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Tobacco users' perceptions of a brief tobacco cessation intervention in community pharmacies

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Abstract

Objective—To explore factors affecting tobacco users' perceived appropriateness of a brief and proactive tobacco cessation counseling program, ask, advise, refer (AAR), at community pharmacies.

Design—Inductive thematic analysis.

Setting—Southern Wisconsin during fall of 2008.

Patients—24 tobacco users who had recently received brief and proactive tobacco cessation counseling at a community pharmacy.

Intervention—Semistructured telephone interviews conducted by primary author.

Main outcome measures—Perceptions of a brief and proactive tobacco cessation counseling program conducted at community pharmacies.

Results—In conducting the thematic analysis, eight distinct themes were identified. Display of information and resources at pharmacies for use by tobacco users as needed was identified as the most predominant theme and was found to be most helpful by many respondents. Other themes identified in decreasing order of prevalence were: tobacco users' perceptions of the role of pharmacists in health care, tobacco users' belief that smoking could interact with a current medication or health condition, tobacco users' sensitivity toward their tobacco use behavior or being told what to do, nonconfrontational and friendly approach of pharmacists, tobacco users' readiness to quit at the time of AAR counseling, tobacco user initiation of tobacco use discussion, and tobacco users' belief that tobacco use is bad.

Conclusion—Overall, this qualitative investigation suggests that several factors might influence tobacco users' perceived appropriateness of AAR counseling at community pharmacies. AAR might be well received by tobacco users and pharmacy patrons as long as it is done in a professional and respectful manner.

Keywords

Tobacco cessation; counseling (patient); public health; community pharmacists; perceptions

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Cigarette smoking is considered the leading cause of death in the United States. An estimated 19.8% of Americans are smokers, and cigarette use causes and aggravates various health conditions such as several types of cancers, cardiovascular diseases, and pulmonary diseases and can cause adverse reproductive health effects.^{1,2} Tobacco use also leads to billions of dollars in economic loss as a result of health care spending and loss of productivity.³ Assistance in quitting by health care providers has been proven as one of the most effective treatments for tobacco cessation and has been promoted by health care organizations and via clinical practice guidelines.⁴

Pharmacists are increasingly being recognized as having an important role in promoting tobacco cessation, given their expertise regarding medications and wide availability as a resource.^{5,6} They are available without an appointment at various locations in communities. For several years, pharmacy advocates have been encouraging pharmacist involvement in tobacco cessation interventions. Research strongly suggests that pharmacist-led tobacco cessation interventions in community settings are effective.^{7–10} However, providers' involvement in treating tobacco use, particularly that of community pharmacists, remains low because of a number of barriers.^{11–14} Lack of time has been consistently reported as a barrier.^{11,13–16} Accepting this barrier, pharmacy and health professions are now promoting adoption of a recently invented brief counseling approach called ask, advise, refer (AAR).^{6,17,18} AAR involves proactively *asking* patients whether they use tobacco, *advising* tobacco users to quit, and *referring* interested users to an intensive tobacco cessation program such as a state's telephone-based quit line.

Fear of offending or alienating patients has also been reported by providers as a barrier to discussing tobacco cessation with patients who smoke.¹⁹ Even among community pharmacists, previous qualitative and quantitative research indicated fear of offending patients and possibly losing "customers" as a primary reason for not counseling patients on tobacco cessation.^{20–22} Interviews of community pharmacists have led researchers to hypothesize that fear of offending patients would remain a key barrier, even with the briefer AAR counseling approach.

On the other hand, literature on patient perceptions of pharmacists suggests that tobacco users interested in quitting are generally accepting of tobacco cessation interventions provided by pharmacists.^{23–25} In Scotland, Coggans et al.²⁶ documented that 66% (n = 600) of the surveyed pharmacy patients agreed that they would be willing to discuss tobacco cessation with a community pharmacist. Brewster et al.²⁷ surveyed more than 2,000 Ontarians, one-third of whom thought their pharmacist would be a good source of tobacco cessation advice, while almost one-half said that they would be somewhat (25%) to very (20%) likely to seek advice from a pharmacist. Also, in one of the two studies conducted in the United States, Hudmon et al.²⁴ interviewed nicotine replacement therapy users who had either recently quit (75% of respondents) or were about to do so. A majority (63%, n = 103) believed that assistance or advice from a pharmacist would increase the chance of success in quitting. In the other study, of the 73 patients who completed a survey, those who smoked (n = 20) agreed or strongly agreed (85%) that pharmacies were the most convenient places for tobacco cessation programs.²⁵

Little research has assessed smokers' perceptions of tobacco cessation counseling by community pharmacists. Additionally, it appears that most of the previous studies have focused on tobacco cessation programs/interventions in response to tobacco users' interest or readiness to quit compared with unsolicited interventions proactively initiated by pharmacists/pharmacy staff.^{24,25,27}

Objectives

Given that AAR is a proactive counseling approach that involves promoting tobacco cessation among all tobacco users, even those who might not be interested, assessing tobacco users' general receptivity toward such an approach is imperative. We sought to explore factors affecting tobacco users' perceived appropriateness of AAR at community pharmacies. The themes identified and the resulting hypotheses generated in this qualitative investigation could further guide the development of successful AAR implementation strategies in community pharmacies.

Methods

To evaluate tobacco users' perceptions of AAR delivered by community pharmacists, the authors conducted an inductive qualitative study drawing on the principles of the grounded theory approach.²⁸ An inductive approach does not apply any preexisting theoretical framework; instead, it allows the data to lead to the generation of hypotheses and theoretical explanations. This qualitative study was conducted as part of a larger two-group randomized controlled trial that was implemented in a large community chain pharmacy.²⁹ Only tobacco users who received AAR counseling (in the experimental group pharmacies of the randomized controlled trial) were invited to participate in the qualitative study. Pharmacists in the experimental group were individually trained (to conduct AAR counseling) using model videos, scripts, and a single 30-minute training session by the primary author. For this qualitative study, the primary author conducted 24 semistructured telephone interviews with tobacco users using standard qualitative procedures.³⁰ The primary author had previous experience and training in conducting one-on-one interviews and focus groups. This study was approved by the institutional review board (IRB) at the University of Wisconsin–Madison.

Participant recruitment

Tobacco users who visited the experimental group pharmacies and received AAR counseling were invited to voluntarily call the primary author to participate in a 20-minute telephone interview. Because AAR is a new approach, the authors thought it best to interview only those tobacco users who had experienced this proactive approach. Pharmacy staff members participating in the experimental group pharmacies were instructed to distribute a study invitation flyer to all tobacco users who were counseled using the AAR approach. A \$25 gift card was offered as an incentive to all tobacco users who participated in the interview.

Sample size

A mixed method of convenience sampling and saturation sampling principles was used. The principle of saturation sampling, which is commonly applied in qualitative research, was used to determine the sample size for this study.²⁸ In this method, sampling is discontinued when no new themes emerge from the data being analyzed. As a result of IRB restrictions, the authors could not proactively recruit tobacco users to participate in the interview. Instead, participation was based solely on tobacco users contacting the primary author. After a call was received from an interested tobacco user, the author set up a time for the interview that was convenient for the caller and asked for the caller's telephone number to make the follow-up call to conduct the interview.

Interview guide

The structure and content of questions were based on the approaches of Patton³⁰ and Spradley.³¹ Consistent with principles of conducting qualitative interviews, the interview

guide consisted of open-ended and neutrally worded questions to avoid eliciting socially desirable responses. Additionally, appropriate nonjudgmental and nonleading probes were used during the interviews, such as nodding, voice cues such as the sound “uhm,” and phrasing such as “Could you tell me more about that?” The overall questioning style was modeled after Spradley’s approach, which starts with a broad (“grand tour”) question and is followed by more specific (“mini tour”) questions. The key questions asked during the interview were as follows: How appropriate do you think it is for community pharmacists to *ask* pharmacy patrons whether they use tobacco? How appropriate do you think it is for community pharmacists to *advise* identified tobacco users to quit? How appropriate do you think it is for community pharmacists to *refer* tobacco users to a quit line? These key questions were followed by appropriate nonverbal and verbal probes as deemed suitable to elicit further elaboration of the participants’ thoughts.

Data analysis

Data collection and analyses were conducted simultaneously to identify the saturation point. Data were analyzed using thematic analysis, which is a common analytical framework that is fundamental in qualitative research.^{32,33} Thematic analysis involves identifying patterns or themes within the raw data. All interviews were first transcribed verbatim and transcripts were subsequently verified for accuracy. Next, in conducting thematic analysis, the following steps were performed. (1) Codes were developed (defined as the most basic segments of the raw data that were relevant to the research objective). (2) Themes were identified (defined as a collation of similar codes to develop analytical categories). (3) All themes were reviewed and named by the primary author, followed by discussions with the second author. Coding was conducted independently by the primary author and a research assistant who was trained to conduct such analyses.

Study rigor

Several steps were taken to ensure methodological and analytical rigor throughout all stages of this qualitative study. Following careful development of the interview guide as described previously, the primary author conducted two pilot test interviews with current tobacco users to test the feasibility of the interview questions and the interviewing process logistics, such as the clarity of the phone recordings. Following the pilot interviews, the author conducted cognitive interviews with the pilot test participants to confirm validity of all interview questions and to obtain any other feedback from the participants.³⁴ Cognitive interviewing is a common technique used to verify that the interviewee’s interpretation of the questions and the purpose of the interview match that of the researcher. Next, the pilot interview data were independently analyzed by both coders. This helped train the research assistant for the main study’s coding process that followed.

During the study interviews, the investigator verified interpretive accuracy during all interviews by summarizing the respondents’ responses after each main question. This process is called member checking and is commonly used in qualitative research.³³ In naming the codes during thematic analysis, the *in vivo* coding method was used. In this method, codes are named using the respondent’s own words, as much as possible, with the goal of reducing any interpretive biases in naming.²⁸ As a final step, two nonparticipant smokers were recruited postanalyses to review all of the themes and indicate their level of agreement with the emergent themes.

Results

Interview and coding description

The author received calls from 36 eligible tobacco users. From these calls, interviews were conducted with the first 24 callers. All interviews were conducted within a day of receiving a call. However, the length of time between tobacco users' pharmacy visit and the interview was not determined. Length of the interviews ranged from 10 minutes to a maximum of 20 minutes (average 15 minutes). A total of 89 codes were identified (intercoder agreement 91%). Disagreement on codes resulted primarily from lack of identification of a code by one of the coders. Such codes were discussed by the authors and a consensus was reached. Additionally, the two nonparticipating tobacco users who reviewed all emergent themes at the end of the study were in agreement with the themes.

Sample description

All tobacco users interviewed were consuming tobacco in the form of cigarettes on a regular basis at the time of the study. "Regular tobacco use" was defined as smoking one or more cigarettes on all or most days of the week for the previous 30 days. The interviewees were predominantly women (82%) between 45 and 64 years of age (58%) who had completed high school diploma (62%). Of interviewees, 33% had some college education and one interviewee held a bachelor's degree. About 17% of interviewees were older than 65 years, and 25% were between 25 and 44 years. Approximately 70% of interviewees reported that they revisited quitting tobacco after their AAR experience at the community pharmacy. Of the 70%, about one-half had already received a follow-up phone call from the quit line and were in the process of setting a quit date. Overall, AAR was viewed in a positive light, with 15 (63%) interviewees reporting that it was appropriate for community pharmacists to conduct AAR counseling; however, 4 interviewees thought it was inappropriate and 3 were undecided.

Themes identified

In conducting the thematic analysis, eight distinct themes were identified. Thematic analysis can be presented in a number of ways. Below is a description of all themes in decreasing order of frequency. For themes with matching total number of interviewees, the theme with a higher number of total codes is ranked higher. The number of interviewees commenting on a given theme and the number of codes collated to form that theme are provided to illustrate the predominant themes that emerged from the inductive analysis.

Table 1 lists the various themes and codes that emerged during analysis, along with relevant excerpts from the transcribed interviews. The first number in the parentheses following each theme indicates the total number of comments (or codes) found throughout all interviews that related to that theme. The second number indicates the total number of interviewees that commented on that theme.

Display of information and resources in the pharmacy—This was the most predominant theme identified during thematic analysis of the data. Of the 24 interviewees, 10 reported that community pharmacies should display informational resources such as brochures, pamphlets, and signage seeking interested tobacco users while conducting AAR. This theme was commented on a total of 12 times throughout all interviews. Availability of information and resources was viewed positively because it presented the tobacco users with an option to further inquire about quitting resources if they were interested and informed them that AAR counseling was being conducted at the pharmacy.

Tobacco users' perception of pharmacists' role in health care—This was the second most commonly identified theme. Nine interviewees commented that counseling on smoking cessation was consistent with pharmacists' roles in health care. In total, this theme was commented on 17 times throughout all interviews. Two interviewees said that tobacco cessation counseling involving *asking* people about their interest in quitting and *advising* them was almost a duty of the pharmacist given their function in the health care system. However, in contrast, one interviewee expressed uncertainty about the pharmacists' knowledge regarding tobacco cessation. Another interviewee said that the role of discussing tobacco cessation was better suited to physicians because they can prescribe cessation medications.

Tobacco users' beliefs that smoking could interact with current medication or health condition—Nine of the 24 interviewees reported that AAR counseling by community pharmacists was appropriate because their medications and health conditions could be affected by smoking. A total of 10 comments occurred for this theme. Interviewees consistently expressed that they would want to ensure that their tobacco use was not making things worse while they were on medications. When probed, one interviewee mentioned that even if no immediate danger existed in terms of medication interactions, patients' tobacco use status could be helpful for the pharmacist for future reference.

Tobacco users' sensitivity toward tobacco use behavior and being told to quit—The next commonly identified theme was tobacco users' sensitivity toward the topic of their tobacco use. This theme was commented on a total of 10 times throughout the interviews, and comments were made by 7 interviewees. Interviewees reported their awareness of the risks of smoking and that they were constantly advised to quit by others. Two interviewees directly reported that they did not want the pharmacist to advise them to quit because they knew themselves that they should. In contrast, another interviewee was in favor of more people advising smokers to quit because he believed that it would further motivate smokers to quit.

Nonconfrontational and friendly approach by pharmacists—Five interviewees reported AAR by community pharmacists is appropriate as long as it is done in a friendly and "non-nagging" way. This theme was commented on a total of 16 times by the five interviewees. Interviewees emphasized that giving them options in a friendly and nonthreatening manner was the best way for pharmacists to promote tobacco cessation counseling in pharmacies. In this theme, some interviewees expressed appreciation toward the professional manner in which the pharmacists (conducting AAR as part of the study) had approached them.

Tobacco users' readiness to quit at the time of AAR counseling—The next commonly identified theme was related to how tobacco users' readiness to quit would impact their perception of the appropriateness of pharmacist-conducted AAR counseling. This theme was commented on five times by four interviewees. In general, these four interviewees agreed that tobacco users who are not ready to quit would perceive pharmacist-led AAR as less appropriate than those who are ready to quit at the time when AAR counseling is conducted by a pharmacist. One interviewee explicitly said that if she was not willing to quit at that time point, she would consider proactive AAR an intrusion of privacy.

Initiation of tobacco cessation discussion by tobacco user—The second-to-last most commonly identified theme was patient initiation. Four interviewees commented that advising and referrals would be more appropriate in cases where pharmacy patrons bring up their tobacco use behaviors and ask for help in quitting. This theme was commented on a

total of four times throughout all interviews. This theme can also be viewed as a subtheme for “display of information and resources in the pharmacy” because patients can initiate tobacco cessation discussion with pharmacists after they identify a display of available resources at the pharmacy.

Tobacco users’ belief that tobacco use is bad—Of the 24 patients interviewed, 3 reported that it is appropriate for pharmacists to conduct proactive AAR because smoking is a health-hazardous habit.

In summary, several factors affected interviewees’ perceptions of the appropriateness of AAR by community pharmacists. Overall, interviewees expressed positive attitudes toward pharmacist-led AAR counseling in community pharmacies. This research hypothesizes that the key factors contributing to the perceived appropriateness of tobacco users regarding pharmacist-led AAR counseling, in order of frequency, are as follows: (1) availability of visible information and resources at pharmacies, (2) tobacco users’ perceptions of pharmacists’ role in health care, (3) beliefs regarding possible interactions between tobacco use and tobacco users’ medications or health condition, (4) tobacco users’ sensitivity toward tobacco use behavior and being told to quit, (5) friendly and nonjudgmental approach of pharmacists in conducting AAR, (6) tobacco users’ readiness to quit at the time of AAR counseling, (7) initiation of tobacco cessation discussion by tobacco users, and (8) tobacco users’ beliefs regarding the harmful effects of smoking on their health.

Discussion

To the best of the authors’ knowledge, this is the first investigation assessing tobacco users’ perceptions of community pharmacy-based AAR counseling. Overall, the results of the qualitative analysis suggest that tobacco users would be receptive to receiving proactive AAR counseling at community pharmacies. This finding was encouraging and is in disharmony with pharmacists’ fear of offending patients by conducting proactive AAR counseling, as documented in the authors’ formative work.²²

One of the key themes conveyed that community pharmacists are considered a key component of the health care team and, as a result, expected to conduct health-promoting programs such as AAR in their pharmacies. This finding reaffirms previous evidence about the overall positive attitude of tobacco users toward pharmacist-led smoking cessation programs^{24,25} and asking patrons whether they smoke.^{23–25} Additionally, this is an encouraging finding given the push toward improving pharmacists’ involvement in tobacco cessation.^{6,35} Further, a few of the respondents were appreciative and said that AAR counseling reinforced the pharmacy’s commitment to patient health, indicating greater satisfaction with pharmacy services that is consistent with previous research.³⁶

The results of this qualitative investigation also indicated that pharmacists can use concrete strategies to facilitate tobacco users’ perceptions of proactive AAR counseling by community pharmacists as appropriate. Based on the key themes that emerged, community pharmacists (1) should offer/display availability of resources, for quitting and for triggering inquiry by interested users, (2) should be sensitive to tobacco users’ readiness to quit by being nonjudgmental and “nonpushy” during the steps of AAR counseling, and (3) could initially focus AAR on patients picking up prescription medications that are adversely affected by tobacco use.

Some of the themes that emerged during analysis are consistent with previous literature that studied smokers’ views of pharmacists’ tobacco cessation counseling.^{23–25} Tobacco users’ positive attitudes toward displaying quitting resources resonate with what has been observed

in previous tobacco-related²⁵ and other literature, such as osteoporosis counseling in community pharmacies.³⁷

Tobacco users' positive perceptions in this regard should be conveyed to pharmacists while training them for implementing AAR counseling. Training needs to provide pharmacists with an appreciation for what patients are receptive to, as well as more sensitive elements of the communication. Specifically, pharmacists need to tailor their encounter to the patient's stage of readiness. This is consistent with the finding that although patients overall were open to pharmacists *asking* about their tobacco use behavior, less agreement appeared to exist regarding the appropriateness of pharmacists *advising* tobacco users to quit.²⁵ Interviewees appeared sensitive to being advised to quit and did not want to be told what to do, especially when they were not willing to quit. Brewster et al.²⁷ found that smokers were likely to seek advice from pharmacists, second only to physicians. This finding is also consistent with another study that identified smokers' sensitivity to being advised as a possible barrier to successful patient–physician dialogue about tobacco cessation.³⁸

The overall positive perceptions found in this study suggested that some discrepancy exists between community pharmacists' perceptions of how AAR will be accepted by pharmacy-visiting tobacco users and the actual perceptions of tobacco users regarding AAR at community pharmacies. In our formative qualitative work, we found that community pharmacists were fearful of offending patients by conducting programs such as AAR at their pharmacies. In contrast, however, the results of this study suggest that tobacco users might be more accepting of AAR than pharmacists perceived. The key will be for pharmacists to anticipate and plan for their AAR programs in terms of visible information on AAR and being sensitive to the stage of readiness of the individual. A similar discrepancy in perceptions was reported by Assa-Eley and Kimberlin³⁹ regarding pharmacy-based services in general. Campbell et al. also found similar discrepancy in perceptions regarding smoking cessation between dental professionals and their patients.⁴⁰ This further reinforces the need for emphasizing patient perception research in conducting provider training programs.

Limitations

A few limitations should be considered when interpreting the current work. First, as is the case with most qualitative investigations, the results of this study cannot be statistically generalized. The purpose of this qualitative investigation was to conduct a hypotheses-generating exploratory investigation of tobacco users' perceptions of AAR counseling at community pharmacies. Second, nonresponse biases could not be assessed. Although it is possible that only tobacco users who had a positive experience at the pharmacy called to participate, the few negative and undecided responses strengthen our confidence in the identified themes. Other limitations include respondents being predominantly women, use of convenience sampling, and the study sample being limited to a specific geographic area.

Conclusion

Overall, this qualitative investigation suggests that several factors might influence tobacco users' perceived appropriateness of AAR counseling at community pharmacies. The findings indicate that AAR might be well received by tobacco users and patrons as long as it is done in a professional and respectful manner. Larger-scale quantitative and/or intervention studies should be conducted to explore the themes presented in the current work.

At a Glance

Synopsis: Tobacco users who received tobacco cessation counseling at a community pharmacy were interviewed to determine perceptions regarding the ask, advise, refer (AAR) counseling approach. Overall, the results suggested that tobacco users would be receptive to receiving proactive AAR counseling at community pharmacies, as long it is performed in a professional and respectful manner. Analysis of the interviews revealed eight themes; display of information and resources at pharmacies for as-needed use by tobacco users was the most frequently occurring theme.

Analysis: Based on the key themes emerging from the current work, community pharmacists are encouraged to display available resources to trigger inquiry by tobacco users interested in quitting and to be sensitive to tobacco users' readiness to quit by being nonjudgmental and unobtrusive during the steps of AAR counseling. Patients picking up prescription medications that are adversely affected by tobacco use could be initial candidates for AAR counseling. These findings suggest that community pharmacists' fears of offending patients by conducting proactive programs such as AAR may be misplaced.

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Table 1

Themes regarding tobacco users' perceived appropriateness of AAR counseling at community pharmacies

Theme rank	Theme/subthemes ^a	Excerpt from interviews
	Display of information and resources in the pharmacy (12, 10)	I'd like them to have a sign up, like, "Would you like to be smoke free?" Give them the info., tell them we're here if you need it.
	Tobacco users' perceptions of role of pharmacists in health care (17, 9)	They deal with medications and know about smoking and what it does to the body. They're in the same sort of field as doctors; they're a type of a health care provider.
	Tobacco users' beliefs that smoking could interact with current medication or health condition (10, 9)	Smoking has a lot to do with interfering with different medicines, so I feel that it is totally appropriate if they ask, especially if you're there for any kind of lung problem or emphysema or bronchitis medicines or things that have to do with the respiratory system.
	Tobacco users' sensitivity toward their own tobacco use behavior or being told what to do (10, 7)	I think because it's just kind of a personal thing. I would think it was an intrusion on my privacy and it's none of their business.
	Nonconfrontational and friendly approach of pharmacists (16, 5)	Don't nag somebody about it. I don't necessarily see it as being out of place, as long as they're not pushy.
	Tobacco users' readiness to quit at the time of AAR counseling (5, 4)	If I was going to smoke, I'd just continue smoking, but if I was quitting the smoking I might say, "Well, how can I go about doing that."
	Initiation of tobacco cessation discussion by tobacco user (4, 4)	If they want information on how to quit, I think it's appropriate. I think that's okay if somebody's asking what's the best way to quit.
	Tobacco users' belief that tobacco use is bad (3, 3)	It would be fine to broach the subject because it's negative against your body. It's still important because it's so bad for your health.

Abbreviation used: AAR, ask, advise, refer,

^aThe first number in parentheses indicates the number of interviewees who commented on that theme, and the second number indicates the total number of comments throughout all interviews.