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Title

Electronically-delivered push notifications improve patient adherence to preventive care: a cohort study

Priority 1 (Research Category)

Population health and epidemiology

Presenters

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Abstract

CONTEXT: Despite the importance of screening, estimates indicate that 12-18% of women have not had recent cervical cancer screening and 25-50% are not up to date with current guidelines; more than 50% of cancers are in women who are not up to date in screening. Many patients do not receive regular preventive care, which often occurs in the context of an annual preventive visit. Patients with diabetes need more frequent follow-ups to prevent complications of the condition.

OBJECTIVE: Evaluate the effectiveness of an automated system for outreach to patients in need of annual preventive examinations, cervical cancer screening, and diabetes monitoring labs.

STUDY DESIGN: We created a population health algorithm and outreach system which was designed to send email and smartphone notifications to patients overdue for primary and secondary preventive services. We compared completion of preventive exams and screenings in the intervention group, compared to a retrospectively-created matched cohort.

SETTING/POPULATION: Primary care patients of a national membership-based primary care delivery system, operating in several metropolitan locations in the US.

INTERVENTION: Email and smartphone notifications within an application that is linked to our EHR.

MAIN OUTCOME MEASURES: Percentage of patients who had a follow up visit or completed lab orders within the follow up period.

RESULTS: For annual preventive visits, the intervention group had 6.6% more visits (95%CI: 6.0-7.2) than the control group. For cervical cancer screening, the intervention group had 1.9% (95%CI: 0.8%-3.1%) more visits. Lab action orders for diabetes showed the largest increases. The intervention group had 11.3% come in for labs, compared to only 3.2% for the control group (8.0% difference, 95%CI: 5.7-10.4).

CONCLUSIONS: A population health outreach system that used reminders for prevention resulted in patients completing appointments for necessary medical services. Such a system, when deployed more

broadly could help close care gaps and improve health for people that are asymptomatic but are due for preventive screenings.