Children's Hospital of Philadelphia
PolicyLab

Parents Quit IT: Tailored Messaging and Decision Supports to Help Parents Quit Smoking in Pediatric Settings

Statement of Problem

Secondhand smoke exposure affects more than 40 percent of youth in the U.S., greatly increasing their risk of disease morbidity and mortality. Children are often exposed to secondhand smoke by their caregivers, so helping parents quit smoking is imperative to protecting children and families from the harms of tobacco.

For some families, bringing their children to the pediatrician is their only point of contact with the health care system. Therefore, pediatricians are uniquely positioned to intervene with intergenerational family services to better address those families' unmet needs in order to improve the health of the child. Unfortunately, appropriate treatments are delivered to parent smokers less than three percent of the time.

Pediatric providers routinely delivering tobacco control to parents would provide a major intergenerational family service in the U.S., as tobacco use annually leads to 480,000 preventable deaths, including almost one-third of all cancer deaths, and $300 billion in tobacco-attributable costs. However, there is a lack of understanding of effective pediatrician-parent communication regarding tobacco cessation treatment and possibilities for interventions. A multidisciplinary research approach combining decision science and clinical informatics could maximize the effectiveness of such interventions while simplifying, standardizing and systematizing parental treatment for tobacco use in pediatric clinical practice.

Description

Building upon preliminary work with the support of a multidisciplinary mentoring team, we're launching a project to create and evaluate a novel intervention to provide caregiver-focused tobacco cessation services in pediatric settings. To aid pediatric providers in delivering tobacco treatment to caregivers, this study will create a clinical decision support (CDS) tool embedded within the electronic health record (EHR). Grounded in behavioral economics and informatics design methods, this research aims to accomplish several goals.

In the first phase of this work, we developed carefully framed messages using a theory-based approach in order to optimize initiation of tobacco cessation treatment for parent smokers who accompany their children for outpatient pediatric care. Using a discrete choice experiment, 180 parent smokers recruited from four diverse primary care practices within Children's Hospital of Philadelphia rated the relative importance of 26 different messages to encourage the start of cessation treatment.

Messages varied based on: who was featured (child, parent, or family); whether the message was gain- or loss-framed—gain-framed messages emphasize potential gains for an individual when performing a health behavior and loss-framed messages emphasize potential losses related to not performing a key behavior; and outcome (general health, cancer, respiratory illnesses, child becoming a smoker, or financial impact).

We found that parent smokers highly prioritized cessation messages emphasizing the impact of quitting smoking on their child. Messages focusing on respiratory illness, cancer or general health outcomes consistently ranked highest, while messages focused on the financial benefits of quitting ranked lowest. Whether the message was gain- versus loss-framed did not meaningfully influence rankings. These findings provide a guide for talking with parents that may help make a difference in conversations that are very common in clinical care.

Next Steps

In the next phase of this work, we aim to develop a CDS system to effectively prompt clinicians to consistently deliver these framed messages for tobacco cessation treatment. Health systems would hopefully be able to feasibly incorporate evidence-based messaging to clinicians and parents into clinical practice using a CDS tool.

Finally, using the messages and CDS system developed in the first two sections of the study, we plan to conduct a pilot trial of an evidence-based intervention to improve parent tobacco cessation rates in preparation for a large-scale pragmatic trial. We hope that our messaging-based intervention will be feasible for clinicians and will increase cessation treatment initiation among caregivers.

The results from this study will build toward the development of a testable, theory-driven intervention that will open the door for future R01 grants supporting the testing of CDS interventions that address parent smoking in pediatric settings. These research efforts and associated training are aimed at the development of smoking cessation interventions, ultimately targeting vulnerable populations and that health systems could scale for broad population impact moving forward.

This project page was last updated in June 2020.

Suggested Citation

Children's Hospital of Philadelphia, PolicyLab. *Parents Quit IT: Tailored Messaging and Decision Supports to Help Parents Quit Smoking in Pediatric Settings* [Online]. Available at: http://www.policylab.chop.edu [Accessed: plug in date accessed here].

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Funders of Project

National Cancer Institute of the National Institutes of Health

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Related Tools & Publications

- Clinical Decision Support Tool for Parental Tobacco Treatment in Primary Care
  Article
  Apr 2016

- Tobacco Control and Treatment for the Pediatric Clinician: Practice, Policy, and Research Updates
  Article
  Mar 2017

- Kids Safe and Smokefree (KiSS) Multilevel Intervention to Reduce Child Tobacco Smoke Exposure: Long-term Results of a Randomized Controlled Trial
  Article
  Jun 2018

- An Office-initiated Multilevel Intervention for Tobacco Smoke Exposure: A Randomized Trial
  Article
  Jan 2018

- Parent Preferences for Pediatric Clinician Messaging to Promote Smoking Cessation Treatment
  Article
  Jun 2020

- Pediatrician Delivered Smoking Cessation Messages for Parents: A Latent Class Approach to Behavioral Phenotyping
  Article
  Jul 2020

- Electronic Health Record-embedded, Behavioral Science-informed System for Smoking Cessation for the Parents of Pediatric Patients
  Article
  Mar 2022

- A Clinical Decision Support System for Motivational Messaging and Tobacco Cessation Treatment for Parents: Pilot Evaluation of Use and Acceptance
  Article
  May 2023

Related Projects

Helping Parents Quit Smoking in Pediatric Settings
Family & Community Health