



Introduction

- The Centers for Disease Control and Prevention (CDC) guideline recommends the use of the 5A's Approach by primary care providers to implement smoking cessation care (CDC, 2019a).
- The Agency for Healthcare Research and Quality (2012) defines the 5A's Approach as:

Asking: about smoking status at every patient encounter
Advising: to quit
Assessing: patient willingness to quit
Assisting: patient in quitting with pharmacotherapy and counseling
Arranging: for follow up care within the first week of quitting

- Implementation of the 5A's Approach by providers is often incomplete, as practitioners neglect to implement smoking cessation interventions and follow up (Martinez et al., 2017).
- Researchers found that an electronic delivery model was effective in implementing provider-delivered 5A's to diverse primary care patients (Satterfield et al., 2018).

Background and Significance

- There are presently 34 million adults who smoke in the United States. Every year, cigarette smoking causes 480,000 deaths and costs the country \$300 billion (CDC, 2019b).
- In addition to lung cancer, smoking is linked to chronic lung disease, cardiovascular disease, stroke, and cancer of the bladder, throat and mouth, kidneys, cervix, and pancreas (American Heart Association, 2015).
- Only 15% of patients who smoke receive appropriate smoking cessation counseling based on their willingness to quit (El-Shawawy et al., 2016).
- Clinician barriers to providing smoking cessation care cited are lack of training in smoking cessation care and time restraints. Training will improve practitioner implementation of smoking cessation screening and treatment (Jradi, 2017).
- EMRs with prompts affect clinical encounters in such a way that providers are more likely to document smoking, engage in counseling, and prescribe medications (Bae et al., 2016).
- Using EMRs to implement the 5A's approach is both efficient and low-cost (Satterfield et al., 2018).

Purpose

The purpose of this project was to address the problem of lack of smoking cessation counseling offered and prescribed to smokers at every patient encounter by practitioners in a primary care office in Middlesex County, New Jersey.

Clinical Question

In the primary care setting, is the implementation of the 5A's smoking cessation screening and counseling EMR tool, as opposed to not using an evidenced-based tool, associated with an increase in the rates of smoking cessation counseling provided, and interventions prescribed, by practitioners?

Methods

Design: Quality improvement (QI) project - pre-/post-intervention chart reviews

Setting: Primary care private practice located in Middlesex County, New Jersey

Population: Sole Physician and sole Nurse Practitioner at private practice

Recruitment and Informed Consent: Zoom meetings, consent obtained

Intervention:

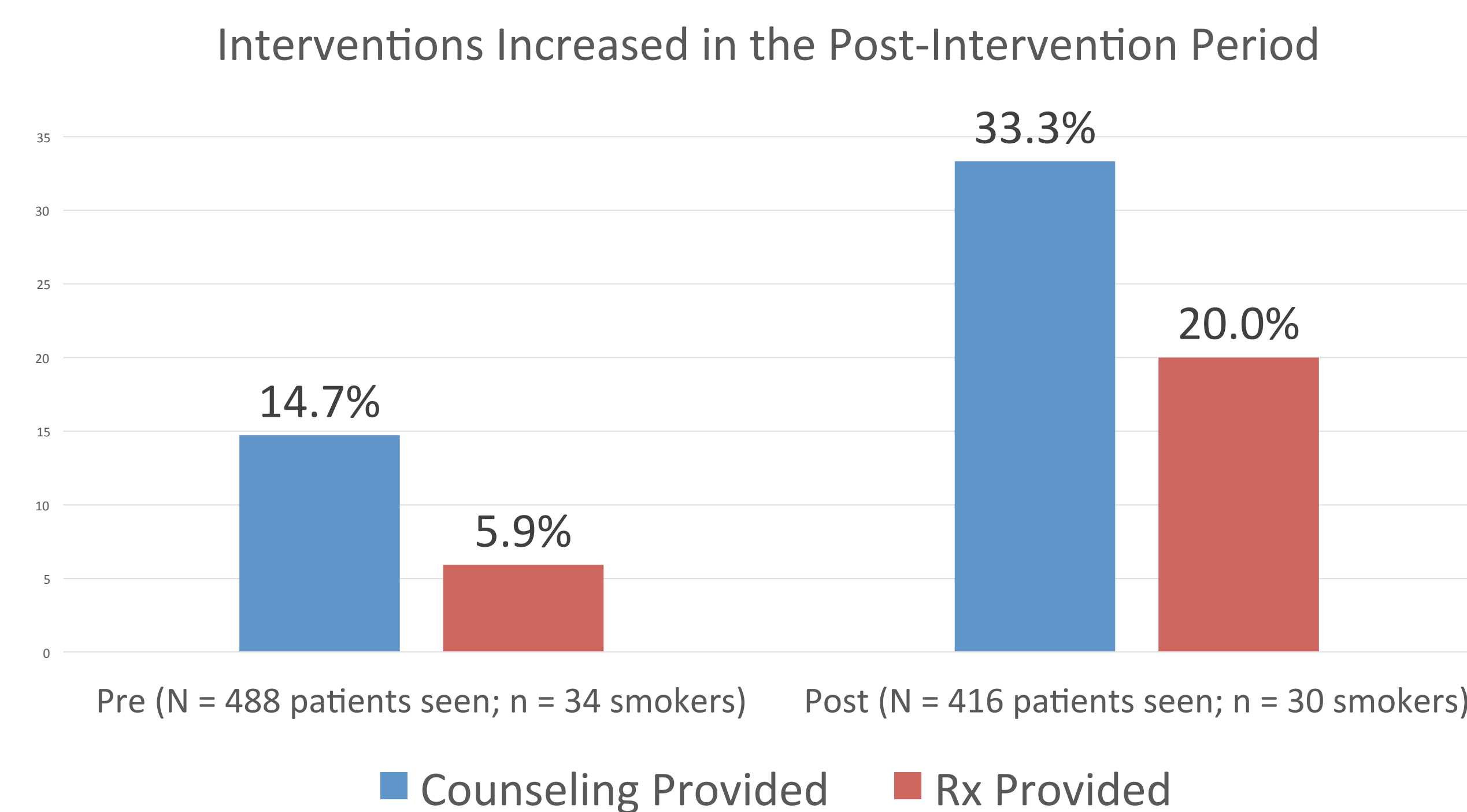
- Education on and placement of the 5A's Approach into the EMR
- Implementation by the clinicians to complete and document the 5A's for smoking cessation care at every patient encounter

Measurable Outcomes:

- 1) % of smokers who were billed for smoking cessation counseling via CPT codes over two months before implementation of study intervention versus two months after implementing the study intervention
- 2) % of smokers who were prescribed medications for smoking cessation over two months before implementation of study intervention versus over two months after implementing the study intervention.

Results

- Pre-intervention: Retrospective chart review (July 1, 2020 – August 31, 2020)
- Post-intervention: Prospective chart review (December 1, 2020 – January 29, 2021)



Although rates increased for counseling and prescriptions, neither was statistically significant based on a student's t-test (p=0.082 versus p=0.103, respectively)

Conclusions

This QI study showed that putting the 5A's Approach into the EMR was associated with increases in smoking cessation counseling and prescriptions written by the clinicians in the primary care setting, even though the results were not statistically significant.

Implications

Healthcare Policy: 5A's approach can easily be integrated into the EMRs of primary care practice.

Clinical Practice: Integrating the 5A's template into EMR will impact practice in that clinicians will be able to succinctly address all five aspects of smoking cessation care, including asking about smoking status, advising to quit, assessing readiness to quit, assisting stop attempts, and arranging for follow-up care.

Patient Care: Patients may be provided quality, evidence-based, guideline recommended smoking cessation care at every encounter.

Economics: There was no cost to put the 5A's template into the EMR or to have the practitioners use the 5A's protocol for each patient encounter. Providers can bill insurance for these services. There is also no cost to patients as smoking cessation counseling and treatment are covered by Medicare and employer-sponsored insurance (American Lung Association, 2020).

Education: The QI project showed improvement in provider prescriptions and counseling behaviors. Therefore, it would be beneficial to educate other primary care practices and providers, as well as office managers and informatics personnel about the utility of putting the 5A's tool into the EMR.

References:

Agency for Healthcare Research and Quality. (2012, December). Five major steps to intervention (the "5 a's"). <https://www.ahrq.gov/prevention/guidelines/tobacco/5steps.html>

American Heart Association. (2015, February). Smoking: do you really know the risks? http://www.heart.org/HEARTORG/HealthyLiving/Smoking-Do-you-really-know-the-risks_UCM_322718_Article.jsp

American Lung Association. (2020). Tobacco cessation treatment: what is covered? <https://www.lung.org/policy-advocacy/tobacco/cessation/tobacco-cessation-treatment-what-is-covered>

Bae, J., Ford, E. W., & Huerta, T. R. (2016). The electronic medical record's role in support of smoking cessation activities. *Nicotine Tobacco Research*, 18(5), 1019-1024. doi:10.1093/ntr/ntv270

Centers for Disease Control and Prevention. (2019a, September 6). Reduce tobacco use. <https://www.cdc.gov/sixteenthtobacco/index.htm>

Centers for Disease Control and Prevention. (2019b, September 21). Tobacco use. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/tobacco.htm>

El-Shahawy, O., Shires, D. A., & Elston Lafata, J. (2016). Assessment of the efficiency of tobacco cessation counseling in primary care. *Evaluation and the Health Professions*, 39(3), 326-335. doi: 10.1177/0163278715599204

Jradi, H. (2017). Awareness, practices, and barriers regarding smoking cessation treatment among physicians in Saudi Arabia. *Journal of Addictive Diseases*, 36(1), 53-59. doi 10.1080/10550887.2015.1116355

Martinez, C., Castellano, Y., Andres, A., Fu, M., Anton, L., Ballbe, M., . . . Fernandez, E. (2017). Factors associated with implementation of the 5a's smoking cessation model. *Tobacco Induced Disease*, 15, 41. doi:10.1186/s12971-017-0146-7

Satterfield, J. M., Gregorich, S. E., Kalkhoran, S., Lum, P. J., Bloome, J., Alvarado, N., . . . Vijayaraghavan, M. (2018). Computer-facilitated 5a's for smoking cessation: A randomized trial of technology to promote provider adherence. *American Journal of Preventative Medicine*, 55(1), 35-43. doi:10.1016/j.amepre.2018.04.009