NAPCRG 52nd Annual Meeting — Abstracts of Completed Research 2024.

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Title

Electronically-delivered PHQ9s increase engagement in patients with depression

Priority 1 (Research Category)

Population health and epidemiology

Presenters

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Abstract

CONTEXT: Since many patients with Major Depressive Disorder (MDD) have anhedonia and can be reluctant to engage in treatment, many practices struggle to engage patients with depression in regular follow up and care. The Patient Health Questionnaire-9 (PHQ9) can help measure depression response and remission, and is the main quality measure used to assess treatment success.

OBJECTIVE: Evaluate the effectiveness of a PHQ9 outreach to patients via a mobile app to increase clinical engagement and improve depression care quality.

STUDY DESIGN: We created a population health algorithm and outreach system which was designed to send email and smartphone notifications to patients who have not filled out a recent PHQ9. We tested this outreach in one geographic region, allowing other regions to act as a comparison group.

SETTING/POPULATION: Primary care patients of a national membership-based primary care delivery system, operating in several metropolitan locations in the US. Eligible patients had a diagnosis of MDD, but had not filled out a PHQ9 in the past 2 weeks to 6 months. (Patients with severe depression should fill out PHQ9s more frequently.) The intervention geography was Washington, DC and other metropolitan areas in the Southeastern US. The comparison regions were major metropolitan areas in the North East and West Coast.

INTERVENTION: Email and smartphone notifications to fill out a PHQ9 within an application that is linked to our EHR. PHQ9 results were sent to the patient's PCP, who could create a follow-up visit reminder, or take other action.

MAIN OUTCOME MEASURES: Percentage of patients who booked a visit for mental health. Percentage of patients who filled out a PHQ9.

RESULTS: In the intervention region 46.1% of patients filled out the PHQ9s, compared to 2.6% in the comparison regions (43.6% difference, 95% CI: 42.3-44.9). In the first 6 weeks of the intervention, 7.2% of patients in the intervention geographies booked a visit, compared to 5.2% in the comparison geographies, (95% CI: 1.1-2.8). When stratified by baseline depression severity, only patients with moderate depression had a significant difference in visit rate (3.52% difference, $p<0.01$).

CONCLUSIONS: A population health outreach system that used reminders for PHQ9s resulted in patients booking appointments to treat their mental health condition. Such a system, when deployed more broadly could help close care gaps and improve mental health.