadequate, it remains unclear whether the increased use of EHR programs may influence the ordering of such tests in most clinics to help patients better manage their diabetes and avoid diabetes-related complications.

These 2011-2013 analyses examined how before and after-EHR changes in three major diabetes care tests (Hemoglobin A1C tests, protein urine tests and eye exams) occurred after the implementation of the same EHR for 291Medicaid adults who received all of their office-based care in a single mid-Michigan clinic setting over a 24-month period. After the authors obtained administrative approval for the study, they received state government claims data concerning a total of 2,727 office visits during the two year period from this sample of patients.

Sample adults 'personal characteristic and Medicaid claims data were linked with healthcare providers' clinic EHR start data. Overall pre-post EHR order rates were compared to national ordering guidelines, and a series of analytical models were used to compare pre and post-EHR differences.



After EHR implementation, the overall order rates of per patient Hemoglobin A1C orders increased significantly and protein urine test rates also increased somewhat. Although the overall post-EHR order rates of eye exams appeared fairly stable compared to pre-EHR numbers, the odds of an individual sample adult receiving an eye exam to check for diabetes-related eye complications actually decreased significantly.

These results demonstrate a mixed influence from one of the growing numbers of office visit EHR programs on diabetes care for Medicaid-covered adults patterns compared to earlier smaller projects. Although the authors are unable to precisely explain why these changes occurred, the authors have suggested that these results indicate that: a) the EHR program reminders shown to providers served to increase their order rates for Hemoglobin A1C diabetes tests that were due to be ordered and b) helped providers avoid ordering duplicate eye exam tests or those eye exams that were not yet due following national ordering guidelines.

These mixed results generally resemble some of the authors' results from another federally-funded project. Hopefully, these findings will provide Medicaid and healthcare officials with a more realistic indication of how the many modern EHRs may, or may not, influence diabetes care ordering patterns for lower-income office patients.

Publication

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