| FIELD ACTION REPORT |

Surmounting obstacles in smoking prevention: Barriers to smoking cessation counseling at a community-based health center in Connecticut

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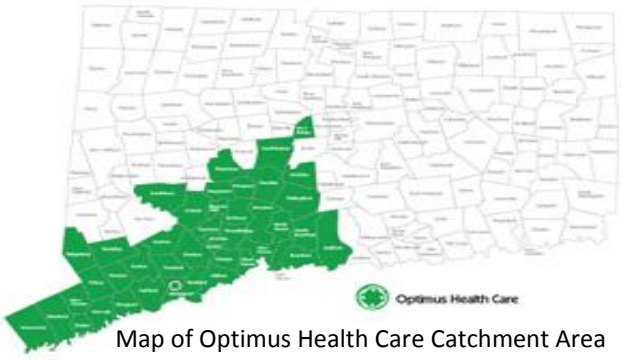
BACKGROUND

Cigarette smoking is the leading cause of morbidity and mortality in the United States. Rates of smoking are highest among low-income populations, contributing to many forms of health disparities. Smoking cessation has emerged as an important preventative avenue for reducing the population-level attributable risk of cardiovascular, pulmonary, and oncologic disease due to cigarette smoking[1]. Despite the health benefits of abstinence, durable smoking cessation is achieved by only a fraction of current smokers. As potential agents of change, healthcare providers possess the ability to promote smoking cessation through both counseling and pharmaco-therapy[2]. Consequently, the purpose of this investigation is to assess the challenges and limitations encountered by the Smoking Cessation Counseling Service at Optimus Health Care (Optimus), the largest community-based health center serving low-income populations in Bridgeport, Stratford and Stamford, CT.



Map of Optimus Health Care Catchment Area

OBJECTIVES

This project had four specific aims:

(1) Research the existing literature on common barriers to smoking cessation counseling as well as successful interventions in other clinical practice settings.
(2) Assess the barriers faced by healthcare providers at Optimus using quantitative and qualitative survey tools.
(3) Analyze prevalence of smoking cessation counseling by patient demographics using medical record data
(4) Provide recommendations to improve future smoking cessation counseling methods at Optimus Health Care and other community-based health centers based on the findings of this study.

METHODS

An unstructured interview was created with questions designed to assess individual clinician's perspectives on (1) background and training in smoking cessation counseling, (2) current practices used in cessation counseling, (3) barriers to offering smoking cessation, and (4) recommendations for improvements that may help overcome barriers to offering cessation counseling. The interview questions were open-ended inquiries in order to maximize the variety and flexibility in the healthcare provider responses.

A structured questionnaire was also designed to assess the three main domains of barriers that clinicians face in providing smoking cessation counseling—knowledge, attitude, and external barriers. The questions pertaining to knowledge barriers were designed to assess provider knowledge of smoking cessation counseling methods, including receipt of professional training and awareness of current guidelines in clinical practices. The questions relating to the attitude barriers were designed to assess provider beliefs about the efficacy of smoking cessation counseling, concepts surrounding self-efficacy, and overall intervention utility. The questions about external barriers addressed lack of resources, cost of cessation procedures, and competing demands for clinician time and attention. For each of the questions, a five-point Likert scale was utilized to assess clinician opinions ranging from "strongly disagree" to "strongly agree." The survey and interview were administered to healthcare providers at Optimus Health Care on four separate occasions in March and April 2012.

De-identified aggregate data was obtained from the Optimus electronic medical record system in order to determine if smokers were offered smoking cessation counseling differentially by gender, race/ethnicity, age group, or insurance status.

Analysis

Qualitative interviews were transcribed and assessed for themes and coded in ATLAS.ti Version 6®. Sum scores for the quantitative questionnaires were

calculated to assess mean and spread scores for each category of barrier. High sum scores reflect high barriers and vice versa. Finally, for the aggregate medical record date, bivariate analysis was performed using the chi-square test for association to determine significant differences in prevalence of smoking cessation counseling by patient category.

RESULTS

Provider Demographics

In this sample of Optimus Health Care providers, there were 7 medical doctors (MD/DO), 4 nurse practitioners (APRN), and 3 physician associates (PA) who participated in the interview or survey. The mean number of years in practice was 14 years (range 1 year to 35 years).

Interviews

Background & Training

Overall, providers reported that knowledge of smoking cessation derives mainly from medical school or learning from personal experience. No provider reported receiving formal training on administering smoking cessation counseling.

Current Practices

The most common strategies providers use when providing smoking cessation counseling were (1) motivational counseling highlighting risks of smoking, (2) pharmacotherapy, and (3) referring patients to external resources for smoking cessation.

Provider Barriers

Providers identified numerous barriers to offering cessation counseling, most frequently citing the lack of time during patient visits to discuss smoking cessation in addition to other urgent conditions. Other notable themes that arose in interviews were patient's lack of motivation to quit, difficult peer environment to quit, and ineffective pharmacotherapy without the provision of additional counseling services.

Recommendations

Providers agreed that changes to the EMR might be helpful in structuring visits and giving more time for cessation counseling as well as give reminders of a patient's smoking history and cessation history. EMRs can also provide handouts and resources for patients to take away from visits.

Furthermore, providers also agreed that more frequent training programs to educate and empower health professionals would help the effectiveness of smoking cessation counseling. Finally, providers also suggested that having dedicated smoking cessation programs or specialists as well as having established guidelines or standardized operating protocols (SOP) may be helpful.

Questionnaire

Providers gave generally mixed opinions regarding the presence of knowledge barriers. For example, 7 of 13 providers agreed that they were unfamiliar with the "Five A's of Smoking Cessation", while 4 providers disagreed. Providers were more likely to disagree with the presence of attitude barriers to smoking cessation. In this category, almost every provider disagreed that they were reluctant to intervene because smoking is a personal choice or that pharmacotherapy can be effective enough without counseling. Finally, results suggest that external barriers are the highest concern for the providers in our sample. For example, 11 of 13 providers agreed that there was insufficient time during patient visits to provide smoking cessation counseling.

Medical Record Data

Female smokers were significantly more likely than male smokers to receive smoking cessation counseling, with almost 94% of women receiving counseling compared with only 69% of men ($p < 0.001$). Out of Non-Hispanic White smokers, Non-Hispanic Black smokers, and Hispanic smokers, Hispanic smokers were most likely to receive counseling and Non-Hispanic Black smokers were least likely to receive counseling ($p < 0.001$). Only 56% of smokers ages 18 or younger received counseling, compared to 83% of smokers ages 19 to 64 and 100% of smokers ages 65 or above ($p < 0.001$). Finally, insurance status was also significantly associated with receipt of counseling, with only 76% of smokers insured by Medicaid receiving counseling compared to rates of over 90% in smokers with Medicare, private insurance, or who were uninsured ($p < 0.001$).

Strengths

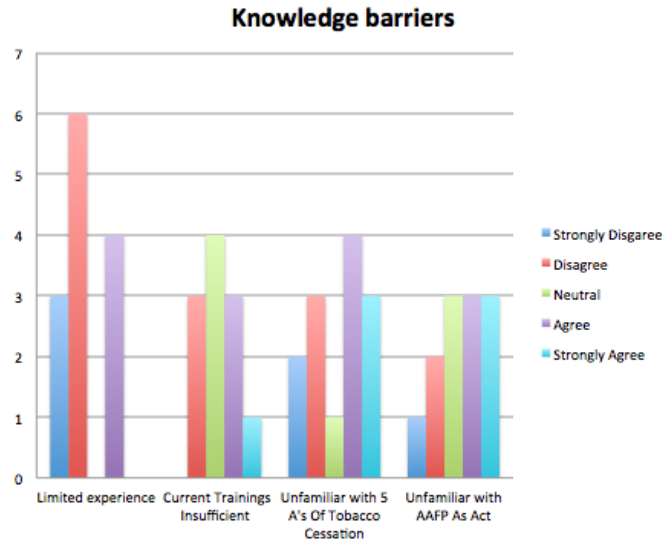
- Cross-sectional study design allows for real-time assessment of barriers currently faced at Optimus Health Care.
- Quantitative and qualitative analysis of healthcare provider responses used open ended interview questions and a survey tool based on barriers previously described in the literature.
- Interviews conducted in an anonymous one on one setting so that respondents can share openly.

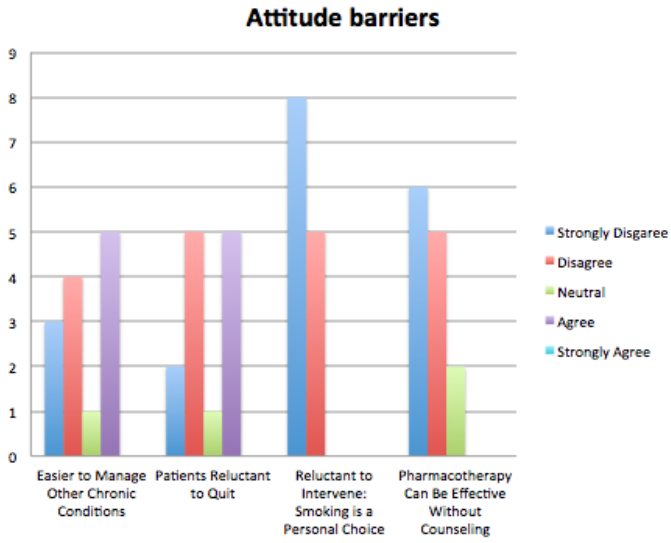
Limitations

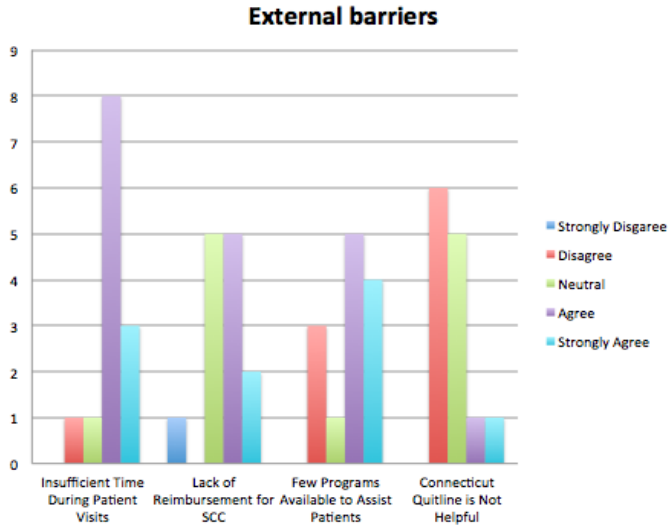
- Small sample size, although sample captures 70% of the providers in this population, maintaining internal validity.
- Social desirability bias may have led to inaccurate responses to interview and survey questions.

- Interviewer / moderator bias may have led to providers being hesitant to give socially undesirable responses.

Key Survey Findings







CONCLUSIONS

Overall, Optimus Health Care Providers were most likely to report lack of time, patient preparedness to quit, and a lack of both internal and external resources for patients and providers as the primary barriers to offering smoking cessation counseling.

Recommendations

1) Optimus Health Care provides training sessions for smoking cessation counseling for all providers. Such a continuing medical education (CME) training could include specific information about nicotine dependency, counseling strategies, current guidelines and best practices.
2) Optimus Health Care establishes guidelines and best practices in the form of standard operating protocols (SOP) for patients who smoke.
3) Optimus Health Care identifies gaps in referral options for primary care providers, consider the possibilities of group and individual counseling and treatments, smoking cessation clinical specialists, a smoking cessation clinic, or community outreach programs.
4) Optimus Health Care utilizes the EMR system to streamline smoking cessation counseling SOP (e.g. pamphlets, reminders, clinic schedules, and patient medical history related to smoking), creating a means for monitoring and evaluating the smoking cessation practices of the clinicians.

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References

1. Schroeder SA. What to do with a patient who smokes. JAMA. 2005 Jul 27;294(4):482-7.
2. Wu P, Wilson K, Dimoulas P, Mills EJ. Effectiveness of smoking cessation therapies: A systematic review and meta-analysis. BMC Public Health. 2006 Dec 11;6:300.