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Printed Educational Materials' Impact on Tobacco Cessation Brief Interventions in CAM Practice: Patient and Practitioner Experiences

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Abstract

Printed educational materials (PEMs) have long demonstrated their usefulness as economical and effective media for health communication. In this article, we evaluate the impact of targeted tobacco cessation PEMS for use along with a brief intervention training designed for three types of complementary and alternative medicine (CAM) practitioners: chiropractic, acupuncture, and massage. We describe how PEMs in CAM practitioners' offices were perceived and used by practitioners and by patients. Semistructured qualitative interviews were conducted with 53 practitioners and 38 of their patients. This analysis specifically focused on developing and distributing project-related posters and pamphlets in CAM practice. Our findings indicate that materials (1) legitimated tobacco-related expertise among CAM practitioners and tobacco-related conversations as part of routine CAM practice, (2) increased practitioners' willingness to approach the topic of tobacco with patients, (3) created an effective way to communicate tobacco-related information and broaden the reach of brief intervention initiatives, and (4) were given to patients who were not willing to engage in direct discussion of tobacco use with practitioners.

Keywords

printed educational materials; tobacco cessation; behavioral intervention; secondhand smoke; complementary and alternative medicine; impact of PEMs

Printed educational materials (PEMs) have long demonstrated their usefulness as economical and effective media for health communication, offering portability and flexibility preferred by patients (Bernier, 1993). Well-constructed visual aids have been as effective as telephone contacts (Emmons et al., 2013), and they offer memorable and

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Note

desirable methods of risk communication (Garcia-Retamero & Cokely, 2011). However, PEMs must be readable and relevant to the target audience (Hoffmann & Worrall, 2004). PEMs have been successfully used to initiate behavior change in various settings. PEMs targeting tobacco use, a leading cause of death worldwide, are disseminated in many health care settings. Tobacco cessation intervention, however, is not part of routine practice for many types of health care practitioners (Albert et al., 2005; Coleman, Murphy, & Cheater, 2000; Gordon et al., 2010). Fear of undermining the patient–practitioner relationship is a primary reason for reluctance to discuss tobacco cessation with patients (Coleman et al., 2000; Stead et al., 2013).

Theoretically, consideration of the impact of PEMs in this analysis draws on “social risk,” or the potential for damaging social or professional relationships, as crucial to evaluating both practitioners’ and patients’ responses to the distribution of tobacco-related PEMs in complementary and alternative medicine (CAM) practice. In a study of tobacco cessation brief intervention (BI) training for lay community member “health influencers,” Castañeda, Nichter, Nichter, and Muramoto (2010) found that physical material resources (i.e., PEMs or “tools”) served to mediate social tensions, allowing health influencers to engage in tobacco-related conversations with less fear of harming social relationships. Castañeda et al. (2010) found that providing PEMs served to increase health influencers’ confidence in offering a BI.

CAM practitioners are a growing presence in health care. Every year, more people report having used CAM therapies for both wellness and specific complaints and illnesses (Sibbritt, Adams, & Young, 2005). The 2007 National Health Interview Survey reported 40% of U.S. adults used some form of CAM therapy in the previous 12 months (Barnes, Bloom, & Nahin, 2008). Of those respondents who used CAM services in the prior year, 17.4% also reported current smoking (Hamm, Muramoto, Howerter, Floden, & Govindarajan, 2014; Hawk, Ndetan, & Evans, 2012). Studies in Europe and Australia report similarly high rates of CAM use (Murthy, Sibbritt, & Adams, 2015). Consultations with CAM practitioners should therefore be considered an opportunity for public health tobacco cessation outreach.

BACKGROUND

The CAM Reach (CAMR) study (NCI RO1 CA137375) was a 5-year project aimed at developing and testing the efficacy of a tobacco cessation BI training specifically designed for delivery in Chiropractic, Massage, and Acupuncture practice settings (Muramoto et al., 2014; Muramoto et al., 2016; Muramoto, Matthews, Ritenbaugh, & Nichter, 2015). In addition to tailored tobacco cessation BI training, CAMR intervention strategies included providing CAM practitioners with “environmental cues” (e.g., posters, pamphlets) and other PEMs to change patients’ knowledge and expectations of the benefits of cessation and establish CAM practitioners as legitimate cessation resources (see Table 1 for study overview).

During the formative research phase of the CAMR project, we conducted interviews with 11 CAM practitioners to gather input regarding intervention components targeted to CAM practices (Muramoto et al., 2015). In those interviews, practitioners reported that inclusion

of PEMs would be useful for approaching the topic of tobacco with patients. They were particularly interested in handouts describing links between tobacco and common presenting complaints among patients, such as pain, as well as information about tobacco cessation-related medications. Taking their concerns and suggestions into account, we created prototype versions of pamphlets and posters and distributed them to CAM practitioners for member check feedback about the appearance, wording, and presentation of the PEMs. We revised and created new materials (e.g., stickers for use on intake forms) based on practitioner comments.

In this article, we evaluate the impact of the targeted PEMs used in conjunction with a BI training designed for three types of CAM practitioners (chiropractors, acupuncturists, and massage therapists). There is significant heterogeneity among these three types of CAM practitioners with respect to their primary professional training, scope of practice, typical appointment length, and practice organization and workflow (Floden et al., 2015). We consider the role of PEMs in implementing a tobacco cessation BI, paying specific attention to how the materials affected practitioners' concern about negatively affecting their relationship with patients.¹ We explore how pamphlets and posters helped establish practitioners as legitimate conveyers of information with cessation training from a reputable source. We further consider how PEMs in CAM practitioners' offices were perceived and used by patients, including how they were passed on to patients' personal networks or provided a means of connecting patients to a tobacco quitline (e.g., Arizona Smoker's Helpline).

METHOD

During CAMR training, all enrolled practitioners were given PEMs to distribute to their patients. Practitioners participated in structured role-plays to gain familiarity with using PEMs with patients. All pamphlets and posters were designed to target patients and encourage them to talk to their practitioner about tobacco use. Project staff then visited practitioners regularly to resupply pamphlets and other materials. See Table 2 for overview of PEM contents.

Additional materials included seven different display posters, stickers with tobacco screening questions for intake forms, and chart stickers (to signify tobacco users). Display posters depicted a variety of images along with text encouraging patients/clients to ask their practitioner about quitting tobacco or secondhand smoke exposure.

This article presents the results of secondary analysis of semistructured qualitative interview transcripts collected over the course of each wave of practitioners' participation in the CAMR study. Based on these interviews with both practitioners and their patients, conducted up to three times (approximately 3-4 months, 6-7 months, and 9-12 months after training), this qualitative analysis focused on comments about the use of project-related PEMs in CAM practices.

¹We note that the CAM disciplines participating in the CAMR study customarily use different terms to refer to persons seeking their care. Chiropractors and acupuncturists usually refer to "patients," whereas massage therapists typically refer to "clients." For simplicity, we will use "patients" throughout this article.

Practitioner Interviews

Questions specific to PEMs in qualitative interviews included the following:

1. Have you had any positive and/or negative interactions with patients/clients? What advice/materials did you offer (referrals, services, medication handout, etc.)? How have you followed up/recovered?
2. How have the posters/pamphlets worked in making you more comfortable with bringing up tobacco? Have patients brought it up themselves?
3. What materials provided at the training were most useful? Least? Is there anything else you would like to have?

Practitioners who described their practice as “mobile,” meaning they travel to patient’s homes, were asked to elaborate on whether they travel with the materials and how they distribute them, in addition to questions listed above.

Practitioners were asked whether they used medications or e-cigarettes handouts. These questions were intended to gauge comfort level in discussing these topics, to check whether patients were asking CAM practitioners about them, and to assess how practitioners approached requests for information.

Patient Interviews

Questions specifically related to PEMs prompted patients to describe receiving them and using them in detail. Questions addressed (1) whether the patient was offered PEMs by their practitioner or picked them up themselves, (2) which materials they received, (3) whether they had used any services related to tobacco cessation as a result of receiving the materials, (4) how the materials affected their conversation with the practitioner, and (5) whether they shared the materials with others, with whom, and how the conversation went.

A total of 151 qualitative interviews with practitioners who completed CAMR training and their patients were audio-recorded and transcribed verbatim. Thematic codes were based on themes of interest and emergent themes identified in initial review of transcripts. Interviews were coded by a team of four project staff who worked simultaneously on the same transcript until they reached agreement about themes to be covered. This reliability procedure was intended to critically reflect on disagreements and improve analytical consistency, not to measure percentage of agreement (Armstrong, Gosling, Weinman, & Marteau, 1997; Pope, Ziebland, & Mays, 2000). Transcripts were coded using ATLAS.ti 7.0 qualitative data analysis software. Qualitative data were analyzed by a researcher not involved in the study design or coding process to reduce potential bias in results by bringing a new perspective on the data and reducing the potential for initial expectations to drive themes. Using thematically grounded qualitative analysis, the research team was attentive to both emergent themes and topics of interest related to practitioners’ and patients’ engagement with PEMs.

RESULTS

Although we asked whether practitioners found a particular handout most useful, no single pamphlet or poster was mentioned more commonly than others as particularly helpful in implementing the BI. Practitioners described choosing materials based on the patient's specific interests or complaints. Having a variety of materials allowed practitioners to tailor recommendations to patients' needs. A commonly reported use for the pamphlets was to inform without undermining or threatening established or newly forming practitioner/patient relationships. Handing a cessation pamphlet to a patient to think about and discuss when ready was seen as non-threatening and as reducing "social risk" when discussing a sensitive topic (Castañeda et al., 2010). The materials allowed practitioners to approach patients as credible sources of information and avoid provoking a defensive reaction from the patient.

Well, a lot of the times I'll just give them just a full range of pamphlets, so that they can read through them and see all the different things that smoking has been proven to cause. (Acupuncturist, 7 months posttraining)

Even the people that say "no," I don't want them to have overly optimistic ideas about where their care's gonna go if they're smokers, because it does have an effect on your healing. So even if they're not interested in quitting at all, I always give them the brochure that says "Smoking and The Effects on Your Body" because I want them to know that it's gonna affect their care. (Chiropractor, 3 months posttraining)

Patients expressed interest in pamphlets they received and described how visual reminders every time they entered the office affected their readiness to quit.

It's always there. It's always in front of you, but it's not being thrown at you, and nobody is beating you up with it, like you get so many places you go. It's just there, but everywhere you turn, it is there. It was done very tastefully, but it was just constantly on display everywhere you went, and it made you stop and think. Here I am, getting acupuncture, going through these health issues. Do I want to continue this pattern of lifestyle that I have been on? It just makes you ask yourself questions. (Acupuncture patient, 12 months posttraining)

PEMs available offered items of interest to a wide range of patients. For example, while patients who were smokers responded positively to pamphlets describing the connection between tobacco use and increased musculoskeletal pain, patients who were nonsmokers sought advice or suggestions for approaching significant others about exposing them to secondhand smoke.

If they show willingness to make any changes, I can come up with the material or a pamphlet right away. That readiness, that empowerment is very helpful, too. (Acupuncturist, 4 months posttraining)

Most practitioners reported having the PEMs available in waiting rooms or treatment rooms. Some massage therapists traveled to clients' homes for treatments. One, below, described the process of handing out pamphlets in a mobile practice. Massage therapists, even more than the other practitioners, reported awareness of whether their patients used tobacco because of

the nature of the treatment (close and prolonged physical proximity and contact). In this situation, the pamphlets offered a less power-laden means of raising the issue of tobacco use.

I leave them in my vehicle. At the end of the session if they wanna talk about it we can go over some stuff. Then I bring the pamphlets in and give them a rundown of what each one of them; what materials they have inside of them. (Massage therapist, 4 months posttraining)

Impact of Materials on Comfort and Feeling of Credibility

Many practitioners expressed concerns about their lack of expertise regarding evidence-based treatment of tobacco use. Several reported that their lack of tobacco-related personal experience and/or professional training prior to the BI training made them reluctant to address tobacco with patients. What PEMs offered, alongside the training, was a chance to talk to patients about tobacco without the requirement of being an expert on the topic. For many, training helped them feel more credible and capable of supporting patients' quit attempts. For others who still experienced apprehension, pamphlets and referral forms for tobacco cessation services allowed them to approach the topic of tobacco with patients and to refer those who were interested in quitting to "experts" in tobacco intervention.

I think it's very helpful because I feel more equipped. If they're wanting to make any changes, I can come up right away with, "Okay, I have this handout for you." It sounds like I know what I'm talking about. There is a follow-up to help. It's not just empty talking. (Acupuncturist, 4 months posttraining)

The use of PEMs allowed practitioners to provide some form of intervention to patients who were not ready to discuss their tobacco use. The pamphlets provide a concrete visual source of information, removing the need to commit in the moment and allowing patients to take the visual home to consider on their own time.

It's nice in conversation to say, "Oh, did you know this, this, this, this, and if you'd like I have a pamphlet that has all that information in it," so it's nice because they hear me, and then I have a visual of being to hand to them so they can read it later on and it reminds them of what I was talking to them about. (Massage Therapist, 4 months posttraining)

Impact of PEMs on Therapeutic Interaction and Quit Attempts

Even for patients who did not express interest in quitting, pamphlets often allowed practitioners to approach the subject of quitting tobacco without raising defensiveness in patients. PEMs provide avenues for offering support, information, and reasons to follow up with patients at varying stages of readiness to quit, as illustrated by Table 3.

In most CAM practices, PEMS were helpful in opening the door for conversation and follow-up. The presence of PEMs in practitioners' offices served to establish legitimacy and credibility when providing tobacco-related advice and referral.

Honestly, it's made me a lot more comfortable because I have something that backs it, instead of me just saying hey, by the way, did you know this? If I have something

in my hand that says, “Hey, this is—see? This is documented.” People tend to take that a lot more serious. (Massage Therapist, 4 months posttraining)

I had, I guess, one client she said, “I’m thinking of quitting, and I saw the poster, and it said to ask you, so can you help me?” I was able to give her brochures and then the ASHLine phone number and talk about some concerns she had and offer support and encouragement. (Massage Therapist, 7 months posttraining)

PEMs in Engaging Concerned Others (Patients’ and Practitioners’ Perspectives)

Several patients and practitioners reported that patients passed pamphlets and information from the study to tobacco-using friends, family, and coworkers. In addition to tobacco users, we recruited “concerned others” (Garrett et al., 1999) to participate in qualitative interviews (i.e., patients who reported interest in addressing their own secondhand smoke exposure and/or patients concerned for the health of tobacco-using friends or family members). This recruitment strategy was intended to assess whether PEMs distributed as part of the BI training could affect a broader community of tobacco users.

[I refer them to] The ASH Line ... and also, the materials in the office. It did happen a couple times that some family members saw those, and then they took the materials away to give to the person that smokes... . They ask me, “Can I take one? Do you treat smoke cessation patients?” Then that was a great chance for me to tell them about the [CAMR] workshop where I participated. (Acupuncturist, 7 months posttraining)

Patients passed materials on to friends, family, and coworkers for two distinct reasons. First, many were concerned about their own exposure to secondhand smoke and used pamphlets to intervene on their own behalf.

Well, I have tried to be pretty healthy as well. The fact that my husband smokes is pretty bothersome to me and he somewhat has been on the verge of trying to quit. Any other information, materials, anything that I can do to help that process, I definitely take it. (Chiropractic patient, 7 months posttraining)

Second, many were concerned about friends, family, or others who smoke. These participants expressed desire to intervene for the sake of others’ health, even strangers or people who lived far away.

My daughter’s co-worker. Evidently she did smoke. My daughter noticed that she was doing it more and more. She had taken one of my pamphlets to work for her. Her friend just cried and cried. I’m sure some of that was from losing her husband and that, but [my daughter] gave her pamphlet. She said, “No more cigarettes. It’s not what my kids need me to be doing.” I think it took her about two weeks to wean herself off of it. (Massage patient, 4 months posttraining)

Pamphlets served as a reminder to patients every time they entered their CAM practitioners’ offices. Participants explained that seeing the pamphlets every time served as a reminder to keep them thinking about quitting.

I did read them. I think it was two or three of them. I don't have them anymore. I did read through them. Like I said, it started me thinking about it, which I really wasn't before... It's all a part of it like coming up out in the open. Not out in the open, but just being—showing it in the face kind of like. That's what got me started on that path. (Massage patient, 7 months posttraining)

The practitioner quoted below described the process of offering materials and advice learned in the BI training to assist a patient in addressing secondhand smoke exposure and acting as a concerned other. When the patient expressed concern about her brother's tobacco use, the practitioner offered pamphlets as well as ongoing support as needed. After the family's intervention, the patient's brother sought care and tobacco cessation support from the practitioner.

I said, "Maybe you'd like to take a brochure. Maybe you'd like to gently hand it to him," and so she ... took the brochure home, and [her brother] took a look at it, and I discussed with her secondhand and third-hand smoke and I said, "What [he] is doing is not just affecting him and those in his household. It is affecting you because you go to see him," so throughout Thanksgiving, the family did a miniintervention. They did a gentle intervention, and [the smoker], who had smoked since a teenager and was 76, is now doing e-cigarettes, so he is making the change. He is trying. He is coming in. We are talking to him, and the whole family sent me a card in thanks, and she came in, and tears coming down her eyes, she said, "Thank you so much." She said, "It's true miracles that happen here." It was just beautiful, and what I did was exactly what Project Reach showed me how to do. (Acupuncturist, 7 months posttraining)

The practitioner describes feeling successful in implementing the BI, which increased her confidence in supporting a patient in a helping role for her family member. Although not all patients passed on brochures, many described the pamphlets as concrete and legitimate information to use as a nonthreatening entry into tobacco-related conversation.

CONCLUSION

Practitioners and patients reported that the presence and variety of informational materials was helpful to broach the subject of tobacco. While some practitioners preferred to give patients just a few relevant pamphlets to target their message, others gave tobacco users or interested patients the whole range of pamphlets to broaden the possibility that one would have an impact. This study was not designed to measure the direct impact of educational materials on quit attempts. Rather, this qualitative analysis describes the process of distributing pamphlets and posters as part of a BI training designed for CAM practitioners. Our findings indicate that (1) the presence of materials legitimated tobacco conversations as part of routine care and practitioners as knowledgeable in raising these issues and offering advice, (2) PEMs increased practitioners' willingness to approach tobacco with patients, (3) PEMs may be an effective way to communicate about secondhand smoke and broaden the reach of BI initiatives, and (4) some participants were more willing to be handed pamphlets for later use than to engage in direct discussion of tobacco use with practitioners.

Castañeda et al. (2010) use the phrase “social risk” to describe potential damage to personal or professional relationships in the act of challenging the values or behaviors of a significant other (cf. Nichter, 2008; Nichter, Quintero, Nichter, Mock, & Shakib, 2004). These authors found that social risk must be addressed by a tobacco cessation training to promote long-term impact. We found that PEMs developed as part of the CAMR study were used to deflect social risk, as Castañeda et al. (2010) report, and even those practitioners who remained hesitant to address tobacco with resistant patients were often willing to distribute materials, leaving a door open for patients to talk to them in the future.

Practitioners appreciated the visual reminder and sense of enhanced credibility offered by the materials, supporting evidence that PEMs can affect professional practice (Giguère et al., 2012). Patients reported passing pamphlets to friends and family even if they did not use tobacco themselves. Although the impact of passive dissemination of PEMs is considered to be minimal (Freemantle et al., 2000), this analysis of actively disseminated PEMs in conjunction with CAM provider training suggests that PEMs may enhance providers’ sense of credibility, willingness to approach patients about tobacco use, and ability to engage concerned others in tobacco cessation BIs.

These findings have important implications for the use of PEMs in conjunction with provider education. Regardless of their effectiveness when passively disseminated, PEMs may have value for deflecting social risk and encouraging providers to approach tobacco use. Future research should consider the impact of PEMs as part of multilayered personal network intervention: facilitating delivery of BIs, engaging concerned others in addressing tobacco use and secondhand smoke exposure, and on patients’ actual quit attempts. Furthermore, health promotion practitioners should consider the possibility of engaging CAM practitioners in tobacco cessation BIs as a means of extending the reach of cessation efforts beyond conventional biomedical health care settings.

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TABLE 1**CAMR Study Overview**

Study purpose	<ul style="list-style-type: none"> • Iterative process in which outcomes from each step informed and shaped the next step. • Tailored training for chiropractors, acupuncturists, and massage therapists to implement tobacco cessation BIs in their practice.
Aims	<ul style="list-style-type: none"> • Evaluate the effectiveness of the CAMR training by studying practitioner BI behavior and patient tobacco cessation activity. • Conduct a qualitative study with a subsample of enrolled practitioners and patients to examine factors associated with implementing tobacco cessation BIs.
Methods	<ul style="list-style-type: none"> • Training was a 1-day, in-person workshop and included a 1-hour in situ “practice patient” learning activity 1-2 weeks later. • Practitioners were provided tobacco cessation materials (pamphlets and posters) to display in their practices and distribute to their patients. • After the CAMR training, research staff visited practices every 2-4 weeks for 3 months to encourage practitioners to incorporate study patient materials and implement tobacco cessation activities into routine practice. • <i>N</i> = 99 practitioners (30 chiropractors, 27 acupuncturists, and 42 massage therapists) enrolled in the study. • <i>N</i> = 595 clients of enrolled practitioners participated in the study. • Of these participants, 54 practitioners and 38 patients were selected for qualitative interviews spread across all three practitioner cohorts.

NOTE: BI = brief intervention; CAMR = complementary and alternative medicine reach.

TABLE 2

Brief Description of Pamphlets Provided to CAM Practitioners in CAM Reach Study

<i>Pamphlet title</i>	<i>Description of contents</i>
Personal Quit Plan	Contains information, goals checklists, and space to create personal quit plan
Thinking of Quitting Tobacco? <i>We can help</i>	Offers information about (1) tobacco's toll on tobacco users' health and that of loved ones, (2) the many rewards of quitting, and (3) the money saved by not buying tobacco products. (<i>Specifically tailored to CAM practitioner type, i.e., "ask your chiropractor for more information"</i>)
Roadmap for Quitting Tobacco	Describes "roadmap for quitting" process: 1. Before you quit: START S = Set a quit date T = Tell family, friends, and coworkers that you plan to quit A = Anticipate and plan for challenges R = Remove tobacco products from your home, car, and work T = Talk to your pharmacist or doctor about getting help to quit 2. The day you quit: Recommendations for staying busy and active 3. After you quit: Planning for temptation and relapse
Benefits of Quitting Timeline	Timeline of benefits experienced from quitting tobacco from 20 minutes to 15 years
Medications That Help With Quitting Tobacco	Brief information about nicotine replacement and prescription cessation medications that are available to help with quitting and tips for how to be successful (including talking to doctor)
Secondhand & Thirdhand Smoke: Surprising Things You Need to Know	Describes secondhand and thirdhand ^a smoke and who is at risk
E-Cigarettes: Things You Need to Know	Provides information about what is currently known about: 1. What are e-cigarettes? 2. Are e-cigarettes safe? 3. Do e-cigarettes help in quitting?
Tobacco & Your Body: Surprising Things You May Not Know	Gives examples of effects of tobacco on: 1. Daily living (pain, allergies, musculoskeletal problems) 2. Musculoskeletal conditions (delayed healing, osteoporosis, etc.) 3. Respiratory conditions (respiratory infections, asthma, etc.) 4. Other major health consequences of tobacco
Helpers: Learning to Help Others Quit Tobacco	Includes quotations from former smokers and those concerned for others who smoke; Provides description of the helpers training program (Muramoto, Wassum, Connolly, Matthews, & Floden, 2010)

NOTE: CAM = complementary and alternative medicine.

^a Thirdhand smoke is described in the pamphlet as "a collection of chemicals left after a cigarette is smoked. These chemicals cling to smokers' hair and clothing, as well as carpet/rugs, upholstery, curtains, car interiors, and other surfaces."

TABLE 3**Role of PEMs in Support and Follow-Up at Various Stages of Readiness to Quit**

<i>If not ready to quit</i>	<ul style="list-style-type: none"> • PEMs provide a way to leave the door open for conversation • Practitioner can provide reading material and offer to have a conversation about quitting when ready
<i>If reluctant</i>	<ul style="list-style-type: none"> • PEMs gently describe benefits of quitting; relationship of quitting to presenting health problem (e.g., pain) • Validates tobacco discussion in relation to presenting health concern; establishes practitioner as a legitimate source of information
<i>If contemplating to quit</i>	<ul style="list-style-type: none"> • PEMs offer a nonconfrontational way to encourage quit plans and encourage quitting in a positive way • Practitioner can offer materials and follow-up in subsequent visits
<i>If ready/motivated to quit</i>	<ul style="list-style-type: none"> • PEMs give examples of things that have helped others, quit plans and how to overcome barriers, and information about further support such as quitlines and cessation medication to discuss with medical practitioners or pharmacists

NOTE: PEMs = printed educational materials.