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Ask, advise and refer: hypothesis generation to promote a brief tobacco-cessation intervention in community pharmacies

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Abstract

Objectives—To conduct a preliminary qualitative study identifying key facilitators and barriers for pharmacists' adoption of a brief tobacco-cessation protocol, Ask-Advise-Refer (AAR).

Methods—Ten community pharmacists were interviewed using semi-structured, face-to-face interviews with open-ended questions. Purposive and saturation sampling techniques were applied to identify participants and determine sample size respectively. Interviews were audio-recorded and transcribed. Using thematic analysis, two reviewers independently coded all transcripts to identify prominent themes. Appropriate measures were taken to ensure study rigor and validity.

Key findings—All facilitators and barriers identified were grouped into nine distinct themes. Pharmacists' fear of negative patient reaction was the most prominent barrier to initiating tobacco-cessation discussions with patients. Other themes identified in decreasing order of prevalence were pharmacists perceiving a rationale for initiating tobacco cessation, pharmacy environment, pharmacists' perception of/prior knowledge of patients' willingness to discuss tobacco cessation/to quit, patient initiation of tobacco-cessation or worsening-health discussion, pharmacists' perceptions of AAR characteristics, length of pharmacist–patient relationship/rapport with patients, low expectations of pharmacy patrons and pharmacists' communication ability.

Conclusion—This study highlights the potential fear among pharmacists about negative reactions from patients in response to initiating tobacco cessation. Based on the results of this study it is hypothesized that the following strategies would facilitate adoption of AAR: (1) train pharmacists to initiate cessation discussions; (2) initially target discussions with patients who have a disease or medication adversely affected by tobacco use; (3) encourage patient enquiry about pharmacy cessation services through visual cues; and (4) help pharmacists set up a workflow system compatible with the AAR protocol.

Keywords

community pharmacist; health promotion; pharmaceutical care; public health; smoking cessation; tobacco cessation

Introduction

A recent report published by the World Health Organization (WHO) states that 'tobacco is the single most preventable cause of death in the world today'.^[1] It has been projected that,

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globally, the number of deaths attributable to tobacco use will rise from 5.4 million in 2005 to 8.3 million by 2030.[2] Even in the USA, cigarette smoking has been documented as the leading preventable cause of disease and death.[3,4] More than one in five Americans are current cigarette smokers.[5]

The adverse health consequences of tobacco use not only compromise users' quality of life, but also impose substantial direct and indirect economic costs on society. The recent WHO report asserts that the global healthcare costs attributable to tobacco use run to hundreds of billions of US dollars each year.[1] During 2000–2004, the total economic burden of smoking in the USA alone was estimated to be \$193 billion annually, accounting for direct healthcare expenditures (\$96 billion) and productivity losses (\$97 billion).[6]

Success rates for quitting increase with evidence-based interventions such as pharmacologic or behavioural therapies, telephone counselling, and health-provider reminder systems.[7] Policy-makers and health organizations encourage providers to assist patients who use tobacco in quitting.[8,9] In 2000, the US Public Health Service published national, evidence-based clinical guidelines recommending that all health care providers, *including pharmacists*, should offer smoking-cessation intervention.[8] The guidelines recommend following the 5A model (Ask-Advise-Assess-Assist-Arrange follow-up) for tobacco-cessation counselling. The 5A model consists of the following steps: ask all patients about tobacco use, advise tobacco users to quit, assess tobacco users' readiness to quit, tailor assistance depending on stage of readiness to quit and, finally, arrange for follow-up with patients willing to quit. Recent evidence also suggests tobacco-cessation interventions by more than one health care provider have the potential to substantially increase quitting and readiness to quit in the population.[10] However, translation of these guidelines into practice has been slow. Lack of time and provider training have been identified as two of the key barriers to providing tobacco-cessation counselling to patients.[11–13]

Accepting these key barriers, a brief model of cessation assistance has been proposed as more feasible and effective. Dr Steven Schroeder, director of the Smoking Cessation Leadership Center, has proposed the Ask-Advise-Refer model, more commonly known as AAR.[14] This model consists of the following steps in order: ask all patients whether they use tobacco, advise identified tobacco users to quit and refer tobacco users to an intensive cessation program such as the national tobacco quit line. This brief protocol is currently being promoted by various health care groups as an alternative approach if the clinical situation demands a shorter intervention.[15,16] The AAR model has also been recommended as an alternative where detailed smoking-cessation intervention by a clinician is not possible. Although the gold standard for tobacco-cessation assistance remains the 5A model, it is hoped that, as a first step towards increasing involvement in tobacco-cessation counselling, AAR will be more readily adopted by health professionals.

The Pharmacy Partnership for Tobacco Cessation, a consortium of tobacco-cessation experts and the American Society of Health Systems Pharmacists joined forces in 2006 to promote adoption of AAR among pharmacists.[15] Pharmacists are one of the most easily accessible health care providers. Meeting with pharmacists for advice on medications and health does not require an appointment. Additionally, over the counter availability of nicotine replacement therapy (NRT) provides the opportunity for pharmacists to assist patients in their quit attempt.

It has been documented that pharmacist-driven tobacco-cessation interventions in community settings can be effective.[17–20] Sinclair and colleagues demonstrated that pharmacy staff trained in tobacco-cessation counselling, have the potential to make a significant contribution to reducing rates of tobacco use.[21] Tobacco cessation services are widely delivered by

community pharmacists in Great Britain[22] and are now one of the core services of the National Health Service's community pharmacy contract in Scotland.[23]

US pharmacists' involvement in tobacco-cessation counselling, however, remains consistently low.[24–28] The National Pharmacy Workforce Survey showed that only 14% of chain and independent community pharmacies offer tobacco-cessation services.[24] Research suggests that pharmacists appear most comfortable conducting tobacco-cessation-related activities involving product dispensing for patients in the process of quitting or seeking help from pharmacists.[27] Some of the Assist behaviours recommended by the 5A model appear to be more commonly performed than the proactive behaviours such as asking, assessing readiness to quit and advising to quit.[26,28] This has been observed beyond smoking cessation, that pharmacists in general prefer a reactive than proactive approach towards patient health promotion.[29] Within the context of discussing smoking cessation, fear of alienating patients by initiating a discussion about tobacco has been identified as a barrier to such proactive behaviours by pharmacists.[28,30] Additionally, historically, pharmacist–patient communication and patient care initiatives have been met with barriers such as lack of time and privacy.[31–33] Although AAR is meant to be brief and thus more feasible to adopt in community pharmacies, it is important to study what factors might affect its implementation.

No research has systematically identified pharmacist perceptions of factors that might impact on the implementation of AAR. The goal of this research was to provide preliminary qualitative groundwork to identify key facilitators and barriers for pharmacists to the adoption of AAR.

Methods

To identify potential barriers and facilitators, the authors conducted an inductive investigation drawing on the grounded theory approach.[34] Using standard qualitative procedures, the primary author conducted 10 semi-structured, face-to-face interviews with pharmacists from 10 different community pharmacies in a mid-sized town. The primary author has prior experience and training for conducting one-on-one face-to-face interviews and focus groups. This study received expedited review status and was approved by the Institutional Review Board of Social and Behavioral Sciences at the authors' university.

Sampling and sample size

A mixed method was used for sampling, involving principles of purposive and saturation sampling. Pharmacists who were not offering tobacco-cessation programs at the time of the study were thus identified purposively to ensure that the pharmacy sites studied (1) varied in terms of the prescription loads at their pharmacies and (2) represented both chain and independent community pharmacies. The principle of saturation sampling, commonly used in qualitative research, was applied to determine the number of interviews required for gathering data.[34] In this method, sampling is discontinued when no new information is obtained from the data being analyzed. Thus, the prerequisite of simultaneous data collection and analysis was followed to identify the point of saturation.

Interview questions

Question construction and interview style were built using Spradley's and Patton's approaches.[35,36] Questions were open-ended, neutral and carefully constructed to prevent elicitation of socially desirable responses. Spradley's approach was used to frame the questions in the form of an overall *grand tour* and specific *mini tours*. Mini-tour questions are questions asked to learn about the details of things described in response to the grand-tour questions.[35] Key questions asked during the interviews were: 'what would make you more or less likely to ask a patient whether he/she uses any kind of tobacco?', 'what would make you more or less

likely to *advise* a tobacco user to consider quitting?' and 'what would make you more or less likely to *refer* an identified tobacco user to a tobacco-cessation program such as the national quit line?' Appropriate non-judgmental probes and non-verbal reinforcement was also used throughout the interviews as needed.

Pilot interviews

The primary author conducted two pilot interviews of pharmacists and feedback from the interviewee pharmacists was documented for review during the period of data collection. Feedback from interviewee pharmacists was discussed with colleagues and incorporated appropriately in the data-collection procedure. One colleague also assessed interviewer performance after the first two interviews to maintain rigor and consistency in collecting data.

Thematic analysis

The main unit of analysis was the individual narratives of interviewing pharmacists obtained during data collection. *Thematic analysis* was used to qualitatively analyze all interview data and is a method for identifying patterns/themes within data.[33] It is the foundational method in qualitative research and has been commonly used in health care research.[37] Thematic analysis was conducted in the following order: interview data was transcribed verbatim, codes were developed (defined as the most basic elements of the raw data that were relevant to the research question), themes were identified (defined as collation of similar codes to develop analytic categories) and, finally, all themes were reviewed and named. Both the authors independently coded all transcripts and consensus was reached on coding disagreement. All the themes were identified and named by the primary author following discussions with the second author.

Study rigor

Several steps were taken to ensure methodological and analytical rigor in this investigation. Before pilot testing, experts reviewed the interview script to verify consistency of the interview script with the established questioning techniques for qualitative interviewing. Also, cognitive interviews were conducted with the pharmacists immediately following pilot interviews to ensure validity of all interview questions. Cognitive interviewing is a very commonly used technique to verify interviewee interpretation of questions matches with the researcher's interpretation. All interviews were transcribed verbatim. All transcripts were verified for accuracy and detail. The interviewer summarized interviewee responses and verified interpretive accuracy during and after the interview (member checking).[38] In-vivo coding was used to analyze data, whereby codes were named using the respondent's own words. This minimizes interpretive bias while naming codes.[34] As a final step, three non-participant pharmacists verified and reviewed all themes identified by researchers in the analysis. Further evidence of validity was obtained by comparing emergent findings with the literature. Codes were grouped into themes as deemed suitable for generating practical intervention strategies to implement AAR in community pharmacies.

Results

Interview characteristics

The participation rate for the interviews was high. Only one out of 11 pharmacists declined to participate in the study due to lack of time. For all details of interview and sample characteristics see Table 1. On average, all interviews lasted for less than 30 minutes. A total of 146 codes were identified from all the interviews by both coders. The inter-coder percentage agreement on all codes was high (94%). Disagreement on the codes was mainly due to lack of identification

of a code by one of the coders. Such codes were discussed by the researchers and a consensus was reached.

Sample characteristics

Five out of the 10 pharmacists interviewed worked at a large community chain setting, three were employed at independent stores, one pharmacist worked at a supermarket pharmacy, and one at a mass-merchandise pharmacy. Most of the pharmacists interviewed were between 36 and 50 years of age and six of the 10 were male.

Identified themes

In conducting the analysis, nine distinct themes were identified. Table 2 outlines the various themes, sub-themes and codes along with examples of data excerpts. Thematic analysis can be presented in a number of ways. What follows is a presentation of all nine themes in decreasing order of prevalence. The frequency of pharmacists commenting on factors and the number of codes collated to form themes are included to give readers some sense of the predominant factors that were identified during analysis.

Theme 1: Negative perceptions towards initiating tobacco-cessation discussions with patients—

The most commonly identified theme was pharmacists' negative perceptions towards initiating tobacco-cessation discussions with patients. This was the only theme that was identified in all interviews and a total of 46 codes were organized under this theme. The codes were further organized into three sub themes: pharmacists' expectation of negative responses from patients, pharmacists perceiving tobacco use as a sensitive topic and pharmacists' assumption of negative interactions of patients with others (physicians, specialists and family members). Pharmacists were fearful of offending patients and resulting negative reactions from patients in response to their enquiry about a patient's tobacco use and advising them to quit. They feared patients would perceive AAR as 'badgering' or 'nagging' by the pharmacist. Several pharmacists perceived that tobacco use was too 'sensitive' and 'private' a topic to discuss. A few pharmacists commented that they did not want to badger the patient about quitting. Pharmacists assumed that the patients were repeatedly being told to quit by others and that they did not want to add to the burden of the patient. Only one pharmacist thought that he would lose a customer if he brought up tobacco cessation. Only one pharmacist commented on tobacco-cessation counselling was more a physician's role.

Theme 2: Pharmacist perceiving a rationale for initiating tobacco cessation—

The second most predominant theme was that a pharmacist would be more likely to identify and counsel a patient on tobacco cessation if (s)he perceived a rationale for doing so. Seven out of the 10 pharmacists commented on this theme and in total it was commented on 22 times throughout the interviews. Three examples cited were pharmacy patrons with worsening health conditions that can be exacerbated by tobacco use (e.g. asthma), patrons picking up medications contraindicated by smoking (birth control) and if the pharmacist were told to promote an existing tobacco-cessation program to patrons. Also it was identified that lack of a rationale would be a barrier.

Theme 3: Pharmacy environment—

Seven pharmacists identified various pharmacy environment-related barriers and facilitators that would influence the likelihood of successful implementation of tobacco-cessation counselling. This theme was identified through 19 distinct codes. Remembering to implement AAR during busy times, motivation of pharmacy staff to assist in AAR and the ability to document AAR intervention in the pharmacy computer system (for future follow-up) were identified as key factors within this theme that would influence AAR implementation. Some of the other pharmacy environment-related factors identified were busyness of the pharmacy, identification of smokers by technicians, lack of

privacy, corporate approval and readily available referral resource materials (e.g. Quit Line cards, etc.).

Theme 4: Pharmacists' perception of/prior knowledge of patients' willingness to discuss tobacco cessation/to quit—Seven pharmacists commented that if, in some way, they were made aware of a patient's interest in quitting tobacco or in discussing tobacco cessation with the pharmacist, they would be very likely to initiate and discuss quitting with that patient. This theme was commented on a total of 15 times during the interviews.

Theme 5: Patient initiation of tobacco-cessation or worsening health discussion—Seven pharmacists also stated that patients' initiation of either tobacco-cessation discussions or a worsening health condition would make them more likely to ask about and discuss tobacco use with them. This was commented on 11 times during the interview.

Theme 6: Pharmacist perceptions of AAR characteristics—The sixth theme involved pharmacists' perceptions of AAR characteristics, such as ease of implementation, the time required for implementing AAR, perceived benefit to patients, and cost associated with implementation of AAR. This was commented on by six pharmacists a total of 12 times.

Theme 7: Length of pharmacist-patient relationship/rapport with patients—Pharmacists had mixed views on whether they would be more likely discussing tobacco with a returning versus a new patron. Five out of the 10 pharmacists interviewed commented that whether a patient was new or returning would affect their ability to discuss tobacco cessation. Three felt AAR would be easier with a returning patron, whereas two said they would be more likely to conduct AAR with a new customer. One pharmacist almost seemed determined not to change anything about his practice for returning patients, so that they would still feel comfortable coming to his pharmacy.

Theme 8: Pharmacists' low expectations of pharmacy patrons—Pharmacists' low expectations of patrons in general would act as a barrier to implementing AAR. Three of the 10 pharmacists perceived patrons always being in a hurry to leave. Two other pharmacists said that patrons did not want anything from the pharmacist but their medications. This theme was commented a total of seven times during the interviews.

Theme 9: Pharmacists' communication ability—In this last theme, pharmacists' commented on how ability to ask tobacco-related questions non-judgmentally would affect a discussion of tobacco cessation with patrons. Three pharmacists acknowledged that the manner of communication and question asking in discussing tobacco cessation is important and would also have implications for whether and how negatively the patron reacts to the enquiry.

Discussion

The involvement of community pharmacists in the USA, in contrast to their counterparts in the UK,[22] remains low. Lack of time has been the most commonly cited barrier to delivery of tobacco-cessation services by pharmacists. The AAR approach is currently being promoted by professional health-related organizations as a more feasible alternative to the 5A model of tobacco-cessation counselling. Our study provides a summary of factors that pharmacists identified, in response to open-ended questioning, as affecting their implementation of the AAR approach in community pharmacies. The authors acknowledge the following limitation for this qualitative investigation and encourage readers to follow the discussion in light of this limitation. In spite of careful, methodological and analytical efforts to limit social desirability and researcher-induced bias, these biases cannot be completely eliminated.

Initiating interaction with patients

We are unaware of any other study that has identified the prominence of American pharmacists' fear of offending patients and their lack of confidence regarding *initiating* conversations about tobacco cessation. This helps explain the low percentage of American pharmacists asking about tobacco use.[25–28] This finding also suggests that collecting tobacco-cessation information as part of other health-history information when enrolling new patients might be an important facilitator. In a sense, this patient information legitimates the pharmacist's further enquiry of patient interest and pharmacist intervention. Pharmacists' assumptions about patient reactions appear pivotal. It is possible that these assumptions might be shaped by past experiences with patients. Descriptive studies of Canadian and Australian pharmacists' perceptions have also reported a similar finding. Pharmacists in these studies also expressed some concerns about alienating their patients by initiating tobacco discussions.[28,30]

Whereas one study shows that patients who are ready to quit are open to pharmacists' tobacco-cessation assistance, it may be interesting to study smokers' expectations or hypothetical reactions to pharmacist *enquiry* about tobacco use.[39] Building the behavioural self efficacy of pharmacists in successfully *initiating* tobacco cessation will be an important intervention strategy.

One prominent facilitator identified in this study is the relevance of a patient's medical condition or medications to tobacco cessation. Seven pharmacists said that they would be more likely to raise the topic if the patient had a condition like emphysema or a medication contraindicated by smoking. However, it is important to mention that three of the seven pharmacists who cited this factor said it would make them more likely to “mention in passing”, “try to mention” and “worm it in”, which reinforces how cautious pharmacists are about this topic. This again may be interpreted as pharmacists not wanting to offend their patients.

Some of the important patient communication themes are reflected in other patient–provider interaction research. Depending on patients to initiate or show interest in a tobacco-cessation dialogue was one of the most frequent facilitators mentioned and is consistent with the higher likelihood of pharmacists' communication when patients asked questions.[31] Additionally, international literature indicates that community pharmacists more commonly provide reactive counselling than proactive counselling for health-promotion activities.[29]

Sleath and colleagues also found that providers see patients as more interested when they ask more questions.[40] Trials promoting pharmacists' involvement in tobacco cessation should identify measures for stimulating patient enquiry of tobacco cessation to pharmacists. One such measure could be posting visual aids about tobacco-cessation resources in pharmacy waiting areas. Additionally, pharmacists' discussion of stigma attached to assessing a patient's tobacco use and the fear of offending patients should inform intervention planning in this area.

Perceptions of other providers

Some pharmacists believed doctors and other health care professionals had already told patients to quit and this was one of the reasons they would not discuss tobacco cessation with their patients. Some pharmacists mentioned that it might be misconstrued as badgering the tobacco user to quit. However, research documents that many physicians do not advise patients to quit. [41] Additionally, a recent study documented that the likelihood of a tobacco user quitting increases with the number of providers advising the person to quit.[10] Another factor, pharmacists' own role expectations,[42] was surprisingly absent from the themes emerging from this study except one pharmacist who commented that tobacco-cessation counselling was more a role of physicians than pharmacists.

Environmental facilitators

One key environment-related facilitator identified by pharmacists was the opportunity to enter data in the computer system to keep the process practical and possible. Unfortunately, many computer systems cannot incorporate such information.[43] Thus alternative documentation approaches might be needed. Using practical and easy documentation systems that fit well within the work flow will be important. One pharmacist also mentioned that having system prompts such as pop-up screens that remind them to discuss tobacco cessation would also be helpful. Also, pharmacy staff such as pharmacy technicians could be utilized for initiating enquiry about patients' tobacco-use behaviour.

One way to approach AAR implementation could be as follows: technicians systematically document tobacco-use status for all pharmacy patients, pharmacists assess patient readiness to quit, pharmacists advise patients and refer them to tobacco-cessation programs such as state-funded tobacco quit lines.

Pharmacist perceptions of AAR protocol

Two pharmacists argued that the AAR approach had limited utility since pharmacists can only refer and not offer any real help. However, most other pharmacists saw this as a good approach to help build relationships and build trust. Ultimately this model could be a first step in helping a majority (87%) of pharmacists to start in the direction of tobacco-cessation involvement. Overall, pharmacist reactions to the feasibility and practicality of this approach were positive.

Given the literature which emphasizes how often pharmacists cite lack of time as a barrier to pharmaceutical interventions,[25,44,45] it is interesting to look at pharmacists' comments about time in this study. Four pharmacists thought that the AAR approach would take very little time and that this would be a facilitator for them. However, two said that time might still be a barrier although very little pharmacist time is required. It may still be necessary to help stage implementation in a way that it is done selectively over the course of a day or week.

Conclusions

The AAR approach has been introduced with the hopes that it will be easier for community pharmacists to implement a brief tobacco-cessation assessment and referral service into daily practice. In this approach pharmacy collaborates with public health programs by playing the assessment and referral role within the tight time limitations of the pharmacy. This is the first scientific investigation to systematically identify possible factors that will affect the successful implementation of AAR in practice. Pharmacists' fear of offending patients and assumptions regarding patients' negative reactions appear to be key barriers to pharmacists' implementation of AAR. However, given the qualitative nature of this study, future systematic quantitative research is needed to identify all possible factors affecting implementation of AAR in community pharmacies. Future pharmacy-based interventions for implementing AAR should carefully consider and address the factors identified in this study. To this end, this inductive investigation has generated hypotheses that the following strategies would promote pharmacists' adoption of the AAR approach: (1) at least initially, focus interventions around a specific disease state or medication that would be relevant to tobacco-cessation discussions; (2) train pharmacists how to ask patients about tobacco use and initiate tobacco-cessation conversations; (3) train technicians or other staff to assess whether patients are smokers and alert patients about the new program and pharmacist as a source of information; (4) create signs and messages to encourage patients to ask questions and inform them about the pharmacist as a potential source of information and referral; (5) help pharmacists to set up a workflow system compatible with incorporating the AAR approach; and (6) help pharmacists generate tobacco-status intake procedures.

Although the gold standard for tobacco-cessation assistance remains the 5A model of care, it is hoped that AAR will act as a step towards increasing involvement in tobacco-cessation counselling.

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References

1. World Health Organization. WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER package. World Health Organization; Geneva: 2008.
2. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Medicine* 2006;3(11):e442. [PubMed: 17132052]
3. Mokdad AH, et al. Actual causes of death in the United States, 2000. *JAMA* 2004;291(10):1238–1245. [PubMed: 15010446]
4. Annual smoking-attributable mortality, years of potential life lost, and economic costs—United states, 1997–2001. *MMWR* 2005;54:625. [PubMed: 15988406]
5. Tobacco use among adults—United States, 2005. *MMWR* 2006;55:724. [PubMed: 16826159]
6. Smoking-attributable mortality, years of potential life lost, and productivity losses—United States, 2000–2004. *MMWR* 2008;57:45.
7. Zaza, S., et al. *The Guide to Community Preventive Services: what Works to Promote Health?*. Oxford University Press; New York: 2005.
8. Fiore, MC., et al. *Treating Tobacco Use and Dependence. Clinical Practice Guideline.* U.S. Department of Health and Human Services, Public Health Service; Rockville, MD: 2000.
9. Calis KA, et al. Healthy people 2010: Challenges, opportunities, and a call to action for America's pharmacists. *Pharmacotherapy* 2004;24(9):1241–1294. [PubMed: 15460187]
10. Lawrence CA, et al. The impact of smoking-cessation intervention by multiple health professionals. *Am J Prev Med* 2008;34(1):54–60. [PubMed: 18083451]
11. Solberg LI, et al. Frequency of physician-directed assistance for smoking cessation in patients receiving cessation medications. *Arch Intern Med* 2005;165(6):656–660. [PubMed: 15795342]
12. Ferketich AK, et al. Are physicians asking about tobacco use and assisting with cessation? Results from the 2001–2004 national ambulatory medical care survey (NAMCS). *Prev Med* 2006;43(6):472–476. [PubMed: 16920185]
13. Monson AL. Barriers to tobacco cessation counseling and effectiveness of training. *J Dent Hyg* 2004;78(3):5. [PubMed: 16197743]
14. Schroeder SA. What to do with a patient who smokes. *JAMA* 2005;294(4):482–487. [PubMed: 16046655]
15. Creating a road map for pharmacy's role in the cessation of tobacco use. *Am J Health Syst Pharm* 2006;63(6):564–566. [PubMed: 16522893]
16. Gordon JS, et al. The 5A's vs. 3A's plus proactive quit line referral in private practice dental offices: Preliminary results. *Tob Control* 2007;16(4):285–288. [PubMed: 17652247]
17. Dent LA, et al. Tobacco interventions delivered by pharmacists: a summary and systematic review. *Pharmacotherapy* 2007;27(7):1040–1051. [PubMed: 17594210]
18. Blenkinsopp A, et al. Systematic review of the effectiveness of community pharmacy-based interventions to reduce risk behaviors and risk factors for coronary heart disease. *J Public Health Med* 2003;25(2):144–153. [PubMed: 12848404]
19. Crealey GE, et al. Costs and effects associated with a community pharmacy-based smoking-cessation program. *Pharmacoeconomics* 1998;14:323–333. [PubMed: 10186470]

20. Sinclair HK, et al. Community pharmacy personnel interventions for smoking cessation. *Cochrane Database Syst Rev* 2004;1:CD003698. [PubMed: 14974031]
21. Sinclair H, et al. An evaluation of a training workshop for pharmacists based on the stages of change model of smoking cessation. *Health Educ J* 1997;56(3):296–312.
22. Anderson S. Community pharmacists and tobacco in great britain: from selling cigarettes to smoking cessation services. *Addiction* 2007;102(5):704–712. [PubMed: 17493105]
23. Public Health Service. NHS Scotland Community Pharmacy. http://www.communitypharmacy.scot.nhs.uk/core_services/phs.html (accessed 18 February 2009)
24. Doucette WR, et al. Evaluation of community pharmacy service mix: Evidence from the 2004 national pharmacist workforce study. *J Am Pharm Assoc* 2006;46(3):348–355.
25. Hudmon KS, et al. Tobacco cessation counseling: pharmacists' opinions and practices. *Patient Educ Couns* 2006;61(1):152–160. [PubMed: 16533683]
26. Williams DM, et al. An evaluation of smoking cessation-related activities by pharmacists. *J Am Pharm Assoc (Wash)* 2000;40(3):366–370. [PubMed: 10853537]
27. Aquilino ML, et al. Smoking-cessation services in Iowa community pharmacies. *Pharmacotherapy* 2003;23(5):666–673. [PubMed: 12741442]
28. Edwards D, et al. Pharmacists' role in smoking cessation: an examination of current practice and barriers to service provision. *Int J Pharm Pract* 2006;14:315–316. 317.
29. Andersen, C., et al. The Contribution of Community Pharmacy to Improving the Public's Health. Report 1: Evidence from the Peer-reviewed Literature 1990–2001. Pharmacy-HealthLink and Royal Pharmaceutical Society of Great Britain; London: 2003.
30. Brewster M, et al. On the front line of smoking cessation: pharmacists' practices and self-perception. *Can Pharm J* 2005;138(3):32–37.
31. Schommer J, Wiederholt J. The association of prescription status, patient age, patient gender, and patient question asking behavior with the content of pharmacist-patient communication. *Pharm Res* 1997;14(2):145–151. [PubMed: 9090700]
32. Amsler MR, et al. Pharmaceutical care in chain pharmacies: beliefs and attitudes of pharmacists and patients. *J Am Pharm Assoc (Wash)* 2001;41(6):850–855. [PubMed: 11765110]
33. Campbell RK. Confronting barriers to pharmaceutical care. *J Am Pharm Assoc (Wash)* 1998;38(4):410–412. [PubMed: 9707949]
34. Strauss, A.; Corbin, J. *Basics of Qualitative Research: Techniques for Developing Grounded Theory*. 2nd ed.. Sage Publications; Thousand Oaks, CA: 1998.
35. Spradley, JP. *The Ethnographic Interview*. Holt, Rinehart and Winton; New York: 1979. p. 86-90.
36. Patton, MQ. *How to use Qualitative Methods in Evaluation*. SAGE; London: 1987.
37. Pope, C.; Mays, N. *Qualitative Research in Healthcare*. 3rd ed.. Blackwell Publishing; 2006.
38. Miles, MB.; Huberman, AM. *An Expanded Sourcebook: Qualitative Data Analysis*. 2nd ed.. Sage Publications; Thousand Oaks, CA: 1994.
39. Hudmon KS, et al. The pharmacist's role in smoking cessation counseling: perceptions of users of nonprescription nicotine replacement therapy. *J Am Pharm Assoc* 2003;43(5):573–582.
40. Sleath B, et al. Asking questions about medication: analysis of physician-patient interactions and physician perceptions. *Med Care* 1999;37(11):1169–1173. [PubMed: 10549619]
41. Heaton PC, Frede SM. Patients' need for more counseling on diet, exercise, and smoking cessation: results from the national ambulatory medical care survey. *J Am Pharm Assoc* 2006;46(3):364–369.
42. Ashley MJ, et al. Pharmacists' smoking cessation practices: relationship to their knowledge and skills, attitudes, and perceptions of roles. *J Am Pharm Assoc* 2006;46(6):729–737.
43. Meyer R, et al. Documentation of smoking status in pharmacy dispensing software. *Am J Health Syst Pharm* 2004;61(1):101–102. [PubMed: 14725127]
44. Margolis JA, et al. Smoking cessation activities by pharmacists in east Texas. *J Am Pharm Assoc* 2002;42(3):508–509.
45. Maguire TA, et al. A randomized controlled trial of a smoking cessation intervention based in community pharmacies. *Addiction* 2001;96(2):325–331. [PubMed: 11182878]

Table 1

Description of interview and sample characteristics

	Total sample
Number of respondents, <i>n</i>	10
Sex	
Male	6
Female	4
Age range	
≤35 years	2
36–50 years	6
51–65 years	2
Pharmacy setting	
Chain	5
Independent	3
Supermarket	1
Mass merchandise *	1
Average daily prescription volume	
100–200	3
201–300	4
301–400	1
401–500	2

* Pharmacy located in a retail outlet that markets general merchandise, prescription drugs, household goods, etc. with a limited grocery selection.

Table 2

Codes, sub themes and themes identified (with examples from raw data)

Theme/sub theme	Example
Theme 1: Pharmacists' negative perceptions towards initiating tobacco-cessation discussion (10, 46)*	
Sub theme 1a: Pharmacists' expectation of negative responses from patients	
Fear of offending patients (9, 11)*	"Its just one of those things where you want to step lightly you don't offend someone, you know."
AAR will be perceived by tobacco users as nagging (6, 7)	"You know people get to the point where the, –you know, do they really want someone nagging? Yeah I know I should quit, I have tried."
Fear of tobacco users getting defensive (3, 5)	"But to tell them to quit, they get a little more, smokers tend to be a group that's a little more standoffish, you know", "Some are very defensive about it, so it could be hard to bring it up."
Sub theme 1b: Pharmacists' perceiving tobacco use as a sensitive issue	
Stigma/taboo (3, 4)	"So it's very, a, there is a stigma attached to it."
Choice (2, 4)	"I think we are treading on, a, personal choices."
Private matter (1, 1)	"Its like one of those things with religion and birth control you know, you want to respect their privacy."
Sub theme 1c: Pharmacists' assumption of negative interactions of patients with others (physicians, specialists and family members)	
Others are already badgering patients to quit (3, 5)	"You know the doctor already harps on them", "You know they have already been to the allergist, to the pulmonologist, do you want to be one more person lecturing them."
Physician has already accounted for drug and tobacco interaction	"You know what to be honest, I sort of think that the doctor has probably, a you know, taken into consideration when they prescribed it, you know, has made those modifications."
Theme 2: Pharmacist perceiving a rationale for initiating tobacco cessation (7, 22)	
Relevance of tobacco-cessation counselling to a tobacco user's medication/disease (6, 8)	"Patient is struggling with their asthma, getting chronically sick, you know then you might be able to worm it in", "With a birth control medication we mention it in passing", "If they just had their wisdom teeth removed, I am not going to ask them at this point."
Necessity/importance of discussing tobacco cessation (5, 13)	"Because right now the reason why I don't ask everyone is I don't think it's necessary. I understand its importance in health care but how am I going to use that information."
Having something to offer (1, 1)	"If it's a, it's, there is a new program or they can get incentive for something to get them interested."
Theme 3: Pharmacy environment (7, 19)	
Remembering to implement AAR (3, 4)	
Motivation of pharmacy staff (3, 3)	
Ability to track patient information on pharmacy computer (3, 3)	
Reimbursement for AAR (2, 2)	
Other (pharmacy busyness, lack of privacy, corporate approval, quick availability of referral resource, initiation of AAR by technician, computer-system prompts)	

Theme/sub theme	Example
Theme 4: Pharmacists' perception of prior knowledge of patients' willingness to discuss tobacco cessation/to quit (7, 15)	
Patient interest in discussing tobacco cessation. (5, 8)	"I think if I knew that there was somebody there who was interested, you know, it was brought to my attention, I would make the time or, you know say, why don't we talk about it further."
Patient readiness to consider quitting (5, 7)	"I don't want to beat on them but when they are ready, Boy I am there for them, if they are on the edge, 'I am thinking about it.'" "I like to let people you know approach me or bring it up to me first before I actually start really going with them", "Somebody is coming in and say I feel like crap, and then you could explore further, smoking could be one of them." (Note: initial in-vivo codes were converted to a theme)
Theme 5: Patient initiation of tobacco cessation/worsening health discussion (7, 11)	"I like to let people you know approach me or bring it up to me first before I actually start really going with them.", "Somebody is coming in and say I feel like crap, and then you could explore further, smoking could be one of them." (Note: Initial <i>in vivo</i> codes were converted to a theme)
Theme 6: AAR characteristics (6, 12)	
This theme consisted of the following in-vivo codes:	
Time required for implementation of AAR (6, 6)	
Ease of implementing AAR (2, 2)	
Benefit to patients (2, 2)	
Belief in AAR (1,1)	"You know, like anything else you got to believe in it."
Cost to implement AAR (1,1)	
Theme 7: Length of pharmacist-patient relationship/rapport with patients (5, 7)	"For someone who has been coming for a long time I am not going to ask", "With people, people that we know, people that we have a good rapport with, then we might just mention something in passing." (Note: initial in-vivo codes were converted to a theme)
Theme 8: Low expectations of patients (5, 7)	
Patients are in a hurry (3, 4)	"And at my store, patients too, always have a rush to leave."
Patients only want to get their medications (1, 1)	"...and patients too just, they just want to drop off and pick it up."
Patients want limited pharmacist involvement (1, 1)	"I am just coming here to get my prescriptions filled, I don't want to tell you anything else, that, kind of attitude is probably prevalent."
Theme 9: Pharmacists' tobacco-cessation related communication abilities (3, 5)	
Ability to phrase questions non-judgmentally/empathically	"It all depends on the manner of your question and how you are going to phrase that question to come across nicely", "So if you are sympathetic in saying yeah, I've heard its really hard to quit and they seem to have some connection, you know, are you on their side", "Trying to identify if now is the time without trying to be offensive, you know."

* The first number in parentheses indicates the number of pharmacists who commented on that theme/code and the second number indicates the total number of comments.