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Title

The Cost-Effectiveness of a Comprehensive Tobacco Treatment Intervention in Real-World Primary Care Clinics

Priority 1 (Research Category)

Smoking Cessation

Presenters

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Abstract

CONTEXT: Primary care offers a unique opportunity to deliver chronic-illness care management to patients who smoke. This real-world pragmatic trial implemented electronic health record (EHR) prompts to facilitate proactive, repeated outreach and smoking cessation treatment to all adult patients who smoked cigarettes. Certified tobacco treatment specialists sent annual invitations to engage with cessation support to patients listed in the clinic's smoking registry, offered aid in smoking cessation within a week after a primary care clinic visit to patients who neither addressed nor endorsed a willingness to quit, and provided ongoing support to patients who were making a quit attempt or attempting to reduce their smoking. OBJECTIVE: This research examines the relative health care costs and benefits of a smoking cessation intervention that involves EHR-guided outreach and intervention by certified tobacco treatment specialists. STUDY DESIGN: The intervention was implemented in 3 steps at 6 primary care clinics located in the Midwest using a stepped-wedge design. ANALYSIS: Pre-post analysis compared intervention costs with benefits of increased treatment engagement, quit attempts, and successful smoking cessation, as well as acute health care use, including emergency department visits and hospitalization. Incremental cost-effectiveness was calculated based on staff time and resources used (including medications) relative to weighted individual pathways of pre-post smoking rates and health care costs for patients who smoked. RESULTS: A total of 10,683 adults were on the smoking registry at the 6 participating clinics from January 2017 to February 2020. Cessation treatment rates increased from 12.9% pre-implementation to 24.0% post-implementation. Smoking cessation rates increased from 2.1% pre-implementation to 10.5% post-implementation. Total intervention cost was \$11.28 per patient on the smoking registry per month post-implementation. Acute health care costs decreased from pre- to post-implementation by an average \$42.65 per patient on the smoking registry per month. The incremental cost-effectiveness ratio was \$1,853 per person who quit smoking. CONCLUSIONS: Implementation of a comprehensive and proactive EHR-enabled smoking cessation outreach and treatment program with certified tobacco treatment specialists is cost-effective in real-world primary care clinics. Reductions in acute health care cost could offset the smoking cessation intervention costs.