Children's Hospital of Philadelphia PolicyLab

Kids Safe and Smokefree (KiSS) Multilevel Intervention to Reduce Child Tobacco Smoke Exposure: Long-term Results of a Randomized Controlled Trial

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Pediatricians following clinical practice guidelines for tobacco intervention (“Ask, Advise, and Refer” [AAR]) can motivate parents to reduce child tobacco smoke exposure (TSE). However, brief clinic interventions are unable to provide the more intensive, evidence-based behavioral treatments that facilitate the knowledge, skills, and confidence that parents need to both reduce child TSE and quit smoking. We hypothesized that a multilevel treatment model integrating pediatric clinic-level AAR with individual-level, telephone counseling would promote greater long-term (12-month) child TSE reduction and parent smoking cessation than clinic-level AAR alone. Pediatricians were trained to implement AAR with parents during clinic visits and reminded via prompts embedded in electronic health records. Following AAR, parents were randomized to intervention (AAR + counseling) or nutrition education attention control (AAR + control). Child TSE and parent quit status were bioverified. Participants (n = 327) were 83% female, 83% African American, and 79% below the poverty level. Child TSE (urine cotinine) declined significantly in both conditions from baseline to 12 months (p = 0.001), with no between-group differences. The intervention had a statistically significant effect on 12-month bioverified quit status (p = 0.029): those in the intervention group were 2.47 times more likely to quit smoking than those in the control. Child age was negatively associated with 12-month log-cotinine (p = 0.01), whereas nicotine dependence was positively associated with 12-month log-cotinine levels (p = 0.001) and negatively associated with bioverified quit status (p = 0.006). Pediatrician advice alone may be sufficient to increase parent protections of children from TSE. Integrating clinic-level intervention with more intensive individual-level smoking intervention is necessary to promote parent cessation.

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