Case studies of tobacco dependence treatment in Brazil, England, India, South Africa and Uruguay

Martin Raw, Ann McNeill & Rachael Murray
UK Centre for Tobacco Control Studies, Division of Epidemiology and Public Health, University of Nottingham, Nottingham, UK

ABSTRACT

Aims The aims of this study are to describe the tobacco dependence treatment systems in five countries at different stages of development of their systems, and from different income levels and regions of the world, and to draw some lessons from their experiences that might be useful to other countries. Methods and data sources Data were drawn from an earlier survey of treatment services led by M.R. and A.M., from Party reports to the Secretariat of the Framework Convention on Tobacco Control, and from correspondents in the five countries. These data were entered onto a standard template by the authors, discussed with the correspondents to ensure they were accurate and to help us interpret them, and then the templates were used as a basis to write prose descriptions of the countries’ treatment systems, with additional summary data presented in tables. Results Two of the middle-income countries have based their treatment on specialist support and both consequently have very low population coverage for treatment. Two countries have integrated broad-reach approaches, such as brief advice with intensive specialist support; these countries are focusing currently upon monitoring performance and guaranteeing quality. Cost is a significant barrier to improving treatment coverage and highlights the importance of using existing infrastructure as much as possible. Conclusions Perhaps not surprisingly the greatest challenges appear to be faced by large, lower-income countries that have prioritized more intensive but low-reach approaches to treatment, rather than developing basic infrastructure, including brief advice in primary care and quitlines.

Keywords Nicotine addiction, tobacco dependence, treatment systems and policy.

INTRODUCTION

Article 14 of the WHO Framework Convention on Tobacco Control (FCTC) [1] obliges countries to develop evidence-based treatment guidelines and take effective measures to promote adequate treatment for tobacco dependence. In November 2008 the third session of the Conference of the Parties (COP3) to the FCTC set up a working group to write guidelines to help countries implement Article 14, to be presented for adoption at COP4 in Uruguay in November 2010 [2]. In 2009 we published the results of a survey of tobacco dependence treatment guidelines in 31 countries [3] and treatment systems [4] in 36 countries. This paper builds upon those results by describing in slightly more detail the treatment systems of five diverse countries, which we hope will provide useful information for countries seeking to implement Article 14.

METHODS

Countries were selected from our treatment survey [4] and from countries where we had contacts willing to help. We selected countries from all four World Bank income levels (however, India moved from low- to lower middle-income during the study) and four of the six World Health Organization (WHO) regions. The final sample included Brazil, England, India, South Africa and Uruguay, countries at different stages of development of their treatment systems. Our correspondents in each country were experienced treatment specialists and government officials involved with tobacco dependence treatment.

We designed a template to collect information in a standard format, completed it with information from our survey, from FCTC Party reports [5] and from initial communication with our correspondents, and then sent it to them for their views and comments. We included three
Table 1 Basic country data.

<table>
<thead>
<tr>
<th>Data</th>
<th>Brazil</th>
<th>England</th>
<th>India</th>
<th>South Africa</th>
<th>Uruguay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>199 000 000</td>
<td>51 000 000</td>
<td>1 166 000 000</td>
<td>49 000 000</td>
<td>3 500 000</td>
</tr>
<tr>
<td>Smoking prevalence (average/male/female)</td>
<td>22 27 18</td>
<td>21 22 20</td>
<td>17 33 1.4</td>
<td>20 35 10</td>
<td>32 37 28</td>
</tr>
<tr>
<td>Smokeless tobacco prevalence</td>
<td>22 37 8</td>
<td>22 37 8</td>
<td>6 1.5 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated smokers</td>
<td>24 million</td>
<td>9 million</td>
<td>115 million</td>
<td>6 million</td>
<td>625 000</td>
</tr>
<tr>
<td>World Bank income level</td>
<td>Lower middle</td>
<td>High</td>
<td>Lower middle</td>
<td>Upper middle</td>
<td>Upper middle</td>
</tr>
<tr>
<td>WHO region</td>
<td>Americas</td>
<td>Europe</td>
<td>South East Asia</td>
<td>Africa</td>
<td>Americas</td>
</tr>
</tbody>
</table>


Table 2 Country situation analysis.

<table>
<thead>
<tr>
<th>Price policy</th>
<th>Brazil</th>
<th>England</th>
<th>India</th>
<th>South Africa</th>
<th>Uruguay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising ban</td>
<td>No</td>
<td>Yes, strong</td>
<td>No</td>
<td>Yes</td>
<td>Yes, strong</td>
</tr>
<tr>
<td>Smoke-free public/work places</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Partial</td>
<td>Yes</td>
</tr>
<tr>
<td>Mass media publicity campaigns</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Large graphic health warnings</td>
<td>Yes, one major surface only</td>
<td>Yes, one major surface only</td>
<td>Yes, one major surface only</td>
<td>No</td>
<td>Yes, both major surfaces</td>
</tr>
<tr>
<td>Quitline number on pack</td>
<td>Yes</td>
<td>On some</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Brazil: the advertising ban does not include at point of sale; some states have introduced smoke-free laws. India: smoke-free law not yet implemented fully in all states. South Africa: smoking is completely banned in all enclosed public places including work-places, but the minister can permit limited smoking: an area equivalent to 25% of total floor space which is separated physically from the rest of the public place and separately ventilated so that air from the smoking zone does not enter the non-smoking areas. However, the effectiveness of the separation needs monitoring. Campaigns: there are limited television and cinema adverts. Uruguay: the quitline number will go onto the pack when the new health warnings are introduced in December 2009.

The description of a country’s treatment system was based upon our original survey questionnaire [4], which asked about government policy and about a number of key treatment elements, including brief advice, quitlines, intensive specialist support and medications. The prose descriptions in each case study and the items in Table 3 report the information given to us by our correspondents.

**CASE STUDIES**

**Brazil**

**Overview**

Brazil is a large federation [6] with a government-funded national health-care system. However, states have autonomy on health, so national health policies, including those on tobacco dependence treatment, cannot be imposed upon states and consequently states vary a great deal in their treatment provision. Brazil has a national policy on treatment and has established a national treatment system. Tobacco dependence treatment is part of the National Tobacco Control Programme (NTCP) established in 1987 under INCA (National Cancer Institute). In 2001 INCA led the development of a national consensus on treatment, in effect national treatment guidelines [7]. The guidelines recommend behavioural support for all smokers and medications for some; for example, those who smoke more than 20 per day or those who have tried to stop but failed because of withdrawal symptoms. In 2002 INCA began integrating tobacco dependence treatment into state and municipal health facilities, with training for behavioural support, medications and resource materials provided centrally by the Ministry of Health. These units must be accredited to offer treatment. Accreditation depends upon possessing at least one health worker with a university degree who has been...
trained by INCA. Training is provided through a ‘cascade’ system: INCA train trainers in the state health and education secretariats; they, in turn, train trainers in the municipal secretariats; municipal trainers train professional workers in work-places, schools and health units.

**Treatment approach**

The recommended treatment model is behavioural support, individual or group (10–15 in a group), plus medications if needed, with weekly sessions in the first month, fortnightly sessions in the second month and monthly sessions until 1 year. Nicotine replacement therapy (NRT) gum, NRT patch and bupropion are provided free of charge in the accredited units.

**Brief advice**

Brief advice in primary care is not available widely nor reimbursed.

**Quitline**

The Ministry of Health has a national health line which receives almost 2 million calls a year on tobacco. Callers reach a recorded menu, one of whose options is cessation advice; of those who select this option, 98% listen to a recorded message and then hang up; 2% select a further option to talk to a counsellor.

**Brief comments**

Brazil has developed a treatment system based upon intensive support delivered in accredited treatment units. The need for an accredited unit to have INCA training might provide quality assurance but also creates a barrier to rapid expansion of the system, because of limited training capacity. It is hard to see how such a system can be expanded rapidly to provide much better population coverage, or how the expansion could be afforded. Central control and distribution of medications has also resulted in delays and blockages, and the quitline configuration, with calls answered by a recorded message and the line...
Addiction

Published reviews show that the services are effective and
nence and smoking reduction as a first step to quitting.
some NRT products were licensed for temporary absti-
use, resulting in much wider use and, more recently ,
regulatory agency relaxed the regulations governing NRT
(NCSCT) (www.ncsct.co.uk)]. In 2005 the medicines
commission, manage and deliver stop smoking services
democratic treatment experts to: monitor and evaluate the
treatment became official policy following the publication
of the first White Paper on tobacco in 1998 [9]. The
chapter on treatment was informed by national,
evidence-based smoking cessation guidelines developed
at the same time as the White Paper, and endorsed widely
by professional, voluntary and public organizations. Cost-
effectiveness guidance published with the guidelines also
influenced the government’s decision to set up a national
treatment system. The treatment system was launched
on a pilot basis in 1999 and went national in 2000 as an
integral part of the NHS. Smokers can be referred to the
services by any health professional and can also self-refer.
The services are intended to be local hubs for cessation
support in their area and offer training to health profes-
sionals. Most services have a salaried core staff of one or
two treatment specialists providing evidence-based inten-
sive support, but in addition to this, a wider range of
health-care professionals can be reimbursed for providing
intensive support to their clients, for example pharma-
cists. Since 1999 the system has evolved in the light of
feedback from an evaluation [10] and other government
initiatives, such as those developed to tackle heart disease
and cancer, and reduce health inequalities. Tobacco
dependence treatment is regarded by the government as a
critical part of these policies and of a comprehensive
tobacco control strategy, and support for smokers
attempting to stop is seen as an important complement to
policies such as high taxation and smoke-free legislation.
In 2009 the government set up a new centre led by aca-
demic treatment experts to: monitor and evaluate the
performance of the services; develop and monitor training
standards; define the basic skills needed by counsellors;
and to deliver training and resources to those who
commission, manage and deliver stop smoking services
[the NHS Centre for Smoking Cessation and Training
(NCSCT) (www.ncsct.co.uk)]. In 2005 the medicines
regulatory agency relaxed the regulations governing NRT
use, resulting in much wider use and, more recently,
some NRT products were licensed for temporary abstin-
ence and smoking reduction as a first step to quitting.
Published reviews show that the services are effective and
are successfully reaching more disadvantaged smokers
[10].

Treatment approach

Treatment policy is based upon a combination of
approaches with wide reach but limited effectiveness (e.g.
brief advice in primary care, free quitline, widely acces-
sible NRT) and intensive specialist support, which has a
smaller reach but greater effectiveness, through the NHS
Stop Smoking Services (the services). Specialist support
largely follows the ‘Maudsley model’ with around six
weekly sessions of behavioural support and medications
individually or in groups, but other configurations are
used, such as ongoing drop-in groups which quitters can
join without an appointment. The latter is one of several
less evidence-based approaches designed to attract more
disadvantaged smokers (who, for example, who some-
times report difficulty in attending fixed weekly sessions).

Brief advice

Family doctors are reimbursed for recording patients’
smoking status and offering brief advice, and payments
for referring smokers to the services or for prescribing
medications are being considered.

Quitline

England has two free national quitlines, one run by the
voluntary sector and the other run by the NHS.

Brief comments

The English system is well funded and well integrated into
its NHS. However, when it was first launched there were
teething troubles in a number of areas. There was little
forward planning on the provision of medications or to
increase training capacity and regulate its quality. Some
medications were reimbursed, some not, causing logisti-
cal problems for the services, and training was left to
market forces, which also caused problems. The govern-
ment’s mechanism to encourage treatment activity was
by setting throughput targets. Although this increased
throughput it made it more difficult to focus upon those
most in need, resulted in a focus upon short-rather than
long-term success and encouraged some fraudulent
behaviour. To attract different kinds of smokers, different
models of support have been developed by the services,
not all of which are evidence-based. The recent intro-
duction of annually updated clinical guidance with
minimum national standards may help with this. The
new national centre should improve quality by monitor-
ing and supporting training and service performance.
**India**

*Overview*

India is a large federation with a government-funded health-care system. States are obliged to implement national policies but still decide their own priorities, so that national policies are implemented by consultation and mutual consent, often with federal government funding. India does not have an official government policy or guidelines on tobacco dependence treatment, but does have a tobacco control division in the Ministry of Health & Family Welfare, and a National Programme on Tobacco Control which includes treatment, and a government official responsible for treatment. Nicotine gum, bupropion and varenicline are available but not reimbursed. In 2001 under a programme supported by the Indian government and WHO, 18 Tobacco Cessation Centres (TCCs) were set up in major cities in 17 of the country’s 35 states with government support. Since then a further 12 TCCs have been established, although these are the initiative of respective institutes and do not have government support. Although there is not yet a national treatment system, TCCs provide brief advice, intensive behavioural support and medications, and are developing outreach programmes in communities outside the major cities. However, they still offer very limited access to India’s population as a whole and are not publicized widely. TCCs are based in hospitals, regional cancer centres, tuberculosis (TB) centres, medical and dental colleges and primary health-care centres, and are run by counsellors trained by WHO under the supervision of doctors. They serve as training and resource centres for the state, assist in scaling-up treatment services, and also act as advocacy and resource centres supporting tobacco control legislation at state level. The centres are involved actively in training health workers, nurses, doctors and other health professionals and students. One centre (Bangalore) is designated a resource centre to support the others, and is developing a cessation website.

*Treatment approach*

Behavioural support (mainly individual) is provided by non-medical trained counsellors normally for between 6 weeks and 3 months. Where medications are recommended, 2-mg nicotine gum can be bought over the counter; any others, including 4-mg NRT, must be prescribed by a doctor. However, as the clients must pay, varenicline is not often prescribed because of its expense. The same basic treatment approach is used for smokers and users of smokeless tobacco.

**Brief advice**

Health professionals are not reimbursed for providing advice in primary care, although they are expected to advise patients not to use tobacco as part of their health advice.

**Quitline**

India does not currently have a national quitline.

**Future plans**

The government intends to establish a treatment budget and integrate treatment into the health-care system, including the system to treat TB. National guidelines are being developed and a national quitline is being planned.

**Brief comments**

Like Brazil, India has also developed a treatment system based upon intensive support delivered in clinics, which has very low coverage. It is hoped that integrating treatment into the system to treat tuberculosis should greatly increase coverage. National guidelines are being developed and a national quitline is being planned. India does not provide any medications free of charge.

**South Africa**

*Overview*

South Africa has a national government-funded health-care system and a widespread primary care system. Health policy is decided at national level but provinces have autonomy on delivery, so policies such as treatment are implemented with the consent of the provinces, often with provincial funding. South Africa does not have: an official government policy on treatment; guidelines; a government official responsible for treatment; a national treatment system. Advice to tobacco users is provided at national level through a quitline. Tobacco control and treatment are part of the undergraduate curriculum in some medical and dental schools.

*Treatment approach*

No national treatment system exists apart from the quitline but NRT (gum, patch, sublingual tablet, mouth spray) is widely available, and buproprion is available. No medications are reimbursed.

**Brief advice**

Health professionals are not reimbursed for providing advice.
Quitline

There is a national quitline which offers behavioural counselling and advice on medications. It is not toll-free but offers a call-back service.

Future plans

There are plans to train a critical mass of primary care providers to record the tobacco use of all patients and offer brief advice, and discussions on obtaining NRT on the national essential drug list.

Brief comments

Integration of treatment into other high-priority public health programmes such as tuberculosis is limited, there is little public understanding of the role of medications in treatment and their cost is a significant barrier to their use. However, the infrastructure for delivering accessible advice and help to smokers exists through the primary care system, and South Africa is planning to train primary care professionals to record tobacco use and give brief advice, is considering placing NRT on its national essential drugs list and does have a quitline.

Uruguay

Overview

Uruguay has a government-funded national health-care system which serves the entire population. Uruguay began to build a tobacco dependence treatment network in January 2004 with the support of the National Resources Fund (FNR), a health insurance organization created by law but semi-independent of government. Treatment, including medications, was available free through this system in about two-thirds of provinces. However, demand became so great that the system became over-stretched and in 2005 changed its focus to training others, and simply providing free medications to other treatment programmes, resulting in the creation of more than 100 treatment programmes. However, a new system is now in place, with all tobacco dependence treatment to be delivered through the National Health System. A comprehensive Tobacco Control law in force since 2008 obliges providers in all public and private health services to incorporate the diagnosis and treatment of tobacco addiction into their primary health care programmes and plans, and smoking status must be recorded in all medical notes. The law also says that health-care providers must follow the evidence-based national guidelines in their treatment work. The 2008 law introduced tobacco dependence treatment into the National Healthcare System, and public and private health-care systems are now being unified into one single NHS, so when the new law is fully implemented the Ministry of Health will be managing tobacco dependence treatment nationally, supported by FNR, and with 100% population coverage. Training was provided by the FNR, but since 2009 it has been supervised by the Ministry of Health. Exactly how the treatment system will be monitored has not yet been decided.

Treatment approach

The most common approach is weekly groups offering behavioural support and medications (NRT and bupropion; varenicline is available but is not reimbursed by this system and the nicotine patch is not offered free because of its cost), with no fixed quit date. Smokers stay in treatment as long as they need.

Future plans

Discussions are ongoing about how to incorporate brief advice into primary care and how to monitor treatment performance; a national quitline is being planned.

Brief comments

Uruguay is in the process of establishing universal tobacco dependence treatment through its health-care system, through a model with similarities to England’s. Key challenges include to establish brief advice in primary care, establish a national quitline, provide greater access to medications and establish a system to monitor quality.

DISCUSSION

The challenges facing these five countries in providing treatment for tobacco users vary enormously. Brazil and India are continental-sized countries and are federations, whose states have considerable autonomy in implementing national policy. Most are politically committed to treatment and have invested in it significantly, recognizing the importance of supporting policies such as high prices and public place smoking bans by offering support to those who need it, a strategy recommended by WHO [11]. Currently, however, treatment appears not to be high on the agenda in South Africa, at national level or among health professionals.

Both England and Uruguay have integrated tobacco dependence treatment into their national health-care systems, so that coverage is (or in Uruguay soon will be) essentially universal. They have also addressed explicitly the issue of monitoring quality. England has set up a new dedicated, government-funded centre to monitor treatment and training outcome and quality, and Uruguay plans to set up a system to do this.
England has the most extensive provision of stop smoking medications. All are available on prescription, which means that many smokers can obtain them free because they do not have to pay prescription charges (for example, people on very low incomes). NRT is also available from pharmacists and ordinary shops. However, England is the only high-income country in this study, and cost is a significant barrier to medications access in many countries.

One key issue for countries beginning their development of treatment services is whether to start with lower efficacy but broader-reach population approaches, such as brief advice in primary care, quitlines and wide access to low-cost medications, or more effective but expensive intensive support delivered through trained specialists, often based in hospitals and clinics. Ideally a balance is needed, as they serve different purposes and potentially different audiences. Brazil and India introduced specialist clinics at an early stage in their histories. However if only this approach is adopted, coverage will be a critical issue, and it may work best where the population is smaller and/or population density is high. Scaling up such intensive specialist treatment is clearly going to be difficult and expensive in huge, diverse countries such as Brazil and India. Countries such as this, indeed perhaps all countries, may want to look at emerging technologies with the potential for population reach, such as cellphones, the internet and even delivery media such as radio.

This discussion prompts the questions as to whether there is consensus on what constitutes an optimal tobacco dependence treatment system, and whether all countries should be aiming to develop comprehensive, integrated systems such as those of England and Uruguay. Although it is doubtful that there is an international consensus as yet, forthcoming Article 14 guidelines will probably result in the emergence of such a consensus. Article 14 itself states that countries should develop effective tobacco dependence treatment, but recognizes that in planning their approach countries should take account of national circumstances and priorities. This language would appear to recognize that the same approach will not be adopted by all countries. It would seem to make sense that low- and middle-income countries should prioritize more affordable broad-reach approaches such as brief advice in primary care, quitlines and access to low-cost medications, using the existing infrastructure.

A limitation of our study is that this is a very select sample and that information presented depends upon the depth of knowledge and understanding of our correspondents. An additional issue may be the natural tendency of government officials to stress their positive achievements, although in each country we received help from people inside and outside government. A related issue is the difference between knowing what a law mandates, and what is actually done in real life, hence the importance we placed upon monitoring treatment performance and quality, an activity which is not yet in place in many countries, at least in a rigorous way.

We hope these case studies throw some critical light on the challenges facing these five countries. Although this is not a representative sample, we believe the issues and challenges encountered in these varied countries are likely to be helpful to other countries as they seek to implement FCTC Article 14 and improve or develop their treatment services. We plan to develop a more extensive library of case studies on www.treatobacco.net and update them periodically, to make a permanent resource for countries seeking information on tobacco dependence treatment services [12].

Declarations of interest

In the last 5 years M.R. has had conference expenses reimbursed, been paid an honorarium for a talk and received freelance fees from Pfizer, but has not accepted support from the manufacturers of stop smoking medications in the last 3 years; A.M. and R.M. have no competing interests.

Acknowledgements

Author contributions: M.R. conceived and led the project and the writing. All three authors contributed to data collection, writing the case studies, interpreting the data, and writing this paper. Many people provided information about treatment in their countries and helped us to interpret it with patience and generosity. We are extremely grateful to them. However, the interpretation is ours alone. They were: Winston Abascal, Mira Aghi, Lekan Ayo-Yusuf, Eduardo Bianco, Tania Cavaclante, Emma Croghan, Diego Estol, Analice Gigliotti, Vineet Gill Munish, Jagdish Kaur, Montezuma Pimenta Ferreira, Raj Kumar, Ana Lorenzo, Andy McEwen, Ricardo Meirelles, Vimla Moody, Lesley Owen, Sabrina Presman, Yusuf Saloojee, Amanda Sica, Gay Sutherland, Robert West and Nicky Willis. M.R. gratefully acknowledges funding to write these case studies from the Society for the Study of Addiction, a learned society based in Britain.

References


