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Clinical Guideline Based Interventions to Increase Smoking Cessation Success in Primary Care

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Executive Summary

Guideline Based Interventions to Increase Smoking Cessation Success in the Primary

Care Setting

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Introduction of the Problem

Cigarette smoking is one of the leading causes of worldwide preventable death (Jones, Gardener, & Cleveland, 2014). The CDC (2017a) estimates that 1 in 5, or 49 million adults in the United States use some form of tobacco products. Providers at a primary care office in North County, St. Louis report failed smoking cessation attempts are a common problem that many of their patients face. Providers play an integral role in reduction of tobacco use and are most successful in improving smoking cessation rates through a combination of counseling, patient follow up, and pharmacotherapy (Caplan, Stout, & Blumenthal, 2010). Prevalence of smoking in Missouri is 5% higher than national prevalence (CDC, 2016b); therefore, the outpatient primary care clinic selected for this project was an ideal location to initiate an algorithm of clinical guideline based smoking cessation interventions. All patients included in this project were patients of this clinic ages 18-80 who currently smoke and who may potentially be willing to attempt smoking cessation. The stakeholder of this project, the primary provider of these patients, provided access to patient records, assisted in initiation of the smoking cessation algorithm, and is continuing these interventions currently.

In the primary care setting, providers are able to build more established trusting relationships with patients; which is important in promotion of smoking cessation (Jones et al., 2014). By following the algorithm of the Five A's; Ask, Advise, Assess, Assist, and Arrange; primary care practitioners have a guideline-based smoking cessation program necessary to

achieve long term smoking cessation success in their patients and make an impact in the morbidity and mortality associated with this problem (Jones et al., 2014).   The Transtheoretical Model of Change was chosen as the conceptual framework to guide the development and implementation of this project (Prochaska & DiClemente, 1983). Throughout the stages of pre-contemplation, contemplation, preparation, action, and maintenance; the individual progresses from not seriously planning on quitting to planning for and establishing a quit date, taking action to stop smoking, and subsequently maintaining smoking cessation (Anczek & Nogler, 2003).

Literature Review

The 5 A's Model is a model, outlined by the Agency for Healthcare and Research Quality (2012), as a guideline for providers to increase smoking cessation among their patients who use tobacco (Agency for Healthcare and Research Quality, 2012). Smoking status should be assessed during every visit with the primary care provider (PCP) and recorded with the vital signs. PCPs should educate on the general health risks associated with smoking and well as individual risk factors based on the patient's medical conditions (CDC, 2017b).

Primary care providers must assist each patient who is willing to cease tobacco usage in developing a plan to quit by establishing a quit date within 2 weeks, educating on nicotine withdrawal symptoms, advising to remove all tobacco products from their home, vehicle, and workplace and encouraging the patient to discuss their quit plan with their friends, family, and co-workers. Behavioral counseling and individualized pharmacotherapy are interventions which are key to long term smoking cessation success (Jones et al., 2014). Arranging follow up via telephone or office visits is an essential aspect of successful smoking cessation counseling. Each patient who is attempting smoking cessation should be followed up on in one week as well as a second follow up within the first month and discuss current and possible problems as well as

pharmacotherapy. Counseling should continue for six months following the patient's quit date (Jones et al., 2014).

Nicotine replacement therapy increases abstinence rates by 2 to 3 times and all pharmacotherapy doubles smoking cessation success (Anczek & Nogler, 2003; US Preventative Services Task Force, 2015). In addition, non-nicotine oral medications can be used alone or in combination with nicotine replacement therapy (Jones et al., 2014). Pharmacotherapy using a combination of nicotine replacement therapy and non-nicotine medication therapy has been found to increase quit rates from 8% to 14% (US Preventative Services Task Force, 2015). The use of counseling in combination with pharmacotherapy increases the likelihood of smoking cessation success from 18% to 21% (US Preventative Services Task Force, 2015).

Project Methods

The purpose of this project was to identify and implement a smoking cessation protocol in an attempt to increase smoking cessation success rate in the primary care setting. The project idea was facilitated by the primary care physician at a small primary care office in North County, St Louis. At the request of the stakeholder, and with the support of the facility, a protocol was developed and implemented for clinical guideline based interventions to increase smoking cessation success. The creation of this protocol was guided by The 5 A's Model for smoking cessation (Agency for Healthcare and Research Quality, 2012) and the sample protocol by Jones et al. (2014). IRB approval was obtained prior to beginning the project.

During clinic visits, patients were asked about their smoking status as part of their routine care. For those patients who stated they smoke cigarettes, further evaluation was conducted using the Fagerstrom test for nicotine dependence (Pomerleau, Majchrezak, & Pomerleau, 1989) and the patient's willingness to quit was also assessed. A statement of informed consent for

completion of the Fagerstrom test was provided to the patient prior to completion of the questionnaire. Agreement by the patient to complete the questionnaire served as informed consent to answer the questions. This process was piloted on a sample of ten patients. After completion of the Fagerstrom test and assessing willingness to quit, the next steps of the 5 A's protocol were continued in collaboration with the stakeholder, one of the primary care physicians in the practice. The provider and clinic staff were trained on the 5 A's Model for smoking cessation in early June 2018. The training consisted of a 15-minute Powerpoint presentation regarding the model and its implementation as well as a handout of the slides and an evaluation. Feedback was also obtained from the provider and the staff after the training session through an evaluation survey.

Evaluation

Implementation of this project began in early June, 2018. A total of six staff members were present during the power point presentation regarding implementation of the smoking cessation program and completed the follow up survey. Of the six staff members, all medical assistants, who completed the survey, all six said they understood the content presented to them and believed they had adequate resources to implement the program. Four of the six staff members stated they believed they had enough time in their work day for the additional paperwork and interview. All six of the office staff members stated they believed they have adequate support from the PCP and they believe this program can benefit their patients. There were additional open ended questions which asked about any concerns staff may have. While four of the staff members left the comments area blank, two staff members brought concerns of additional workload.

The patient sample consisted of 10 patients, including males and females ages 40-70, and ethnicities of Caucasian and Asian. The Fagerstrom test was implemented during their regularly

scheduled well visit. Of those ten patients, five were willing to attempt smoking cessation. Patients unwilling to quit smoking were referred back to the primary care provider of the office who will continue to counsel them at each office visit. Patients who were willing to attempt smoking cessation were prescribed by the PCP of the clinic non-nicotine replacement therapy according to patient's current medication list as well as considerations for patient preference. In addition, all patients were provided with prescriptions for nicotine replacement therapy in the form of nicotine patches.

Each of the five patients who were willing to attempt smoking cessation were instructed to establish a quit date within two weeks of counseling, quit dates were established and recorded. At one and two week intervals, all five patients were called via telephone, three of which were reachable. Patients who were unable to be reached by telephone were left voice messages. At one week post quit date, one patient reported success and two did not. At two weeks post quit date, via a second phone call, the same patient stated she continued to be successful, two patients remained unreachable, and the remaining two patients reported reduction without abstinence. Patients unable to achieve abstinence cited death and illness in the family as reasons for inability to abstain. At two months post quit date each of these patients were contacted a third time. At that time, the results remained the same, with only one patient able to abstain completely from smoking. In summary, of the ten patients who were willing to complete the Fagerstom test, five of patients were willing to attempt smoking cessation. Of those five patients who were willing to attempt smoking cessation, one was successful over two months.

Impact on Practice

The immediate impact of this project at this clinical practice site was that the providers were educated about a quick smoking cessation assessment tool that can be implemented into practice without adding much time and burden to the already busy schedule of the practice. The

providers were also educated on a protocol that can be used to try to increase smoking cessation among their patients after the assessment is completed. Due to the fast-paced schedule of the office, patients were unable to be seen again in the office for follow up of smoking cessation attempts and had to be contacted via telephone. This created a limitation in the ideal way of implementing the protocol with face to face follow up. Lack of response from two individuals to the telephone calls created incomplete data. Due to time constraints for implementation of the project, patients were only able to be followed for two months following their quit date, while the literature recommended six month follow up.

Long-term impact of this project is difficult to assess given the time limitations that there were. Although only 1 participant of 5 in the smoking cessation followed the protocol at the 2 month mark of the 6 month program, the literature suggests that this type of protocol may be beneficial in helping to reduce smoking. Modifications to implement telephone follow up as opposed to face to face may be a more feasible option in this practice setting. Financial reimbursement issues would also need to be addressed in relation to coverage for cost of prescriptions and for cost of counseling therapy. Moving forward, it may be beneficial to incorporate additional strategies for approaching patients, keeping them engaged and retained, and for supporting and encouraging them throughout the study. When patients feel supported and encouraged and do not feel they will be penalized for not achieving the desired outcome, they may be more likely to continue communication with the data collector regardless of their success or failure.

Conclusions

The Five A's Model was utilized as a structured algorithm to increase smoking cessation among patients within the primary care setting. Patients were receptive and forthcoming in their participation. Unfortunately, not all patients who stated in their interview that they were willing

to attempt smoking cessation made themselves available for follow up interview. Moving

forward, increased data could be obtained by scheduling at least one follow up office visit for

these patients. These patients should also be followed for a full six months as the literature

denotes. A larger sample size would so aid in further assessing the effectiveness of the Five A's

Model for increasing smoking cessation success in the primary care setting.

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