1. Benefits and rationale for establishing quit-line services

1.1 WHAT IS A QUIT LINE?
Quit lines provide a variety of tobacco cessation services predominately via telephones. These usually include:
• initial screening and collection of demographic and smoking history information;
• brief counselling;
• mailed self-help materials;
• referral to community resources to help tobacco users to quit;
• in-depth counselling for some callers, providing practical quitting information, skills building, confidence and motivation enhancement, and social support.

Ideally quit lines should also include:
• proactive call backs for some callers where the quit line calls the participant back at set time intervals.

As communication technology has evolved, quit lines have increasingly supplemented these services with:
• online (Internet) support services, which may include social networking, interactive lessons, text and assessments;
• automated or live e-mail support;
• automated mobile phone texting;
• medication support, including information about medications, help with proper use, and the provision of tobacco cessation medications;
• recorded messages with multiple options based on responses.

Quit lines were developed and tested during the 1980s in Europe and the United States in an effort to overcome a number of challenges to the dissemination of existing cessation treatments:
• group cessation classes were effective, but smokers were reluctant to attend in large numbers, and scheduling and staffing classes efficiently often proved challenging;
• one-on-one health professional counselling was effective, but it was challenging to initiate and maintain practitioner interest in offering routine cessation counselling;
• many evidence-based tobacco treatments were not covered by public health services or health insurances.

Over the past 25 years, multiple large randomized trials (reviewed later in this manual) have been conducted in various settings. These trials demonstrated that telephone-based counselling, especially when proactive call back of quitters was included, increased quit rates in the long-term. Later trials confirmed the benefits of medication support, and preliminary evidence suggests there are some benefits in Internet and mobile phone texting support.
1.2 WHAT ARE THE BENEFITS OF QUIT LINES?
Telephone quit lines have a number of potential benefits to different segments of society. From the perspective of health ministries charged with improving the health of a population by decreasing tobacco use, quit lines provide an efficient means of delivering evidence-based treatment. Quit lines can:

- create a central resource serving as a direct provider of evidence-based services and information;
- serve as a portal for other tobacco treatment services, including community-based face-to-face counselling, medications and Internet-based services;
- potentially reach at least 4-6% of total tobacco users a year in a country;
- be promoted relatively easily and generally meet with broad acceptance by the public;
- serve as a source of training and experience for counselling professionals and paraprofessionals, increasing the pool of tobacco treatment specialists in a country.

From the perspective of individual health-care providers (see also Section 7. Integrating quit lines into health systems), quit lines can:

- offer providers an easy, convenient, consistent, evidence-based referral resource to help their patients;
- increase health-care provider willingness to conduct routine brief tobacco interventions with tobacco users (Fiore et al., 2000; An et al., 2006; Bentz, 2007; McAfee, 2007; Fiore et al., 2008);
- increase the number of their patients making quit attempts who use evidence-based approaches such as counselling and cessation medications;
- help ensure patients taking medication receive optimal instructions on use and counselling support, thus increasing effectiveness.

Potential added benefits to broader tobacco control of quit lines can:

- help normalize quitting and stimulate quit attempts even among those who do not call (Ossip-Klein et al., 1991), which is necessary to decrease prevalence (Zhu, 2006);
- increase support for tobacco control initiatives because they are tangible and offer direct help to tobacco users – some health ministries have leveraged the positive support for quit-line services to help obtain or maintain general tobacco control funding (see Section 4. Funding);
- be used as “hotlines” to report violations of smoke-free legislation, thus encouraging community participation and supporting other tobacco control initiatives (care needs to be exercised since this targets different audiences);
- ultimately increase the overall cessation rate while reducing relapse.

Finally, from the perspective of the individual tobacco user:

- help is available anywhere, at any time, at no cost to the tobacco user;
- quit lines offer confidential, personal and tailored support motivating and supporting quit attempts;
- quit-line service availability provides tangible evidence that society wants to help them quit, not punish and stigmatize them, thus creating an enabling environment.
1.3 POTENTIAL NEW BENEFITS OF QUIT LINES IN LOW- AND MIDDLE-INCOME COUNTRIES

Although less well studied, quit-lines could benefit countries with less well-developed tobacco control infrastructures or where readiness to quit is lower by:

• providing information, support and skills building for “proxy” callers, i.e. family, friends, co-workers and former smokers interested in helping tobacco users they know to quit (Muramoto, 2010);
• providing information, counsel and resources to health-care providers and community workers on how to help their patients stop smoking – this is often a sideline of a quit-line service, where health-care providers can consult on individual cases, or in the framework of a health system’s support resources, but this function has seldom been more actively promoted;
• serving as an information resource about the harms of tobacco and the benefits of quitting, particularly in countries where the quit attempt rate is low;
• serving as a model for other public health services that populations can access remotely (e.g. mental health services, other drug treatment, and tuberculosis/HIV medication adherence).

1.4 EFFECTIVENESS

1.4.1 Counselling

There is a strong evidence base for telephone counselling. After pooling multiple clinical randomized trials, the 2006 Cochrane Review (Stead, Perera & Lancaster, 2006) found a odds ratio of 1.4 (people calling the quit line and receiving counselling were 40% more likely to quit successfully when compared with people receiving less assistance). The United States Public Health Service (Fiore et al., 2008) conducted a similar analysis, finding an even higher odds ratio of 1.6. There was a wide range of effectiveness between different quit-line studies.

Quit-line effectiveness increases as the number of calls increase. Even a single, in-depth call improves the chances of quitting compared to printed materials alone. However, two calls are slightly more effective, and multiple calls are the most effective (i.e. between four and five) (Zhu, 1996; Hollis, 2007; Carreras Castellet, 2007). Multi-call randomized trial data is based on proactive call backs or appointments initiated by the quit line, not reactive follow-up that depends on the initiative of the quitter to re-establish contact.

1.4.2 Medication

Most of the trials establishing effectiveness of medications include large amounts of instruction on proper use and counselling. However, in the “real world”, most people take medications to help them quit without any instruction or counselling. There is some concern that when used with no instruction or counselling, medications provide much less benefit. Thus, quit lines may provide a means to help people gain access to medications, use them more appropriately, and receive concurrent counselling.

Strong evidence shows that providing counselling and medication together is more effective than either alone. The United States Public Health Service guideline pooled multiple studies and found that adding quit-line counselling to medication increased the effectiveness of medication by 30% relative to medication alone (Fiore et al., 2008). Evidence also exists showing that the addition of medication to telephone counselling increases effectiveness at different levels of phone-based counselling (i.e. one brief call, two calls and five calls) (Hollis et al., 2007).

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3 A Cochrane Review is a systematic review of published evidence regarding a health-care procedure, medication or intervention conducted by an independent international organization.
Medication availability has also been used as a way to promote quit lines. Even without paid media, large increases in call volumes have been seen when medication is available to callers (An et al., 2006; Tinkelman et al., 2007; Deprey et al., 2009).

1.5 COST-EFFECTIVENESS

The cost-effectiveness of tobacco treatment is well established, with actual positive return on investment in worksite settings (Warner et al., 1996), and one of the best cost-effectiveness ratios for any preventive or health-care intervention (Maciosek et al., 2006). In other words, tobacco treatment can save society money by decreasing health-care costs and improving productivity, and is the most cost-effective of all adult clinical interventions for increasing the quality and length of life.

The cost-effectiveness of quit lines has been examined extensively (Fellows et al., 2007). In addition, the cost-effectiveness of incremental additions to baseline services has also been examined, including the addition of proactive counselling calls, medication, and long rather than short courses of medication (Fellows et al., 2007). In general, the addition of proactive calls and medication is cost-effective, often dramatically so when compared to other medical and preventive services (Box 1).

Box 1. Making the case for the cost-effectiveness of quit lines

Carefully arguing the cost-effectiveness of quit lines is a critical step in their establishment, expansion and maintenance. Sometimes, government officials or even tobacco control advocates suggest that money (including quit lines) should not be spent helping smokers quit because policy initiatives such as smoke-free legislation or tax increases are so much cheaper. What is wrong with this argument?

First, only a comprehensive tobacco control strategy can reverse the global tobacco epidemic. The increasing social pressure on tobacco control efforts (for example, smoke-free workplaces and public places, increasing the price of tobacco through higher taxes) can increase the motivation or stimulus for tobacco users to quit. Offering evidence-based tobacco dependence treatment (including quit lines) greatly improves their quit rates and supports the implementation of other population-based tobacco control initiatives. Recent simulation modelling suggests that comprehensive tobacco cessation policy changes, including the implementation of quit-lines, have the strongest effect on lowering tobacco prevalence rapidly (Levy et al., 2010).

Second, it is incorrect to compare tobacco treatment costs with the costs of implementing policy changes. Tobacco dependence is a chronic condition, and its treatment should be compared to the cost of treating the sequelae of ongoing tobacco use, i.e. the cost of treating lung cancer, heart disease, asthma, chronic obstructive pulmonary disease (COPD), worsened tuberculosis, etc., as well as the cost of lost productivity from disease and early death. These costs are real and are a growing burden on LMICs. When compared to these costs, tobacco treatment (including quit lines) is the bargain of the 21st century.

In the long-term, how the cost-effectiveness argument for quit lines is framed may have important implications for their support. We recommend trying to avoid an either/or approach regarding other tobacco control programmes, or other tobacco treatment programmes. For example, rather than framing the issue as “quit-line funding versus mass media funding”, the focus should be on increasing the size of overall tobacco control funding, with appropriate resources for the quit line. Quit lines have the potential to benefit other aspects of tobacco control, and other forms of tobacco treatment.
1.6 LIMITATIONS

Despite the many advantages described above, quit lines are not a panacea.

- Quit lines require access to a telephone. Given the widespread rapid dissemination of mobile phones, this is becoming less of an issue in LMICs, but may still be a barrier in some geographical areas. Mobile phone charges can be a significant barrier to accepting counselling via mobile phones in certain countries where the person receiving the call is also charged. Toll-free numbers can help with this, but individual device fees may still inhibit callers from engaging in counselling. Options for lowering cost barriers should be explored carefully.

- Cultural or knowledge barriers may make it harder for tobacco users to call (see Section 6. Creating a demand for service for solutions).
  - Is it acceptable or even imaginable to receive counselling assistance via the telephone?
  - Negative perceptions about call centres and telemarketing may interfere. For example, in developed countries, the increased use of call screening devices on phones has decreased the ease of reaching participants for call-back sessions and evaluation.
  - A lack of understanding of the sort of services that are available. Many tobacco users assume quit lines are like drug hotlines or that they are “nag” lines. Often health-care providers share a similar lack of understanding and are initially less inclined to refer to quit lines.
  - Concerns about receiving help from government programmes may prevent some tobacco users from calling for assistance.

- Potential barriers may limit the reimbursement of quit lines as a health-care service. Some government and private health insurers may not reimburse for the provision of services delivered over the phone. This may make it more challenging to expand quit lines if equivalent face-to-face services can be paid for as health-care services.

The ability to overcome these barriers may be limited by funding availability, which impacts hours of operation, availability of toll-free numbers, and marketing and promotion capacity. Funding for services and promotion is often far below the potential demand for services (see Section 4. Funding). Most tobacco users quit without help, even when help is available. Although we can markedly increase the number of people getting help by removing access barriers and promoting services such as quit lines, it is also important to encourage quit attempts in general and not suggest that it is impossible to quit without help.