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RUNNING HEAD: Smoking cessation quitlines

Smoking cessation quitlines: An under-recognized intervention success story

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Abstract

Quitlines providing telephone counseling for smoking cessation derive from behavioral research and theory, have been shown to be effective, and have been adopted and then institutionalized at both the state and national levels. Although psychologists have made seminal contributions to quitline development and evaluation, this accomplishment largely has gone unnoticed by the practice and research communities in clinical, counseling and health psychology. This article summarizes the development, content, structure, empirical status, and current reach of cessation quitlines. We note the rich research opportunities afforded by quitlines, describe some recent approaches to improving their effectiveness, and suggest that understanding how quitlines work could also improve their effectiveness. The implications for practitioners and the potential application of telephone counseling to other disorders are also considered.

Key words: tobacco cessation quitlines

Introduction

Developers of a behavioral intervention have a dream. The content of their intervention would be derived from a solid empirical and theoretical foundation. The intervention would be shown to be effective in rigorous randomized trials, and then adopted by health-care providers and systems. Following additional confirmatory research, the program would then become institutionalized; a budgeted standard service at the local, state or even national level. Few, if any, behavioral programs have achieved such a level of success. Smoking cessation quitlines are approaching this level (Centers for Disease Control and Prevention, 2004)

Quitlines are telephone-based programs for helping tobacco users quit. Tobacco users initiate contact with a Quitline and services may include mailed materials, recorded messages, counseling at the time of call, call-back from a counselor, access to cessation medication or some combination of these services. Most services are free to the caller (North American Quitline Consortium, 2009)

There are several advantages to telephone counseling for smoking cessation (Zhu, Tedeschi, Anderson, & Pierce, 1996): First, it's convenient. Phone counseling decreases logistical barriers to treatment and increases service utilization. If clients need additional help over time they can simply call back and re-engage in counseling. Second, the initial counseling session can progress rather quickly. The semi-anonymous nature of phone counseling facilitates candid discussion, which helps counselors to gain an accurate clinical picture in a short time.. Third, the telephone medium allows counselors to provide proactive counseling (i.e. the counselor calls the client), thereby increasing the likelihood that follow-up sessions will occur.. In addition to reducing attrition, proactive counseling promotes accountability and social support. Fourth, the telephone format lends itself to use of a structured counseling protocol,

which provides the minimum acceptable content for each session. A structured protocol ensures that every call is thorough yet focused and brief, making it suitable for large scale application,

Tobacco use is the major, avoidable cause of illness and death in the United States, accounting for 435,000 deaths each year (Centers for Disease Control and Prevention, 2005). Ergo, developing effective methods to help tobacco users quit literally is a matter of life or death. The development and evaluation of quitline protocols are a collective accomplishment of many investigators, some of them psychologists. Although the early seminal, evaluation studies were all published in the Journal of Consulting and Clinical Psychology (i.e. Ossip-Klein et al, 1991; Orleans et al, 1991; Zhu, Stretch, et al.,1996), most of the subsequent work has been published in *addiction, medical, public health, preventive care, or health education* journals. These journals are not typically read by psychologists. Quitline interventions may not be viewed as “counseling” or “therapy” by researchers or practitioners. Wampold’s (2001) definition of psychotherapy is restricted to face-to-face interactions, and California’s Board of Psychology does not consider telephone counseling as supervised professional experience; these hours cannot be counted toward licensure (L.V. Synder, personal communication, June 25, 2009). Consequently, practitioners and researchers in clinical, counseling, and even health psychology appear to be unaware of quitlines either as a resource for their clients or an opportunity for their research.

This article describes the history, structure, content, and reach of quitlines. The empirical research on the effectiveness of quitlines is reviewed, and some recent efforts to improve effectiveness are noted. We summarize the features of quitlines that could facilitate future research, and implications of quitlines for practitioners. Finally, we consider the prospects for adapting the quitline model to help in the treatment of other disorders and risk factors.

History and Reach of Quitlines

The history and growth of quitlines were recently summarized by Anderson and Zhu (2007). In the early 1980's, the U.S. National Cancer Institute provided the first telephone-based cessation service as a component of the Cancer Information Service. This service was limited and its effectiveness was not formally evaluated, but it demonstrated considerable consumer interest in cessation services (Anderson, Duffy, Hallett, & Marcus, 1992). The effectiveness of a reactive quitline – client-initiated calls only – was reported by Ossip-Klein and her colleagues (1991), and was adopted for several years by the American Lung Association. In 1992 Group Health Cooperative of Puget Sound, a health maintenance organization, introduced the Free & Clear quitline service for its members using an experimentally-validated protocol (Orleans et al, 1991). Concurrently, California established the first publicly-funded statewide quitline using a protocol validated in a large, randomized trial (Zhu, Stretch et al, 1996). Both of these protocols involved proactive – counselor initiated – calls after the client first phoned the quitline. Massachusetts (1994), Arizona (1996), and Oregon (1998) followed suit with proactive quitlines, and by 2005 forty-four states had sponsored some form of quitline, as had many countries across the globe. Quitline assistance is now available in all 50 states and Washington, DC via a single national telephone portal (1-800-QUIT NOW). To facilitate information exchange among state quitlines and to provide a unified voice to promote the quitlines nationally, the North American Quitline Consortium (NAQC) was formed in 2004 (NAQC 2009). NAQC also includes provincial quitlines in Canada.

Similar development has occurred in Europe and Oceania. In Europe, UK Quit® was the first broadly accessible telephone service dedicated exclusively to helping smokers quit. It played a key role in starting the European Quitline Network. In Australia, Victoria established

the first call-in service for smoking cessation. The active research conducted there influenced the later development of quitlines in other Australian states and New Zealand (Borland & Segan, 2006; Borland, Segan, Livingston, & Owen, 2001). National quitlines have also been in operation in multiple Asian countries and a few in South America. The quitlines in Asia are currently establishing a network to facilitate exchange of expertise.

A critical factor in the rapid and widespread adoption of quitlines in the U.S. has been the enthusiasm of state public health officials, who saw the value of quitlines not only as an accessible and cost-effective clinical service, but also as an integral component of population-based approaches to smoking cessation (Anderson & Zhu, 2007). Internationally, the growing tobacco-control movement has fueled interest in, and funding for, quitlines, which can overcome geographic limitations of traditional face-to-face interventions (World Health Organization, MPOWER 2008).

The adoption of quitlines has also been facilitated by research that has largely focused on developing practical intervention protocols rather than on testing any particular theory of behavior change. With an ecumenical attitude toward theory, quitline research has emphasized developing needed products for the field by testing telephone-specific counseling protocols in large randomized trials. Translating research protocols to the real-world has been made simpler by the fact that many of the randomized trials have been conducted within the context of operating quitlines (Stead, Perera & Lancaster, 2007). Quitline operators' interest in innovation, especially in developing new interventions in response to emerging needs, has led to fruitful collaborations among researchers, practitioners, and funders (McAfee, 2007). Quitline sponsors, primarily state health divisions in the case of US quitlines, typically have outcome evaluations

built into their contracts. This permits states to evaluate variations in services, or ways to market services (Lichtenstein, 2007).

The emergence of publicly-funded quitlines means that each year a large number of smokers are served by a few centrally-operated programs. About 400,000 smokers in the U.S. are served annually by 50 state quitlines (Cummins et al. 2007) Although this absolute volume seems impressive, it must be viewed in context; it represents only about 1% of the 40 million smokers in the U.S. The reach of quitline services, however, seems mainly constrained by limited resources for marketing and promotion (Cummins et al. 2007). In the U.S., some better-funded state quitlines have reached 4-5% of their smoking population in one year (Swartz, Woods & Haskins, 2007), and some large cities have reached 4% of their smokers in just one month by publicizing free nicotine patches available from the quitline (Cummings, Fix et al, 2006; Cummings, Hyland et al, 2006). There is great potential for increasing quitlines' reach, because the convenience of a telephone-based service makes it relatively easy for smokers to respond to promotional messages.

An encouraging piece of evidence for quitlines' potential as a public health service is their ability to reach underserved populations. Early reports from the first US state quitline (the California Smokers' Helpline) showed that African American smokers were more likely to use the quitline than any other ethnic group including Caucasians (Zhu et al. 1995). More data from California and other state quitlines later confirmed this data pattern (Halperin Bush Yepassis-Zembrou P, & McAfee T., 2005; Maher, et al., 2007; Zhu, Anderson, Johnson, Tedeschi, & Roeseler, 2000).). Moreover, studies have shown that recent immigrants such as Asian language speakers are also calling the quitline at rates similar to that of Caucasian smokers. This is contrary to what the literature would predict (Abe-Kim et al., 2007; Sue, Zane, Nagayama Hall,

& Berger, 2009), making quitlines one of the few behavioral counseling services to be so well used by this population (Zhu, Wong, Stevens, Nakashima, Gamst, in press).

In addition to publicly-funded quitlines, some large corporations and health plans fund their own quitlines to serve employees or plan members. Free & Clear, Inc. the American Cancer Society and the Mayo Clinic, which between them operate more than half of the current U.S. state quitlines, also market their services to private groups. Free & Clear Inc. has contracted with over 100 employers and health plans, and the American Cancer Society with over 70, to provide cessation counseling by phone (McAfee, personal communication 2008; Rabinus, 2007). Though data on proprietary quitline operations are difficult to obtain, some private quitlines are highly visible to their targeted service populations. For example, the Quitline for Group Health in Seattle at one point reached 10% of its smoking members (McAfee, 2002). Such encouraging figures have served as a basis for the ambitious goals outlined in the U.S. National Action Plan for Tobacco Cessation, which recommends funding a national network of quitlines aiming to serve 16% of U.S. smokers annually and lead 1 million smokers to quit smoking each year (Fiore, Croyle, Curry et al, 2004).

Effectiveness of Quitlines

The Cochrane Library has provided systematic reviews of the smoking cessation outcome literature primarily relying on meta-analyses. Our summary of quitline effectiveness emphasizes their most recent review (Stead, Perera, & Lancaster, 2007) which focuses on studies recruiting smokers who call quitlines.

Quitline outcome research has been constrained by service obligations which make it difficult to refuse or delay service to callers. Evaluations usually compare variations in service – e.g., one call vs. multiple calls, or calls vs. written materials – rather than a no-treatment

condition. In spite of these barriers, eight trials studied smokers who contacted quitlines and received proactive callbacks, and these trials compared multiple proactive calls to a single brief call or to written materials only. Across the eight studies there was clear evidence of a benefit from the counseling; the pooled odds ratio was 1.41 (N=18,468, 95% CI = 1.27-1.57). The number of participants in these eight trials – over eighteen thousand – is exceptionally large for a behavioral intervention. The latest Clinical Practice Guideline (Fiore, Jaén, Baker, et al 2008) reported a similar meta-analysis based on nine studies with an odds ratio of 1.6 (95% CI = 1.4 – 1.8).

The randomized trials for quitlines tend to have large sample sizes and include diverse populations. For example, two trials in California which had more than 3,000 smokers each, had a high proportion of ethnic minority smokers, and were conducted in English and Spanish (Zhu, Stretch et al, 1996; Zhu et al, 2002). Each had clearly significant intervention effects. Quitline studies have extended to various specific populations such as veterans (An et al. 2006, Sherman et al. 2009) medicare beneficiaries (Joyce et al. 2009), teens (Lipkus, et al. 2004; Peterson et al, 2009), pregnant women (Rigotti et al. 2006; Zhu Cummins et al. 2009), and populations for whom “talk therapy” is unfamiliar, such as recent immigrants who speak Asian languages (Zhu et al. in press).

There are several evidence-based pharmacological treatments for tobacco dependence (Fiore, Jaén, Baker et al, 2008). The most popular is nicotine replacement therapy (NRT) – e.g., gum, patch, lozenges – which are over-the-counter products and thus easily accessible. It is instructive to compare the research literatures on NRT and telephone counseling. The NRT literature is a much larger one. However, quitline trials include many more participants per study, about 1100 more on average. The odds ratios in nicotine patch trials are higher than those

observed in quitline trials, while the nicotine gum trials yield odd ratios similar to those found in quitline research (Fiore, Jaén, Baker et al, 2008). The Clinical Practice Guideline reports odd ratios of 1.9 (CI = 1.7 – 2.2.) for the nicotine patch and 1.5 (CI = 1.2 – 1.7) for nicotine gum. The bulk of the NRT studies are efficacy trials conducted under optimal conditions of patient selection, and drug administration. The eight trials summarized above with smokers calling quitlines are, in contrast, trials of effectiveness with the interventions delivered under relatively typical real-world quitline conditions. Under such conditions the number of counseling sessions actually delivered is often much lower than the protocol intent, due to such factors as missed appointments or invalid phone numbers this makes the 1.6 OR for quitline counseling all the more impressive.

Structure of Quitlines

We limit our discussion of quitline structures primarily to those that are components of state or national tobacco-control programs, as operational details for privately funded (e.g. employer) quitlines are often proprietary and are not routinely reported in easily accessible, uniform formats. In the U.S., individual states determine the nature of the service provided. Due to budget and policy differences, there are variations in the services they offer (Cummins et al, 2007); For example, quitlines generally offer counseling services in Spanish and English, but most quitlines, with one exception, rely on translation services for callers who speak Asian languages. The North American Quitline Consortium regularly updates their website on the services provided by each quitline (NAQC, 2009).. Nearly all states have a proactive feature whereby after an initial reactive contact, a quitline counselor initiates a series of calls to the smoker. State quitlines, however, differ with respect to eligibility and the amount of counseling offered, usually reflected in the number of calls. Some states triage callers depending on their

Medicaid or health insurance status while others offer multiple, proactive calls to all interested smokers. For example, Oregon's quitline offers a single phone counseling session to any smoker, but only smokers in the Oregon Health Plan (Medicaid) routinely receive multiple calls. State programs also vary with respect to the extent that they provide medicinal adjuncts such as nicotine replacement products and Internet based services (Cummins et al, 2007). All quitline services have budget constraints and use marketing/advertising strategically to try and keep demand in line with supply. Experience and research show that the number of smokers using quitlines is sensitive to marketing (e.g. Carrol & Rock, 2003; Pierce, Anderson, Romano, Meissner & Odenkirchen, 1992).

Smokers who call a designated quitline number are taken through a brief screening process.

A typical series of questions includes:

- Are you calling about yourself or about someone else?
- Are you interested in quitting or calling for information?
- Are you ready to quit soon (e.g., within a week or month?)
- Are you interested in phone counseling?

Smokers who are ready to quit and want counseling may be transferred immediately to a counselor, or asked for convenient times to be called. Quitline counseling – a scarce resource – usually is reserved for smokers who are currently motivated to quit, and, in most cases, for those who take the initiative to call.

The Content of Quitline Counseling

Given the variations in service and sponsorship noted above, one might expect much variation in protocol content. While little has been published on counseling content, there are factors operating in favor of similarity of content. State tobacco-control programs typically

contract for quitline services. Because three major contractors – Free & Clear, Inc. the American Cancer Society, and National Jewish Health – serve over two thirds of the states among them, they provide some degree of consistency (Cummins et al, 2007). The two largest vendors, Free & Clear and the American Cancer Society, recently forged a partnership wherein Free & Clear will take over state quitline counseling from ACS, thereby producing even greater consistency of counseling across states (ACS, 2009). Typically quitlines draw on a common literature describing and evaluating counseling interventions conducted in groups or individually (e.g., Marlatt & Gordon, 2005). Social learning theory (Bandura, 1997) and coping skills training are often invoked as guiding frameworks. Counselors typically seek to enhance motivation, help clients marshal social support, and teach coping or problem-solving skills to help clients deal with withdrawal and social pressures to smoke. The counseling also aims to strengthen client's sense of self-efficacy to carry out their cessation plan (Orleans et al., 1991; Zhu, Tedeschi, Anderson & Pierce, 1996).

To date, the California quitline has published the most detailed account of the content of counseling and is relatively representative of programs that offer multiple sessions (Cummins et al, 2007; Tedeschi, Zhu, Anderson, Cummins & Ribner, 2005; Zhu, Tedeschi et al 1996). In California, the initial call is the longest, 30-40 minutes, and covers assessment, enhancing motivation, increasing self-efficacy or confidence in executing a successful quit plan, planning or developing coping strategies, and adopting a nonsmoker self-image. A key end-point for the first call is for the client to set a specific quit date. Subsequent calls are scheduled on or immediately after the quit date, and then 3 days, 1 week, 2 weeks, and 1 month after quitting. The timing of the calls is based on the shape of the relapse curve (Zhu & Pierce, 1995) showing that risk of relapse is highest right after quitting, and decreases over time. The follow-up calls focus on

managing withdrawal, reviewing/revising coping strategies, examining slip or relapse situations, and revisiting self-efficacy and motivation. Follow-up calls are shorter than the initial call, typically taking 10-15 minutes. In some states, Free & Clear, Inc, offers a similar number of sessions, covering similar topics, with the first session occurring soon after the quit date, but with the follow-up sessions spread over a 3-4 month period. This type of scheduling adds the advantage of contact with clients who may have relapsed and creates an opportunity to encourage another quit attempt (Centers for Disease Control and Prevention, 2004; Orleans, et al, 1991)

Counselors and Training

For many quitlines, counseling is delivered by staff with bachelor's degrees or by counselors with master's level training in psychology or related disciplines (Cummins et al, 2007; NAQC, 2009; Zhu, Tedeschi et al, 1996). Graduate students in psychology are sometimes employed, and some phone counselors are working towards or have achieved licensure available to masters or doctoral degree-level training. In some cases, training and supervision are carried out by doctoral level, licensed psychologists (Zhu, Tedeschi et al, 1996). Training involves reading, lectures, discussion, role playing and sometimes written exams: The California quitline provides about 48 hours of initial training to intervention staff followed by a month-long apprenticeship during which new staff are monitored closely for administrative and clinical competencies (Zhu, Tedeschi et al, 1996). Content of training varies across quitlines, but most include standard review of the essential psychological principles of change for addictive behavior. For example, in addition to tobacco specific content, the American Cancer Society's quitline provides extensive training to staff on the stages of change for health behavior, principles of motivational interviewing, and cognitive behavioral therapy (American Cancer

Society, 2009). Supervision of counselors in quitline settings often occurs in individual and group meetings. The centralized nature of quitline services permits on-site observation and regular call monitoring or recording of sessions by supervisors, and these methods are utilized by most U.S. quitlines (Cummins, et al 2007). Much current quitline counseling is computer driven, adding to the standardization or fidelity, and convenient storage of information.

Quitlines may be viewed as an exemplary utilization of “paraprofessional counselors”, staff who may have limited academic training in psychology or who may not seek a professional career in counseling. The intervention has been empirically validated and then standardized and manualized. The counselors are trained by and work under the supervision of experienced clinicians or counselors. Ethical standards of practice are met thereby and considerable cost-efficiencies attained. Moreover, quitline training and supervision of paraprofessional and professional counselors allows for quality control by program, not by individual. That is, standardized training, structured protocols, and regular call monitoring provide a strong degree of quality assurance. Supervisors monitor counselor adherence to the protocol and provide appropriate feedback. This ensures that quality control is based on program standards, not on a counselor’s unique background.

Increasing the Effectiveness of Quitlines

With the effectiveness of quitline counseling established in the research literature, quitline sponsors (e.g., state health departments) are intent on increasing their impact so as to maximize quitlines’ role in tobacco cessation on the population level (Anderson & Zhu, 2007; McAfee, 2002). To increase their impact, quitlines must increase either reach or cost efficiency. Both efforts would benefit from research support. To increase reach, many quitlines are making proactive efforts to recruit smokers into counseling. For example, healthcare providers may be

encouraged to identify smokers during office visits and, with patient consent, provide contact information to the quitline including . faxed referrals. Counselors then phone the smokers and offer cessation help. These procedures can dramatically increase enrollment in counseling (Cummins et al, 2002). Even more importantly, given that few physicians have the time or training for cessation counseling, quitline availability increases their motivation to intervene with patients who smoke (Boldemann, Gilljam, Lund & Helgason, 2007). The combination of quitline counseling with physicians' efforts not only increased the reach of quitlines but significantly increased cessation among the smokers seen by these physicians (Borland et al, 2008).

Another example of proactive outreach involves "cold calls" to smokers in a given community. This approach allows quitlines to target disadvantaged groups who have higher smoking prevalence (e.g. low-SES groups). Studies have shown that smokers are generally receptive to such an approach from quitlines (Cummings et al, 2007; Paul, et al., 2004; Van Deusen et al. 2007), although the effectiveness of quitline counseling with smokers recruited in this way is still being tested.

To increase cost efficiency, quitlines may seek to improve effectiveness with the same amount or a minimal increase of effort, or to maintain effectiveness with reduced effort. Several approaches may serve both to increase effectiveness and to reduce effort. One is to combine phone counseling with an interactive website. About one-third of U.S. quitlines include some kind of Internet service (Cummins et al, 2007). Given the growing popularity of web-based behavioral interventions (Bock et al, 2004; Cobb, Graham, Bock, Papandonatos, & Abrams, 2005; Etter, 2006), it is likely that there will be greater integration of telephone counseling with Internet programs,

There is also a growing trend toward combining telephone counseling with cessation medication: nicotine patches or gum or Bupropion (Swan et al, 2003; Hollis, et al, 2007; Miller et al, 2005). In the U.S., most state Medicaid plans cover nicotine replacement, although McMenamin, Halpin and Bellows (2006), found that most smoking Medicaid beneficiaries and approximately one third of their providers in two states with full Medicaid treatment coverage were unaware of their Medicaid tobacco cessation benefits. Most U.S. state quitlines now provide or offer medication to at least some eligible adult callers (NAQC, 2009). Quitline counseling increases quit rates compared to medication alone: OR = 1.3, CI = 1.1-1.6 (Fiore, Jaen, Baker et al, 2008). A recent study found that the nicotine patch significantly increased quitting for each of three levels of quitline counseling: brief, moderate, and intensive (Hollis et al, 2007). It has also been shown that offering free nicotine patches has a dramatic effect on increasing quitline calls (An, Schillo, Kavanaugh et al, 2006; Cummings, Fix et al, 2006; Tinkelman, Wilson, Willett & Sweeney, 2007).

Another approach to improving cost-efficiency involves classifying smokers into subgroups requiring different amounts of counseling. Studies clearly link increased numbers of counseling calls to increased quit rates (Hollis et al. 2007; Zhu, Stretch et al, 1996). However, the optimum number of calls is not clear. It is possible that the additional sessions do not benefit all smokers equally; some may need fewer sessions than others. If predictor models can be developed for subgroup classification, quitlines can more effectively allocate scarce and expensive counseling resources. Quitlines typically have very large samples of smokers evaluated under various conditions, permitting the statistical analysis necessary for subgroup classification. This approach to matching subjects with treatment not only has practical value for quitlines, but also has theoretical significance for behavioral intervention research in general.

Finally, research aimed at better understanding how telephone counseling influences quitting could also improve its effectiveness. Little research has been done to examine how quitline counseling exerts its effects. Does the counseling enhance motivation, self-efficacy and improve coping skills and are changes on these dimensions related to outcomes? Mediation analyses could examine whether these putative mechanisms – are related to cessation.

The psychotherapy and counseling research literature provides a framework for examining quitline counseling. Quitline effects may be attributable to general or common properties inherent in all counseling interventions (Frank, 1961; Wampold, 2001). Wampold (2007) has challenged psychotherapy researchers and practitioners by arguing that treatment effects – which he asserts are large and robust – are primarily attributable to common factors. Based primarily on meta-analyses of outcome studies, Wampold identified several common factors that account for significant outcome variance, such as counselor skills or the counselor-client relationship. Given that quitline operations tend to employ large numbers of counselors, each of whom typically counsels large numbers of smokers, the quitline setting is readily amenable to examining such counselor effects. Increased understanding could lead to rational protocol modifications such as optimizing the degree of directiveness versus supportiveness in delivering the intervention. Analysis of counselor factors could result in improvements in counselor selection and training.

Quitlines have several procedural features conducive to both outcome and process research. The interventions are well standardized and are delivered from a central location that easily permits recording or observation. Some quitlines use computer-assisted technologies which automatically store data. Counselors manually record much data which could be utilized for process analyses. Quitline operators are contractually obligated to perform follow-up

evaluations of randomly selected callers, thereby providing outcome data. The sheer number of counseling events permits the accrual of large sample sizes which may be needed to detect mediators and mechanisms. One challenge to such research stems from the service context of quitline research. Additional informed consent may be needed for some studies. The relative brevity of the intervention may also constrain process analyses. These challenges notwithstanding, we believe that collaborations between quitline managers and psychotherapy or counseling process researchers could be very fruitful.

Implications of Quitlines for Practitioners

Quitlines represent a convenient, evidence-based referral resource for practitioners who identify smokers but cannot themselves provide intensive interventions. The U.S. Department of Health and Human Services Public Health Service has developed a guideline for practitioners: “Treating Tobacco Use and Dependence: Clinical Practice Guideline” (Fiore, Jaén & Baker, et al 2008). These evidence-based recommendations are designed for a broad range of clinicians, certainly including psychologists (Wetter, et al 1998; Lichtenstein, 1997). The Practice Guidelines enjoin practicing psychologists to, at a minimum, routinely assess all clients’ smoking status, provide brief advice to quit, and to offer or guide the client to evidence-based intervention.

Ironically, psychologists who are trained to motivate and counsel clients in changing behavior, have been slower to adopt the “Treating Tobacco Use and Dependence” guidelines relative to physicians or dental professionals (Gordon, Lichtenstein, Severson & Andrews, 2007). We recommend that practitioners routinely address tobacco use for all clients, perhaps at the conclusion of the requested service. Tobacco users who are interested in quitting could then be referred –with a phone number – to the state quitline. Such a brief clinical maneuver has been

found to increase quit rates (Fiore, Jaén, Baker et al, 2008). The Clinical Practice Guideline notes that, “all smokers with psychiatric disorders, including substance use disorders, should be offered tobacco dependence treatment, and clinicians must overcome their reluctance to treat this population” (Fiore, Jaén, Baker et al, 2008, p.154). Smoking rates for people with mental illness and substance use disorders are well above the population average, making these groups particularly vulnerable to smoking-related morbidity and mortality (Lasser et al, 2000; Fiore, Jaen, Baker et al, 2008). Lichtenstein (1997) provides a further discussion of the rationale and barriers to psychologists routinely addressing smokers.

Is the Smoking Quitline Model Adaptable to Other Problems?

Telephone counseling has been increasingly utilized in mental health and substance services, though primarily as an adjunct to face-to-face treatment (e.g., McKay, Lynch, Shepard, & Pettinati, 2005; Mohr et al, 2005). Telephone interventions also have been successfully employed in physical activity, dietary change (Eakin, Laqwler, Vandelanotte, & Owen, 2007) and risky drinking interventions (Curry, Ludman, Grothaus, Donovan & Kim, 2003). Several adaptations of smoking cessation quitlines involve working with callers who have medical or mental health co-morbidities. Smoking is considered a proxy for many physical and psychiatric health problems, so it is not surprising that there is significant co-morbidity among current smokers (Foulds, 1999; Kalman, Morrisette & George, 2005; Lasser, et al., 2000; Zeidonis & Williams, 2003), including diabetes, cancer, cardiovascular conditions, and depression (Hebert, Zhu, Cummins, Tedeschi & Hernandez, 2007). It also appears that the rate of co-morbidity is greater among smokers calling quitlines than smokers at large (Hebert et al., 2007). Current protocols can be amended when needed to address the unique needs of these callers. Since the relationship between co-morbid conditions and smoking is strong, counselors must be prepared

to address these issues if they arise, while still keeping their focus on tobacco cessation. In fact, several quitlines have begun to address behavioral health (e.g., mental health and substance use) issues head on, including integration of smoking cessation with disease management programs and the development of training modules for staff on these issues (Schroeder, McAfee, Hutchings, Michael, & Morris, 2009). Quitline counselors also refer callers to other services to deal with these co-morbidities and follow up in many cases to see if callers have heeded these referrals. Alternatively, as co-morbidities become apparent, they could provide an opportunity to offer additional phone-based interventions, specifically designed for issues such as diabetes management or mood management. Studies have already demonstrated the potential of phone-based services for mood management, dietary behavior, and exercise (e.g., Eakin, et al, 2007; Ludman, Simon, Tutty, & Von Korff, M.,2007). It would seem cost-effective to combine these services, delivering them from one centralized operation. More research is needed to clarify the effectiveness and the cost-efficiency of such multi-faceted phone-based services.

We next consider the prospects for other problem-specific, stand-alone caller-initiated services that might garner support from local or state government. The success of smoking quitlines is only partially due to their empirically demonstrated effectiveness (Anderson & Zhu, 2007). There are political and economic considerations. Public Health officials lobbied state governments to address tobacco control and quitlines were seen as a key component of state directed programs. Although in a few states – notably California and Oregon – dedicated cigarette tax increases provided funding, Master Settlement Agreement funding was a major factor in the rapid rate of adoption by states (Anderson & Zhu, 2007). Because all states derived income from cigarette sales, it was deemed politically expedient and morally appropriate to provide services for smokers.

The necessary conditions for state sponsorship of telephone counseling, therefore, would seem to be: (1) a disorder or risk factor with a relatively high prevalence rate, for which there are insufficient existing services, and for which individuals can reasonably self-diagnose; (2) an efficacious intervention protocol suitable for delivery by phone, with a reasonable theoretical and empirical rationale; (3) governments with a financial stake in the disorder because it derives revenue from the activity or product that gives rise to the disorder and the revenue stream provides a logical source of funding for the quitline service. We see two likely candidates that meet these criteria: problem gambling and problem drinking. Relatively intensive psychological interventions for pathological gambling are effective. A meta-analysis of 22 studies found a significant effect size of 1.59 ($p < 0.01$) at follow-up averaging 17 months post-treatment (Pallesen, Mitsem, Kvale, Johnsen, & Molde, 2005). Helplines for gamblers have been developed for the United Kingdom (Griffiths, Scarfe, & Bellinger, 1999), Canada (Rush & Moxam, 2001), New Zealand (Abbot, 2001), Southern New England (Potenza et al, 2001), and other parts of the U.S. (Volberg, 2002; Volberg, 2003). However, these gambling quitlines have not yet been rigorously evaluated. There is, on the other hand, a substantial literature showing that brief, face-to-face counseling is an effective intervention for problem drinkers (e.g., Babor, 1994, Miller & Rollnick, 2002). Curry and colleagues (2003) provide a model for successfully adapting brief interventions for quitline delivery.

Implications for Psychologists

The success of smoking cessation quitlines has several implications for psychologists. A relatively brief, standardized, empirically validated intervention delivered largely by “paraprofessionals” is an effective treatment for tobacco dependence. The use of the telephone as the delivery channel greatly enhances the accessibility or reach of the intervention. It is likely

that the effectiveness of quitlines is partly due to their delivering assistance at the point when callers are most ready to quit and most in need of support. That is, there is little if any delay between the request for service and intervention without the cost, inconvenience and confidentiality barriers of face-to-face treatment formats. And counselors can intervene proactively by phone during the critical first two weeks of quitting when the probability of relapse is highest.

Empirical research on quitline effectiveness was necessary but not sufficient for the widespread adoption of quitlines (Anderson and Zhu, 2007). The empirical evidence needed to be synthesized – e.g. by the Cochrane Library (Stead et al, 2007) – displayed in practice guidelines (e.g., Fiore, Jaen, Baker, et al 2008) and embraced by the public health community as an integral part of tobacco control programs. More effort is needed to acquaint smokers and their health and psychological care providers with the availability, features and efficacy of quitlines in order to generate greater consumer demand for them and political will for their support (e.g., McMenamin et al., 2006; McAfee, 2007; Orleans, 2007). Quitlines now present psychologists with opportunities and challenges. Practitioners can capitalize on the availability of free state quitlines and refer smokers as physicians and dentists have been encouraged to do (Schroeder, 2005). Researchers have a potentially rich “laboratory” wherein they could examine mechanisms of behavior change in tobacco dependence and even more broadly. The psychological and public health communities can collaborate on extending the smoking cessation quitline model to other risk factors or disorders.

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