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Asking the Right Questions: Screening for Second-Hand Tobacco Exposure in Pediatric Primary Care.

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Introduction

- Cigarette smoking is the leading cause of preventable death in the United States, and increases the risk of heart disease, stroke, and lung cancer.
- Second-hand smoke (SHS) exposure increases the risk of many acute and chronic childhood diseases including respiratory infections, asthma, cancer, perinatal mortality, delayed growth and development, and SIDS.
- Disparities in tobacco use based on race, ethnicity, educational level, and socioeconomic status increase the burden of smoking associated morbidity and mortality in these groups. African American children and adults are more likely to be exposed to SHS than any other racial or ethnic group
- Exposure to smoking in the household is one of the most important factors leading to the initiation of smoking in children and adolescents.
- SHS exposure has decreased significantly since the 1900's; however, recent studies show that over 40% of children between the ages of 3-11 and 29% of middle and high schoolers in the US are exposed to SHS.
- Screening for SHS exposure in children is recommended during well child visits and aims at identifying the risk, providing an opportunity to educate the family on the harmful effects of tobacco, and offering resources to help quit smoking or reduce the child's exposure. Smoking cessation interventions and support have been shown to be effective in initiation of smoking cessation efforts, successful quitting, and prevention of relapse.

Aims

1. Optimize the screening process for tobacco exposure in children by:
 - a. Asking most effective screening question and
 - b. Implementing universal screening in all health care visits.
2. prevent SHS exposure by offering education and smoking cessation resources for families who are interested in smoking cessation.

Methods

We used a PDSA model for QI improvement. The following interventions were implemented across the organization that included 15 offices across the Omaha metropolitan area, rural Nebraska, and eastern Iowa:

1. Based on the recommendations of the AAP, we changed the screening question from: Is your child exposed to second-hand smoke? To: Does/has parent or any caretaker smoke(d) even a puff in the last 30 days?
2. Added a question: Is the parent/caregiver interested in resources on quitting smoking?
3. Implemented a universal screening of all patients during well visits.
4. Collected data including answers to the new questions from the EMR for 3 periods: one year before the change (pre-implementation period), one year after the change (post implementation period), and an additional year following the change (maintenance data).



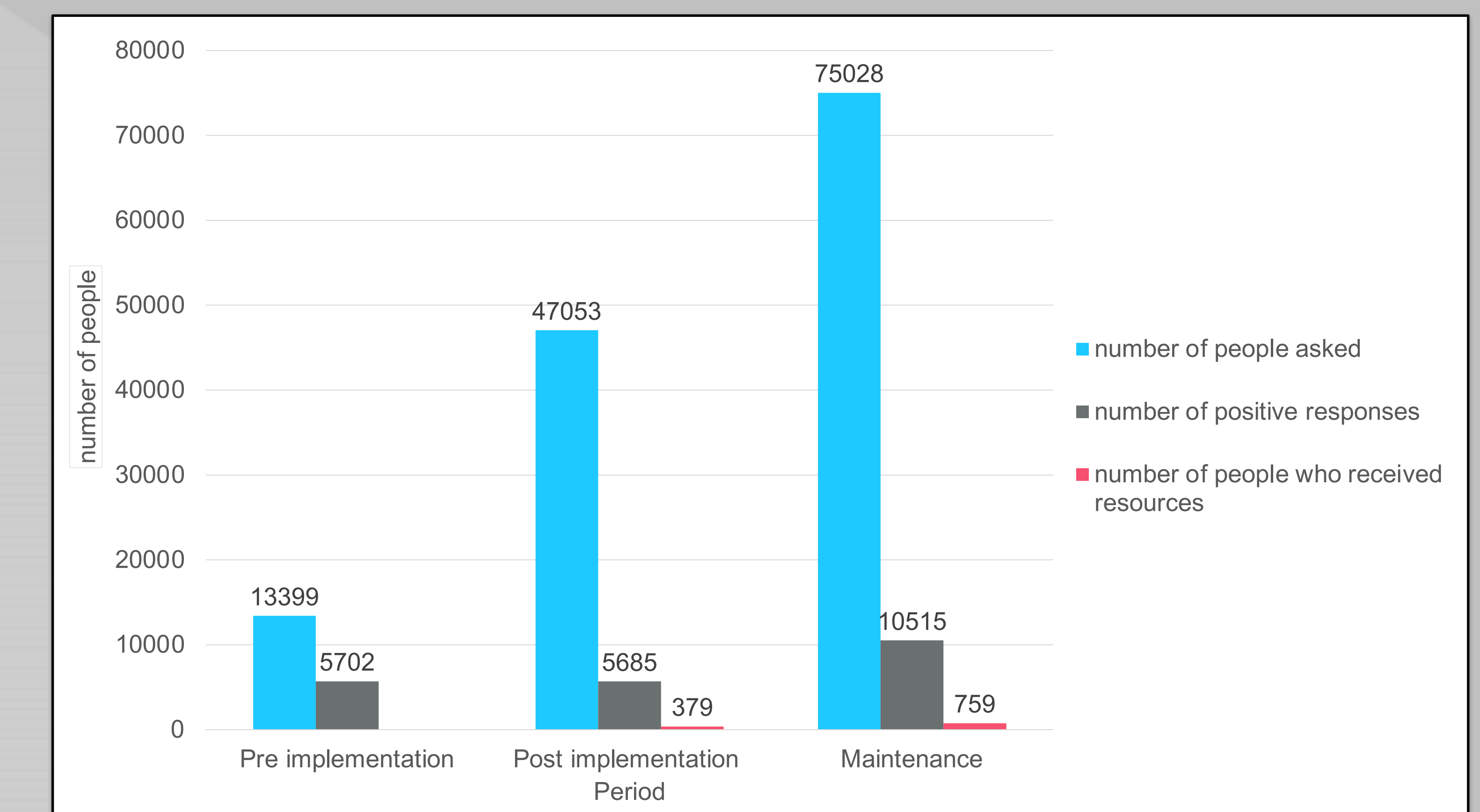
Discussion and Future Directions

- The number of parents/caregivers with a documented answer to the question increased significantly after the intervention and continued to increase in the maintenance phase. However, the number of parents who gave positive answers (yes for smoking) remained roughly the same from pre to the post implementation period, resulting in a decrease in the proportion of positive answers in the total sample.
- The higher positive response rates in the pre-implementation period could be the result of a small sample size or selection bias in asking the question.
- More than 1,100 families requested resources for smoking cessation and were provided with these resources. This result, although modest, can be considered a success.
- Continued follow up and analysis of the positive responses including relationship to demographic data may allow better understanding of the effectiveness and impact of SHS screening in the primary care setting.
- A follow up study to determine the cessation success rates would be helpful in measuring the real impact of this project.

Results

	Number of responses	Number of positive responses	% of positive responses	% of all patients asked
Pre implementation	13399	5702	42.5%	14.08%
Post implementation	47053	5685	12.08%	46.92%
Maintenance	75028	10515	14.01%	72.00%

Above: The results from the three periods of the project are represented in both percentages and whole numbers.
Below: The number of responses from the three periods are represented in the bar chart.



Acknowledgements

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