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Evaluation of the Impact of Pharmacist-Led Tobacco Cessation Classes on Abstinence Rates in Patients of a Patient-Centered Medical Home (PCMH) Practice

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Background

Significance

- Tobacco dependence is a chronic condition that often requires repeated interventions for permanent cessation
- Even with the resulting decline in cigarette smokers from 42% in 1965 to 18% in 2012 as a result of the initial Surgeon General's Advisory Committee report on smoking and health, over 42 million Americans still smoke[1]
- While there is not one preferred treatment option for patients undergoing cessation attempts, current guidelines advocate for the use of medication and counseling for optimal success[2]

Practice Innovation

- As part of an academic partner agreement, a pharmacist faculty member and pharmacist resident from Duquesne University Mylan School of Pharmacy have an established practice within a PCMH practice with a high population of adult smokers
- In order to help meet the needs of this population, the pharmacist created a tobacco cessation support group/educational class entitled "The Courage to Quit," which involves 4 sessions and occurs quarterly throughout each year

Objective

- This study will evaluate abstinence rates of patients in a PCMH practice that attended pharmacist-led group tobacco cessation classes in conjunction with tobacco cessation medications compared to those that utilized medications but did not attend the classes
- Endpoints collected will include baseline demographics, tobacco use history, cessation medication of choice, and tobacco use status at specific follow-up points

Methods

Study Design

- Retrospective, controlled trial with prospective follow-up component
- Approved by the Institutional Review Board (IRB) under expedited review

Inclusion Criteria**	Exclusion Criteria
Age 18 or older	Patients attempting tobacco cessation without pharmacologic therapy
Active nicotine use documented in EMR	Lack of response after 3 follow-up attempts
Current patient of PCMH practice	The use of electronic cigarettes (E-cigs) as the only method for cessation
Documented use of cessation medications	

**Inclusion criteria for the control group included a negative history of attendance to the smoking cessation classes
** Inclusion criteria for the intervention group included attendance of >80% of smoking cessation class

Methods

Study Population

- Control group matched to intervention group in terms of baseline demographics and chosen cessation medication(s)
- Study medications included nicotine replacement therapy (NRT) (gum, lozenge, patch), bupropion, and varenicline. These were chosen based on patient preference and physician approval

Intervention Procedure

Recruitment
Patients identified for smoking cessation through diagnosis codes in EMR
Letters mailed to patients with instructions for voluntary enrollment
Enrolled patients called with reminder 1 week prior to class

Class
Each class consisted of 4 weekly, 1-hour sessions
Blood pressure and carbon monoxide levels assessed at initial and final session
Pharmacist collaborated with primary care physician to ensure optimal pharmacologic therapy

Follow-up (F/U)
Patients contacted telephonically at 2, 4, and 24 weeks after final session
Documentation of class attendance and cessation if applicable in EMR to communicate tobacco use status to primary care team

Control Procedure

Recruitment
Patients identified for smoking cessation through diagnosis codes in EMR

Communication
Patients identified through EMR were contacted telephonically

Follow-up (F/U)
Documentation of communication was collected along with consent to participate in the study

Patient Demographics (Intervention N=30)

Age	<50 years: 3 (10%) >50 years: 27 (90%)	
Gender	Male: 11 (37%) Female: 19 (63%)	
Pack per day (1PPD= 20 cigarettes)	<1 PPD: 15 (50%) 1 PPD: 5 (17%) 1.5 PPD: 4 (13%)	*Other: 6 (20%)
Duration of nicotine use	<50 years: 5 (17%) >50 years: 3 (10%)	Unknown: 73%
Cessation method used	Patch: 9 (30%) Gum: 3 (10%) Varenicline: 7 (23%) Bupropion: 7 (23%)	Inhaler: 1 (3%) Patch and Lozenge: 2 (8%) Gum and Bupropion: 1 (3%)

*Other: cigar (1 person); cigarettes and E-cigs (3 people); cigarettes and chewing tobacco (2 people)

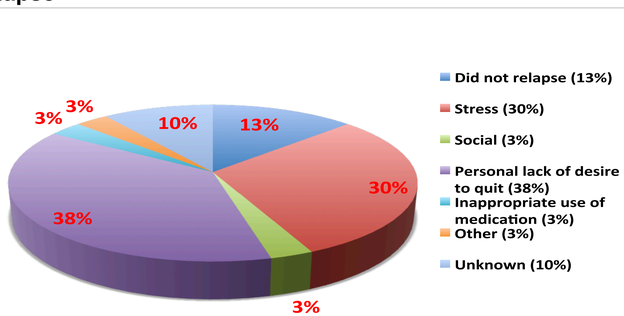
Results: Intervention

Results

Group	2 week follow-up	4 week follow-up	12 week follow-up	24 week follow-up	At time of follow-up call
Intervention	Quit: 77% Still Smoking: 23%	Quit: 67% Still Smoking: 33%	Quit: 43% Still Smoking: 57%	Quit: 20% Still Smoking: 70% Lost to F/U: 10%	Quit: 20% Still Smoking: 73% Lost to F/U: 7%
Control**	____	____	____	____	____

** Results of the control group are pending

Reasons for Relapse



*Other: 2 examples include: the patient was diagnosed with cancer; the patient underwent cataract surgery

Discussion

- The control group follow-up phone calls will conclude at the end of April 2016
- The results show that a high cessation rate occurs close to the end of classes but as time goes on this number decreases. This correlates with other data found from previous studies, such as the COMMIT trial that said nicotine dependence has a stronger association with cessation than motivation[3] and a meta-analysis that states within 12 months after treatment 30% relapse and NRT is required in most cases to be repeated[4].

References

1. U.S. Department of Health and Human Services. The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.
2. Fiore MC, Jaen CR, Baker TB, et al. Treating Tobacco Use and Dependence: 2008 Update. U.S. Department of Health and Human Services. 2008. Agency for Healthcare Research and Quality, Rockville, MD.
3. Hyland A, Li Q, Bauer JE, Giovino GA, Steger C, Cummings KM. Predictors of cessation in a cohort or current and former smokers followed over 13 years. *Nicotine and Tobacco Research*. 2004; 6: S363- S369.
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