TB and Tobacco

Tobacco cessation within TB programmes:
A 'real world' solution for countries with dual burden of disease.

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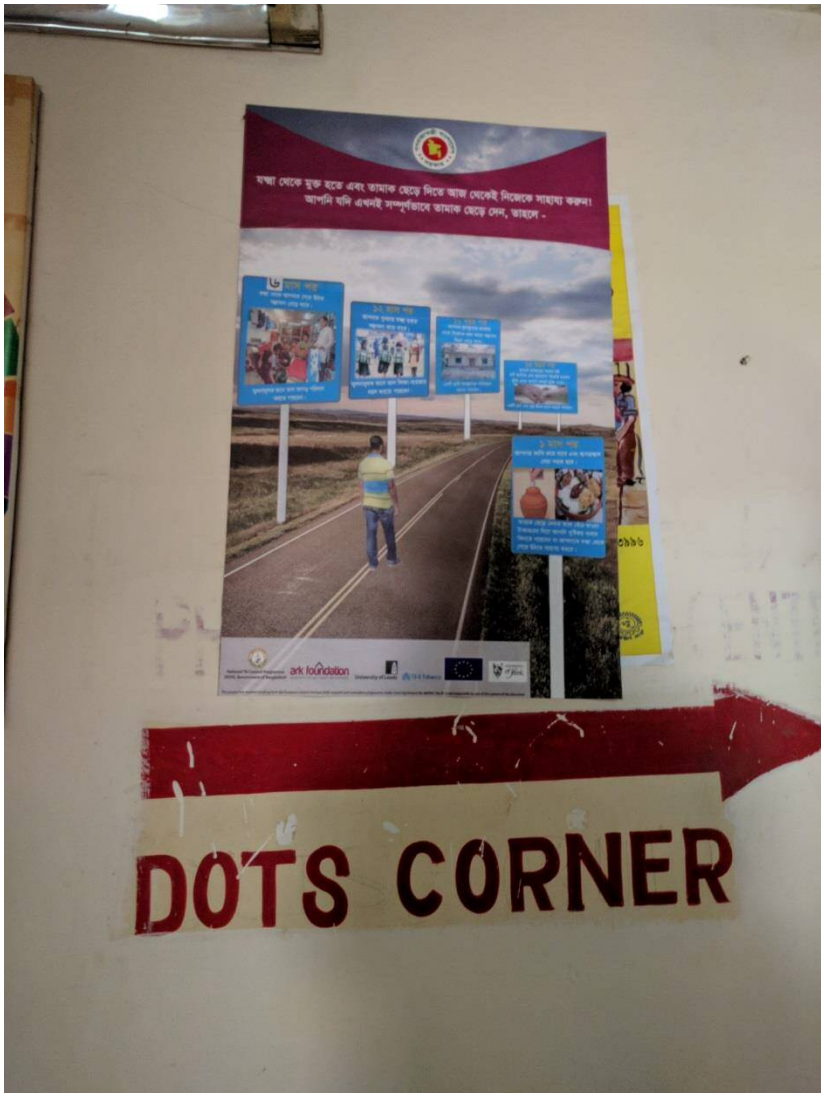
Integrating tobacco cessation into tuberculosis care in South Asia: Lessons learned from the *TB & Tobacco* process evaluation



Process Evaluation Report for Stakeholders - D4.1

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February 2019

TB & Tobacco

Integrating tobacco cessation into tuberculosis care in South Asia: Lessons learned from the TB & Tobacco process evaluation

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Executive summary

Key findings

1. **Health workers are motivated, but structural problems such as high numbers of patients make it difficult to spend extra time on behaviour support counselling.**

2. **Many health workers experience the issue of tobacco use to be sensitive and stigmatizing, especially when counselling people of different genders.**

3. **Health workers adapt the counselling situation to their needs by focusing on specific messages from the TB & Tobacco treatment flipbook.**

4. **Most TB patients who smoke are willing to quit smoking in order to protect their health and their families.**

5. **Social support is instrumental to patients trying to stop smoking. The TB & Tobacco intervention suggests encouraging patients to get that support from family and friends.**

6. **Many patients have a wish to get additional support to deal with cravings, such as smoking cessation medicine.**

7. **Patients have four main reasons for not attending the tobacco cessation counselling session: not willing to quit, not able to quit, time constraints, disagreement about setting a quit date.**

Key recommendations for National Tuberculosis Programmes (NTP)

1. **Provide training to health workers not only on tobacco cessation counselling but also on how to specifically integrate the flipbook counselling into the administration and the overall workflow.**

2. **Include soft skills into the health worker training: (1) gender sensitivity when approaching patients and (2) rapport building with people of different social, cultural or educational backgrounds.**

3. **Make the provision of tobacco cessation services a mandatory standard part of TB care through regular monitoring of patients' tobacco use and whether the health workers provide counselling. This shows NTP's commitment to tobacco cessation for patients with TB and creates motivation for health workers to discuss tobacco use with their patients.**

4. **Provide additional funding to facilitate the TB registration process and free up some time for health workers to focus on counselling.**

5. **Create a mechanism to ensure distribution and use of the TB & Tobacco materials in all clinics.**

Key recommendations for health workers

6. **Approach the topic of tobacco use regularly when talking about TB to your patients, as some patients might need extra time to feel comfortable enough to talk about their smoking habits.**

7. **Use the flipbook as an aid for your regular TB counselling and not only for smokers to streamline the counselling process.**

8. **Share your behaviour support counselling skills and techniques with your health worker colleagues to enable them to conduct the counselling as well. Share the workload and ensure that all patients can profit from the cessation offer.**

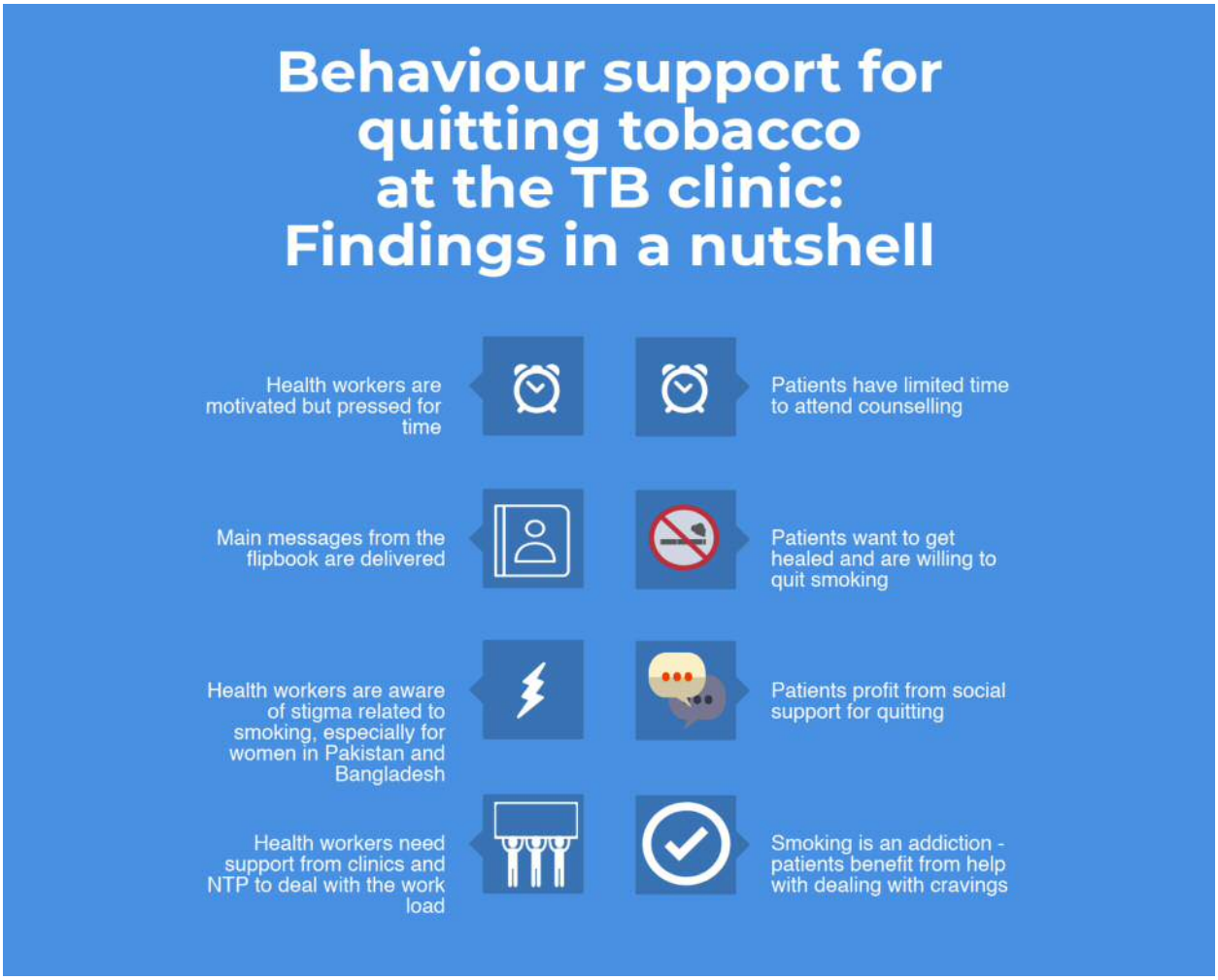


Figure 1: Process evaluation findings in a nutshell

The infographic highlights our main findings. Time is an issue for both health workers and patients, and socio-cultural contextual aspects influence the intervention implementation.

Background and rationale

The TB & Tobacco project helps address barriers to smoking cessation within TB care

Many studies on tobacco cessation have been conducted in higher income countries – the TB & Tobacco project now wants to make cessation more widely available in South Asia, too. To this end, we have cooperated with National TB Programmes in Pakistan, Bangladesh and Nepal, and have talked to clinic heads, health workers and patients at clinics in these three countries. We are investigating how tobacco cessation support can be integrated into national TB programmes using the affordable low-cost pharmacotherapy cytisine and a specifically designed behaviour support counselling approach. This approach consists of an image-heavy flipbook delivering messages on how to take care of yourself with TB, including living a healthy lifestyle without alcohol and tobacco and dealing with smoking cessation withdrawal symptoms, a poster advertising tobacco cessation support at the clinic, and a leaflet highlighting main behaviour changes necessary to quit, such as getting social support, resting, and not substituting cigarettes with other forms of tobacco. Health workers are trained to use these materials and to speak to patients about their tobacco use. Each counselling session lasts about 15 minutes. All of these materials plus training materials for health workers are available for free as downloads on the TB & Tobacco website[1] in English, Bangla, Urdu and Nepali.

[1] https://tbandtobacco.org

Figure 2: TB & Tobacco flipbook page and poster from Nepal

The flipbook page indicates the necessity to take TB medicine regularly every day for several months. The poster advertises the smoking cessation services offered at the clinic.

Why do we need a project like TB & Tobacco? Tobacco is a health risk - especially for patients with TB

Tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis*, leading to an estimated 1.3 million deaths and an estimated 10.4 million new TB cases in 2016 [1]. Pulmonary TB that affects the lungs is the most infectious form of TB, and tobacco use is a highly relevant risk factor for the development of pulmonary TB [2]. According to the World Health Organization (WHO) approx. 20% of the global TB incidence and 15% of the global pulmonary TB burden could be attributable to tobacco [3]. Tobacco use increases the risk of acquiring a TB infection, increases the risk of disease progression and worsens disease outcomes and mortality [2,4,5]. To combat the colliding epidemics of TB and tobacco and to reduce lung disease burden in South Asia, tobacco cessation strategies can be delivered to patients receiving routine TB care.

Figure 3: A non-smoking sign at a clinic in Nepal

Having non-smoking rules in place supports the cessation counselling at clinics

Smoking cessation matters to patients with TB!

Quitting tobacco is an important step to support recovery from TB and to reduce a number of diseases caused by tobacco, such as cancer, heart disease, stroke, chronic obstructive pulmonary disease (COPD) and low fertility [6]. Our study showed that many patients with TB are willing to quit smoking and to improve their health. The diagnosis of TB is a "teachable moment" for many, a moment in which a person is particularly eager and highly motivated to change their behaviour [7].

However, willpower and motivation alone are often not enough, as nicotine creates an addiction that makes it extremely difficult for individuals to stop smoking and leads to withdrawal symptoms [8]. Support from doctors, health workers and other medical professionals is therefore highly important. Patients with TB can profit from tools on how to deal with withdrawal, to replace their smoking habits with healthier alternatives, and to continue to say no to cigarettes. Behavioural support has been shown to provide smokers with

these tools and increase their capacity to become ex-smokers (REF). Pharmacological support and nicotine replacement therapy can also be useful [9]. Most importantly, **being aware of the dangers of tobacco, assessing the tobacco use of a patient with TB, and encouraging them to quit** are major components of a successful tobacco cessation programme in TB care.

Everybody knows tobacco is unhealthy – why is it so challenging to quit?

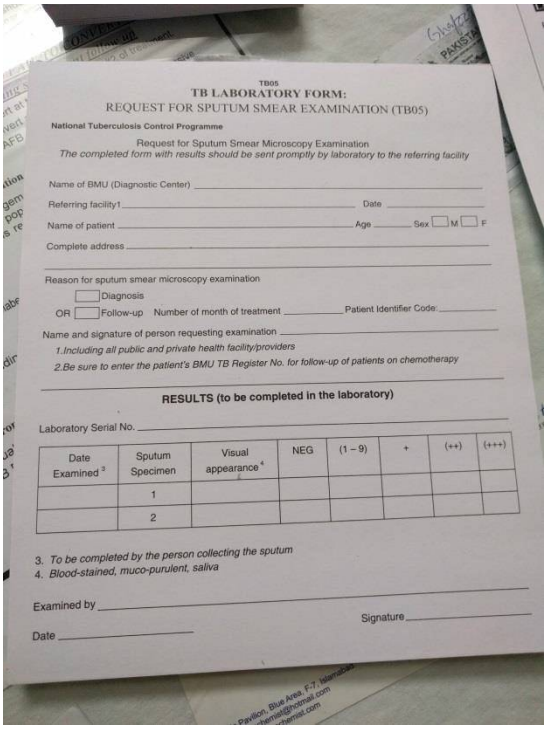
A few decades ago, even doctors smoked in their practices, and cigarettes and other forms of tobacco were visible everywhere. For a long time, tobacco companies were able to convince experts and the public that smoking wasn't really harmful, and tobacco control as a legal and regulatory mechanism has only been introduced in the past decades. Tobacco control policies in Pakistan, Bangladesh and Nepal are still young and not yet comprehensive [10]. This means that tobacco is big business globally, and easily available in South Asia. Once a person starts smoking, the nicotine addiction makes it very difficult to stop. While knowing about the risks of tobacco can help with not even starting to smoke, in many social groups smoking is so common that it seems almost impossible to avoid exposure. Studies have shown that having friends, family members or co-workers who smoke makes it much more likely for somebody to start smoking themselves or to relapse if they make quit attempts (REF). Withdrawal symptoms can be very unpleasant and drive a person to take another puff to ease the headaches or nausea. **All in all, quitting tobacco is hard work – but the rewards are worth it, especially for patients with TB!** Within only six week of quitting, immunological abnormalities in TB patients induced by tobacco smoke reverse [11], and the excess risks for heart disease halve already one year after quitting [12]. If a person quits smoking before the age of 40, the risks of dying from smoking-attributable diseases decrease by 90% [12] – but no age is too late to quit!

Figure 4: The TB & Tobacco poster illustrating benefits of quitting

The poster shows that some positive effects on TB can already be felt shortly after quitting.

Barriers to cessation provision in TB care

Tobacco's effects on health become visible after some time, which means that the necessity to focus on tobacco use might be lost in the more visible and acute care for the TB infection.



TB05

TB LABORATORY FORM:

REQUEST FOR SPUTUM SMEAR EXAMINATION (TB05)

National Tuberculosis Control Programme

Request for Sputum Smear Microscopy Examination

The completed form with results should be sent promptly by laboratory to the referring facility

Name of BMU (Diagnostic Center) _____

Referring facility[1] _____ Date _____

Name of patient _____ Age _____ Sex ☐ M ☐ F

Complete address _____

Reason for sputum smear microscopy examination

☐ Diagnosis

OR ☐ Follow-up Number of month of treatment _____ Patient Identifier Code: _____

Name and signature of person requesting examination _____

1.Including all public and private health facility/providers

2.Be sure to enter the patient's BMU TB Register No. for follow-up of patients on chemotherapy

RESULTS (to be completed in the laboratory)

Laboratory Serial No. _____

Date Examined [3]	Sputum Specimen	Visual appearance [4]	NEG	(1 – 9)	+	(++)	(+++)
	1						
	2						

3. *To be completed by the person collecting the sputum*
4. *Blood-stained, muco-purulent, saliva*

Examined by _____

Date _____ Signature _____

Figure 5: A TB laboratory form in Pakistan

As part of the TB & Tobacco intervention, TB forms are amended to record smoking habits.

The people working for patients with TB at the clinic have a lot of work to do: they are in charge of registering patients, filling in the TB cards, providing TB medication and counselling people with TB on how to deal with their illness. All of these tasks have to be completed for a lot of patients over a short period of time, leaving little room for anything else [13,14]. However, these barriers can be addressed by our intervention.

Processes of implementation: The TB & Tobacco process evaluation aims to learn what works – and what doesn't

The aim of the TB & Tobacco project is to implement tobacco cessation into routine TB care. To make sure that the tobacco cessation programme is a good fit for clinics in South Asia, we talked to health workers giving the behaviour support counselling and to patients who want to quit and were counselled during their clinic visits. This process evaluation was conducted by a multi-professional and multi-national team from Germany, Nepal, Bangladesh, Pakistan, the UK and the Czech Republic [15]. Meet the core TB & Tobacco Process Evaluation Team on page 29.


Figures 6 and 7: The TB & Tobacco process evaluation team working in Bangladesh and Nepal

Research is team work, as shown here in site visits in Bangladesh (left) and at a team meeting in Nepal (right)

Choosing two clinics per country as case studies, we interviewed a total of 10 health workers (6 in Pakistan, 2 in Bangladesh and 2 in Nepal) as well as 45 patients: 17 in Bangladesh, 18 in Pakistan, and 10 in Nepal. Four of these patients were women (one in Pakistan and three in Nepal). Over a period of a little less than one year, we repeatedly visited the TB clinics and asked health workers and patients about the TB & Tobacco behaviour support materials, how the counselling fits into their TB therapy processes, what wishes they had for changes to the programme, and how the quit journey went for the patients. We then analysed these interviews to identify the main themes of these conversations.

What is TB&Tobacco?

Tobacco use is a health risk

01

increases risk of heart disease

increases cancer risks

increases risk of stroke

increases risk of a TB infection

increases risk of TB getting worse

Colliding epidemics of tobacco and TB

global TB incidence in 2017

women 3.2 mi. ♀

men 6 mi. ♂

tobacco use in Pakistan

women 6% ♀

men 32% ♂

smoked tobacco use in Bangladesh

women 0.9% ♀

men 37% ♂

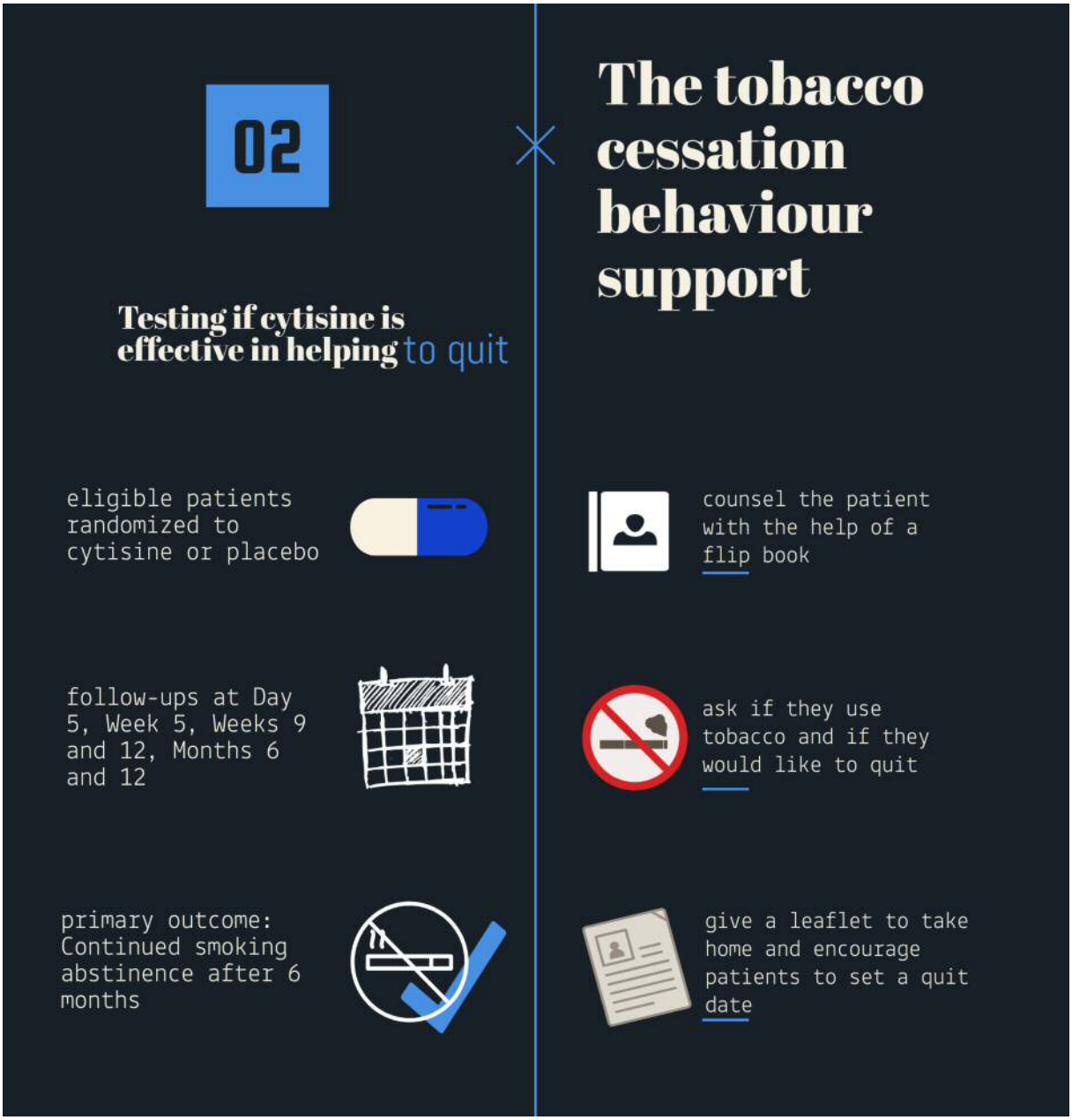


Figure 8: In short: what is TB & Tobacco?

Infographic of the TB & Tobacco project, consisting of the cytisine randomised controlled trial component (left) and the behaviour support component (right).

Results from the TB & Tobacco process evaluation

Part I: Integrating tobacco cessation into routine TB care: health worker views

Finding 1: Health workers are motivated, but structural problems such as high numbers of patients make it difficult to spend extra time on behaviour support counselling.

Health workers at the clinics have very little time per patient, so this time needs to be well spent. Administration work in particular cuts into the time for counselling:

> *"I think the only thing that is needed is time and more staff…we are three persons in the dispensary […] I am overloaded with documentation and record keeping,"*
> Health worker, male, 29, Pakistan

> *"It is definitely difficult to implement in places that have only one health worker dealing with all of the services here. There has to be at least two to three health workers to run the program without any problems. That is because if there are at least two people in the health facility then one person could be busy with the distribution of the medicines and the other person could be handling the registration. One person could be involved in the counselling part while others handle the rest of the things."*
> Health worker, female, 48, Nepal

Some clinics with a very high volume of patients cannot afford to invite the individual patient into a private counselling session. One health worker solved this problem by introducing group sessions:

> *"I do a combined lecture where all the patients are made to sit together, CAT 1, CAT 2, referrals, all of them are made to sit together and they are explained everything regarding TB and cigarettes. They are told about the disease and the medicine they have to use for it and what do they have to avoid and how do they need to take precautions."*
> Health worker, male, 31, Pakistan

Others adapted the materials to their needs by highlighting the main points in an even further condensed session:

"Many patients have to wait for a long period […], so I have deducted some part of it and kept only those parts which contain the main gist."

Health worker, male, 60, Bangladesh

One health worker in Pakistan raised the idea of playing a video outlining health risks of smoking in the waiting areas for all patients to see:

"I want multimedia so I can get to every child and every child should insist to their father: please stop smoking. We will die of it, please quit. It is my request to give us multimedia so we can campaign against tobacco use and for the betterment of society."

Health worker, male, 31, Pakistan

Finding 2: Many health workers experience the issue of tobacco use to be sensitive and stigmatizing, especially when counselling people of different genders.

Male health workers felt unease discussing smoking with women, and whether or not they felt comfortable enough to raise the subject depended on the individual. One health worker stated he felt it was just part of the patient – provider interaction:

"No we don't feel any embarrassment asking them about addiction, cigarette, hookah, Naswar…it is our right to ask every patient, even ladies."

Health worker, male, 40, Pakistan

A female health worker used communication techniques to make patients feel more at ease:

"I myself felt that I shouldn't have asked [whether they smoke] like this so I improved […] that I don't have to ask directly about smoking."

Health worker, female, 29, Pakistan

Beyond gender, other sensitive situations also required health workers to adapt their communication styles:

"[T]here was a young boy and when I started talking to him, he started telling me irrelevant stories. Then I sent his father outside and talked to the boy in private and he accepted saying, "yes, it's true. I am a smoker. I use cigarettes". Then he has been given medicine keeping it hidden from his father."

Health worker, male, 40, Pakistan

Summary of findings:

The interviewed health workers want to implement tobacco cessation in regular TB care, but need support in the form of regular training, shifting of work load, and cultural change within their institutions.

Talking about tobacco can be a challenging issue, yet TB health workers are experienced in discussing topics such as infection and know how to build rapport with their patients. Additional training in cultural sensitivity and raising stigmatized issues could be helpful. Clinics could ideally also train health workers of different genders to offer counselling by women for women.

Conclusion:

Patients' needs are at the center of health workers' views on the behaviour support counselling. With structural support, they can provide tobacco cessation to patients with TB.

Figure 9: Counselling in Bangladesh

The health worker is showing a page in the flipbook to a patient

Which behaviour change messages are most often given by health workers?

Finding 3: Health workers adapt the counselling situation to their needs by focusing on specific messages from the TB & Tobacco treatment flipbook.

To what extent was the behaviour counselling session implemented as planned at the study sites? We audio-recorded a sample of 37 counselling sessions in Bangladesh and 53 sessions in Pakistan with health workers' and patients' consent to find out which messages were regularly given to patients during the counselling sessions. In Bangladesh, in 70% of the sessions patients were reassured that TB was curable, and in over 90% of sessions they were advised to take medicine regularly to get cured. A healthy lifestyle, particularly getting nutritious food, was encouraged in almost 50% of the sessions in Bangladesh, and to abstain from tobacco and alcohol was partially addressed in 95% of all sessions. While in 70% of sessions patients were asked whether they used tobacco, setting a quit date was only addressed in around 30% of sessions. Health workers gave information on positive effects of quitting and negative effects of not quitting in almost 70% of sessions.

In Pakistan, 70% of sessions also discussed the necessity of regularly taking medicine for TB, and adopting a healthy lifestyle was advised in some form in 80% of counselling sessions. In only 30% of sessions was tobacco use status checked, and only 3% of sessions mentioned setting a quit date. However, in 50% of sessions positive effects of quitting were discussed, and information on withdrawal symptoms and how to deal with these was also provided in 50% of sessions.

Conclusion:

Overall, the behavior support intervention was implemented by health workers in Bangladesh and Pakistan through focus on specific messages. Patients were informed about health effects of quitting and their tobacco use status checked. A specific quit date was rarely set together with the patients, indicating some potential need for adaptation of the behaviour support counselling approach to setting a quit date during TB counselling.

Part II: Tobacco cessation counselling: A chance for patients with TB who smoke

We spoke to patients in Bangladesh, Nepal and Pakistan, and they overwhelmingly expressed gratitude to be well cared for at the clinics. Many were willing to quit and tried hard to not smoke again. In addition to willpower, getting support from their families and also the health workers was very important for their motivation and persistence.

Finding 4: Most TB patients who smoke are willing to quit smoking in order to protect their health and their families.

Shortly after the behaviour support counselling, many patients try to be optimistic about their smoke free future and indicate a willingness to quit:

> *"I gave the first priority to my health and I quit those things. I chose to focus on my medications instead."*
> Patient, male, 22, Nepal

Saving money to provide for one's family and getting healthy again are major motivators to make a quit attempt:

> *"My grandchildren often come to my home on weekends. I can't make them sit with me. I can't show affection towards them. I can't hold them in my lap."*
> Patient, male, 55, Pakistan

Admitting to tobacco use was a problem for some of the Pakistani patients, especially for the female interviewees, but not so much an issue in Bangladesh and hardly seen as problematic in Nepal.

Finding 5: Social support is instrumental to patients trying to stop smoking. The TB & Tobacco intervention suggests encouraging patients to get that support from family and friends.

While some patients are not bothered by friends or co-workers smoking around them, for many having the support of family and friends is integral to staying quit. Avoiding temptation is an important aspect here:

> *"While spending time with [my friends], I smoke sometimes. Otherwise not."*
> Patient, male, 27, Bangladesh

"It would help if no one else smoked around me. When I walk past someone on the street who is smoking, it bothers me."

Patient, male, 40, Bangladesh

Those who have full support from their families and friends find dealing with craving a bit easier:

"Nobody smokes in my family. […] [T]hey motivated me, they said: "It is good that you quit smoking."

Patient, male, 28, Bangladesh

Finding 6: Many patients have a wish to get additional support to deal with cravings, such as smoking cessation medicine.

In our study, participating patients were randomly assigned to receive cytisine for tobacco cessation, or a placebo pill. Many patients felt very confident in the effects of cytisine on their quit attempt:

"The day I made a promise I will not smoke, I could abandon it from that day. I think I alone could not have done that and the drug […] made it effective."

Patient, male, 25, Bangladesh

Summary of findings:

The social environment can entice people to smoke or help them to stop. Patients in work places and situations where many people use tobacco may need additional motivation to quit. These issues should be discussed as part of behaviour support counselling and ways to politely decline tobacco in a social circle should be taught to patients.

Quitting cigarettes is difficult and people can benefit from support to help with cravings. The TB & Tobacco behaviour support provides information on creative alternative habits and on healthy ways to deal with withdrawal symptoms.

Conclusion:

Using the TB diagnosis as a teachable moment works well with patients' motivation to get healthy. Giving people tools such as the "not a puff rule" to stop abruptly or alternative habits such as chewing fennel seeds when craving a cigarette can support their willpower and may lead to increased quit success.

Barriers to receiving behaviour support

Finding 7: Patients have four main reasons for not attending the tobacco cessation counselling session: not willing to quit, not able to quit, time constraints, disagreement about setting a quit date.

Very few patients in our study refused to listen to the TB & Tobacco counselling. We asked health workers to take notes when patients said they'd prefer to not hear the behaviour support messages. Those who said they did not want to be counselled gave the following reasons:

Box 1: Reasons to not participate in the behaviour support counselling

- I already quit smoking
- I do not smoke
- I don't have time today to stay longer and attend the session (especially work-related time pressures)
- I have already waited at the hospital for a long time
- I do not want to quit
- I cannot quit
- I can quit without medicine

Conclusion:

These reasons for not staying to be counselled indicate the need for behaviour support to become an integrated component of TB counselling, to keep extra time needed to a minimum. The behaviour support intervention is adaptable and can stress how to deal with cravings and the risk of re-uptake of smoking for those patients who have already made quit attempts.

Recommendations

How can NTP support health workers?

Our findings show that health workers are in a prime position to build rapport with their patients and to counsel those who smoke. To enable health workers to integrate tobacco cessation into their daily routine, National TB Programmes (NTP) can support clinics and health workers in the following ways:

Recommendation 1: Provide training to health workers not only on tobacco cessation counselling but also on how to specifically integrate the flipbook counselling into the administration and the overall workflow.

Knowing how to use the TB & Tobacco approach and how to align it with the work flow at the clinic can help health workers make the most of the limited time they have.

Recommendation 2: Include soft skills into the health worker training: (1) gender sensitivity when approaching patients and (2) rapport building with people of different social, cultural or educational backgrounds.

Many health workers are highly skilled and experienced in discussing sensitive issues with patients of all kinds of backgrounds. Use this peer knowledge to help all health workers find culturally appropriate and successful ways of including everyone in the conversation. Encourage the clinic and staff to also reflect on their own stereotypes: do women really not smoke cigarettes, or are we just assuming they don't?

Recommendation 3: Make the provision of tobacco cessation services a mandatory standard part of TB care through regular monitoring of patients' tobacco use and whether the health workers provide counselling. This shows NTP's commitment to tobacco cessation for patients with TB and creates motivation for health workers to discuss tobacco use with their patients.

Showing that NTP is committed to providing tobacco cessation to patients with TB is a powerful way to incentivize action at the clinic level.

Recommendation 4: Provide additional funding to facilitate the TB registration process and free up some time for health workers to focus on counselling.

Administration is very important, and so is being present with the patient. If support for registration is available, health workers can focus on delivering behaviour support

Recommendation 5: Create a mechanism to ensure distribution and use of the TB & Tobacco materials in all clinics.

The TB & Tobacco project takes place in several clinics all over the country in Bangladesh, Nepal and Pakistan. The materials and training guides are freely available: NTP can scale up the behaviour support to provide tobacco cessation to all patients with TB who smoke!

Figure 10: A counselling room in Nepal

The TB & Tobacco poster on the upper left together with other informational materials for TB patients.

How can you as a health worker support patients?

Make the TB & Tobacco behaviour support counselling work for you and for your patients:

Recommendation 6: Approach the topic of tobacco use regularly when talking about TB to your patients, as some patients might need extra time to feel comfortable enough to talk about their smoking habits.

You are already well-versed in talking to people about sensitive topics and are advising them on how to deal with disease: you can apply this knowledge to advice on smoking cessation, too.

Recommendation 7: Use the flipbook as an aid for your regular TB counselling and not only for smokers to streamline the counselling process.

The information you already give on TB is the first 5 pages, and the information on tobacco is only 3 pages in the flipbook. Focus on the main messages if pressed for time and follow up with the patient at the next visit.

Recommendation 8: Share your behaviour support counselling skills and techniques with your health worker colleagues to enable them to conduct the counselling as well. Share the workload and ensure that all patients can profit from the cessation offer.

This helps divide up the work and ensures consistent care for your patients.

Figure 11: Counselling in Pakistan

The health worker in her counselling room with the flipbook on the table. The poster advertises the TB & Tobacco services.

You as a health worker can make a difference in a patient's life! Need more information on the TB & Tobacco behaviour support? The guidance for health workers is available on our website in English, Bangla, Nepali and Urdu.

Figure 12: A counselling room and TB & Tobacco poster in Pakistan

The door opens to the counselling room.

TB & Tobacco resources

To learn more about the TB & Tobacco project and to download the behaviour support materials, please visit our homepages:

https://tbandtobacco.org/

https://www.york.ac.uk/healthsciences/research/public-health/projects/tb-tobacco/

Figure 13: A waiting area in Bangladesh

While waiting, patients can get a drink of water or sit down.

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References

1 World Health Organization. *Global Tuberculosis Report 2017: Leave no one behind - Unite to end TB*. Geneva: : World Health Organization 2017. doi:10.1001/jama.2014.11450

2 Bates MN, Khalakdina A, Pai M, *et al.* Risk of tuberculosis from exposure to tobacco smoke: a systematic review and meta-analysis. *Arch Intern Med* 2007;**167**:335–42. doi:10.1001/archinte.167.4.335

3 World Health Organization. Tuberculosis & Tobacco: a strong association. TB Tob. Factsheet. 2009.http://www.who.int/tobacco/resources/publications/factsheet_tb_tobacco_sep09.pdf (accessed 30 May 2017).

4 Slama K, Chiang C-Y, Enarson DA, *et al.* Tobacco and tuberculosis: a qualitative systematic review and meta-analysis. *Int J Tuberc Lung Dis* 2007;**11**:1049–61.

5 Pai M, Mohan A, Dheda K, *et al.* Lethal interaction: the colliding epidemics of tobacco and tuberculosis. *Expert Rev Anti Infect Ther* 2007;**5**:385–91. doi:10.1586/14787210.5.3.385

6 Health Effects. Tob. Atlas. https://tobaccoatlas.org/topic/health-effects/ (accessed 3 Jan 2019).

7 Elsey H, Dogar O, Ahluwalia J, *et al.* Predictors of cessation in smokers suspected of TB: Secondary analysis of data from a cluster randomized controlled trial. *Drug Alcohol Depend* 2015;**155**:128–33. doi:10.1016/j.drugalcdep.2015.08.002

8 Piper ME. Withdrawal: Expanding a Key Addiction Construct. *Nicotine Tob Res* 2015;**17**:1405–15. doi:10.1093/ntr/ntv048

9 Kotz D, Brown J, West R. 'Real-world' effectiveness of smoking cessation treatments: a population study. *Addiction* 2014;**109**:491–9. doi:10.1111/add.12429

10 Nohavova I, Králíková E, Zvolská K. TB & Tobacco Delivery Factors Report. Prague: 2016. https://www.york.ac.uk/media/healthsciences/images/research/phs/tbandtobacco/TB & Tobacco Deliverable 5.1 Delivery Factors Report.pdf

11 Arcavi L, Benowitz NL. Cigarette Smoking and Infection. *Arch Intern Med* 2004;**164**:2206. doi:10.1001/archinte.164.20.2206

12 American Cancer Society. Benefits of quitting smoking over time. https://www.cancer.org/healthy/stay-away-from-tobacco/benefits-of-quitting-smoking-over-time.html (accessed 3 Jan 2019).

13 Dogar O, Elsey H, Khanal S, *et al.* Challenges of Integrating Tobacco Cessation Interventions in TB Programmes: Case Studies from Nepal and Pakistan. *J Smok Cessat* 2016;**11**:108–15. doi:10.1017/jsc.2015.20

14 Elsey H, Khanal S, Manandhar S, *et al.* Understanding implementation and feasibility of tobacco cessation in routine primary care in Nepal: a mixed methods study. *Implement Sci* 2015;**11**:104. doi:10.1186/s13012-016-0466-7

15 Boeckmann M, Nohavova I, Dogar O, *et al.* Protocol for the mixed methods process and context evaluation of the TB & Tobacco randomised controlled trial in Bangladesh and Pakistan: a hybrid effectiveness-implementation study. *BMJ Open* 2018;**8**:e019878. doi:10.1136/bmjopen-2017-019878