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Exploring Online Asynchronous Counseling With Tobacco Treatment Specialists in the QUIT-PRIMO and National Dental PBRN HI-QUIT Studies: Who Uses It and What Do They Say?

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Abstract

Purpose—To describe the content of messages sent by smokers through asynchronous counseling within a Web-based smoking cessation intervention.

Design—Qualitative.

Setting—National community-based setting of patients who had been engaged by the medical or dental practices at which they attended or via Google advertisements.

Participants—Adults older than 19 years who were current smokers and interested in quitting. Participants throughout the United States referred to a Web-based cessation intervention by their medical or dental provider or by clicking on a Google advertisement.

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Opinions and assertions contained herein are those of the authors and are not to be construed as necessarily representing the views of the respective organizations or the National Institutes of Health. The informed consent of all human participants who participated in this investigation was obtained after the nature of the procedures had been fully explained.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Methods—We conducted a qualitative review of 742 asynchronous counseling messages sent by 270 Web site users. Messages were reviewed, analyzed, and organized into qualitative themes by the investigative team.

Results—The asynchronous counseling feature of the intervention was used most frequently by smokers who were white (87%), female (67%), aged 45 to 54 (32%), and who had at least some college-level education (70%). Qualitative analysis yielded 7 basic themes—Talk about the Process of Quitting, Barriers to Quitting, Reasons to Quit, Quit History, Support and Strategies for Quitting, Quitting with Medication, and Quit Progress. The most common theme was Support and Strategies for Quitting with 255 references among all messages.

Conclusion—We found rich communication across the spectrum of the quit process, from persons preparing to quit to those who had successfully quit. Asynchronous smoking cessation counseling provides a promising means of social support for smokers during the quit process.

Keywords

smoking cessation; tobacco treatment specialist; smoking cessation counseling; asynchronous communication; tobacco control

Purpose

Nearly 1 in 5 adults in the United States, or 42.1 million people, currently smoke cigarettes.[1] Quitting reduces the risk of smoking-related disease.[2] There is no best way to quit smoking as different methods work for different smokers.[3] Studies suggest that smokers benefit greatly from interpersonal communication during the quit process,[4] particularly when it includes social support that exhibits encouragement, caring, and concern.[5] In addition, personalized and intensive Web-based interventions potentially improve cessation rates.[6]

About 72% of US households currently have Internet access.[7] Because individuals are more frequently turning to the Internet for health information, it is a promising tool for interpersonal communication between patients and health-care professionals. The most frequently searched online topics include healthy living, locating health-care providers, and general health information.[8] Individuals who seek health information online are younger, have higher incomes, and are more educated than offline health information seekers.[9,10] In addition, patients of all racial backgrounds seem to be comfortable with seeking health information online and subsequently, dialoguing with providers about that information.[11] From the provider perspective, providers who validate their patients' quests for Internet-based health information typically receive higher scores in patient satisfaction.[12] Thus, the Internet offers health-care professionals expanding opportunities to interact with patients in novel ways, particularly in providing resources for smoking cessation.

Internet-based interventions for smoking cessation have been implemented since the early 2000s and have demonstrated effectiveness because of their broad reach, cost-effectiveness, and constant availability.[13] However, it is not clear whether cessation interventions delivered via the Internet are as effective as face-to-face counseling given the small sample size of previous studies.[14] Most Web-based interventions focus on self-management and promote but do not incorporate cessation counseling.[15] When cessation counseling is included as a

component of Web-based interventions, it is typically via face-to-face or telephone counseling.[16] The addition of an asynchronous counseling component to Web-based interventions may benefit smokers during a quit attempt by offering a convenient, interpersonal mode of communication to more smokers than could be reached in face-to-face or telephone counseling. Asynchronous communication involves secure messaging between a smoker and a tobacco treatment expert, usually initiated by the smoker at unspecified times. Asynchronous communication supports the delivery of counseling in a variety of settings and in a confidential manner.

Many smoking cessation studies have provided the opportunity for smokers and cessation experts to engage in asynchronous interpersonal communication, facilitating the quit process. Although some studies have included one-directional asynchronous communication, including the use of tailored, supportive e-mails[17,18] and text messages sent to users,[19] other studies have included some form of dialogue between users and cessation experts, such as providing tailored, expert advice,[20–22] providing a question and answer e-mail service,[23] and offering opportunities for online peer support.[24] Studies that incorporated one-directional asynchronous communication resulted in higher reported abstinence rates among users[17–19]; dialogue-based studies had either positive impact on cessation[20–22] or no impact on cessation.[23,24] Typically, opportunities to engage in asynchronous communication are included alongside more complex cessation interventions; the addition of an asynchronous component has had varying effectiveness in improving cessation or abstinence rates.[14] Although prior studies establish the utility of asynchronous communication, there has been little evaluation of the content of asynchronous communication delivered as part of a larger Web-based intervention. Understanding the content of messages can help inform the delivery of Web-based cessation interventions and asynchronous smoking cessation counseling by answering the following questions—Who uses asynchronous smoking cessation counseling? What types of questions do users of asynchronous cessation ask tobacco experts during the quit process?

Methods

Study Design

We conducted a qualitative review of 742 asynchronous counseling messages sent by 270 unique Web site users between June 2010 and January 2012. Individual messages were sent to one of the three certified tobacco treatment specialists (TTSs) within the context of two Web-assisted tobacco interventions for dentists (Hygienists Internet Quality Improvement in Tobacco Cessation [HI-QUIT]) and physicians (Quality Improvement in Tobacco Provider Referrals & Internet-delivered Microsystem Optimization [QUIT-PRIMO])[25]; a total of 761 Web site users had access to TTS counselors within the intervention. Frequency of messages was at the discretion of the user; some users sent one message, whereas others sent numerous messages. The Web site allowed users to send messages throughout the course of the intervention.

Tobacco treatment specialist training was conducted through the University of Mississippi Medical Center ACT Center for Tobacco Treatment, Education, and Research in Jackson, Mississippi in October 2008. This 3-day workshop provided preparation for certification as

TTS, was based on a cognitive behavioral therapy model and was designed for face-to-face counseling. This training provided a three-segment approach to cessation counseling, including instruction on how to assess progress, how to provide treatment for groups and individuals, and how to encourage the use of medication with tobacco users interested in quitting. From this training, TTS counselors in this project adapted educational approaches to use in online counseling, including how to improve motivation and maximize readiness for change; how to assess the tobacco user; primary behavioral and cognitive intervention strategies such a identifying personal cues that trigger tobacco use behavior, learning to anticipate situations likely to lead to tobacco use, and developing skills and strategies to manage smoking cues and urges; the use of pharmacotherapy and considerations for use; and how to maintain abstinence. Much of the information delivered in this TTS training program was based on recommendations from the Treating Tobacco Use and Dependence Guideline[4] as published by the Public Health Service of the US Department of Health and Human Services.

As described in the primary intervention manuscript,[26] patients entered the study through referral from a dental or medical provider participating in the larger intervention. Eligible patients were current smokers aged 19 and older, who were English-speaking and who consented to participate. At participants' first log-on to the site, eligibility was assessed, demographic characteristics and basic information were collected, including race, gender, age, education, current smoking behavior (number of cigarettes smoked per day), whether the participant had ever visited a smoking cessation Web site, current interest in quitting smoking, and quit attempts in the past 12 months. Participants were also allowed to choose between three TTS counselors to be their primary counselor on the site. A brief overview of each counselor's background and approach to cessation counseling was provided to assist participants in making a choice. Smokers completed an electronic informed consent during registration for the Web intervention.

Because training to become certified TTS is somewhat standardized, this review is limited to the content of messages sent by smokers to TTSs. Qualitative review involved interpreting the meaning of messages sent to TTSs and organizing them into overarching themes.[27]

Sample

Adults older than 19 years who were current smokers and interested in quitting were eligible for participating in the larger randomized controlled trial from which these data were derived. We recruited smokers from across the United States through 81 primary care medical practices, 51 general dental practices, and Google advertisements. Smokers who were referred by their medical or dental provider received a direct referral to the Web site. For Google advertisements, smokers who clicked on our advertisements were counted as referrals. As smokers logged onto the Web intervention, we were able to electronically track referral source.

Setting

Smokers could use the asynchronous communication feature for the duration of the intervention by clicking on a link from the homepage of the Web intervention. The Web site

was available via Internet access using any available desktop or laptop computer; no mobile application was developed for this intervention. This Web intervention is currently being used in several PCORI and NIH trials and a full description of intervention development was previously published.[28–30] The Web intervention was reviewed and approved by the institutional review board of the University of Alabama at Birmingham. There was no cost for participation to participants and the intervention itself did not generate any compensation for the Web intervention. Costs of development were covered by the grant.

Analysis

We conducted a narrative analysis of the 742 messages sent to TTSs by users of the intervention. Analysis included reviewing messages, coding messages, and discussing findings with other members of the research team.[31] The analyst then asked sensitizing questions (eg, What do the data indicate? What is its meaning to those involved? and What is going on here?) and made comparisons of the properties and dimensions of the data to help us reflect on their meaning as typically done in the grounded theory approach to qualitative analysis.[31] Although grounded theory techniques were used to analyze the data, the purpose of this analysis was not to generate theory but to explain the data by examining the emergence of codes and themes. We used this approach because it allows analysis to be driven entirely by the respondents' concerns.

Messages were analyzed using NVivo 9 qualitative data analysis software distributed by QSR International, Australia. The software was used to categorize data into themes. Two independent raters with experience in tobacco control reviewed the messages to identify themes. NVivo automatically numerates the occurrence of coded themes; each occurrence of a code is called a reference. The number of references for each theme was used to determine the top themes. Although discrepancies in coding were rare, when they did arise the two reviewers discussed and reached an agreement to adjudicate the discrepancy.

Primarily, the open coding process was used to organize themes that emerged from the data. Thoughts and ideas that were contextually similar or that had related meanings were grouped under "themes" during the open coding phase.[31] Themes were named based on the researchers' logic of how they represented the data.[32] Once themes were defined, each theme was developed in terms of properties and dimensions in order to differentiate one theme from another theme.[31]

To establish credibility and trustworthiness of the findings, we engaged in two methods of validation—peer debriefing and triangulation. Peer debriefing involves the external check of research through debriefing sessions.[33] For peer debriefing, the two independent raters discussed the results from the coding process with the research team and asked questions of the data, determined meanings of themes, and discussed interpretations. Triangulation is the process of examining different data sources and theories to provide supporting evidence.[33] In triangulation, we aligned the resulting themes with the transtheoretical model of change[34] which classifies behavior change into five different stages described as precontemplation (no intention to change behavior within the next 6 months), contemplation (intention to change behavior within the next 6 months), preparation (intentions to change behavior within the next 30 days and making preparations to change), action (changed behavior for less than 6

months), and maintenance (changed behavior for more than 6 months). Each theme that emerged from coding was organized into a corresponding stage from the transtheoretical model that was categorized as: Preparing to Quit (precontemplation/contemplation), Attempting to Quit (preparation), and Actively Abstaining (action/maintenance).

Results

The TTS counseling feature of the QUIT-PRIMO and HI-QUIT interventions was used most frequently by smokers who were white (87%), female (67%), aged 45 to 54 (32%), and who had at least some college-level education (70%); similar demographics were seen in non-TTS users of the intervention (88% white, 65% female, 33% age 45–54). Thirty-four percent of users who were offered TTS counseling participated. Most users of TTS smoked 1 pack of cigarettes or fewer per day (76%) compared with 81% of non-TTS users. About 8% of TTS users were heavy smokers of more than 2 packs per day, compared with 3% of non-TTS users. Only 24% of smokers in this study had ever visited a smoking cessation Web site. About 91% were interested in quitting smoking and 57% had made a quit attempt in the last 12 months. The majority of smokers in this analysis were referred by medical providers (57%), followed by Google advertisements (37%) and dental providers (7%). Smokers in this study sent an average of 2.07 messages per user (standard deviation = 3.75; median = 1; range 1–27).

Qualitative analysis yielded 7 basic codes or themes—Talk about the Process of Quitting, Barriers to Quitting, Reasons to Quit, Quit History, Support and Strategies for Quitting, Quitting with Medication, and Quit Progress. We further categorized these themes into 3 overarching themes that corresponded with the natural flow of quitting, guided by the transtheoretical model of change: (1) Preparing to Quit, (2) Attempting to Quit, and (3) Actively Abstaining. Preparing to Quit included messages from users during the early stages of their quit attempt and included basic themes of—Talk about the Process of Quitting, Barriers to Quitting, Reasons to Quit, and Quit History. Attempting to Quit included messages about Support and Strategies for Quitting and Quitting With Medication. Within this theme, smokers described the methods they were using for quitting and asked questions to TTSs regarding those methods. Overwhelmingly, the most common basic theme was requests for support and strategies in quitting smoking. Actively Abstaining included the theme Quit Progress, detailing updates from smokers on their quit strategies.

Preparing to Quit

Talk about the Process of Quitting—The Talk about the Process of Quitting theme included discussions of emotions, physical symptoms, and psychological aspects of the beginning stages of quitting. One smoker described her anxiety associated with her quit date along with the benefits she feels she would gain from quitting, noting “I am anxious about my actual quit date … but in a way I am also looking forward to being free of nicodemon.” Other smokers indicated difficulties they anticipated from quitting.

Smokers who communicated with TTSs often described their feelings about smoking during the quit process. One smoker indicated, “I’m doing good. It’s great not to smoke. I haven’t

posted because I'm not thinking about smoking much." There were 130 references to the theme Talk about the Process of Quitting.

Barriers to Quitting—Barriers to Quitting messages were centered on the circumstances or emotions the smokers felt would hinder their quit attempt, such as their love for smoking or fear of gaining weight. Of 742 messages, there were 88 references to barriers to quitting smoking. One of the most prevalent barriers to quitting was lack of motivation with 1 smoker describing her difficulty with quitting, writing, "I tried again and just couldn't get psyched up enough." Overcoming the habit of smoking was another barrier to quitting—with many smokers reporting difficulty with quitting around common everyday activities that involve smoking. For example, 1 smoker reported, "The hardest thing about quitting is coffee in the morning and after I eat meals." Enjoyment of smoking was also a common barrier to quitting smoking, with 1 smoker noting, "I enjoy it too much. It's my only vice." Many smokers also anticipated the cravings they might encounter while quitting. One smoker reflected on prior quit attempts where cravings were a problem, saying, "I have quit for 24 hours, 3 times this month … smoking addiction is more powerful than the drive to eat, sleep, or drink." Another barrier to quitting that was frequently reported includes the use of smoking as a stress/anxiety reliever, with 1 smoker describing the calming effect of smoking —"I tend to smoke to ease my nervous tension, and it gives me a calming effect."

Smokers who communicated with TTSs also reported dreading the withdrawal phase of quitting. As a final common barrier, many smokers believed their environment might pose a problem while quitting and cited lack of social support or being around other smokers as a significant barrier.

Reasons to Quit—Smokers discussed their reasons to quit smoking in 69 messages. The Reasons to Quit theme emphasized the primary motivations for this most recent quit attempt and frequently referred to quitting for a loved one (eg, children, grandchildren, husband who hates smoking). The most common reasons to quit smoking were to save money, for better health, and for their family's sake. One smoker expressed her motivation:

> I want to not put my daughter through what I went through, losing my mom. I am angry that she killed herself smoking and wasn't able to even see my daughter even once.

Another smoker noted,

> I have smoked since I was 12 years old. I am now 43 and am terrified that I will be diagnosed with cancer in the next ten years. I have a 4-year-old and a 6-year-old and I want to be here for them well into my 80s …

Many of the smokers were facing serious health concerns and were urged by their physician, dentist, or dental hygienist to quit. One user wrote, "I am scared to even take a puff. The doctor patched 3 holes in my heart. I am healing. No more smoking." Another smoker reflected, "I just got tired of the Dr telling (me) that I had to quit." Many smokers wanted to quit because of aesthetic reasons, such as the smell on their clothes or the effect smoking had on their teeth.

Quit History—This theme (25 references) encompassed discussions of smokers prior quit attempts, specifically the duration of quit attempts, number of previous quit attempts, and reasons for failed quit attempts. Thirty messages included descriptions of previous quit attempts. Few of the smokers indicated that this was their first quit attempt; most commonly, there had been numerous previous attempts. One smoker recalled multiple prior quit attempts, writing "I quit smoking last November after smoking on and off for 2 years. Before this I had been smoke free since 1989." A few smokers described a heavy smoking habit similar to this smoker who wrote:

> Currently smoking 2 packs/day. Used to smoke 3 to 4 packs per day prior to 6-month quit a year ago. Have used patch, hypnosis, Chantix, and "About.com" chat line. I find pleasure in smoking that is difficult to avoid. Have altered most other aspects of my life conduct to become mentally and physically healthier but cannot kick the smoking desire.

Some smokers described their current quit attempt as their final quit attempt, with statements similar to this smoker's—"This will be my first time quitting forever, but my second time quitting."

Attempting to Quit

Support and Strategies for Quitting—By far, the most common reason for corresponding with a TTS was to gain support from the counselor or to learn strategies for quitting smoking as represented by the Support and Strategies to Quit theme. For example, it was common for smokers to ask specific questions similar to this user who messaged, "What do I do when the urge hits and what do I do with bad feelings that come with quitting?" The Support and Strategies for Quitting theme was referenced 255 times among all messages.

Many smokers were concerned with how to begin a quit attempt. For instance, 1 user said, "How do I get started? Every time I go to set a 'quit date' I find excuses to postpone it." Some smokers requested tips for avoiding smoking in difficult situations. Smokers also contacted TTSs for help in increasing motivation to quit. One smoker noted, "I really want to quit smoking, but I can't find the motivation to do so. I feel I should be able to do it on my own and once my quit date comes (which is every Monday) I give in." Many users of the site also wrote about having accountability. For instance,

> Being accountable to someone else, even someone anonymous, helps keep me from even thinking about smoking. Thank you for responding to my emails and for providing tips to keep me smoke free.

Also common in this subtheme were learning to overcome urges to smoke, venting frustration in finding motivation to stay quit, and gaining encouragement and support for quitting. One smoker wrote, "I HAVE to stop! I can't breathe, but I go completely crazy without cigarettes. I've tried EVERYTHING! HELP!!!!"

The Support and Strategies for Quitting theme was further categorized into a subtheme that included questions from smokers about quitting. Thirty messages were included in this sub-theme. These messages generally asked TTSs specific methods that could be used for quitting. Smokers also were concerned with finding ways to avoid relapse, writing "I have

made several attempts to quit but seem to always go back when I am stressed. Can you help me?" Other smokers had general questions about the most effective way to quit, such as "What is the best way to stop?"

Quitting with Medication—Quitting with the use of medication was frequently discussed; 64 messages included references to this theme. Within this theme, smokers inquired about the cost and feasibility of using cessation medication during a quit attempt, sending statements such as "I am interested in trying the patches but cannot afford them." Similarly, 10 messages included questions about quitting *without* medication, where smokers discussed reasons for avoiding medication during a quit attempt. One smoker wrote:

> I have first thought of using a med named Chantix. It seems to be a good one. But, I am on too much meds now for blood pressure …

Some users of the system had questions about the use of natural remedies (herbal supplements and essential oils) as a means of quitting. Many smokers described side effects of using cessation medication. The most commonly reported side effect with prescription cessation medication was hallucinations and bad dreams. With the patch, smokers most often reported itching and irritation at the site of attachment. For the lozenge, the most commonly reported side effect was mouth sores. One user wrote, "I've tried Commit, which irritated my mouth, and reverted back to the patch."

Smokers who preferred to quit without the use of medication overwhelmingly did so cold turkey. One smoker wrote, "[I] have decided to do this cold turkey and am on my way on day 2." Two smokers indicated that they were using an electronic cigarette to help them quit. Smokers were also concerned about contraindications of cessation medication with other medications they are currently taking. For instance, 1 smoker wrote, "I am presently taking antibiotics for URI. Is it safe for me to take antibiotics with the Chantix or do I need to wait?"

Actively Abstaining

Quit Progress—During the process of quitting, many smokers provided updates of their most recent quit attempt since their initial asynchronous communication with a TTS (174 references). Within the Quit Progress theme (43 messages), smokers described their current method of quitting, including the use of cessation medication, tapering, and staying busy. Smokers also described the reasons for their most recent quit attempt, most commonly due to an upcoming event such as a birthday or surgery. One user explained, "I have moved it up 5 days. Once oral surgery is complete I'll be done with smoking."

Finally, within this theme smokers described how it felt to quit, both emotionally and physically. One smoker noted, "I am learning to take it easy and a day at a time." Other smokers described the struggle of wanting to quit but missing smoking. Within this theme, smokers also described how they were dealing with cravings. For instance, " … Drinking lots of water, eating well, and sleeping a bit more than usual" was described by 1 smoker. Additional examples of dealing with cravings included distraction, dependence upon NRT, and avoidance.

Discussion

Similar to prior studies, we found that the majority of users of asynchronous communication in our study were white, more highly educated, and younger. The majority of participants who used asynchronous counseling were light smokers. In addition, this user group was also motivated to quit, with over half having made a quit attempt within the year prior to using the intervention.

Smokers in this study were engaged in the messaging process and we found rich communication across the spectrum of the quit process, from persons preparing to quit to those who had successfully quit. The Treating Tobacco Use and Dependence Guideline recommends that providers counsel smokers to quit based on their level of readiness, using the 5 Rs to enhance motivation to quit.[4] The 5 Rs are used by health professionals to increase motivation to quit by focusing on “Relevance” for the patient to indicate why quitting is personally relevant, “Risks” to identify the potential negative consequences of continuing to use tobacco, “Rewards” to help the patient consider the benefits of quitting, “Roadblocks” to help the patient identify barriers to quitting, and “Repetition” to remind the provider to continue motivating patients to quit during future clinic visits with the patient. The content of counseling delivered in this Web-based format maps back to the “5 Rs,” including addressing why quitting is personally relevant, identifying the risks, rewards, and roadblocks of quitting, and repeating motivational messages within each subsequent message from a TTS.[4] Thus, this study supports the delivery of guideline-based counseling through asynchronous messages.

The findings of the study aligned with the transtheoretical model[34], classifying smokers into Preparing to Quit (precon-templation/contemplation), Attempting to Quit (preparation), and Actively Abstaining (action/maintenance). Prior studies based on this theoretical model have focused on stage transitions or moving individuals toward behavior change. The users of asynchronous communication in this study appeared to be more self-motivated to change their behavior, based on the content of their messages. Thus, the use of the transtheoretical model in interventions of this type may serve more to characterize than predict behavior change. Additionally, monitoring communication patterns of users in this intervention reflected the mental process that individuals undergo through the behavior change process and may inform the design of future cessation interventions. Specifically, the results of this study illustrate the most important topics for users of online cessation interventions. The content that addresses strategies for Preparing to Quit, Attempting to Quit, Actively Abstaining a quit attempt, and improving social support during a quit attempt should be made available within the context of a Web-based intervention. Future interventions could also incorporate real-world stories or testimonials of users in each of these categories as examples for users of the intervention.

This study had several limitations. The number of smokers communicating with the TTS was not especially high, but there was a sufficient number to reach theme saturation—the goal of a qualitative study. Also, there was only one Web-based platform for communicating with three different TTSs, potentially limiting the frequency of communication. Internet access was required for this study, which resulted in a biased sample that was not

representative of all smokers. According to the Pew Research Center, about 76% of all American adults used the Internet in 2010 when this study first began and the majority of Internet users were younger (compared with older adults), had a college education, and were white or English-speaking Asian Americans; men and women in 2010 were equally likely to be Internet users.[35] This helps to explain our nonrepresentative sample and its limitations in reflecting all smokers' perspectives during a quit attempt. Although TTS training was standardized, individual interactions between users of asynchronous counseling and TTS counselors were subject to wide variability in depth and frequency, largely at the discretion of the user. As previously described, users of asynchronous counseling experienced a wide range of interactions with TTS counselors from as little as one message to as many as 27 messages throughout the intervention. Thus, the data collected as part of the intervention did not fully reflect the range of each user's experience during a quit attempt. Although the qualitative data analysis methodology in this study used a grounded theory approach that allows for the emergence of themes within the data, other data management and analysis frameworks may have provided a more nuanced exploration of the content of asynchronous messages. For instance, using the framework method[36] would have allowed the research team to analyze the views of each participant within the context of their full account with TTSs so that the context of individual views were not lost; the framework method also structures the data such that a comparison and contrast could have been made across all TTS users.

Conclusion

Findings of this study support the use of online asynchronous counseling messaging with TTSs as a promising tool for white, middle-aged female smokers who are preparing to quit. Users of asynchronous communication within the context of this intervention relied on TTSs as a means of social support during the quit process, as suggested by the most common theme for messages was Support and Strategies for Quitting. Future studies of asynchronous counseling should focus on methods to engage a more diverse subset of smokers in Web-based counseling. In addition, a study assessing appropriate length of asynchronous counseling messages might suggest the potential of using other Web-based messaging platforms (eg, social media) to reach smokers.

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SO WHAT: Implications for Health Promotion Practitioners and Researchers

What is already known on this topic?

Quitting smoking reduces the risk of smoking-related illnesses. Internet-based interventions for smoking cessation have demonstrated effectiveness because of their broad reach, cost-effectiveness, and constant availability. Within these interventions, smokers and cessation experts have engaged in asynchronous interpersonal communication, facilitating the quit process. However, little is known about the users of and the type of information contained within asynchronous cessation counseling.

What does this article add?

This study revealed that the majority of users of asynchronous cessation counseling were able to engage in guideline-based counseling through asynchronous messages. This study demonstrates the utility of the Internet as a platform for the delivery of guideline-based smoking cessation counseling.

What are the implications for health promotion practice or research?

Asynchronous cessation counseling delivered over the Internet provides a medium through which smokers can engage with counselors during a quit attempt.