Children's Hospital of Philadelphia PolicyLab

An Office-initiated Multilevel Intervention for Tobacco Smoke Exposure: A Randomized Trial

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Provider adherence to best practice guidelines (ask, advise, refer [AAR]) for addressing child tobacco smoke exposure (TSE) motivates parents to reduce TSE. However, high-risk, vulnerable populations of smokers may require more intensive treatment. We hypothesized that a pragmatic, multilevel treatment model including AAR coupled with individualized, telephone-based behavioral counseling promoting child TSE reduction would demonstrate greater child TSE reduction than would standard AAR. In this 2-arm randomized controlled trial, we trained pediatric providers in systems serving low-income communities to improve AAR adherence by using decision aid prompts embedded in routine electronic health record assessments. Providers faxed referrals to the study and received ongoing AAR adherence feedback. Referred participants were eligible if they were daily smokers, >17 years old, and spoke English. Participants were randomly assigned to telephone-based behavioral counseling (AAR and counseling) or nutrition education (AAR and attention control). Participants completed prerandomization and 3-month follow-up assessments. Of providers, >80% (n = 334) adhered to AAR procedures and faxed 2949 referrals. Participants (n = 327) were 83% women, 83% African American, and 79% low income (below poverty level). Intention-to-treat logistic regression showed robust, positive treatment effects: more parents in AAR and counseling than in AAR and attention control eliminated all sources of TSE (45.8% vs 29.9%; odds ratio 1.99 [95% confidence interval 1.44-2.74]) and quit smoking (28.2% vs 8.2%; odds ratio 3.78 [95% confidence interval 1.51-9.52]). The results indicate that the integration of clinic- and individual-level smoking interventions produces improved TSE and cessation outcomes relative to standalone clinic AAR intervention. Moreover, this study was among the first in which researchers demonstrated success in embedding AAR decision aids into electronic health records and seamlessly facilitated TSE intervention into routine clinic practice.

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