UC San Diego
UC San Diego Previously Published Works

Title

Telephone Counselling for Pregnant Smokers: Essential Elements

Permalink

https://escholarship.org/uc/item/5tc4w5mn

Journal

Journal of Smoking Cessation, 2(2)

Authors

Cummins, Sharon E
Tedeschi, Gary J
Anderson, Christopher M
et al.

Publication Date

2007-11-01

Peer reviewed

Telephone Counselling for Pregnant Smokers: Essential Elements

Sharon E. Cummins, Gary J. Tedeschi, Christopher M. Anderson, Raechelle Quinlan-Downs, Patricia Harris and Shu-Hong Zhu

University of California, United States of America

Counselling pregnant smokers to quit is as difficult as it is essential. This article discusses a telephone counselling protocol designed to promote tobacco cessation among pregnant smokers. The protocol, validated in a large randomised, controlled trial, addresses three key elements of change for addictive behaviour — motivation, cognition and skill building — in ways tailored to pregnant smokers' unique needs. Details concerning scheduling, counsellor training and broader applicability are also presented.

Alicia is 28 years old and 3 months pregnant with her second child. Despite smoking throughout her first pregnancy, she gave birth to a healthy 7 lb 5 oz baby girl. When Alicia found she was pregnant this time she attempted to quit but lasted less than a day. Her boyfriend and her doctor have pressured her to quit smoking and have given her brochures about the health risks of smoking during pregnancy. Although Alicia feels guilty, she justifies her smoking: 'At least I stopped drinking. And I'm only smoking 10 a day instead of 20 like I used to'. For the third time this week, Alicia hears a public service announcement about the importance of quitting smoking. This one has a toll free number to call for help. She opens the brochure with pictures of a premature baby hooked up to tubes. She sighs, picks up the phone, and dials.

There are thousands of pregnant smokers like Alicia, ambivalently taking steps to get help. They appear in doctors' offices, health clinics and group smoking cessation programs, and they call telephone-based programs. What is the best thing to do when they present for treatment? In this article, we discuss a protocol designed for telephone counselling and empirically validated in a randomised trial (Zhu, Cummins, Tedeschi, Rosbrook, Koon-Kirby, & Anderson, 2007). We articulate the essential elements of this approach to working with pregnant smokers, and we discuss the unique context of pregnancy and its impact on motivation, cognition and skill building.

Smoking during pregnancy leads to a host of devastating health complications for mother and baby, before birth as well as after (Anderson, Johnson, & Batal, 2005; Castles, Adams, Melvin, Kelsch, & Boulton, 1999; Cnattingius, 2004; DiFranza, Aligne, & Weitzman, 2004; Monuteaux, Blacker, Biederman, Fitzmaurice, & Buka, 2005; U.S. Department of Health and Human Services [USDHHS], 2001, 2004). Beyond its profound personal effects on individual infants and their families, maternal prenatal smoking is expensive. The total excess health care costs in the United States attributable to smoking during pregnancy are estimated at $4 billion per year (U.S. Department of the Treasury, 1998). Moreover, maternal prenatal smoking and its damage are nowhere more concentrated than in low socioeconomic status populations (Centers for Disease Control and Prevention [CDC], 2001; Martin et al., 2005).

A recent Cochrane Review concluded that smoking cessation counselling is efficacious during pregnancy, although the 48 reviewed trials varied considerably in intensity and quality of the intervention and in effectiveness (Lumley, Oliver, Chamberlain, & Oakley, 2004). The review authors called on researchers to describe successful interventions in sufficient detail to allow for replication. This article provides details about a pregnancy-specific intervention designed to be delivered through a free, statewide telephone quitline, the California Smokers' Helpline. The counselling protocol was tested in a large, randomised, controlled study and found to be efficacious (Zhu, 2007).

Pregnant smokers who seek cessation help are typically those who find quitting difficult (Ussher, Etter, & West, 2006). Some pregnant smokers quit without seeking professional help, soon after discovering that they are pregnant (Solomon & Quinn, 2004). Our preg-

nant callers, however, report a number of challenges. Fewer than half have a spouse or partner. Many have no stable living situation or steady income. They may be facing unplanned pregnancies, compounding their stress. Some experience complications of pregnancy that limit their mobility. Add to that the fact that pregnancy itself can bring general fatigue, morning sickness, concern about weight gain, or the physical limitations of mandatory bed rest. The counselling approach that we have developed reflects both the challenged population that it was designed for and the challenging task of changing addictive behaviour. By discussing the conceptual components of this clinical protocol and providing examples of its use, we hope to add to the existing knowledge of how best to facilitate positive changes in the health behaviour of pregnant women.

Telephone Counselling

Many pregnant smokers want to quit but feel unable to (Ershoff, Solomon, & Dolan-Mullen, 2000). They may be cautious of popular and proven pharmacological aids such as medication (bupropion) and the nicotine patch, heeding physicians' and manufacturers' cautions about side effects on the baby. A more viable option for these smokers is behavioural counselling (Lumley et al., 2004).

Quitlines, sustainable and evidence-based (Fiore et al., 2000; Lichtenstein, Glasgow, Lando, Ossip-Klein, & Boles, 1996; Stead, Lancaster, & Perrera, 2003), can provide behavioural counselling to pregnant smokers in a broad public health setting. A number of factors make telephone counselling appropriate for pregnant smokers. First, quitlines reach diverse populations and are easy to access (CDC, 2004). Telephone-based services have a greater representation of minority, low-income, and low-education participants than do traditional clinic-based programs (Zhu et al., 1995). Accessibility is particularly important for pregnant smokers, whose mobility may be limited and who are likely to have childcare issues (Ussher, Etter, & West, 2006). Second, telephone counselling can begin immediately or soon after the initial call, when motivation is highest, unlike group programs that may delay service to gather enough interested participants. Third, telephone counselling is proven effective. Meta-analysis indicates that it increases a smoker's chance of staying abstinent by about 50% (Stead, Perera, & Lancaster, 2006). Fourth, because telephone counselling is conducted one-on-one, it can easily be tailored to individual clients (Zhu et al., 1996).

Theoretical Approach

The Helpline's pregnancy-specific protocol is informed by social learning theory. The application of social learning theory for telephone counselling of adults rests on three tenets: (a) smoking is a learned behaviour and can be unlearned; (b) in order to quit smoking, the smoker must be motivated and willing to take action and (c) counselling can help, whether through specific components such as skill building or through nonspecific components such as social support and accountability (Zhu, Tedeschi, Anderson, & Pierce, 1996). Our work with pregnant smokers led to another concept that shaped the pregnancy-specific protocol. That belief is that pregnancy represents a unique context for smoking cessation. As pregnancy progresses, women face social, physical, emotional, financial, and cognitive changes that may either hinder or facilitate the quitting process.

Implementation of the theory follows a combination of Motivational Interviewing (MI) principles and cognitive behavioural strategies. MI is useful for addressing ambivalence and increasing motivation. MI techniques also help to minimise client resistance and enhance the quality of the counselling relationship (Miller & Rollnick, 2002). Cognitive behavioural strategies focus on three main goals. First, counsellors help clients identify core beliefs. Second, they teach clients to systematically challenge problematic beliefs, such as the notion that quitting smoking is impossible. Third, they encourage clients to replace problem behaviours with new, more adaptive ones (Beck, Wright, Newman, & Liese, 1993). Cognitive behavioural strategies are particularly useful for developing a specific plan of action (Brown, 2003; Perkins, Conklin, & Levine, 2007; Zhu et al., 1996).

The Counselling Protocol
Protocol Basics

The protocol is structured (manualised) yet flexible. It specifies topics and provides sample questions but leaves topic order and degree of emphasis to counsellors' discretion, to facilitate tailoring to the individual client. The protocol was developed after a thorough review of the literature, discussions with experienced counsellors, and most importantly, many years of work with pregnant smokers. Pregnant smokers, like other smokers, need help with motivation, cognition, and skill building to successfully face the challenge of quitting. Although these are topics basic to any behaviour change, they take on new meaning within the unique context of pregnancy.

Schedule of Calls and Materials

The tested protocol included one comprehensive pre-quit call lasting on average 35 minutes, five 10–15 minute follow-up calls to help prevent relapse, one 15–20 minute prebirth call to plan for remaining smoke-free postpartum, and two additional 5–10 minute postpartum calls. After clients initiated contact with the Helpline, counsellors made all subsequent calls. Following the initial screening, all clients received a self-help booklet about

quitting during pregnancy and fact sheets on second-hand smoke and quitting while pregnant. During the pregnancy, clients also received additional mailings at 4.5 months, 6 months, and 7.5 months gestation. These included a pamphlet on pregnancy facts, a refrigerator magnet and a social support planning worksheet. Clients also received a congratulatory card after the birth and a 1-month postpartum brochure with tips for parenting newborns. This combination of materials served to remind clients of their commitment to quit smoking and of the availability of the Helpline as a resource.

The Role of Motivation

Motivation is an essential component of any sustained behaviour change and is particularly important in the treatment of addictions (Miller & Rollnick, 2002). Many of our pregnant callers state that they are calling because someone else (e.g., a doctor or spouse) wants them to quit. Insistence from others to quit smoking can engender defensiveness (Ussher et al., 2006). As a result, counsellors of pregnant smokers may need to spend more time on the issue of motivation and to be patient in developing a plan of action. The reason for quitting may be obvious, but sustaining the motivation to quit can be quite complex.

Teachable Moment

Pregnancy is a 'teachable moment' for smokers; this life transition is a window of opportunity. Women are more likely to quit during pregnancy than at almost any other time in their young adulthood (Coleman & Joyce, 2003; Haug, Aaro, & Fugelli, 1994; Solomon & Quinn, 2004). At the same time, it is important to remember that most pregnant smokers are ambivalent about quitting. Protecting the health of the baby is a compelling reason to quit, but there is also a high perceived cost associated with giving up smoking (e.g., loss of an important coping strategy). Moreover, we learned from some of our clients that they had a hard time seeing the baby as real. The baby was more of an abstraction than a real presence, so the possibility of harm seemed remote and was sometimes outweighed by the desire for immediate gratification from smoking. Discussing developmental milestones, such as seeing the sonogram and feeling movement for the first time, makes the baby more real, which in turn makes quitting more salient.

Misunderstanding Health Risks

Some pregnant clients may not fully grasp the heath risks of smoking. One woman, having heard that smokers are more likely to have low birth weight babies, voiced the thoughts of many of our pregnant smokers: 'But I don't want my baby to get too big! Won't he have an easier time being born if he's small?' Counsellors educate clients about problems associated with low birth weight and encourage quitting smoking as a way to help the baby reach optimal weight.

Other pregnant clients may believe that the reported harmful effects on the infant are exaggerated. Many women rely on direct experience with smoking and pregnancy (Abrahamsson, Springett, Karlsson, & Ottosson, 2005; Dunn, Pirie, & Hellerstedt, 2003; Dunn, Pirie, & Lando, 1998; LeClere & Wilson, 1997). They may defend current smoking by stating that their previous pregnancies were problem-free despite smoking. Women in a first pregnancy may recall friends and family members who smoked throughout pregnancy with no negative effects. Rather than arguing, the counsellor reflects the dilemma: on the one hand the client wants to do whatever it takes to give her baby a healthy start; on the other hand the client knows of cases where a mother's smoking had no apparent consequence and thinks maybe she could be lucky as well. Presenting the contradiction in a neutral manner often strengthens motivation. Without needing to defend their smoking, women can then admit that they worry about the negative impact on their child. Counsellors can capitalise on the insight by reinforcing this maternal protectiveness.

Reluctance to Change

Some women who do understand the consequences of smoking during pregnancy find ways to justify their behaviour because smoking has utility. Like Alicia, whose story opened this article, a woman may try to assuage her guilt about smoking by telling herself that she has reduced her cigarette intake, that she is at least not using alcohol, or that she needs to smoke to avoid stress, which she sees as more damaging to the infant (Abrahamsson et al., 2005; Dunn et al., 1998). These rationalisations may make women unlikely to seek help or, if they enter treatment, less receptive to intervention. Helpline counsellors strive to remain nonjudgmental and supportive and to avoid inducing guilt. Their efforts facilitate a rapport with pregnant smokers that will minimise reluctance and maximise the possibility of effective intervention.

Loss of Control

Some pregnant clients feel a loss of control over their quitting process. Pregnancy imposes a timeline. Planned or unplanned, the pregnancy creates a significant reason to quit that did not exist before. For some it is a welcome push; for others it marks a loss of control over personal decision-making. Feeling forced into quitting prematurely can wreak havoc with motivation. Counsellors ask 'If you weren't pregnant, would you be quitting?' to explore the impact of pregnancy on the timing of the quit attempt and on the client's level of readiness.

Other control issues arise from the fact that pregnancy is not experienced in isolation. Friends, family and doctors have an investment in the outcome, and the pregnant woman may experience their investment as a loss of control. Even women with strong support

systems can have difficulties if they perceive expressions of support as nagging. Although this involvement provides just the boost that some women need, others feel guilty or resentful and become defiant, resistant or overwhelmed. Family and friends may also minimise the problem of smoking during pregnancy, making it difficult for clients to find support for quitting (Dunn et al., 2003). To enhance motivation, counsellors engage pregnant clients in discussion of positive and negative aspects of others' involvement.

Ambivalence

Because motivation to quit during pregnancy is complex and can be undermined by ambivalence about quitting, counsellors address these issues early and often. The counsellor's job is to help bolster the client's desire to quit amidst the various impediments to motivation. A thorough assessment of reasons and intentions to quit, confidence and skill level is necessary to determine when there is sufficient motivation to proceed to planning. Fear of failure, worries about coping, belief that smoking does not jeopardise the baby's health or rationalisation that cutting down is sufficient to minimise harm all lower motivation and can take counselling in different directions. Counsellors use MI strategies to help clients address ambivalence and boost motivation. Counsellors also ask clients to discuss what they like and dislike about smoking. This cost–benefit analysis brings ambivalence to the surface, helps counsellors assess readiness to quit, and provides insights used later in the quitting plan. In addition, counsellors may ask clients to picture their lives when the baby is born and to describe how cigarettes fit or do not fit with that image. Counsellors refrain from trying to 'give' clients the motivation to quit smoking. Rather, they ask evocative questions like, 'If you don't quit smoking, what concerns do you have?' or 'How do you think things will be better after you quit?' When clients answer questions like these, they begin to hear themselves make their own argument for change (Miller & Rollnick, 2002). Once clients' motivation is sufficiently strong, they can move on to other parts of the protocol that focus more on perceptions about quitting smoking and on behavioural planning.

The Role of Cognition

Behaviour change is easier to sustain if clients understand the connection between their success and their thoughts (Brown, 2003). Counsellors help pregnant smokers succeed by working with them to develop ways of thinking that build confidence, maximise motivation and increase coping.

Self-Efficacy

If smokers do not believe they can succeed in quitting, they may not try in the first place. If they do try, they may fail to persist when quitting becomes difficult.

Self-efficacy, the perception of one's ability to change (Bandura, 1997), is shaped primarily by experience; thus, smokers who have tried to quit and failed may have low self-efficacy for success. Rather than accept clients' negative evaluation of their abilities, counsellors reframe previous attempts at quitting, including those made during other pregnancies, as learning experiences and successes. Counsellors also attempt to bolster self-efficacy for the current quit attempt by helping clients identify and change self-defeating thoughts. As part of creating a quitting plan, counsellors and clients work together to replace negative thoughts with more adaptive ones. For example, a client who says, 'I'm such a failure' can learn to replace that negative thought with, 'I've practised a lot and now I can use what I learned to make it work this time'. Planning itself can further boost confidence. It provides a reassuring guide to quitting by identifying triggers and generating coping strategies. Planning also implicitly communicates the counsellor's confidence in the client's ability; it implies that the client's previous relapses were due only to a lack of planning, not to any lack of ability.

Deprivation Mentality

In our experience with pregnant callers, it appears that many put their energy into meeting the needs of others and feel guilty when they address their own needs directly. This may be due to their limited resources, challenging circumstances, and/or limited experience of support. Regardless, as more demands are made on their time (with a baby and maybe other children or a partner competing for attention) they may feel increasingly deprived, which may prime them for relapse. Without recognising the build-up of stress and resentment, they may abruptly begin to think, 'I deserve a cigarette. It is my reward for all that I have given up'.

Further, we found that feelings of deprivation may arise from concern for the baby. Health care providers advise giving up many things the pregnant woman may have enjoyed or counted on — not only cigarettes, but also alcohol, caffeine and most drugs. Even hot baths are discouraged, as they can raise internal temperatures to dangerous levels. Friends and family may focus on the baby so much that the client feels unimportant, which can strain relationships and lower support. Since these negative consequences can increase the probability of relapse, counsellors work on changing the deprivation mentality. The social support section of the protocol guides counsellors in assessing whether clients are feeling deprived of basic needs for food, rest, friendship and fun. If there are unmet needs, counsellors explain the connection between deprivation and relapse, encouraging clients to place their own needs high on their list of priorities. Many clients require further work to learn to ask for help from others and to find appropriate ways to protect their time and energy.

Guilt

Many pregnant smokers feel guilty because they recognise the harm that can result from continuing to smoke. To the extent that guilt provides an impetus for change, it can be useful. However, guilt is sometimes used as 'penance' for smoking, which may subtly give permission to continue the behaviour (Irwin, Johnson, & Bottorff, 2005). Clients who feel guilty may reject help or may lie about their smoking status, making it difficult to provide the help they really need. Guilt is uncomfortable and clients may cope with it as they do with other uncomfortable feelings — by smoking. Women who appear indifferent to the effects of smoking while pregnant may instead be feeling guilty. They may have trouble reconciling their smoking with their desire for a healthy baby. They may see quitting as a painful declaration that they have done something wrong. Instead of using the discomfort to deepen motivation to change, they can end up rationalising their smoking. Counsellors remain alert for signs of guilt in its many manifestations. If there is any indication that guilt is preventing a client from moving forward, counsellors confront this topic directly. They let clients know that such feelings are common but also point out if the client appears to be using guilt as an excuse to keep smoking.

Attribution

Many women who quit smoking during pregnancy attribute their success to the pregnancy rather than to their own cognitive and behavioural changes. Certainly, some women quit smoking in the early part of pregnancy because they suffer from morning sickness and the smell of cigarettes makes them feel ill. However, morning sickness is often confined to the first trimester, making physical illness an unlikely explanation for abstinence throughout pregnancy. Usually, women who say they were able to quit because of the pregnancy mean that they were motivated to change their behaviour because of the potential harm to the baby. If the client is able to acknowledge that her own change in behaviour was instrumental in bringing success, her self-efficacy will rise. If she does not give herself this credit, she will not realise that she has skills that she can use to stay quit. This underestimation of ability places her at risk for relapse after the baby is born.

To address attribution, counsellors start by acknowledging the importance of pregnancy in increasing motivation. They then help clients take credit for the choices they make and the behaviours they change that support quitting. For example, while quitting, a pregnant woman may avoid socialising with other smokers to minimise the cues to smoking. She may endure cravings by reminding herself about their fleeting nature. Because quitting is so important to her, a pregnant woman may utilise her support systems in a way that she never did in previous quit attempts. By encouraging clients to attribute success to themselves, counsellors can help to increase clients' intrinsic motivation over time. This is especially important because more intrinsic motivation, as opposed to extrinsic motivation, is associated with sustained postpartum abstinence (Curry, McBride, Grothaus, Lando, & Pirie, 2001).

Cognitive Shift

Even among smokers who quit for the duration of pregnancy there is a high rate of relapse after the birth (Dolan-Mullen, 2004). Some women return to smoking immediately after giving birth, despite the long period of quitting success, because they never intended to remain abstinent. For example, one client asked her sister to meet her with a pack of cigarettes as she left the hospital; her period of enforced abstinence was over. However, many women who do intend to remain abstinent also relapse. There appears to be a cognitive shift in the early postpartum period in which they give themselves permission to smoke again. This issue is hard to address with pregnant clients. Most find it difficult to imagine how they will feel about smoking after they give birth. The counsellor can predict the cognitive shift as a paradoxical strategy. For instance, the counsellor might say, 'After the baby is born, you may notice yourself thinking, "Hey, I can smoke now"'. This approach is intended to heighten awareness so that appropriate strategies can be included in the postpartum plan. There is some risk that the prediction might inadvertently normalise postpartum relapse. However, it is more likely to support abstinence once the baby is born.

Positive Expectancy

If a pregnant client holds the positive expectancy that smoking will enhance her sense of wellbeing, she is more likely to relapse (Bandura, 1997). Many smokers can identify the way they use cigarettes: to relax, to deal with strong feelings, to take a break or to stay alert. If a smoker quits during pregnancy but continues to value cigarettes for these purposes, she is more likely to take up smoking again. Counsellors help clients identify their positive expectancies and appropriately challenge the accuracy and usefulness of these beliefs. For example, a woman may be encouraged to replace the phrase 'I needed to smoke after a fight with my fiancé' with 'I chose to cope with my feelings by smoking, but it didn't really help solve the problem'. Counsellors also encourage clients to create new beliefs early in the pregnancy, adaptive thoughts about coping without cigarettes, to inoculate them from expectancies that might lead to postpartum relapse.

Self-Image

The adoption of a nonsmoker self-image can help to prevent relapse (West, 2006; Zhu et al., 1996). This involves a shift from thinking of oneself as an abstaining

smoker, who might smoke again, to thinking of oneself as a nonsmoker, for whom smoking is never an option. Even when clients successfully quit smoking, there is a time lag before their self-image shifts and nonsmoking behaviour becomes automatic. For many, the smoker self-image has been integral to their identity; for example, it may proclaim that they are rebels, free spirits or independent women. Since clients may not be fully aware of how integral smoking is for them, the counsellor helps the client become conscious of the degree to which smoking contributes to her identity. This enables the client to develop other ways to fill identity needs, to cope with the loss of the smoker self-image and to embrace a new, nonsmoker self-image. If the client's self-image does not change, she remains more vulnerable to relapse.

A pregnant woman faces another shift in self-image as she develops or modifies her parenting identity. This counselling protocol capitalises on the parallel development of the nonsmoker and parenting identities, so that each shift furthers the other. As the parent and nonsmoker identities solidify, they provide a valuable contribution in freeing the individual from daily or hourly struggles over whether to smoke. Counselling can help the client connect her image of herself as a parent with the goal of staying abstinent. This discussion increases the discrepancy between smoking and being the parent she wants to be. Counsellors have clients imagine the role that smoking will play in their future. Clients may imagine either needing to protect their child from their second-hand smoke, or being able to look at their healthy child and congratulate themselves for being nonsmokers.

The Role of Skill Building

Developing effective coping strategies is part of any good plan for quitting smoking. Many pregnant smokers face multiple stressors daily but lack the coping skills to persevere without smoking. These skills centre primarily on handling the emotional aspect of quitting during pregnancy, but also include strategies for behavioural change.

Mood Management

Sharp fluctuations in hormones can cause considerable mood instability during pregnancy and postpartum. Withdrawal from nicotine also negatively affects mood, with spikes in irritability and fatigue. One of the most common reasons that smokers give for relapse is negative affect (i.e., low mood) (Piasecki, 2006; Shiffman, 2005). Research has also shown that smokers with a history of depression have more difficulty quitting than those with no such history (Burgess et al., 2002; Zhu & Valbo, 2002). This makes mood an important topic to discuss when counselling pregnant women to quit smoking.

Counsellors start by assessing the client's history of mood instability. They ask about symptoms of premenstrual syndrome, which have been associated with risk of postpartum depression (Sugawara et al., 1997), and

about depressive episodes, including symptoms, frequency, intensity and duration. Counsellors also assess confidence in dealing with moods without smoking. The counsellor's assessment serves three purposes. First, it alerts the counsellor to potential problems beyond the scope of quitline work. If there are any concerns about a woman's use of mood stabilising medication, her history of depression or her potential for postpartum depression, the counsellor refers her to her medical doctor for follow-up. Second, it allows the counsellor to normalise the fluctuations of mood during pregnancy and cessation so that the discomfort does not sabotage the effort to quit. Third, it provides a segue into concrete planning for mood management when quitting. The planning includes cognitive and behavioural strategies and the development of social support.

Social Support

Although people generally understand what *social support* means, the construct is multifaceted. Support can be natural or imposed, practical or emotional; it can refer to an actual network of people or simply to a perception (Vaux, 1988). Social support consistently emerges as an important predictor of success in quitting smoking (Gulliver, Hughes, Solomon, & Dey, 1995; Murray, Johnston, Dolce, Lee, & O'Hara, 1995; Roski, Schmid, & Lando, 1996). Yet many pregnant smokers' social networks are made up of other smokers; clients express concern that quitting may threaten their support system at a time when they are in greatest need of it. The counselling protocol helps women identify kinds and sources of potential support. Some women limit themselves unnecessarily by believing that all support should come from their partner. When this proves unrealistic, they continue to put efforts into making the partner live up to expectations rather than exploring other options. The goal of counselling is to empower women to obtain sufficient support for the difficult task of staying abstinent while carrying and raising a child. The discussion starts in the first counselling session and continues through subsequent calls. Counsellors' questions help clients clarify the types of support available and assist clients in making appropriate plans to bolster support as needed. Who will do physical tasks such driving, making meals, or cleaning? Who will provide emotional support through encouragement and reassurance? Is it realistic to expect to get what is wanted from partners or other identified people? If not, what is the backup plan?

Here the role of the counsellor is threefold. First, by addressing the issue of support, the counsellor raises a pregnant client's expectations that support is possible. Second, the counsellor may become a coach, empowering the client to influence her support system through her own positive behavioural change (Papero, 1997). Third, the counsellor may become an integral part of the client's support system as she is quitting.

Sharon E. Cummins, Gary J. Tedeschi, Christopher M. Anderson, Raechelle Quinlan-Downs, Patricia Harris and Shu-Hong Zhu

Assertiveness

An optimal support system requires good communication among all involved. In our work, we focus on helping pregnant smokers gain both practical and emotional support for quitting. Many struggle to get these needs met. There is a tendency either to passively accept a lack of support, or to make demands and then lash out when needs are thwarted. Since many of the pregnant smokers we work with are financially dependent on others, it is particularly important to teach them ways to get their needs met without alienating the people who provide their financial support. Counsellors assess the client's social and cultural context to determine the appropriateness of teaching assertive behaviour. Encouraging inappropriately assertive behaviour could threaten, rather than enhance, any support that clients receive from others. Taking into consideration these caveats, counsellors may educate about the differences among passive, aggressive, and assertive behaviour and may engage clients in role-playing. Together, counsellor and client may identify challenging situations and alternate in the roles of pregnant smoker and potential support person. The purpose of assertiveness training is not to make clients assertive in all situations, but to help them build this skill into their repertoire of behaviours for cessation.

Stress Management

To successfully quit smoking, a pregnant woman not only must develop specific skills to avoid cigarettes, but also must learn to cope with pregnancy and the demands of daily life. Many smokers use cigarettes in response to general stress (e.g., Cnattingius, 1989; Dunn et al., 1998; Gritz, Kirsteller, & Burns, 1993; Kilby, 1997), and pregnant smokers are no exception. Pregnancy itself can compound normal stressors and make smoking an even more attractive source of relief (McCormick et al., 1990). This may be especially true among individuals with low incomes and poor social support, both associated with continued smoking during pregnancy (LeClere & Wilson, 1997). Unmarried pregnant women or those with a history of depression can find quitting smoking even more difficult (Breslau, 1995; Breslau, Peterson, Schultz, Chilcoat, & Andreski, 1998; Floyd, Rimer, Giovino, Mullen, & Sullivan, 1993; Leftwich & Collins, 1994; Pritchard, 1994; Zhu & Valbo, 2002). Since stress plays such a large role in relapse and in other destructive behaviour patterns, counsellors spend time helping clients to identify stressful elements of their lives and to examine what makes these elements stressful. Counsellors provide information about the relationships among thoughts, feelings, behaviour, and physical response and their roles in smoking. This discussion serves as a basis for developing a quitting plan.

A high level of perceived stress is related to greater likelihood of relapse across a range of behaviours such as smoking, alcohol, drug use, medication compliance and diet (Flynn, Walton, Curren, Blow, & Knutzen, 2004; Kassel, Stroud, & Paronis, 2003; Ng & Jeffrey, 2003; Siahpush & Carlin, 2006). A person feeling overwhelmed is less likely to think clearly or to make good choices. Pregnancy, by its very nature, can be stressful as women anticipate and experience the physical, emotional and financial strain of giving birth and raising a child. An unplanned pregnancy can be even more stressful, further complicating smoking cessation.

As they help clients identify their sources of stress, our counsellors pay particular attention to determining whether the stressor is modifiable. Some stressors can be prevented through better planning; others cannot. If a stressor cannot be prevented, counsellors may guide clients in using cognitive reframing to make situations less overwhelming, or they may help clients arrange increased support so that stress will not sabotage the quitting effort.

Planning

The mechanics of developing a quitting plan for pregnant smokers is essentially the same as for other smokers: client and counsellor identify smoking triggers that will be problematic and establish several coping strategies for each. Counsellors encourage clients to predict the most difficult situations they will encounter and come up with specific strategies to deal with them. Counsellors may then augment the list of situations and coping options based on what they have learned about the client's life circumstances and quitting history.

Because of these pregnant clients' difficult circumstances, the planning phase of the counselling protocol requires an assessment of client needs and is quite comprehensive. There may be pressing issues such as referrals to food programs, housing and/or health care. Case management aside, targeting cognitive and behavioural skills is the next priority. Counsellors focus the planning on strategies that address pregnancy-specific challenges to quitting and staying quit, such as adjusting to new social dynamics, greater emotional volatility and physical changes.

Pharmacotherapy

Manufacturers of Nicotine Replacement Therapy (NRT) recommend that pregnant women avoid its use. Some evidence suggests that NRT may be beneficial in pregnancy, but the cost/benefit ratio is yet to be determined (Benowitz & Dempsey, 2004; Schroeder et al., 2002). Regardless, some pregnant women still choose to use NRT as part of their plan to quit smoking. Quitline counsellors explore with clients their plans for using NRT and provide them with the information needed to make an informed decision. For example, many pregnant smokers have reduced their cigarette intake to less than five per day, contraindicating NRT.

It may be that the greatest benefit of NRT is its potential impact on self-efficacy. Many pregnant smokers state that quitting is just too difficult. Since they would continue to receive nicotine from smoking

anyway, these clients may benefit from initiating discussions with their physicians about using NRT as a quitting tool. This additional aid may increase pregnant smokers' confidence. If pregnant clients are determined to use NRT, counsellors refer them to their physicians for consultation.

Counsellor Considerations
Counsellor Characteristics

Is there a certain type of person who can best work with pregnant smokers? Counsellors who were involved in testing this protocol were experienced quitline counsellors who volunteered for the project. This group seemed to have characteristics and skills well suited for working with this clientele. First, they were aware of the challenging issues facing their clients and held realistic expectations about the effect they could have with a brief intervention. Second, they were able to persevere, even when change came slowly. Individual counsellors cited different reasons for enjoying the work. Most commonly, they described a profound desire to help this vulnerable group, despite the added challenges. They were gratified to be helping both mother and baby. Some counsellors in a similar phase of development (e.g., contemplating pregnancy, raising young children) identified strongly with pregnant clients and found it particularly satisfying to help women with whom they had much in common. At the same time, it was important for counsellors to understand their own motivations in order to keep personal feelings in check and professional boundaries in place.

Counsellors' Emotional Responses

Working with pregnant smokers can bring out *countertransference*, a set of feelings in the counsellor that may either enhance or interfere with the counselling (Cullari, 1996; Gorkin, 1987). On the positive end of countertransference, counsellors may enjoy the role of mentor, sister, friend or mother with some clients. However, positive countertransference can be problematic. We encountered this early in the project when counsellors were reluctant to direct clients to set quit dates. Counsellors stated that they felt the need to take care of and 'mother' clients because these women had such stressful lives. Once we recognised this issue in supervision and dealt with it through protocol changes, counsellors were able to be firm and challenging about setting a quit date while remaining empathic.

On the negative end of countertransference, working with pregnant smokers can be emotionally draining for counsellors. They may worry about the baby and feel pressured about the time frame for quitting. They may feel judgmental about the mothers' perceived lack of responsibility. Counsellors may also become disappointed or angry with clients who fail to make progress. High-risk pregnancies (previous stillbirth, multiple

babies, evidence of placenta praevia) can increase counsellor anxiety and lead to preaching or prematurely setting a quit date. Other unresolved personal issues may be triggered, such as feelings about abortion, adoption and infertility.

Counsellors are encouraged to be aware of their own positive and negative feelings toward their clients. To facilitate this process, supervisors and other colleagues are available for immediate debriefing after difficult calls. In addition, counsellors attend weekly supervision meetings led by experienced clinicians. Here counsellors consult about challenging cases and group members offer support and suggest counselling strategies. They also discuss clinical topics such as professional boundaries, case management and dealing with ambivalence. Participation in these activities increases counsellors' awareness of countertransference and allows them to focus on clinically indicated client needs, rather than their own personal ones.

Counsellor Training

The testing of the pregnancy specific counselling protocol utilised 23 experienced tobacco cessation counsellors who had already successfully completed an intensive training program on telephone counselling for adult smokers (see Zhu et al., 1996). All held bachelors degrees in counselling, social work or related health fields, and six held advanced degrees. Prior to working with pregnant clients, these counsellors met for 8 additional hours of in-house training that addressed issues specific to pregnant women and the implementation of the pregnancy-specific counselling protocol. Two hours of this training, provided by a registered nurse, dealt with physical, emotional and social dimensions of pregnancy. A 4-hour seminar with a certified MI trainer covered use of MI with pregnant smokers. The specialised training increased counsellor credibility and comfort working with this population.

The remaining training time focused on how to implement the manualised protocol. Each call had its own sets of questions designed to guide the counsellor through topics of greatest relevance. Training became ongoing through the weekly supervision meetings as counsellors worked, often using role-playing, to develop the skill needed to move from merely asking questions to providing clinically rich intervention.

Conclusion and Application

The devastating consequences of maternal smoking make helping pregnant smokers quit an important public health issue. Progress has been made in lowering smoking prevalence during pregnancy. However, within certain communities smoking is still common among pregnant women. The most vulnerable communities are, coincidentally, those that tend to underutilise traditional clinic-based cessation programs. Telephone-based programs can yield higher utilisation rates

among typically underserved groups because they are easy to access. In addition, telephone counsellors can deliver the intervention one-on-one, making it possible to take into account the unique circumstances of the individual. This individual counselling allows clinically rich discussions tailored specifically to the client. Furthermore, quitlines can deliver counselling to a large number of callers using population-specific structured protocols.

In this article, we describe a telephone-based smoking cessation program designed especially for pregnant smokers. However, the issues raised in the development of this protocol may be applicable across a range of problematic behaviours and treatment modalities. Women are often instructed to change an array of health behaviours when they learn they are pregnant. Health care providers can use the concepts discussed above to conceptualise and intervene with potentially problematic behaviours such as drinking alcohol or using other drugs, managing gestational diabetes, complying with vitamin or medication regimens, or changing diet and exercise patterns. Although the setting for this intervention was a quitline staffed by counsellors, the change principles articulated may be applicable to any setting where pregnant women present for health care and where medical staff and paraprofessionals implement interventions.

Acknowledgments

References

Abrahamsson, A., Springett, J., Karlsson, L., & Ottosson, T. (2005). Making sense of the challenge of smoking cessation during pregnancy: A phenomenographic approach. *Health Education Research: Theory and Practice, 20*(3), 367–378.

Anderson, M.E., Johnson, D.C., & Batal, H.A. (2005). Sudden infant death syndrome and prenatal maternal smoking: Rising attributed risk in the *Back to Sleep* era. *BMC Medicine, 3*, 4.

Bandura, A. (1997). *Self-efficacy: The exercise of self-control.* New York: W.H. Freeman.

Beck, A.T., Wright, F.D., Newman, C.F., & Liese, B.S. (1993). *Cognitive therapy of substance abuse.* New York: Guilford Press.

Benowitz, N.L., & Dempsey, D.A. (2004). Pharmacotherapy for smoking cessation during pregnancy. *Nicotine & Tobacco Research, 6* (S2), S189–S202.

Breslau, N. (1995). Psychiatric comorbidity of smoking and nicotine dependence. *Behavior Genetics, 25,* 95–101.

Breslau, N., Peterson, E.L., Schultz, L.R., Chilcoat, H.D., & Andreski, P. (1998). Major depression and stages of smoking: A longitudinal investigation. *Archives of General Psychiatry, 55,* 161–166.

Brown, R.A. (2003). Intensive behavioral treatment. In D.B. Abrams, R. Niaura, R.A. Brown, K.M. Emmons, M.G. Goldstein & P.M. Monti, *The tobacco dependence treatment handbook: A guide to best practices* (pp. 118–177). New York: Guilford Press.

Burgess, E.S., Kahler, C.W., Niaura, R., Abrams, D.B., Goldstein, M.G., & Miller, I.W. (2002). Patterns of change in depressive symptoms during smoking cessation: Who's at risk for relapse? *Journal of Consulting and Clinical Psychology, 70*(2), 356–361.

Castles, A., Adams, E.K., Melvin, C.L., Kelsch, C., & Boulton, M.L. (1999). Effects of smoking during pregnancy: Five meta-analyses. *American Journal of Preventive Medicine, 16,* 209–215.

Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention Health Promotion. (2001). *Tobacco Information and Prevention Source (TIPS): Pattern of tobacco use among women and girls—Fact sheet.* Retrieved December 6, 2005, from http://www.cdc.gov/tobacco/sgr/sgr_for women/fact-sheet_reducesmoking.htm

Centers for Disease Control and Prevention. (2004). *Telephone quitlines: A resource for development, implementation, and evaluation.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

Cnattingius, S. (1989). Smoking habits in early pregnancy. *Addictive Behaviors, 14,* 453–457.

Cnattingius, S. (2004). The epidemiology of smoking during pregnancy: Smoking prevalence, maternal characteristics, and pregnancy outcomes. *Nicotine & Tobacco Research, 6*(S2), S125–S140.

Coleman, G.J., & Joyce, T. (2003). Trends in smoking before, during, and after pregnancy in ten states. *American Journal of Preventive Medicine, 24*(1), 29–35.

Cullari, S. (1996). *Treatment resistance: A guide for practitioners.* Boston: Allyn and Bacon.

Curry, S., McBride, C., Grothaus, L., Lando, H., & Pirie, P. (2001). Motivation for smoking cessation among pregnant smokers. *Psychology of Addictive Behaviors, 15*(2), 126–132.

DiFranza, J.R., Aligne, C.A., & Weitzman, M. (2004). Prenatal and postnatal environmental tobacco smoke exposure and children's health. *Pediatrics, 113*(4 Sup), 1007–1015.

Dolan-Mullen, P. (2004). How can more smoking suspension during pregnancy become lifelong abstinence? Lessons learned about predictors, interventions, and gaps in our accumulated knowledge. *Nicotine & Tobacco Research, 6*(S2), S217–S238.

Dunn, C.L., Pirie, P.L., & Hellerstedt, W.L. (2003). The advice-giving role of female friends and relatives during pregnancy. *Health Education Research, 18*(3), 352–362.

Dunn, C.L., Pirie, P.L., & Lando, H. (1998). Attitudes and perceptions related to smoking among pregnant and postpartum women in a low-income, multiethnic setting. *American Journal of Health Promotion, 12,* 267–274.

Ershoff, D.H., Solomon, L.J., & Dolan-Mullen, P. (2000). Predictors of intentions to stop smoking early in prenatal care. *Tobacco Control, 9*(Supp. III), 41–45.

Fiore, M.C., Bailey, W.C., Cohen, S.J., Dorfman, S.F., Fox, B.J., Goldstein, M.G., et al. (2000). *Treating tobacco use and dependence. Clinical practice guideline.* Rockville, MD: U.S. Department of Health and Human Services. Public Health Services.

Floyd, R.L., Rimer, B.K., Giovino, G.A., Mullen, P.D., & Sullivan, S.E. (1993). A review of smoking in pregnancy: Effects on pregnancy outcomes and cessation efforts. *Annual Review of Public Health, 14,* 379–411.

Flynn, H.A., Walton, M.A., Curran, G.M., Blow, F.C., & Knutzen, S. (2004). Psychological distress and return to substance use two years following treatment. *Substance Use and Misuse, 39*(6), 885–910.

Gorkin, M. (1987). *The uses of countertransference.* Northvale, NJ: Jason Aronson.

Gritz, E.R., Kristeller, J.L., & Burns, D.M. (1993). Treating nicotine addiction in high-risk groups and patients with medical co-morbidity. In C.T. Orleans & J. Slade (Eds.), *Nicotine addiction: Principles and management.* (pp. 279–309). New York: Oxford University Press.

Gulliver, S., Hughes, J., Solomon, L., & Dey, A. (1995). An investigation of self-efficacy, partner support and daily stresses as predictors of relapse to smoking in self-quitters. *Addiction, 90,* 767–772.

Haug, K., Aaro, L.E., & Fugelli, P. (1994). Pregnancy: A golden opportunity for promoting the cessation of smoking? *Scandinavian Journal of Primary Health Care, 12,* 184–189.

Irwin, L.G., Johnson, J.L., & Bottorff, J.L. (2005). Mothers who smoke: Confessions and justifications. *Health Care for Women International, 26,* 577–590.

Kassel, J.D., Stroud, L.R., & Paronis, C.A. (2003). Smoking, stress, and negative affect: Correlation, causation, and context across stages of smoking. *Psychological Bulletin, 129*(2), 270–304.

Kilby, J.W. (1997). A smoking cessation plan for pregnant women. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 26,* 397–402.

LeClere, F.B., & Wilson, J.B. (1997). Smoking behavior of recent mothers, 18–44 years of age, before and after pregnancy: United States, 1990. *Advance Data, 25*(288), 1–11.

Leftwich, M.J.T., & Collins, F.L., Jr. (1994). Parental smoking, depression, and child development: persistent and unanswered questions. *Journal of Pediatric Psychology, 19,* 557–570.

Lichtenstein, E., Glasgow, R.E., Lando, H.A., Ossip-Klein, D.J., & Boles, S.M. (1996). Telephone counseling for smoking cessation: Rationales and meta-analytic review of evidence. *Health Education Research, Theory and Practice, 11,* 243–257.

Lumley. J., Oliver, S.S., Chamberlain, C., & Oakley, L. (2004). *Interventions for promoting smoking cessation during pregnancy* (review). The Cochrane Database of Systematic Reviews, issue 4. Art. No: CD0001055.pub2. DOI:10.002/14651858. CDC001055.pub2.

Martin, J.A. , Hamilton, B.E., Sutton, P.D., Ventura, S.J., Menacker, F., & Munson, V.L. (2005). *National Vital Statistic Reports, 54(2),* 12.

McCormick, M.C., Brooks-Gunn, J., Shorter, T., Holmes, J.H., Wallace, C.Y., & Heagarty, M.C. (1990). Factors associated with smoking in low-income pregnant women: Relationship to birth weight, stressful life events, social support, health behaviors and mental distress. *Journal of Clinical Epidemiology, 43,* 441–448.

Miller, W.R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people to change addictive behavior.* New York: The Guilford Press.

Monuteaux, M.C., Blacker, D., Biederman, J., Fitzmaurice, G., & Buka, S.L. (2006). Maternal smoking during pregnancy and offspring overt and covert conduct problems: A longitudinal study. *Journal of Child Psychology and Psychiatry, 47,* 883–890.

Murray, R.P., Johnston, J.J., Dolce, J.J., Lee, W.W., & O'Hara, P. (1995). Social support for smoking cessation and abstinence: The Lung Health Study. *Addictive Behaviors, 20*(2), 159–170.

Ng, D.M., & Jeffrey, R.W. (2003). Relationships between perceived stress and health behaviors in a sample of working adults. *Health Psychology, 22*(6), 638–642.

Papero, D.V. (1997). *Bowen Family Systems Theory.* Boston: Allyn & Bacon.

Perkins, K.A., Conklin, C.A., & Levine, M.D. (2007). *Cognitive-behavioral therapy for smoking cessation: A practical guidebook to the most effective treatments.* London: Routledge Mental Health.

Piasecki, T.M. (2006). Relapse to smoking. *Clinical Psychology Review, 26,* 196–215.

Pritchard, C.W. (1994). Depression and smoking in pregnancy in Scotland. *Journal of Epidemiology and Community Health, 48,* 377–382.

Roski, J., Schmid, L. A., & Lando, H. A. (1996). Long-term associations of helpful and harmful spousal behaviors with smoking cessation. *Addictive Behaviors, 21,* 173–185.

Schroeder, D.R. et al. (2002). Nicotine patch use in pregnant smokers: Smoking abstinence and delivery outcomes. *Journal of Maternal, Fetal, & Neonatal Medicine, 11*(2), 100–107.

Siahpush, M., & Carlin, J.B. (2006). Financial stress, smoking cessation and relapse: Results from a prospective study of an Australian national sample. *Addiction, 101,* 121–127.

Shiffman, S. (2005). Dynamic influences on smoking relapse process. *Journal of Personality. 73*(6), 1715–1748.

Solomon, L.J., & Quinn, V.P. (2004). Spontaneous quitting: Self-initiated smoking cessation in early pregnancy. *Nicotine & Tobacco Research, 6*(S2), S203–S216.

Stead, L.F., Perrera, R., & Lancaster, T. (2006). *Telephone counseling for smoking cessation.* Cochrane Database of Systematic Review 2006, issue 3. Art.No.:CD002850.DOI: 10.1002/14651858.CD002850.pub2.

Sugawara, M., Toda, M.A., Shima, S., Mukai, T., Sakakura, K., & Kitamura, T. (1997). Premenstrual mood changes and maternal mental health in pregnancy and postpartum period. *Journal of Clinical Psychology, 56*(3), 225–232.

U. S. Department of Health and Human Services. (2004). *The health consequences of smoking: A report of the Surgeon General.* Rockville, Maryland: Author.

U. S. Department of Health and Human Services. (2001). *Women and smoking: A report of the Surgeon General.* Rockville, Maryland: Author.

U.S. Department of the Treasury (1998, March 15). The economic costs of smoking in the United States and the benefits of comprehensive tobacco legislation. Report 3113. Retrieved March 29, 2006, from http://www.treas.gov/press/releases/report3113.htm

Ussher, M., Etter, J.F., & West, R. (2006). Perceived barriers to and benefits of attending a stop smoking course during pregnancy. *Patient Education and Counseling, 61,* (467–472).

Vaux, A. (1988). *Social support: Theory, research, and intervention.* New York: Praeger Publishers.

West, R. (2006). *Theory of addiction.* Oxford: Blackwell Publishing.

Zhu, S.-H., Cummins, S.E., Tedeschi, G.J., Rosbrook, B., Koon-Kirby, C., Anderson, C.M. et al. (2007). *Telephone counseling to help pregnant smokers quit: A randomized trial* (unpublished manuscript).

Zhu, S.-H., Rosbrook, B., Anderson, C., Gilpin, E., Sadler, G., & Pierce, J.P. (1995). The demographics of help-seeking for smoking cessation in California and the role of the California Smokers' Helpline. *Tobacco Control, 4,* 9–15.

Zhu, S.-H., Tedeschi, G., Anderson, C., & Pierce J.P. (1996). Telephone counseling for smoking cessation: What's in a call? *Journal of Counseling and Development*, *75,* 93–102.

Zhu, S.-H., & Valbo, A. (2002). Depression and smoking during pregnancy. *Addictive Behaviors, 27,* 649–658.