

## 5.7 Measures to assess the effectiveness of tobacco cessation interventions

The importance of encouraging smokers to quit completely is reflected in the actions outlined in Article 14 of the WHO FCTC (Figure 5.35), and has also been recognized by the World Bank as necessary in order to reduce tobacco related deaths in the next half-century (Jha & Chaloupka, 1999). Tobacco control interventions described here, and elsewhere in this Handbook, are expected to motivate smokers to make quit attempts. However, some smokers, especially those who are

nicotine dependent (see Section 3.3) will need support in order to be able to stop successfully; that support is the main subject of this section.

In many countries, even though the majority of smokers want to stop smoking and many try to do so, they have difficulty succeeding. For example, in the UK, where there is a long established tobacco control movement, the natural population cessation rate is only about 1-2% per year. Smoking is a chronically relapsing condition and tobacco use

has been recognized to be highly addictive (US Department of Health and Human Services, 1988; Royal College of Physicians, 2000). Tobacco dependence and withdrawal syndrome are classified as substance use disorders under the WHO International Classification of Diseases (WHO, 1992), and nicotine dependence and nicotine withdrawal are classified similarly by the American Psychiatric Association's Diagnostic and Statistical Manual (American Psychiatric Association, 1995).

1. Each Party shall develop and disseminate appropriate, comprehensive and integrated guidelines based on scientific evidence and best practices, taking into account national circumstances and priorities, and shall take effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence.
2. Towards this end, each Party shall endeavour to:
  - (a) design and implement effective programmes aimed at promoting the cessation of tobacco use, in such locations as educational institutions, health care facilities, workplaces and sporting environments;
  - (b) include diagnosis and treatment of tobacco dependence and counselling services on cessation of tobacco use in national health and education programmes, plans and strategies, with the participation of health workers, community workers and social workers as appropriate;
  - (c) establish in health care facilities and rehabilitation centres programmes for diagnosing, counselling, preventing and treating tobacco dependence; and
  - (d) collaborate with other Parties to facilitate accessibility and affordability for treatment of tobacco dependence including pharmaceutical products pursuant to Article 22. Such products and their constituents may include medicines, products used to administer medicines and diagnostics when appropriate.

WHO (2003)

Figure 5.35 WHO FCTC Article 14: *Demand reduction measures concerning tobacco dependence and cessation*

Support for tobacco users trying to quit is incorporated in the range of tobacco control strategies, and complements the other approaches described in this Handbook. Implementing some of the interventions described in this section will need significant investments of time and money. It may be more appropriate for a country at an early stage of tackling the tobacco problem to focus on the strategies described in other sections (such as taxation and smoke-free policies), which will be less costly to implement. Strategies, such as smoke-free policies, also help to normalize non-smoking thereby providing an environment which motivates tobacco users to make attempts to quit. Nevertheless, some of the less intensive strategies described in this section can be promoted and implemented with ease. For countries which have implemented a comprehensive tobacco control strategy, the interventions described here become even more important.

In this section we refer to support for smokers when trying to stop as “tobacco cessation interventions.” Tobacco cessation interventions are sometimes referred to as “treatment interventions,” and for the purpose of this section, these terms will be used synonymously. Our definition of tobacco cessation interventions originates from Raw and colleagues (2002), who defined treatment interventions as including “...(singly or in combination) behavioural and pharmacological interventions such as

*brief advice and counseling, intensive support, and administration of pharmaceuticals, that contribute to reducing or overcoming tobacco dependence in individuals and in the population as a whole.”*

In many countries, tobacco cessation interventions are not widely available or integrated into healthcare systems. The availability and accessibility of pharmacological medications for smoking cessation also varies from country to country (Jha & Chaloupka, 1999). Tobacco dependence cessation interventions, in most countries, are often not as available as treatment for other addictions, such as illicit drugs and alcohol, suggesting that the addictive nature of tobacco use has not been adequately recognized and addressed.

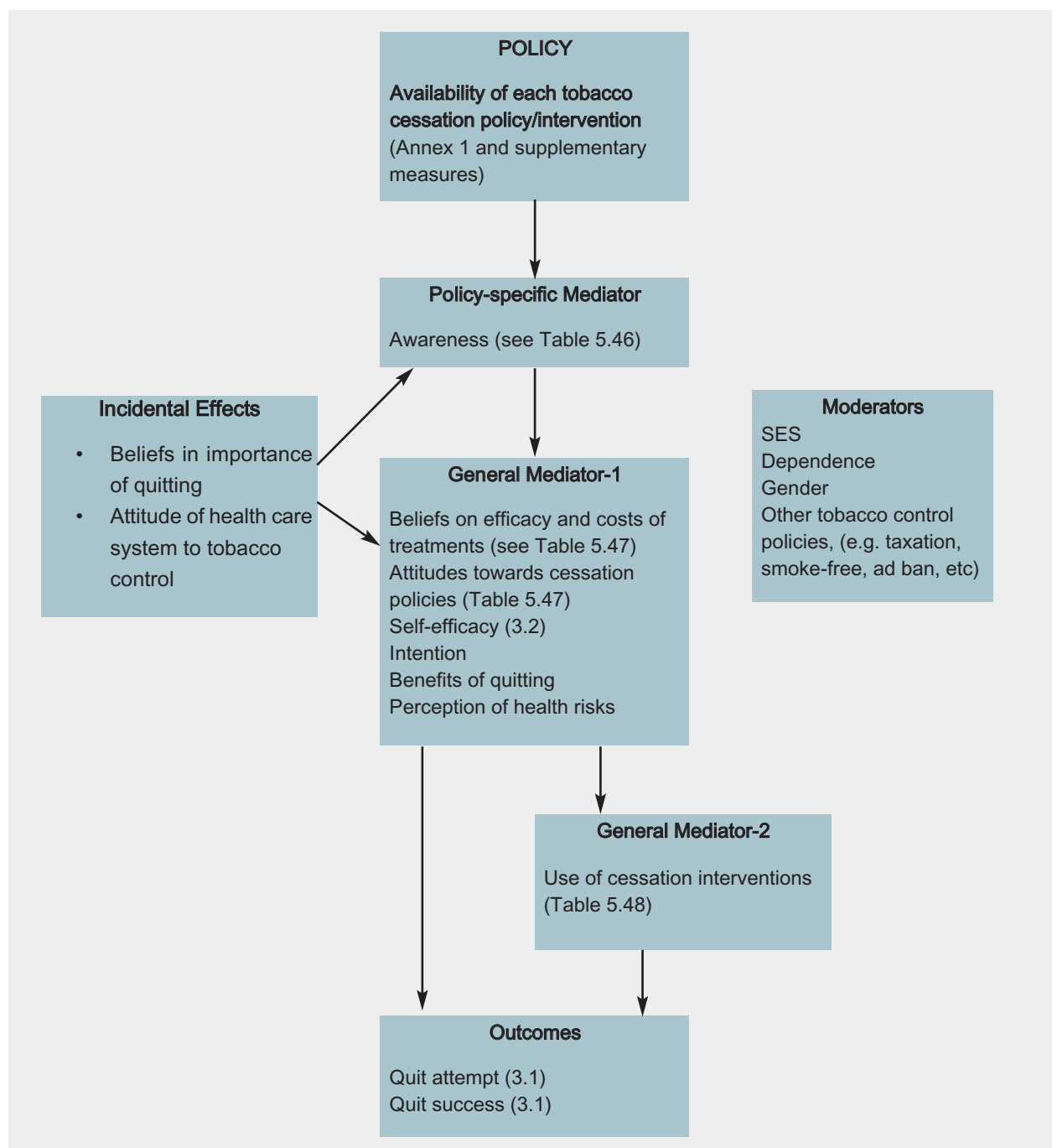
This section provides protocols for measuring the existence and effectiveness of different forms of tobacco cessation interventions based on measures outlined in Article 14 of the WHO FCTC (Figure 5.35), and following a proposed conceptual framework for the evaluation of tobacco cessation policies and interventions (Figure 5.36). Since Article 14 only provides a minimum standard, this section builds on the measures advocated. It is the view of this working group that cessation interventions and policies should be evidence-based.

This section mainly focuses on interventions aimed at adult smokers, as most of the research has been carried out on them.

However, cessation interventions are also targeted at sub-groups of the adult population, such as pregnant smokers or smokers in disadvantaged groups. Adolescent smokers may also be the target of cessation interventions. Target group considerations are important and should be taken into account when developing protocols and carrying out research (Chesterman *et al.*, 2005).

## Policy

Figure 5.37 sets out various cessation policies, including the infrastructure thought necessary to implement cessation policies and interventions (e.g. evidence-based guidelines for tobacco cessation policies and interventions). Some countries have adopted these as a first step towards implementing cessation policies. Guidelines have been developed and implemented, *inter alia*, in the USA, Europe, UK, Canada, Australia, and New Zealand (Fiore *et al.*, 1996, 2000; Raw *et al.*, 1998, 2002; West *et al.*, 2000; US Department of Health and Human Services, 2008). In addition, Figure 5.37 lists the type of interventions that a country may deliver. Evidence-based cessation interventions range from less intensive interventions that can be delivered on a large scale, such as brief, opportunistic advice by healthcare professionals, to more intensive interventions delivered to smokers either individually or in groups by a trained healthcare professional. Government smoke-free policies are also relevant to



**Figure 5.36 Conceptual framework for the evaluation of tobacco cessation policies and interventions**

Numbers in parentheses indicate sections in the volume covering the argument

- Government policies & infrastructure on tobacco cessation
  - o Availability & implementation of national evidence-based cessation guidelines
  - o Existence of a smoking cessation coalition or partnership
  - o Training for smoking cessation
  - o Advertising/marketing of cessation interventions (e.g. helpline from government, nongovernmental or private (pharmaceutical) sources)
  - o Development of a formal research programme for tobacco cessation
  - o National quitline number advertised on packs/adverts
  - o Reimbursement or level of funding or subsidy, for smoking cessation treatments including pharmacological interventions and mechanisms to provide this, eg through workplaces
  - o Availability of tobacco cessation interventions:
    - Brief opportunistic advice being delivered routinely by doctors
    - A telephone helpline (preferably freephone) for smokers & promotion of it
    - Smoking cessation treatment services
    - Stop smoking medications – over the counter, prescription, give aways, approval of new medications, marketing rules
    - Quit and win contests
    - No smoking days
    - Mass media quit campaigns (see Section 5.6)
    - New technologies such as internet smoking cessation support and automated email messaging
    - Intensive cessation services delivered face to face either individually or in groups, consisting of behavioural interventions with pharmacological support

**Figure 5.37 Government tobacco cessation policies and infrastructure for tobacco cessation**

this section, but are covered in Section 5.2.

Figure 5.37 does not give an exhaustive list of the types of cessation policies or interventions that countries can offer, but outlines the relevant ones that a country is likely to adopt to satisfy Article 14 of the WHO FCTC, most of which have proven effectiveness. Early studies of the newer technologies, such as text messaging on on-line smoking cessation support, are promising.

### **Efficacy of cessation interventions**

A summary of the efficacy of most of the interventions listed in Figure 5.37 can be found in 11 languages on the *Treatobacco* website (<http://www.treatobacco.net>). A few of the policies and types of infrastructure have not been evaluated, but as they are listed in Article 14 and are believed to be necessary to implement smoking cessation interventions, they are retained in this section.

When evaluating population effectiveness and impact of cessation interventions, the two key factors to be considered are reach and efficacy (effect size). Generally, interventions which are low intensity are more likely to reach a greater number of smokers within a population than high intensity interventions, but will have smaller efficacy. Conversely, more intensive interventions are more effective and will provide a greater degree of contact between the smoker and

the provider than low intensity interventions, but will not reach as many people and, therefore, may not have a measurable population impact. However, these more intensive interventions are important, for example, to highly dependent smokers who are likely to need more intensive support to stop smoking successfully. Though more intensive interventions are expected to incur a higher financial cost, their greater efficacy still makes them more cost effective compared with other healthcare interventions (McNeill *et al.*, 2005).

When appraising evidence of efficacy, it is important to know how abstinence has been measured. In 2003, the Society of Research on Nicotine and Tobacco (SRNT) convened a series of workgroups in order to provide guidance on measures used in clinical trials of treatments for smoking cessation (SRNT Subcommittee on Biochemical Verification, 2002; Hughes *et al.*, 2003, 2004b). The papers emanating from these groups provide “gold standards” to which those working in the smoking cessation field should aspire. These include the use of biochemical samples to validate self-reports of abstinence, such as expired-air carbon monoxide (CO) or cotinine level (a metabolite of nicotine) at various stages of follow-up, with the optimum being six months or longer. The rate of relapse after six months has been estimated enabling some assessment of quitting permanently from those followed-up for six months.

In some countries, and with some types of intervention (i.e. high reach, low efficacy), biochemical validation of quit rates at six and twelve months post-treatment may be cost-prohibitive with low compliance. We suggest as a minimum, data be collected on point prevalence at the end of treatment and six months later, with a random sample (if not all) of self-reported quitters being biochemically validated (see Section 3.2).

### **Assessing the existence and extent of implementation of tobacco cessation policies in a country**

A simple questionnaire administered to policy makers, commissioners, or auditors will enable assessment of the availability of cessation policies, guidelines, interventions, and training within a country. Several tools have been developed to do this. A WHO Assessment Tool covers the availability of cessation services for tobacco dependence under five domains: infrastructure, support for treatment, intervention and treatment, healthcare providers, and healthcare users (Anderson, 2006). [In February 2008, WHO published the Report on the Global Tobacco Epidemic, available online at <http://www.who.int/tobacco/mpower/en/>, which outlines help offered to quit tobacco use by country in the world conveniently summarized in continent-specific spreadsheets]. Joossens and Raw (2006) recently developed a new Tobacco

Control Scale to measure country activity and included measures for assessing treatment. In this scale, treatment is given a maximum of 10 points (out of a maximum of 100 points given for all tobacco control measures), with a maximum of two points being allocated for a quitline, six points maximum for a national network of specialized smoking cessation experts or units offering individual or group support delivered by properly trained professionals, and a maximum of two points for reimbursement of medications. The Framework Convention Alliance (2007) has documented the availability of treatment with a number of questions about government policy, clinical guidelines, promotion of cessation treatments, and the availability of individual interventions, as well as accessibility of medication in participating countries.

There is no easy way of validating the responses to questionnaires seeking cessation services information. Ideally more than one policy maker/ regulator/programme manager should be required to complete the questionnaire and supporting evidence sought via documentation. A recent review of the array of availability of cessation interventions within England may also be helpful in determining the type of information that should be collected (McNeill *et al.*, 2005).

Cost data will be needed to measure cost-effectiveness of cessation policies. For each cessation policy or intervention, the costs both to the provider and

the smoker utilizing it should be assessed. Together with an assessment of the likely benefits, an estimate of cost-efficacy can then be made (Godfrey *et al.*, 2005).

Supplementary measures will be needed to assess the implementation of specific smoking cessation interventions, in order to understand data on smokers' usage and perception of these interventions. Examples of the types of data that can be collected for some common cessation interventions follow.

*Supplementary measures needed to assess availability of specific cessation interventions:*

a) Brief opportunistic advice by healthcare professionals

The key measure of interest is whether smokers recall receiving advice to quit smoking from healthcare professionals, and whether they report acting on this advice (see below). However, it can also be useful to supplement such data with an assessment of the proportion of healthcare professionals who report offering smoking cessation advice, as some smokers may not recall receiving advice, or deny receiving it. Surveys of healthcare professionals often demonstrate higher levels of reported intervening than is suggested in surveys of smokers, which may suggest that healthcare professionals overestimate their frequency of discussing interventions. Interpretation of these findings can be facilitated by

qualitative research, such as the use of observational techniques to better understand the context within which brief interventions are given, if they are given at all, and why the advice may not be having the impact that is desired (e.g. if it is too brief ) (Coleman *et al.*, 2004). It can also be useful to assess doctors' views of referring smokers for further support (McEwen *et al.*, 2005).

To be able to advise smokers to quit, healthcare professionals need to keep up-to-date records of the smoking status of all patients, and be aware of more intensive support that is available to which smokers can be referred as appropriate. Auditing notes about patients can help assess whether smoking status and interventions (such as advice to quit, prescriptions, referrals) are being recorded in a systematic and consistent way, and can assess the availability of reminder systems for healthcare professionals to intervene on smoking matters (Anderson & Jane-Llopis, 2004).

b) Telephone helplines

For countries running telephone stop smoking helplines, monitoring is needed to answer questions about their purpose, target audiences, reach, cost, and effectiveness. The different purposes that telephone helplines can serve need to be identified (Centers for Disease Control and Prevention, 2004). The most common is to act as a first port-of-call for smokers seeking help (e.g.

following a television or radio advertisement). Smokers contacting the helpline can then be given support either in the form of self-help materials, brief or intensive counseling, or they can be directed to other sources of information or support. The helpline may also be used proactively and involve multiple call-backs offering further support. If the helpline is used in conjunction with media campaigns, the evaluation of the helpline would need to be assessed alongside the evaluation of the media campaign. In this case, the outcome measures for the helpline evaluation should directly link to its intended purpose in relation to the mass media. For example, if the purpose is to direct smokers where to go for further help, assessing whether information on effective treatments was given out (and subsequently used), is very different from an assessment of effectiveness if the purpose is to deliver a smoking cessation intervention (Centers for Disease Control and Prevention, 2004).

Alternatively, the purpose of the helpline may be to target specific groups, such as pregnant smokers. Basic demographic and tobacco use data (see below) are useful for assessing the ability and success of the helpline in reaching its stated target groups. As some target groups are difficult to reach, progress can be compared between a newly set-up helpline and one that is well-established and strives to reach similar target groups (Centers for Disease Control and Prevention, 2004).

Collecting data consistently across different helplines will aid in such comparisons.

The CDC (2004) also recommends collecting process evaluation data, for example, call volumes, how many callers get different types of service, how many callers get through to a live counselor, etc. Understanding how the service is utilized and factors affecting the caller's choice of service will help make sense of effectiveness and cost data. Knowing how callers heard about the helpline will be important to be able to assess which channels of advertising are most cost-effective. Caller satisfaction is also useful to assess (e.g. are callers getting the service they were expecting? do they receive the materials they were told they would? how long did they wait to speak to a counselor?). Caller satisfaction can also be assessed by asking open ended questions of a random sample of callers.

#### c) Stop smoking medications

It is worthwhile trying to obtain sales data for stop smoking medications in countries. Often these data will need to be obtained from market research companies (e.g. aggregate sales data on pharmaceuticals; companies which collect aggregate sales data on pharmaceutical sales, such as IMS Global Services, AC Nielson, and IRI). Alternatively, the pharmaceutical manufacturers might be able to get permission to share sales data from the market research com-

panies. The limitations of using commercial sales databases are discussed in Section 3.5. Sales data from pharmacies might also be available. Sales data can be evaluated to assess the impact of changes in policies or accessibility (West *et al.*, 2005). Government data can also be sought on medication subsidies or prescription script receipts.

#### d) No Smoking Days

In addition to cost and target group, message type and media penetration can also be monitored for No Smoking Days.

#### e) Quit and Win contests

Similar process indicators to those referred to above, for No Smoking Days, can also be monitored here.

#### f) Intensive cessation services

It would be helpful to know how many services exist in a particular country and any monitoring data that is routinely collected. A comprehensive evaluation of a national network of smoking cessation services was recently carried out in England (Raw *et al.*, 2005). This study included an evaluation of monitoring data collected by the services to evaluate short- and long-term outcomes (Ferguson *et al.*, 2005; Judge *et al.*, 2005). Guidance exists on the monitoring data most useful to capture on a routine basis (McNeill *et al.*, 2005; West, 2005b).

In addition, surveys (qualitative and quantitative) can be carried

out with healthcare professionals dedicated to giving specialist smoking cessation advice and support. Such surveys were recently conducted as part of the national evaluation of smoking cessation services in England (Bauld *et al.*, 2005; Coleman *et al.*, 2005; Pound *et al.*, 2005). These surveys enable an assessment of the perceived barriers to giving adequate advice and support to smokers.

#### **Policy specific mediators (proximal measures)**

Smokers need to be aware of the availability of cessation interventions before they can access them. Questions can therefore be asked about awareness of support that is available to help smokers quit and whether they are aware that they can get financial support for treatment or free cessation treatment (see Tables 5.46a and 5.46b).

Consumer surveys with smokers and recent ex-smokers (usually defined as smokers who have stopped within the last year) can assess awareness for different types of smoking cessation policies and interventions. It may also be important to ask how consumers hear about different types of interventions to help assess the most appropriate communication routes to profile these interventions. If appropriate, it might also be useful to examine these results by target group (e.g. pregnant women). It is also possible, although more resource intensive, to carry out separate

Construct	(a) Awareness of Tobacco Cessation Interventions
<b>Measure 1</b>	“Are you aware of assistance that might be available to help you quit smoking, such as telephone quitlines, local health clinic services?” (Yes, No, Don’t know)
<b>Source</b>	US Adult Tobacco Use Survey from CDC (Starr <i>et al.</i> , 2005)
<b>Validity</b>	Unknown - face validity.
<b>Variation</b>	Could be expanded to include a comprehensive array of culturally and country-specific tobacco cessation interventions.
<b>Comments</b>	Researchers might want to include a follow-up question to assess which sources of cessation services individuals are aware of (e.g. “If Yes, what is available to help you quit?”).
Construct	(b) Awareness of Tobacco Cessation Intervention Reimbursement
<b>Measure 1</b>	“Does any of your health insurance cover treatment to quit smoking cigarettes or to stop using other tobacco products?” (Yes, No)
<b>Source</b>	American Smoking and Health Survey from CDC (Starr <i>et al.</i> , 2005)
<b>Variation</b>	Could be expanded to assess awareness of the specific types of cessation interventions covered (e.g. counseling, medication), rather than coverage in general.
<b>Validity</b>	Unknown - face validity.
<b>Comments</b>	Should be adapted to other countries where treatment might be financed by sources other than insurance. This measure isn’t relevant to individuals who do not have insurance.
Construct	(c) Awareness of Tobacco Cessation Intervention Medications
<b>Measure 1</b>	“Have you heard about medications to help people stop smoking, such as nicotine replacement therapies like nicotine gum or the patch, or pills such as Zyban?” (Yes, No)
<b>Source</b>	The ITC Project, 2007
<b>Variation</b>	Include whatever medications are relevant for the country being surveyed.
<b>Validity</b>	Unknown - face validity.
<b>Comments</b>	Probably do not want to ask in some countries where awareness is ubiquitous.
<b>Measure 2</b>	“In the last month have you noticed any advertisements for stop-smoking medications?” (Yes, No)
<b>Source</b>	The ITC Project, 2007

**Table 5.46 Population-Level Survey Measures of Awareness of Cessation Interventions, Reimbursement, Medications, and No Smoking Days**



<b>Variation</b>	This could be expanded to include advertisements for other tobacco cessation interventions. Time reference should be specific to the policy implementation time-line.
<b>Validity</b>	Unknown - face validity.
<b>Comments</b>	Could be adapted for different tobacco cessation interventions.
<b>Construct</b>	<b>(d) Awareness of No Smoking Days</b>
<b>Measure 1</b>	“Some months ago, there was an organized day about smoking. Do you remember what it was called?” (Yes, No)
<b>Source</b>	Owen & Youdan, 2006
<b>Variation</b>	Adapt or tailor according to how the day is referred to in a country.
<b>Validity</b>	Unknown - face validity.
<b>Comments</b>	
<b>Measure 2</b>	“No Smoking Day was held on [date]. Do you remember it?” (Yes, No)
<b>Source</b>	Owen & Youdan, 2006
<b>Variation</b>	Adapt or tailor according to how the day is referred to in a country.
<b>Validity</b>	Unknown – face validity.
<b>Comments</b>	
The ITC project: The International Tobacco Control Policy Evaluation Survey	

**Table 5.46 Population-Level Survey Measures of Awareness of Cessation Interventions, Reimbursement, Medications, and No Smoking Days**

surveys for smokers and ex-smokers for each individual intervention allowing for more comprehensive data to be assessed.

Examples of questions that can be used in surveys of smokers and recent ex-smokers to assess awareness of specific smoking cessation interventions are shown in Tables 5.46c and 5.46d (in this case smoking cessation medications and na-

tional No Smoking Days). Countries at an early stage of the tobacco epidemic may consider asking smokers and recent ex-smokers whether they are aware healthcare professionals can offer advice or support to stop smoking. It might be appropriate to separate questions asking about advice from doctors from questions about advice from other healthcare professionals, depending on

which professional groups are being targeted to offer assistance within a country.

#### **General mediators (intermediate measures)**

It can be important to measure smokers' attitudes towards government cessation policies and interventions. Such questions can shed light on whether tobacco

users perceive their tobacco use as an addiction, in a similar way to other addictions, and whether they therefore believe it is appropriate for governments to be offering support in stopping.

Questions assessing the proportion of smokers who believe that specified cessation methods will help them to quit, can be useful for assessing whether smokers are distinguishing between unproven and proven methods and recognize the importance of seeking help with quit attempts. Beliefs about whether cessation support should be free to smokers also reflects whether smokers believe that getting help can increase the likelihood of their quit attempt being successful or whether really only willpower is needed. Examples of these types of questions are given in Table 5.47a.

Questions can also be asked about barriers to seeking help with stopping. Table 5.47b gives an example of a question assessing perceived barriers to using smoking cessation medications.

Measuring beliefs about the role of nicotine (Table 5.47c) will also help to elucidate whether smokers understand that they are or might be dependent on nicotine. Such questions will help to identify whether they are distinguishing between habit and addiction, which will also help to understand their responses to questions on seeking help in stopping. Questions about beliefs on nicotine will also help clarify their understanding of how nicotine replacement medications

might help them to stop (Siahpush *et al.*, 2006).

Specific questions can be asked about individual cessation interventions that smokers are aware of, and for each one their beliefs about usefulness and perceived efficacy. Table 5.47d shows such a question for No Smoking Days.

### **General mediators (distal measures)**

A general question can be asked to assess which cessation interventions, if any, smokers and ex-smokers used when trying to stop tobacco use recently. The time interval period over which smokers/ex-smokers should be asked to recall interventions needs consideration. Smokers have been shown to forget quit attempts, particularly shorter ones (West, 2006), so if the period is too long this is likely to result in increased forgetting. However, having a period which is too short will increase the likelihood of missing some events of interest. An alternative way of asking questions about intervention use is to link a quit attempt (e.g. the most recent quit attempt) with the support used, rather than asking what methods have been used over a time period. This makes it easier to ascertain which methods most likely contributed to quit attempts and success, but will miss some attempts to quit. Probably a combination of the different types of questions is needed. An example of a question

which can be adapted to test use of interventions either over a time period or during a recent quit attempt is given in Table 5.48a.

As well as generic questions, smokers and recent ex-smokers can also be asked further details about specific cessation interventions such as how they were accessed or how they were used. Some examples of these are covered in the sections below. Questions can also be asked about correct use or compliance as well as any perceived impact.

#### a). Advice by healthcare professionals

Surveys of smokers (and recent ex-smokers) can assess whether they have visited healthcare professionals, whether they recall being asked about their smoking and their motivation to quit, and whether they recall receiving advice to quit or support from healthcare professionals and how they acted on the advice (see Table 5.48b). They can also be asked whether there were any follow-ups offered or arranged by their healthcare professionals.

#### b). Stop smoking helplines

Evaluating a quitline can involve taking a random sample of callers and following them up to see how many quit after a period of time, for example six months (Centers for Disease Control and Prevention, 2004). Though this method is relatively straightforward to carry out, it cannot

Construct	(a) Beliefs About the Benefits of Tobacco Cessation Interventions
<b>Measure 1</b>	<p>“Which of the following cessation interventions do you think would help you to quit?:</p> <ol style="list-style-type: none"> <li>Call a quitline</li> <li>See a physician</li> <li>Join a cessation programme</li> <li>Use a nicotine patch, gum, nasal spray, inhaler, lozenge, or tablet</li> <li>Use a prescription pill, such as Zyban, Bupropion or Wellbutrin</li> <li>Use an internet smoking cessation programme</li> <li>Quit with a friend, relative, or acquaintance</li> <li>Other method</li> <li>Quit on your own”</li> </ol>
<b>Source</b>	Modified from CDC (Starr <i>et al.</i> , 2005)
<b>Variation</b>	Can be modified to assess any culturally relevant or country-specific cessation methods, either evidence-based or non-evidence-based.
<b>Validity</b>	Unknown - face validity.
<b>Comments</b>	Assesses to what extent and which individuals recognize that cessation interventions can help them. Has not been widely used to date. There is no ranking of what would be most helpful.
<b>Measure 2</b>	<p>“I’m going to read a list of statements about stop-smoking medications. Please tell me if you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with each of the following statements:”</p> <ol style="list-style-type: none"> <li>If you decided you wanted to quit, stop-smoking medications would make it easier.</li> <li>If you decided you wanted to quit, you would be able to quit without stop-smoking medications.</li> </ol>
<b>Source</b>	The ITC Project, 2007
<b>Variation</b>	This question should be asked specifically of certain medications (e.g. various Nicotine Replacement Therapy, Bupropion).
<b>Validity</b>	Unknown - face validity.
<b>Comments</b>	These questions could be expanded to include specific medications and other non-medication cessation interventions.
<b>Measure 3</b>	<p>“Proven therapies for treatment of tobacco dependence should be covered by health insurance plans.” Do you:</p> <ol style="list-style-type: none"> <li>Strongly agree</li> <li>Agree</li> <li>Disagree</li> <li>Strongly disagree</li> </ol>
<b>Source</b>	CDC (Starr <i>et al.</i> , 2005)

**Table 5.47 Population-Level Survey Measures of Beliefs about and Barriers to Using Tobacco Cessation Interventions, and Beliefs about Nicotine and No Smoking Days**

<b>Variation</b>	Adapt for country-specific funding sources.
<b>Validity</b>	Unknown - face validity.
<b>Comments</b>	Only appropriate for countries with insurance. Could be modified to “free to smokers wanting to quit.” The current item is somewhat poorly worded and may be confusing to respondents.
<b>Construct</b>	<b>(b) Beliefs About Barriers to Tobacco Cessation Interventions</b>
<b>Measure</b>	<p>“I’m going to read a list of statements about stop-smoking medications. Please tell me if you strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with each of the following statements”:</p> <ul style="list-style-type: none"> <li>a. Stop-smoking medications are too expensive</li> <li>b. You don’t know enough about how to use stop-smoking medications properly</li> <li>c. Stop-smoking medications are hard to get</li> <li>d. Stop-smoking medications might harm your health</li> </ul>
<b>Source</b>	The ITC Project, 2007
<b>Variation</b>	This question should be asked specifically of certain medications (e.g. various Nicotine Replacement Therapy, Bupropion)
<b>Validity</b>	Unknown - face validity.
<b>Comments</b>	These questions could be expanded to include specific medications and other non-medication cessation interventions. An item could be added to assess whether general costs of cessation represent a barrier (e.g. “Which of the following best describes your beliefs about the costs of quitting smoking: a) It’s too expensive; b) It’s expensive but if I wanted to I could afford it; and c) expense is not a problem”).
<b>Construct</b>	<b>(c) Beliefs About Nicotine</b>
<b>Measure</b>	“Do you believe that the nicotine in cigarettes is the chemical that causes most of the cancers?”
<b>Source</b>	The ITC Project, 2007
<b>Validity</b>	Unknown - face validity.
<b>Variation</b>	This could be adapted to cover other diseases caused by smoking.
<b>Comments</b>	

**Table 5.47 Population-Level Survey Measures of Beliefs about and Barriers to Using Tobacco Cessation Interventions, and Beliefs about Nicotine and No Smoking Days**

Construct	(d) Beliefs About No Smoking Days
Measure	<p>“Do you think No Smoking Day is a good/bad idea?”</p> <p>“What do you think the main purpose of No Smoking Day is?”</p> <p>“From what you remember, did you feel No Smoking Day was aimed at people like you, or not?”</p> <p>“I’d now like to talk about No Smoking Day in general. Did it make you feel more or less confident about stopping smoking or did it make no difference?”</p>
Source	Owen & Youdan, 2006
Validity	Unknown - face validity.
Variation	These can be adapted to cover information on specific smoking cessation medications, if more than one type is available in a country, distributed during No Smoking Day.
Comments	
The ITC project: The International Tobacco Control Policy Evaluation Survey	

**Table 5.47 Population-Level Survey Measures of Beliefs about and Barriers to Using Tobacco Cessation Interventions, and Beliefs about Nicotine and No Smoking Days**

determine what proportion of the quitting is attributable to the helpline and what proportion would have quit without it; for this, a randomised controlled study would be needed which can have significant cost implications (Centers for Disease Control and Prevention, 2004).

CDC recommends that various issues be taken into account when reported quit rates are being assessed in the absence of a control group. These include: an exact description of how the callers contacting the helpline were selected for inclusion in the evaluation sample; a description of baseline caller characteristics, such as dependence and intention to quit, as this may affect quit

success; a follow-up of a random sample of successes to ascertain long-term success, given loss to follow-up; and a calculation of success rate to assume those not followed-up relapsed to smoking. Appendix F of the CDC quitline report (Centers for Disease Control and Prevention, 2004) contains a recommended minimum data set for evaluating helplines, and Chapter 4 of the European Network of Quitlines Best Practice Guide provides similar information (European Network of Quitlines, 2004).

An alternative means of assessing the impact of reactive helplines on smokers’ quitting behaviour at a national level, is to survey smokers (and recent ex-

smokers) and ascertain whether they contacted a helpline, got through, and the impact of that intervention (Table 5.48a).

#### c) Stop smoking medications

Surveys of smokers (and recent ex-smokers) can assess whether they have accessed, purchased, and/or used stop smoking medications (Tables 5.48c and 5.48d). It is also important to ask how they used the medication (e.g. to cut down or to stop smoking altogether), for how long they used it, and whether they are still using the medication. Responses from population surveys to questions about accessing medications (either by purchasing

<b>Construct</b>	<b>(a) Use of Tobacco Cessation Interventions</b>
<b>Measure</b>	<p>“Have you used any of the following to try and stop using tobacco?” (Yes, No)</p> <ul style="list-style-type: none"> <li>a. Counseling, including at a smoking cessation clinic?</li> <li>b. Nicotine replacement therapy?</li> <li>c. Other prescription medications, for example (FILL IN WHATEVER IS RELEVANT TO THE COUNTRY)?</li> <li>d. Traditional medicines, for example (FILL IN WHATEVER IS RELEVANT TO THE COUNTRY)?</li> <li>e. Acupuncture?</li> <li>f. Hypnosis?</li> <li>g. Quit line?</li> <li>h. Anything else? (Please specify: _____)</li> </ul>
<b>Source</b>	GATS, 2007
<b>Variation</b>	Can be modified to assess any culturally relevant or country-specific cessation methods, either evidence-based or non-evidence-based. It can also be modified to specify which quit attempt is of interest (e.g. most recent, any quit attempts since a policy implementation).
<b>Validity</b>	Unknown – face validity.
<b>Comments</b>	Time scale can be varied to ask about ever used, used in last attempt, or used since policy implementation.
<b>Construct</b>	<b>(b) Receipt of a Tobacco Cessation Intervention from a Healthcare Professional</b>
<b>Measure</b>	<p>“During any visit to a healthcare professional in the last 6 months, did you receive (Yes, No for each):</p> <ul style="list-style-type: none"> <li>a. Advice to stop smoking?</li> <li>b. Additional help or referral to another service to help you quit?</li> <li>c. Prescription for stop-smoking medication?</li> <li>d. Pamphlets or brochures on how to quit?</li> <li>e. Did they arrange a follow-up?</li> <li>f. Did not visit a healthcare professional in the last 6 months?</li> </ul> <p>During any visit to a doctor or healthcare provider in the past 12 months, did you receive advice to quit using tobacco?” (Yes, No)</p>
<b>Source</b>	The ITC Project, 2007 (adapted to include follow-up); GATS, 2007
<b>Variation</b>	Can adapt for individual professionals (e.g. doctor, nurse, pharmacist).
<b>Validity</b>	Unknown – face validity.
<b>Comments</b>	Brief advice from a physician is efficacious.

**Table 5.48 Population-Level Survey Measures of the Use of Tobacco Cessation Interventions (TCI), Receipt of TCI Information from Healthcare Professionals, Assessing the Use of Tobacco Cessation Medications, How Medications were Obtained, and Behaviour Change on No Smoking Days**

Construct	(c) Use of Tobacco Cessation Medication
Measure	<p>"Have you used any stop-smoking medication?" (Yes, No, Can't remember)</p> <p>"In the last 6 months – since [6 month anchor] – have you used any stop-smoking medication?" (Yes, No, Can't remember)</p> <p>"In the last 6 months, which medication or medications did you use (do not prompt)?" (require type not brand name, can select more than one)</p> <p>"The last time you used a stop-smoking medication, did you use more than 1 product at the same time?" (Yes, No)</p> <p>"Which medications did you use at the same time?"</p> <p>"For how long did you use the medication?"</p>
Source	The ITC Project, 2007
Variation	The time scale can be adjusted to assess, all medication use, most recent use, or use since the policy implementation.
Validity	Unknown - face validity.
Comments	Could supplement or replace with pharmaceutical sales data.
Construct	(d) Access Tobacco Cessation Medication
Measure	<p>"How did you get [medication from previous answer]?" (By prescription, Over the counter/over the shelf, From a friend)</p> <p>When you used [medications from previous answer], did you pay full price, get a discount, or get it free?</p>
Source	The ITC Project, 2007
Variation	These may need to be changed to be country specific.
Validity	Unknown - face validity.
Comments	Could supplement or replace with prescription or pharmacy data.

**Table 5.48 Population-Level Survey Measures of the Use of Tobacco Cessation Interventions (TCI), Receipt of TCI Information from Healthcare Professionals, Assessing the Use of Tobacco Cessation Medications, How Medications were Obtained, and Behaviour Change on No Smoking Days**

or through a healthcare professional) can be compared with sales data and medication subsidies or pre-prescription receipts.

#### d). No smoking days

Examples of questions used in annual surveys of the UK No Smoking Day are given in Table 5.48e.

#### e). Intensive cessation services

User satisfaction surveys can also be used, if appropriate, to increase understanding of why and how cessation services have a particular impact.

#### **Summary and recommendations**

Article 14 of the WHO FCTC obligates ratifying nations to adopt policies that promote access to evidence-based tobacco cessation interventions. Such interventions range from less intensive efforts, such as brief, opportunistic

Construct	(e) Behaviour Change on No Smoking Days
<b>Measure</b>	<p>“Did you yourself attempt to give up or cut down your smoking on No Smoking Day?” (Yes, No) (for those who answer “No,” ask why not)</p> <p>For those who say yes:  “Did you.....  a. Give up for the whole day?  b. Give up smoking for part of the day?  c. Cut down your number of cigarettes on that day?  d. Or did you find you just couldn't cut your smoking?  e. Can't remember?”</p> <p>For those who did stop or reduce, including on the Day itself, for how long did you manage to stop or reduce your smoking?</p> <p>How long did you intend to stop or reduce smoking?</p> <p>Why did you want to reduce or stop smoking on No Smoking Day?</p>
<b>Source</b>	Owen & Youdan, 2006
<b>Validity</b>	Unknown - face validity.
<b>Variation</b>	These can be adapted to similar days in other countries.

GATS: Global Adult Tobacco Survey  
The ITC project: The International Tobacco Control Policy Evaluation Study

**Table 5.48 Population-Level Survey Measures of the Use of Tobacco Cessation Interventions (TCI), Receipt of TCI Information from Healthcare Professionals, Assessing the Use of Tobacco Cessation Medications, How Medications were Obtained, and Behaviour Change on No Smoking Days**

advice by healthcare professionals, to more intensive efforts delivered to tobacco users either individually or in groups by trained healthcare professionals. Core constructs for evaluating access to tobacco cessation interventions include: proximal variables, such as awareness of cessation interventions; intermediate variables, such as specific beliefs and attitudes about different cessation interventions; and distal variables

reflecting the utilisation of different cessation interventions.

The effects of policies facilitating access to tobacco cessation interventions can be assessed through self-report using standardised surveys of current and former tobacco users, and by reviewing records that document trends in utilisation of tobacco cessation interventions (e.g. calls to a helpline, sales of stop smoking medications). Mea-

asures described here are useful exemplars of how to assess utilization of cessation services. Evaluations of the effects of policies to promote access to cessation interventions should preferably include a longitudinal design, which assesses the relationship between the utilization of cessation treatments by current and former tobacco users and tobacco use behaviors.