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Screening for Second Hand Smoke Exposure in Primary Care

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Purpose: According to the American Cancer Society (ACS) environmental tobacco encompasses 7,000 chemicals of which 70 are cancer causing agents. The ACS reports any degree of exposure is a health threat and is hazardous to individuals who come in contact with secondhand smoke (ACS, 2015). According to the most recent Surgeon General's Report, in the last 50 years, 2.5 million Americans died due to Second Hand Smoke Exposure (SHSE), and an estimated 5.6 billion dollars are lost in productivity yearly due to second hand smoke alone. When SHSE is combined with primary smoking there is a supplementary economic impact of 300 billion annually (US Department of Health and Human Services [HHS], 2014). Despite these findings, research by Bunik et al. (2013), acknowledges that regardless of recognition for widespread counseling by clinicians to limit SHSE, screening and education are not performed routinely. In addition, the amount of research and initiatives that focus on screening and counseling to decrease the frequency of occurrence is inadequate (Bunik et al., 2013). According to Fischer and Kraemer (2015), there is progress with the incidence of exposure, however, a large amount of the worldwide population remains involuntarily affected by SHSE. The World Health Organization (WHO) (2015), recommends minimizing exposure by monitoring tobacco use and prevention policies, protecting individuals from SHSE, offering quit programs, educating on the hazards of tobacco, enforcing bans on tobacco advertising, promotion and sponsorship, as well as raising taxes on tobacco. WHO (2015), estimates 20% of the world's population is protected by at least one of these recommendations, and 40% of the world's population is protected by two or more recommendations (WHO, 2015).

Methods: This project was a quality improvement initiative that included a chart review, pre and post screening questionnaires, and interventions to create behavior change for clinical providers within the primary care clinic. We completed a retrospective chart review to determine if an adequate screening question was present in the electronic medical record, and providers completed a pre-initiative questionnaire to determine baseline knowledge and screening practices. Interventions were then implemented to influence clinical behavior change and included education, visual reminders, flag reminders, and a monetary incentive of \$50. Providers screened patients utilizing a questionnaire over a six-week period and the difference in screening between pre and post initiative was evaluated at the conclusion.

Results: The question within the electronic medical record did not address SHSE adequately and pre-intervention provider screening was low despite 100% provider acknowledgment of negative outcomes associated with exposure. Provider screening and education increased significantly from 14% pre-initiative to 99% post initiative. Fifty three percent of providers found that flag reminders influenced their behavior change the most. Seventy five percent of 240 patients reported current SHSE or previous exposure, however 83% reported never being screened or counseled by a clinical provider. Ninety five percent of patients found education and counseling informative and 89% considered behavior change to minimize their exposure.

Conclusion: Quality initiatives with interventions, such as education, visual reminders, monetary incentives and flag reminders within EMRs, may facilitate provider behavior modification and practice change that improves screening and education for SHSE by clinicians in healthcare settings. Future implications surrounding this healthcare phenomenon center on technology, research, legislation, national guidelines, and clinical practice. Future research should center on initiatives for new and sustained behavior change by providers and patients with regard to incentives and reminders. Research should address the impact of behavior change to health and economic outcomes within organizations and healthcare overall. The United States Preventive Services Task Force (USPSTF, 2013), recommends annual lung cancer screenings with low dose CT scans for adults 55-80 with a 30 pack per year smoking

history, and who currently smoke or quit within the last 15 years. The USPSTF should also adopt these guidelines for nonsmokers who are affected by SHSE. In addition, clinicians should identify patients with prolonged SHSE as candidates for lung cancer screenings based on the USPSTF guidelines for smokers. To look further, organizations and Information Technology Departments must collaborate to incorporate efficient screening questions with flag reminders within EMRs for primary care settings and other healthcare settings. The inclusion of screenings as a national quality measure for all patients, with government incentives, to improve provider compliance, should also be considered by The Agency for Healthcare Research and Quality, The Centers for Medicare Services, and The U.S. Preventive Task Force Services. Lastly, the development of new and comprehensive legislation to limit public exposure by state, local, and national officials is warranted.

Title:

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Abstract Summary:

Participants within this session will learn the importance of screening and educating on secondhand smoke exposure for all patients within healthcare settings. In addition, the proposal of future implications for clinicians, researchers, and legislators that facilitates screening and education and minimizing exposure will be analyzed.

Content Outline:

1. Body I. Introduction

A. Secondhand smoke exposure (SHS), lack of screening and education, impacts health and economic outcomes for all populations.

B. Electronic medical record additional screening question inefficiency and proposed clinical behavior change may positively influence this healthcare phenomenon.

A. Main Point: There is no safe level of secondhand smoke exposure (CDC, 2017).

Supporting Point 1: There are 7,000 chemicals in SHS and 70 are known carcinogens (American Cancer Society, 2015).

a. In the last 50 years 2.5 million Americans died due to SHS (US Department of Health and Human Services, 2014).

b. Research supports association of SHS to ischemic heart disease stroke and COPD (Fischer & Kraemer, 2015).

B. Main Point: There is progress with the incidence of exposure, however, a significant worldwide population remains involuntarily exposed to SHS (Fischer & Kraemer, 2015).

Supporting Point 1. The World Health Organization (2015), developed recommendations to minimize exposure.

a. WHO recommends monitoring tobacco use and prevention policies, protecting individuals from SHS, offering quit programs, educating on the hazards of tobacco, enforcing bans on tobacco advertising, promotion and sponsorship, as well as raising taxes on tobacco product.

b. WHO (2015), estimates approximately 20% of the world's

population is protected by at least one of these recommendations, and 40% of the world's population is protected by two or more recommendations (World Health Organization [WHO], 2015).

C. Main Point: Efforts to stymie exposure with education and screening is limited.

Supporting Point 1. Despite recognition of the need for widespread counseling by healthcare clinicians to limit SHS exposure, screening and education are not performed routinely (Bunik, 2014).

a. The amount of research and initiatives that focus on screening and counseling to decrease the frequency of occurrence is inadequate (Bunik, 2014).

b. The addition of a screening question regarding SHS exposure within an EMR led to nurses screening and educating 91% of adult admissions and 86% of pediatric admissions over one year (Kruse & Rigotti, 2014).

D. Main Point: The economic component associated with SHS exposure is significant, and clinicians should consider the expense associated with this healthcare phenomenon.

Supporting Point 1. An estimated 5.6 billion dollars is lost in productivity yearly due to secondhand smoke.

a. When second hand smoke exposure is combined with primary smoking there is a supplementary economic impact of 300 billion annually.

b. Medical care is approximately 130 billion of this cost and 150 billion is related to lost productivity (U. S. Department of Health and Human Services, 2014).

III Conclusion

A. The lack of screening and education for secondhand smoke exposure in healthcare settings for all patients impacts health and economic outcomes, and warrants practice change.

B. Development and dissemination of SHS exposure research centered on clinical behavior change, and EMR efficacy is essential to actions within clinical settings that improves screening

and education for all populations.

C. Medical professionals, nursing professionals, researchers, legislators, and information technology professionals must work collaboratively to lead the charge for change.

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