TB and Tobacco

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

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Deliverable 5.2 "Outcome Factors Report"

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WP 5 Report on Deliverable D5.2

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Title: Outcome factors report: A report on the contextual factors that predicts outcomes, either positively or negatively, and their implications for policy makers and health professionals

Report Due: April 30, 2019 (Month 42)

Content:

Abbreviations

BS	Behavioural Support
COACH	COntext Assessment for Community Health questionnaire, see ref. 2
COM-B	Capability, Opportunity & Motivation (Behaviour system), see ref. 1
DOTS	Directly Observed Treatment, Short-course
RA OS	Research Assistant Observation Survey
RTC	Randomized Control Trial
SSI	Semi-Structured Interview
TC	Tobacco Control
TB	Tuberculosis
WP	Work Package

D5.2: Outcome factors report

1. INTRODUCTION

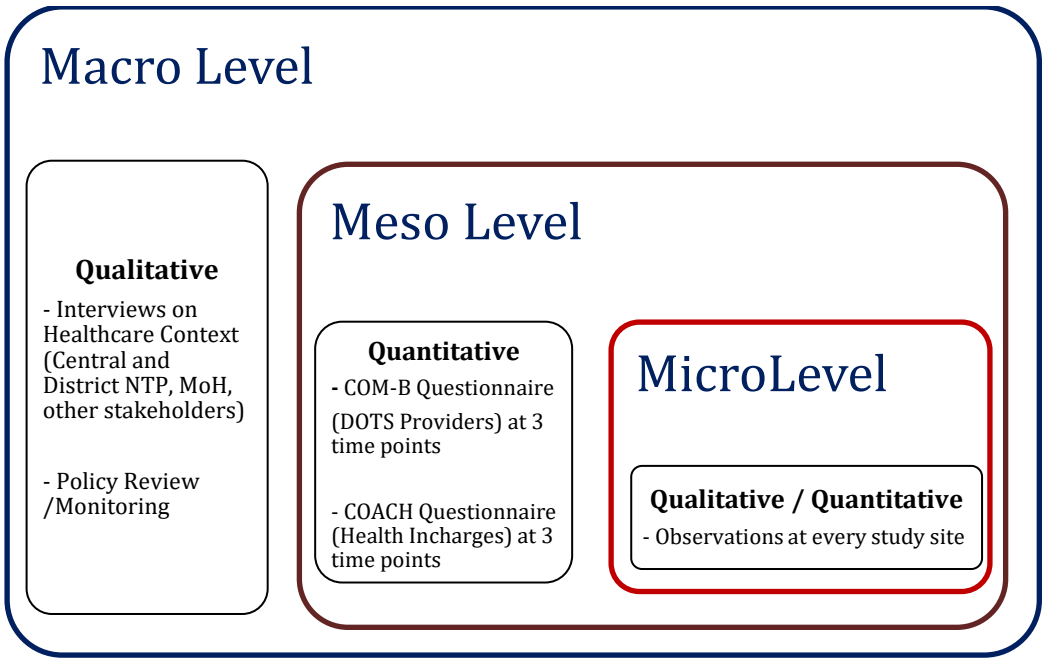
This Deliverable describes the work conducted as part of Work Package 5 (WP5), to map contextual factors, (barriers and facilitators), that can influence delivery of tobacco cessation (TC) interventions in Tuberculosis (TB) patients in the TB & Tobacco study. The first year of WP5 work focused solely on identification of contextual factors that positively or negatively influence the delivery of TC strategies (reported in D5.1, month 12). The second year involved data collection from every enrolled TB & Tobacco trial site, coupled with additional central level semi-structured interviews (SSIs) to assess and monitor any changes of the identified contextual factors over time.

2. OBJECTIVES

The objectives of Deliverable 5.2 are to summarize contextual factors that predict outcomes, either positively or negatively, and their implications for policy makers and health professionals in each of the three countries where the TB & Tobacco trial is taking place (Pakistan, Bangladesh and Nepal).

3. METHODS

The diagram bellow illustrates major sources of data for information on organizational capacity and context for delivering TC strategies within TB programmes at three levels: (a) macro (state/national level), (b) meso (facility/institution), and (c) micro (healthcare provider).



3.1 Research Assistant Observation Survey

The Research Assistant Observation Survey (RA OS) was developed in collaboration with WP4, solely for the purpose of the TB & Tobacco study. This site-observation survey collects data on the facility surroundings and tobacco control policies and practices in place, initial consultation settings, circumstances when patients meet the DOTS facilitator for behavioral support (BS), successes and challenges when delivering BS and TC drugs, including time and space requirements and if additional skills/training are needed. It contains a total of 29 questions (qualitative and quantitative), as can be seen in Attachment 1. The RA OS was pre-tested with local teams and culturally adapted for translation. Due to its length, it was agreed to split this tool into two parts and collect at two separate

time points. This questionnaire was completed for each of the enrolled clinical sites in the three countries by a research assistant working there at two time points during the RTC period (RA OS part I during months 21-23 RTC, part II during months 29-31 RTC).

3.2 COM-B Questionnaire

The COM-B questionnaire was adapted from the version used by the National Centre for Smoking Cessation and Training in the UK by WP1, in collaboration with WP5, during the first year of this project. The questionnaire identifies the extent of health worker motivation, capability and opportunity to deliver TC to their patients (1). The questionnaire was pre-tested with 3 health workers in each country. Following this, 14 questions were included. Changes made included reducing the questions on long-term follow-up (as this is not part of the planned intervention, due to feasibility constraints) and adding separate questions for building rapport with men and with women. The questionnaire is on a scale of 1 to 5, where 1 is 'not confident' and 5 is 'very confident'. This questionnaire was administered to the DOTS provider in each of the enrolled clinical sites in the three countries at three time points during the RTC period (wave 1 in months 24-25, wave 2 in months 30-31, wave 3 in month 37-38).

3.3 COACH Questionnaire

The COACH tool (COntext Assessment for Community Health questionnaire) is a quantitative measure that provides an overview of organizational resources, community engagement/monitoring, sources of knowledge, commitment to work, work culture, leadership, and informal payment (2). The questionnaire was pre-tested with 3 doctors in-charge in each country. Following this, a tobacco control subject area was added, consisting of 7 new questions. The questionnaire is on a scale of 1 to 5, where 1 is 'strongly disagree' and 5 is 'strongly agree'. This questionnaire maps the institution and health professional (meso/micro) level, and similarly to COM-B was administered to the doctor in-charge in each of the enrolled clinical sites in the three countries at three time points during the RTC period (wave 1 in months 24-25, wave 2 in months 30-31, wave 3 in month 37-38).

3.4 Semi-structured interviews (SSIs)

A total of 5 central (macro) level SSIs were conducted in the three countries in conjunction with WP6 qualitative data collection. SSIs were conducted with representatives at the central level of National TB programmes (NTP) in each country. The SSIs from facility/healthcare provider level have been agreed between WP5 and WP6 to take place at a later date since the WP6 implementation of the scale-up activities is taking place during months 38-48 and a greater information and feedback merit was perceived to be gained from those SSIs for WP6 than for WP5. Details of participants are provided in table 1.

Table 1: Participant characteristics

Country	Interview code	Designation	Gender
Pakistan	P1-PK	Provincial level NTP director and Senior Programme Officer	Both male
	P2-PK	National TB programme director / National Technical Advisor	Both male
	P3-PK	Provincial level NTP director	Male
Bangladesh	P1-B	National Program coordinator	Female
Nepal	P1-NP	-	Male

The central level interviews were conducted at the interviewee's work place, were audio recorded, transcribed and translated into English. Transcripts were coded and analysed using NVivo (qualitative

data analysis software) (3) by the researchers in Pakistan and by the researcher in the UK (WP6). Analysis was conducted using the Consolidated Framework for Implementation Research (CFIR) coding framework.

During the central level SSIs, follow up questions to the Year 1 SSIs were asked similarly about national level engagement for the National TB programme alone, and with relation to tobacco control; about current priorities in the National TB programmes; about what milestones have been achieved in recent years, and about what the known barriers and facilitators are.

3.5 Policy Review / Monitoring

See Supplement Tobacco Control Policy in Bangladesh, Nepal and Pakistan

4. FINDINGS

4.1 Research Assistant Observation Survey Results

Analysis was done in collaboration with WP4 and with help of one research assistant from the Pakistan team. Separate codebooks for each part of the questionnaire were developed, based on thematic analysis of the collected data. They were mutually pre-tested, modified and agreed among the researchers. Then, each researcher coded all RA OS separately. Differences in coding between researchers were resolved via conference call discussion. An inter-rater reliability coefficient remains to be calculated.

In overall characterization, all participating 37 clinics in the TB & Tobacco study in all three countries were roughly equally represented in terms of size (smaller clinic with <50 patients/day, larger clinic serving 100-200 patients/day). Treated patients were either from low/middle or mixed income levels. There was a possibility to purchase tobacco products in the near vicinity of the clinical sites, from 50% in Nepal to 94% in Bangladesh, with some sites specifically indicating that no over-the-counter tobacco dependence treatment was available for purchase. In most cases, people were regularly seen smoking outside the clinics. Clearly visible 'no smoking' signs in the clinics were only present in 2 sites in both Pakistan (14%) and Nepal (25%), and 7 sites (41%) in Bangladesh. A few clinics displayed posters on walls inside the clinics, slightly more in the treatment areas than in the waiting areas, and also slightly more often on TB related topics, compared to tobacco related content. Nearly half of the clinics noted challenging working conditions (i.e. space availability/crowdedness, treatment interruptions) and not having sufficient time.
The majority of the sites also stated that no recording of smoking status in documentation at the facility and/or province level is in place (Pakistan 75%, Bangladesh 100%, Nepal 88%) and reported a lack of monitoring and supervision (Pakistan 33%, Bangladesh 44%, Nepal 69%). Interestingly, when asked whether health workers need any additional skills to deliver TC behavioural support, the responses varied across the three countries (Pakistan 54%, Bangladesh 82%, Nepal 100%).

4.1.1 Results per country

PAKISTAN (n=14)

A 'No tobacco' policy is implemented in 58% of the clinics and 92% report no smoking is allowed inside. Pakistan also had the highest reported number of clinic personnel (indicated as "other healthcare professionals") using tobacco (67%) among the three studied countries. The health workers' (HW) attitudes toward tobacco use was mixed. For TC successes, 33% of surveys indicated delivery of behavioral support (BS, delivered only by trained DOTS provider) and patient compliance. Among the challenges mentioned were the DOTS facilitators' lack of interest / time to provide BS in 58% and poor drug adherence (too many pills) in 42%. Also, 33% of the sites indicated long waiting times for patients to be seen by DOTS facilitators, and inadequate treatment areas. 43% of participating clinics in Pakistan

reported having inadequate room equipment and 29% had a lack of sanitation. As for the challenges faced by HW in delivering TC, these were burn-out due to patient loads, and lack of staff (42%).

BANGLADESH (n=17)
A 'No tobacco' policy is implemented in 94% of the clinics and 94% report no smoking is allowed inside the clinic. 41% of healthcare staff were seen using tobacco products, however that did not seem to impact HW attitudes toward tobacco use, where 88% stated there is "no difference between their own attitude and patients' attitude". Staff internal discussions regarding TB and Tobacco occurred in 56%. BS is delivered by trained DOTS facilitators in 53% of clinics. Very similarly to Pakistan, delivery of BS and patient compliance (53% for both) were most often indicated among TC successes. In addition, 24% of the clinics positively noted that family members were motivated by the success of their sick loved-one and wanted to quit also. The greatest challenge in delivering BS was lack of patient interest (in 50% of cases). The greatest challenge in delivering TC medicine was lack of trust in/information on new tobacco medicine (32%), patients not admitting their tobacco use (29%), drug adherence (i.e. too many pills) (21%), or high patient load per DOTS (38%).

NEPAL (n=8)
Strict and complete observation of a 'No tobacco' policy, including smokeless tobacco use within clinic premises was noted in all sites (100%). Less than 20% of health care staff were observed using tobacco around the clinics. The MD in-charge had a positive attitude towards TC in 50% of clinics, but HW attitudes towards tobacco use were mixed. Among the stated successes delivering TC were patients' compliance/motivation to quit tobacco (56%) and the provision of BS (31%). Tobacco and stigma were challenging for HWs to manage (31%) along with lack of interest from the patient (19%). BS is delivered by trained DOTS facilitators, coupled with internal staff discussions in 44% cases. Resources as facilitators to delivering TC were mentioned in 38% of clinics, while barriers consisted of logistical/infrastructure barriers and lack of training (75%), lack of monitoring and supervision (69%), or high patient load per DOTS (44%). Other challenges HW faced were patients not willing to admit tobacco use and work burden/lack of staff (31%).

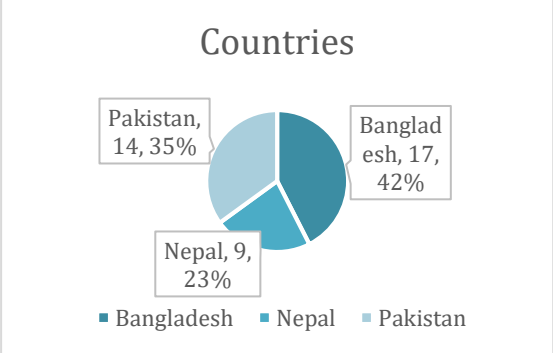
4.2 COM-B Questionnaire Results

The COM-B questionnaire was pre-tested for comprehensibility in three sites in each country. The health workers interviewed understood the questions and only minor editing and simplification of the wording were needed in the three languages. Once finalized, the researchers in each country conducted the questionnaire with health workers in all the trial sites at three time points. The collected data were statistically analyzed per collection and also cumulatively compared in a time series analysis.

4.2.1 Combined Country Pre-Intervention / Post-Intervention Results (initial DOTS training)

There were 40 respondents, 14 of them from Pakistan, 9 of them from Nepal and 17 from Bangladesh (figure 1). The sample consisted of 15 females (37%) and 25 males (63%).

Figure 1: Participant distribution at initial DOTS training



None of the respondents received training from the TB & Tobacco project, however two respondents (both from Bangladesh, 5%) received other training on TC.
Before the intervention, there were 9 (23%) people highly confident in describing what to expect from the treatment programme. After the intervention 28 (70%) people were highly confident. None of the respondents felt not confident after the intervention.
Before the intervention, there were 19 (47.5%) respondents who felt confident or highly confident in describing the principles and effectiveness of typical behavioural support. After the intervention, the majority (34; 85%) were confident or highly confident in describing the principles and effectiveness of typical behavioural support. None of the respondents reported being not confident after the intervention.
Before the intervention, 11 (27,5%) respondents were highly confident in facilitating and advising on the use of social support. After the intervention more than half of the respondents (21; 53%) were highly confident in facilitating and advising on the use of social support. Only 6 respondents were moderately confident after the intervention (5 of them from Bangladesh).
Before the intervention, one third of the sample felt highly confident in describing the stop smoking medications that can support a quit attempt. After the intervention 60% of the respondents were highly confident. The intervention, however, seems to be effective in Pakistan and Bangladesh only. All the respondents in Pakistan and 84% of the sample in Bangladesh felt confident or highly confident after the intervention, whereas only 1 respondent felt highly confident in Nepal.
More than half of the respondents (54%) felt not confident or moderately confident in assisting clients to set a quit date before the intervention. After the intervention there were only 4 respondents who were moderately confident, the rest (90%) of the sample reported being confident or highly confident.
Before the intervention, there were 2 respondents (1 from Pakistan, 1 from Bangladesh) not confident in helping clients devote strategies to cope with barriers, cues to smoke and relapse triggers. After the intervention 93% (from 5%!) of respondents were confident or highly confident in helping clients to develop strategies.
Before the intervention, there were 13 respondents (33%) who were confident or highly confident in assessing commitment, readiness and ability to quit. None of them was from Nepal. After the intervention 88% of the sample felt confident or highly confident, 4 respondents were moderately confident (2 from Bangladesh, 1 from Nepal, 2 from Pakistan).
Before the intervention, 22% of the respondents reported always using flipbooks or leaflets and 55% respondents reported using them sometimes.

4.2.2 Countries combined - Times series analysis results (Between 1st and 3rd wave comparison)

For the number of respondents in each wave stratified by country see the following table 1.

Table 1: COM-B respondent distribution overall

	1st wave	2nd wave	3rd wave	Complete data from 3 waves
Bangladesh	17	17	17	17
Nepal	7	8	7	5
Pakistan	15	14	13	8
All	**39**	**39**	**37**	**30**

Frequency tables were used to assess between-waves changes in the whole sample. It was not possible to use statistical tests to compare means, due to a low number of participants in each of the three sites (n<20). Therefore, the paired t-test (questions 1-18) was applied to compare means in the three waves in the whole sample. Only respondents who participated in all three waves were included in the testing. Details are listed in table 2.

Table 2: Statistical comparison between waves (n = 29)

	Between 1st and 2nd wave (p value)	Between 2nd and 3rd wave (p value)	Between 1st and 3rd wave (p value)
1	0,845	0,227	0,258
2	0,043	0,264	0,231
3	0,165	0,243	0,055
4	0,023	0,424	0,005
5	0,025	0,169	0,002
6	0,580	1,000	0,588
7	0,019	0,326	0,118
8	0,037	0,625	0,090
9	0,602	0,056	0,043
10	0,088	0,712	0,165
11	1,000	0,573	0,662
12	0,791	0,202	0,354
13	0,054	0,769	0,043
14	0,326	0,712	0,165
15	0,017	0,103	0,006
16	0,050	0,326	0,169
17	0,380	0,489	0,136
18	0,281	0,265	0,774

There was a statistically significant difference between the 1st and 3rd waves in the level of confidence the respondents have in describing the principles and effectiveness of typical behavioural support and facilitating and advising on the use of social support and in emphasising the importance of the 'not a puff' rule.
There was also a difference in a mean score in question 15 (how important it is to provide tobacco dependence treatment to improve TB treatment outcomes). The mean score increased for Bangladesh and Pakistan, whereas it decreased for respondents from Nepal.
Statistically significant differences were also observed in questions 21 (offering help to patients with TB), 23 (usage of flipbooks and leaflets), 25 (smoking), 27 (smoking in the past).

4.3 COACH Questionnaire Results

The same process that took place for the COM-B questionnaire, was also done for the COACH tool. It was pre-tested for comprehensibility in three sites in each country. The doctors in-charge who were interviewed understood the questions and only minor editing and simplification of the wording were needed in the three languages. Once finalized, the researchers in each country conducted the questionnaire with doctors in-charge in all the trial sites at three time points. The collected data were statistically analyzed per collection and also cumulatively compared in a time series analysis.

4.3.1 Countries combined - Times series analysis results (Between 1st and 3rd wave comparison)

For the number of respondents in each wave stratified by country see the following table 3.

Table 3: COACH respondent distribution overall

	1st wave	2nd wave	3rd wave	Complete data from 3 waves
Bangladesh	17	17	17	17
Nepal	7	8	7	5
Pakistan	12	12	13	7
All	**36**	**37**	**37**	**28**

Frequency tables were used to assess between-waves changes in the whole sample (table 4). It was not possible to use statistical tests to compare means due to a low number of participants in each of the three sites (n<20). Therefore, the paired t-test (questions 1-21, 27-49 and 54-56) was applied to compare means in the three waves in the whole sample. Only respondents who participated in all three waves were included in the testing.

Table 4: Statistical comparison for between waves (n = 28)

	Between 1st and 2nd wave (p value)	Between 2nd and 3rd wave (p value)	Between 1st and 3rd wave (p value)		Between 1st and 2nd wave (p value)	Between 2nd and 3rd wave (p value)	Between 1st and 3rd wave (p value)
1	0,184	0,021	0,002	29	0,032	0,212	0,014
2	0,200	0,016	0,001	30	0,602	0,415	0,823
3	0,869	0,023	0,021	31	0,110	0,017	0,006
4	0,045	0,006	0,360	32	0,110	0,170	0,021
5	0,501	0,029	0,117	33	0,448	0,375	0,110
6	0,502	0,059	0,030	34	1,000	0,096	0,057
7	0,012	0,873	0,047	35	0,170	0,110	0,005
8	0,070	0,174	0,014	36	0,626	0,293	0,161
9	0,281	0,187	0,041	37	0,415	0,293	0,110
10	0,110	0,007	0,000	38	0,691	0,161	0,702
11	0,110	0,001	0,000	39	0,787	0,212	0,134
12	0,037	0,010	0,001	40	0,787	1,000	0,813
13	0,110	0,083	0,011	41	0,573	0,212	0,136
14	0,702	0,869	0,621	42	0,030	0,573	0,362
15	0,702	0,039	0,050	43	0,011	0,095	0,558
16	0,702	0,257	0,130	44	0,326	0,096	0,326
17	0,722	0,002	0,015	45	0,115	0,008	0,326
18	0,730	0,031	0,096	46	0,408	0,021	0,024
19	0,206	0,003	0,001	47	0,646	0,039	0,058
20	0,489	0,000	0,000	48	0,212	0,000	0,000
21	0,421	0,003	0,016	49	0,110	0,001	0,000
27	0,118	0,293	0,043	54	0,009	0,170	0,001
28	0,020	0,110	0,001	55	0,017	0,305	0,006
				56	0,258	0,043	0,801

Note: red colour highlights questions in which the average score was statistically different between waves (p < 0.05)

Between 1st and 3rd wave comparison

There were statistically significant differences in questions 1-3, 6-13, 15, 17, 19-21, meaning that there was a difference in the level of agreement with the statements.

For questions 27–49 respondents were asked to indicate their agreement and we observed differences between average scores between waves 1 and 3 in questions 27-29, 31-32, 35, 46, 48-49 and 54-55.

4.4 Semi-structured interviews (SSIs) Results

This is an initial analysis of the organizational and policy context in which the TB & Tobacco study is being implemented in Bangladesh, Nepal and Pakistan, with the aim of understanding context and how the organizational environment influences the implementation of the interventions to support people with TB to quit tobacco use. Further interviews with TB Programme staff and managers will be conducted during WP6 to provide further information on the context for implementation of TC, and will be reported under WP6.

This report presents a summary of the meanings and themes identified during the interviews structured according to the CFIR domains. Since the interview guides were structured to allow issues to emerge inductively, rather than being restricted rigidly to the domains of the CFIR, some of the elements of CFIR may not have been covered in some interviews. In such cases these were discussed between researchers to ensure consistent understanding.

Direct quotations are provided to enable understanding of each of the findings under each of the CFIR domains. Furthermore, rather than presenting the findings against all 47 domains of different thematic areas from the CFIR framework, this report presents the summary of the interviews which are coded against five main domains of the CFIR framework.

I. Intervention Characteristics

PAKISTAN

The high-level government employees who are responsible for implementing the TB programme in their respective countries and areas were unanimous in voicing the need to have solid comparable evidence to prove that TC reduces the burden of TB. Only then would the TC intervention be successfully implemented within the TB programmes. Once it is evident that the behavior support (BS) counselling can feasibly be implemented and still be effective in helping patients to quit, this needs to be incorporated into the regular TB programme. This will ensure regular monitoring, budget, and training are included as the regular job of the staff. However, this is currently not the case, therefore, the first step is to gather evidence and build Government buy-in.

> *"I think evidence is the best thing. For instance, the implementation that you have done; if you share this evidence with us and prove that this is something doable, this is something that has got impact, or it can be replicated. So, this depends on your team if you can advocate the results well (P3_PK)."*

NEPAL

The directors commented that the IEC materials with pictures for TC to TB patient are more effective compared to only verbal counselling and textual material. Furthermore, they also reiterated that the health workers / DOTS facilitators also need special skills to counsel for TC, for which they need separate training. The directors also emphasized that the TC intervention for TB patient needs to be expanded to the whole country to have a positive impact.

> *"But the thing is that the People with TB are dispersed all over the country. That is why… This program has to be taken to all the health facilities and the health workers working in it. That is the first thing. Its expansion which means that the program has to be taken throughout the country [for implementation] (IDI 1 Nepal)".*

While the Government of Nepal through the NTC clearly prioritizes effective implementation of TB treatment, they now have a firm commitment to including TC as part of the TB control programme. NTC is planning to put TC as part of the TB control programme and request budget from the Ministry of Finance. The policy maker interviewed in Nepal felt that it is important to bring to the attention of other senior government officials in and beyond the Ministry of Health (MoH) the importance of TC in

TB control through meetings, advocacy, involving them in different stages of programme and sharing evidence with them.

> *"We have to state it to the higher level authorities like the Ministry of Health and Population, Ministry of Finance and other governmental bodies who are connected to the policy level directly or indirectly. We need to tell them that the cessation of tobacco products makes positive impact on the NTP program through orientations conducted time and again. We need to advocate it to them (P1NP Nepal)".*

The interviewee also felt it was important to show the government that TC in TB programmes eventually reduces the over-all health system cost. He said that this would be the most effective way to convince them to allocate budget for TC in TB programme.

BANGLADESH

Bangladesh ranks 6th, globally, in terms of burden of TB, and TB claims over 80,000 lives per year, despite the availability of treatment. Similar to Nepal and Pakistan, the focus on tobacco within TB has been growing. Government is planning to pass a Tobacco Free Act. It is taking TC seriously, as evidenced by a number of interventions to stop tobacco smoking. For example, law enforcement to ban advertisement, establishment of a mobile court to penalize people who smoke in public, display of pictorial health warnings, and properly designed graphical warnings of tobacco use. This has resulted in decrease in tobacco use in the last few years to almost 30% from 45%.

> *"One of the remarkable changes due to law enforcement in the past few years is the pictorial health warning. This is a major component of the law enforcement. Another remarkable change is the work to establish 'No-Smoking' signs. There are many mobile courts that have been established to penalize those who are in violation of the law. At present work is being done to ban advertisements related to tobacco consumption. Close monitoring work has been done to ensure proper illustration of graphical warning of tobacco use. Presently government and NGOs are working for Ad-Ban (P1B Bangladesh)".*

In Bangladesh, some of the regular staff deliver TC messages to people with TB. For example, the TB and Leprosy control assistants advise people with TB not to smoke. A separate flipbook they use does not have anything related to TC, neither do they have any training related to TC, but it will be possible to introduce one hour sessions within regular training for them to use the BS materials to equip them for TC counselling. However, even if the training is provided there will be challenges in monitoring, reporting and recording, because the regular TB recording and reporting system currently does not have those mechanisms. However, there have been initiatives to introduce TC information in TB treatment.

> *"The TLCAs [TB and Leprosy Control Assistant] are working all over the country and they received training. As part of their training, it was discussed that smoking is very harmful for People with TB. TLCAs tells all the People with TB 'what to do' and 'what not to do'. They explain how to take medicine, how important it is to take medicine regularly, the side effects of medicines, what should they do in case of emergency. TLCAs also warns People with TB not to smoke. But the flip books prepared by NTP does not have anything specific on tobacco use (P1B Bangladesh)".*
>
> *"the current training does not include any dedicated session on tobacco cessation. But we are thinking that a one hour session can be introduced. I think I discussed this earlier with your colleague that it would not be possible to include a half day session within the current training programme. Rather a one hour interactive session can be introduced (P1B Bangladesh)".*

II. Outer setting

PAKISTAN

Naturally, in some counties and provinces within the country, the TC interventions will be accepted easily because of the awareness level, social norms and growing interest of government to curb the ill effects of tobacco, which are costing additional resources to the government. For example, since the NTPs already have some commitment to their respective government in all countries, WHO and other

UN and other agencies, , there is a good chance that TC will be incorporated into the TB programme. The National Technical Advisor *(P2_PK)* reiterated that it is not only the TB-related programme and organization; there is a need to include other organizations as well, such as schools, universities, community groups and other societies. The Director also added that sustainability of these interventions is always challenging. Addressing this issue from multiple interventions is another aspect they need to look at in future.

> *"I forgot the name of the donor... but they do things; they go to schools, they go to colleges and educate them, they develop materials for awareness. Like Pakistan chest society has done a lot of work for tobacco awareness. So, these things are in my knowledge. There will be other ongoing activities as well which I am not aware of (P2_PK)".*

Communication between different stakeholders, health workers and between patients was identified as equally important. In Pakistan, interviewees noted that those in the government and those directly involved in TB treatment have started to talk about TC in TB treatment. Therefore, the implementation climate is improving at least in Pakistan.

> *"Look, we have seen and heard people working in KP and in Pakistan that they now talk more about tobacco, then ever before. We talk about tobacco control, we talk about cessation, we talk about link of tobacco to so many diseases and particularly TB in this context. Now we have started talking more and more about tobacco (P3_PK)".*

There is always resistance to a new programme if it does not come with added incentives, which needs careful consideration and thoughtful planning.

> *"Because there are certain interventions in which we provide additional incentives to the worker. When those incentives are discontinued, the quality of work experiences a sudden decline. And then when we talk about incentives, let's take an example of polio program; there are regular incentives being given in polio program. So, the misuse of incentive is another major factor (P3_PK).*

<u>BANGLADESH</u>

Other complexities are the bureaucracy, and taking responsibility of this new initiative. Furthermore, it is socially accepted that use of tobacco releases stress and some people take personal pride in tobacco use. There are cost implications as well, for example the government allocates funding for tobacco control but not for TC, and NTP does not have any funding even for tobacco control.

> *"I think the challenge could be of bureaucracy. I don't think that for data collection it could be a challenge though. The challenge would be in regards with bureaucracy and leadership, i.e. who will take up the responsibility for this. I am sure you are aware of how frequently line directors change within ministry. Coordination with multiple NGOs can be another challenge (P1B Bangladesh)".*

She added that, however, the government has plans to make Bangladesh a tobacco free country by 2040, this is our top priority, and we have planned to spend tobacco related taxes in tobacco control activities, including banning tobacco farming.

These factors need wider consultation and funding from outside stakeholders such as the Global Fund, WHO and other partners.

> *"There are many foreign agencies in our country that are working with TB, one of the major one being the Global Fund. Through this global fund three diseases are usually being funded for – TB, Malaria and HIV/AIDS. We have a vision of building a TB-free country by 2030. Global Fund is assisting us to the most extent by funding us to fulfil our vision by our desired timeframe. At present, there are very few MDR-TB patients. Our main priority right now is to discover the accurate number of TB patients in our country. If we can identify that then it will become easier for us to move forth with our prevention measures (P1B Bangladesh)".*

<u>NEPAL</u>

Agencies such as Ministry of Health, District Administration Office influence the TC interventions and NTC also has separate policies for TC (N1_Nep).

All interview participants said that since TB treatment is a government priority, it is only a matter of convincing the government that TC helps to reduce TB burden. This needs to be incorporated into

the government's strategic plan of both NTPs and the respective Ministry of Health. The priority should be to incorporate it as a part of the TB programme, otherwise there will be issues of additional work and incentives as explained above which are controversial and, which will make the programme unsustainable if additional funding is not secured

> *Currently, NTP does not have any plan to provide any tobacco cessation drugs for TB patients. This needs wider consultation with Global Fund, WHO and other partners. NTP's priorities are MDR-TB and child TB. TB case detection rate also needs to be improved. But, as tobacco control is a priority of the government, NTP will be supportive to the initiative (P1B Bangladesh).*

III. Inner setting

PAKISTAN

It is important to note that once a TC intervention is part of the regular TB programme, there will not be any problem, because this intervention will be owned by the government. However, if this intervention includes significant increases in the resources required, such as medicine (cytisine or anything else), or longer cessation counselling, that will need additional resources and commitment from the Central Government and Provincial Government.

> *"ownership comes when the intervention gets incorporated in the routine wherever it is being introduced. It should be incorporated in districts then, in the public sector (P3_PK)".*

Therefore, the most important challenge for us is to provide evidence that TC significantly decreases the burden of TB.

> *"I think evidence is the best thing. For instance, the implementation that you have done if you share its evidence with us and prove that this is something doable, this is something that has got impact, or it can be replicated. So, this depends on your team if you can advocate the results well (P3_PK)".*

The TC intervention needs to have buy in from the government, their involvement and support otherwise no matter whether it is evidence based or not the policy makers will not take it forward. However, academic and practitioner involvement in designing such complex interventions is essential. For piloting and designing purposes, external support or research is a must, but once it is proven, it can be incorporated into the NTP's regular TB treatment programme. Otherwise the health workers will not implement it.

> *"Nobody does any extra work in the facility. If you are a doctor or you have worked in health sector ever, if you tell a paramedic to write just 5 lines here, he will never do it. They don't do. Our people just don't do. Our facilities are already overburdened so they don't do all this (P1_PK).*

NEPAL

In Nepal, even if they have evidence, any newly developed interventions will have resistance from the system, staff, physical resources, skill and human resources, which are equally important for the success of the programme. These aspects need to be thought through and considered, and flexibility built in to adapt to the local context. Therefore, in order to be successful, TC should be evidence based, appropriately designed, adapted to local need and complexity.

Internal coordination meetings are held between different stakeholders. There has been very limited buy-in for TC programmes. For example, the lung health programme did not continue after running for its project period. Even though reducing TB is a priority of the government, due to limited sources of funding it is difficult to introduce TC in TB programmes, but it can be piloted in some places to see the effect by using the available resources.

> *"In order to lower the use of tobacco products, they are carrying out activities to control its use and reduce it. We have to present these issues in the next NSP. This activity is also important… We are focused on the campaign to end TB. In order for that campaign to be successful, this program to control the use of tobacco products is necessary to reduce the use because it will help to increase the number of cases of People with TB getting cured. If there is*

reduction of use of tobacco products, then it will increase the number of cured People with TB as well (P1N Nepal)".

BANGLADESH

In case of Bangladesh, despite the government's commitment towards tobacco control there has not been any programme or plan to provide any TC counselling or medicine. There is nothing and also currently nothing is being done from the government's side as such in behavior support for patients with TB to quit tobacco. There are no TC counselling mechanisms within the current health system, no quit line in Bangladesh nor any system of recording and reporting of patients' tobacco consumption status. The most important thing is that it needs to integrated into the TB programme and also in the training of TB and Leprosy control assistants.

"the current training does not include any dedicated session on tobacco cessation. But we are thinking that a one hour session can be introduced. I think I discussed this earlier with your colleague that it would not be possible to include a half day session within the current training programme. Rather a one hour interactive session can be introduced (P1B Bangladesh)".

IV. Characteristics of Individuals

For successful counselling, the health workers need to have appropriate counselling skills, for which training is important. We should also educate people about the ill effects of tobacco use for people with TB, and include this in training manuals and IEC materials. Most importantly, it should be addressed from all the health facilities and should be included in government plans.

Current practices do not provide any counselling unless the doctor or health worker suspects that the patient smokes. If so, they advise the patient to quit; however they do not get enough time to advise every patient.

V. Processes

PAKISTAN

Often there is reluctance to implement new interventions, but in the case of TC for people with TB, the impact is so obvious that there isa high chance that the Government will take ownership and incorporate it into the regular TB programme. Unless it becomes the government's priority and is mentioned explicitly in national guidelines, it is very difficult to include it in the regular programme, which is often guided by the available resources and leadership's understanding of the problem.

"when it will become a part of national guideline, everyone would follow the promises. There should be an agreement for this on national level. We tried to get that agreement, guidelines are being renewed. We have given our recommendation to incorporate it in this, now it's up to them to do it or not (P1_PK).

NEPAL

Planning and monitoring and supervision should be built into any intervention, and these need to be coordinated with health service providers and organizations. Therefore, recording, reporting and supervision are the most important aspects, which should also be reflected in HMIS. Similarly, the government line agencies and other related stakeholders should be engaged in this programme from the start so that they feel ownership of the programme. Their engagement is very important for the uptake of the intervention to the local, provincial and national level.

"we need to consider the aspect of recording and reporting… the HMIS [Health Management Information System] system that we have in place has the forms and the government also has an online reporting system that we call DHIS2 [District Health Information System 2]. (P1N-Nepal)".

Since TB is already a priority activity for NTC, incorporating TC should not be a problem.

"They cannot simply do it based on the things that they have learnt. That is the reason why we see the need to provide them the orientation or the training or on- site coaching that they require in order to improve their specific counselling skills. Simultaneously, I have also

mentioned about the IEC materials like the flipcharts and the posters that can be provided in the health facilities" (N1-Nep).

BANGLADESH

Since tobacco is not only the reason behind contracting TB, it cannot take the priority over the many other reasons. However there have been efforts to include harmful effects of tobacco in tobacco packaging. There are some NGOs such as BRAC and Gana Swatho who are supporting the TB control programme, but they are not implementing TC counselling.

Currently, NTP does not have any plan to provide any tobacco cessation drugs for People with TB. This needs wider consultation with Global Fund, WHO and other partners. NTP's priorities are MDR-TB and child TB. TB case detection rate also needs to be improved. But, as tobacco control is a priority of the government, NTP will be supportive to the initiative (P1B Bangladesh)".

However, the BS materials prepared can be widely used and government agencies and NGOs working in this sector need to be involved widely and coordinated. For this, a coordinated approach from everyone is needed, including the government, NGOs and development partners who are very important stakeholders.

"What is needed is coordinated efforts from everyone. The major obstacle is non-coordination of the operational plans and among DPs (development partners). We have so many vertical programmes without any coordination. Leadership is another problem. Change in staff within different units in every six months to a year slows down the progress of the work (P1B Bangladesh)".

She added that for this initiative to have an effect this needs to be included in our main HMIS (Health Management Information System), this will ensure the recording and reporting. Government is planning to regulate the sale of tobacco, by licensing tobacco sellers.

4.5 Policy Review / Monitoring Results

See Supplement Tobacco Control Policy in Bangladesh, Nepal and Pakistan

Coordination and cooperation between different ministries and departments is vital for procuring funding to implement TC BS counselling for people with TB. In the case of Nepal, since the health system has been decentralized but the TB programme has not, there is still a policy gap at the provincial and local level, that needs to be addressed. This provides a good opportunity for the TC programme for people with TB to be incorporated into the Nepalese health system. There is also a chance to design the health system better, to address human resources and financial resources.

"The national operational mechanism that we have is based on federalism. So the NTC is currently under the central state government. Our work is to build policies and provide support with the supervision and monitoring. That is the reason why we, NTC, need to take the leadership with the policy making (P1NP Nepal)".

5. KEY FINDINGS SUMMARY

The results showed that initial DOTS training significantly increased the confidence of respondents from all three countries in describing the principles and effectiveness of typical behavioural support, in facilitating and advising on the use of social support and in emphasising the importance of the 'not a puff' rule.

More respondents in Pakistan and Nepal were highly confident in describing the stop smoking medications after the intervention. Confidence in assisting clients to set a quit date and in helping clients devote strategies to cope with barriers, cues to smoke and relapse triggers increased in respondents from all countries after the intervention.

COACH - Respondents from Bangladesh and Nepal believed more by the 3rd wave that their centres helped to improve and develop staff skills. In the 3rd wave, more respondents believed that centres had enough staff with the right training and skills to provide tobacco cessation.

Lack of training, including regular refresher courses: systematically implemented and centrally managed training, but not limited only to DOTS providers, is strongly recommended.

Lack of recording and monitoring: critical tobacco control activity is missing in all three countries. Each country needs to implement tobacco surveillance systems to enable analysis and comparison of progress at national and international levels.

Lack of resources (human, financial): adequate space, time, high patient load and lack of financial resources are important contributors towards slow/inadequate TC and BS treatment implementation.

Tobacco as taboo: this remains a significant cultural barrier. DOTS need to be trained with special approach techniques to reach positive rapport with patients. Specifically for Pakistan, having female DOTS for female patients has been suggested as one possible solution.

Implementation sustainability: TC services are not generally available, while tobacco use rates remain high. Commitment of resources by Ministries of Health and/or NTP for integrating TC in TB programmes is vital for the sustainability success.

In summary systematic education (pre-, and post-graduate) and staff training are essential in providing tobacco dependence treatment in people with TB in practice. On the other hand, the prevalence of smoking in a population is associated with the level of tobacco control policy in each country.

6. CONCLUSION

COM-B: There was statistically significant difference between the 1st and 3rd waves in the level of confidence the respondents had in describing the principles and effectiveness of typical behavioural support and facilitating and advising on the use of social support and in emphasising the importance of the 'not a puff' rule.
There was also a difference in the mean score in question 15 (how important it is to provide tobacco dependence treatment to improve TB treatment outcome?). The mean score increased for Bangladesh and Pakistan, whereas it decreased for respondents from Nepal. It may be a result of the experience with the RCT (smoking cessation within TB programmes) in Bangladesh and Pakistan, while this trial was not conducted in Nepal.
Statistically significant differences were also observed in questions 21 (offering help to patients with TB), 23 (usage of flipbooks and leaflets), 25 (smoking), 27 (smoking in the past).
COACH: There was a statistically significant differences in questions 1-3, 6-13, 15, 17, 19-21, meaning that there was a difference in the level of agreement with the statements.
For questions 27–49 respondents were asked to indicate their agreement and we observed differences between average scores between waves 1 and 3 in questions 27-29, 31-32, 35, 46, 48-49 and 54-55.

For details, see Attachment 1.

In agreement with WP6, we conclude that the access to the information, knowledge and trainings are essential for the success of TC in TB programmes. These should be evidence- based, contextualized and understandable, because any such interventions are implemented by the grass roots level health

workers. Even though individual motivation differs from one health worker / service provider to another , once it is implemented at the national level it will be a routine job for any health worker who joins the TB programme.

7. References

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Attachment 1: Tobacco cessation within TB programmes: A 'real world' solution for countries with dual burden of disease, 1-3 Wave Data Analysis (TB&TOBACCO WAWE 1 and 3 v2.docx)

Attachment 2: Tobacco control policy in Bangladesh, Nepal and Pakistan (Tob Control Bangl Nepal Pak v2)

Attachment 1

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

1-3 Wave Data Analysis

Last Updated: 24/02/2019

COM-B

For the number of respondents in each wave stratified by country see the following table.

	1st wave	2nd wave	3rd wave	Complete data from 3 waves
Bangladesh	17	17	17	17
Nepal	7	8	7	5
Pakistan	15	14	13	8
All	**39**	**39**	**37**	**30**

Frequency tables were used to assess between-waves changes in the whole sample. It was not possible to use statistical tests to compare means due to a low number of participants in each of the three sites ($n<20$). Therefore, the paired t-test (questions 1-18) was applied to compare means in the three waves in the whole sample. Only respondents who participated in all three waves were included in the testing.

For statements 1-14 respondents were asked to circle the number corresponding with how they feel from a scale of 1 'not confident' to 5 'highly confident'

Q1: How confident are you in describing what to expect from the treatment programme, including length, content and what it requires?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.4	4.5	4.8	4.6	4.3	4.1	4.7	4.6	4.6

The confidence in describing the treatment programme increased in Bangladesh, but it decreased in respondents in Nepal and Pakistan.

Q2: How confident are you in building rapport and asking male patients about tobacco use?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.5	4.9	5.0	4.3	4.1	3.9	4.3	4.6	4.4

The confidence in building rapport and talking to male patients increased in Bangladesh and it decreased in Nepal. In Pakistan the average score changed from 4.3 to 4.4.

Q3: How confident are you in building rapport and asking female patients about tobacco use?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.6	4.3	4.5	4.6	4.5	4.4	4.1	3.0	3.3

The confidence in building rapport and talking to female patients increased in Bangladesh (average score from 3.6 to 4.5), however it decreased in Pakistan dramatically.

Q4: How confident are you in describing the principles and effectiveness of typical behavioural support?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.0	4.5	4.6	4.3	4.1	4.0	4.5	4.1	4.7

The average score increased in Bangladesh and Pakistan, however, respondents from Nepal were less confident are you in describing the principles and effectiveness of typical behavioural support in the 3rd wave when compared to 1st follow-up.

Q5: How confident are you in facilitating and advising on the use of social support?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.9	4.7	4.8	4.0	4.3	4.1	4.5	4.1	4.6

The average score increased in all three countries, the change in Bangladesh was the most significant.

Q6: How confident are you in describing the stop smoking medications that can support a quit attempt?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.6	4.9	4.8	2.3	1.0	1.0	4.5	3.9	4.2

The average score increased in Bangladesh, however it decreased in Pakistan. In Nepal, the confidence was low in the 1st wave (average score 2.3) and even lower in the 3rd wave (1.0).

Q7: How confident are you in assist clients to set quit date?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.5	4.8	4.8	4.1	4.4	3.9	4.4	4.4	4.0

Respondents in Bangladesh feel more confident in assisting clients to set quit date in the 3rd wave in comparison with the 1st wave.

Q8: How confident are you in enhancing client motivation and self-efficacy?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.2	4.6	4.7	4.1	4.5	4.1	4.9	4.7	4.5

Respondents in Bangladesh feel more confident in enhancing client motivation and self-efficacy in the 3rd wave in comparison with the 1st wave. There was not any change in respondents from Nepal. Respondents from Pakistan feel less confident.

Q9: How confident are you in emphasising the importance of the 'not a puff' rule?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.5	4.6	5.0	4.6	4.6	4.0	4.4	4.2	4.5

Respondents in Bangladesh feel more confident in emphasising the importance of the 'not a puff' rule in the 3rd wave in comparison with the 1st wave. On the other hand, respondents from Nepal felt less confident in the 3rd wave.

Q10: How confident are you in securing commitment to the 'not a puff' rule following the quit date?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.3	4.8	4.8	4.1	4.4	4.0	4.3	4.2	4.2

Only respondents from Bangladesh felt more confident in securing commitment to the 'not a puff' rule following the quit date in the 3rd wave in comparison with the 1st wave.

Q11: How confident are you in helping clients to develop strategies to cope with barriers, cues to smoke and relapse triggers?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.4	4.7	4.8	4.4	4.4	3.9	4.5	3.7	4.0

Only respondents from Bangladesh felt more confident in helping clients to develop strategies to cope with barriers, cues to smoke and relapse triggers in the 3rd wave in comparison with the 1st wave.

Q12: How confident are you in assessing clients' experience of stop smoking medications, including usage, side effects and perceived benefits?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.4	4.6	4.9	2.7	1.0	1.0	3.8	3.9	3.7

Only respondents from Bangladesh felt more confident in assessing clients' experience of stop smoking medications in the 3rd wave in comparison with the 1st wave.

Q13: How confident are you in dealing with lapses to minimise the likelihood that they will lead to full 'relapse'?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.4	4.8	4.8	3.6	4.0	3.7	4.2	4.1	4.0

Participants from Bangladesh felt more confident in dealing with lapses in the 3rd wave in comparison with the 1st wave. Respondents from Nepal felt slightly more confident (average score increased from 3.6 to 3.7), but respondents from Pakistan felt less confident than in the first follow-up.

Q14: How confident are you in assessing commitment, readiness and ability to quit?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.2	4.5	4.6	3.7	4.3	3.9	4.3	4.2	3.8

Participants from Bangladesh and Nepal felt more confident in assessing commitment, readiness and ability to quit in the 3rd wave in comparison with the 1st wave.

For questions 15-18, respondents were asked to indicate their response by either circling a number between 1 and 5, where 1 is "Completely disagree" and 5 is "Completely agree".

Q15: I think it is important to provide tobacco dependence treatment to improve TB treatment outcome

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.5	4.8	5.0	5.0	4.8	4.4	4.7	4.9	5.0

Respondents from Bangladesh and Pakistan agreed with the statement more in the 3rd wave than in the first follow-up (average score increased).

Q16: With my patients, I always discuss the effects of tobacco use on TB

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.6	4.9	4.9	4.9	4.6	4.4	4.5	4.5	4.7

Respondents from Bangladesh and Pakistan agreed with the statement more in the 3rd wave than in the first follow-up (average score increased).

Q17: With my patients, I always discuss the effects of second hand smoke on TB

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.6	4.8	4.9	4.7	4.6	4.6	4.3	4.3	4.3

Only respondents from Bangladesh agreed with the statement more in the 3rd wave than in the first follow-up (average score increased).

Q18: I have enough time and capacity to provide face-to-face tobacco cessation intervention

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.2	4.2	4.4	4.3	4.5	4.0	3.4	2.8	3.2

Only respondents from Bangladesh agreed with the statement more in the 3rd wave than in the first follow-up (average score increased).

For questions 19-23, respondents were asked to indicate their response by either circling one of the following: "Always", "Sometimes", "Never".

The following tables show the percentage of participants who responded "Always".

Q19: In my centre, I ask patients with TB about their tobacco use

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
88.2	94.1	100	85.7	75.0	71.4	73.0	92.9	92.3

In Bangladesh and Pakistan, more respondents stated (during the 3rd wave data collection) that they always ask patients with TB about their tobacco use.

Q20: In my centre, I recommend patients with TB to stop using tobacco products

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
76.5	100	100	85.7	87.5	71.4	93.3	85.7	92.3

Only in Bangladesh there was a higher percentage of respondents who recommend patients with TB to stop smoking in the 3rd wave when compared to the 1st wave.

Q21: In my centre, I offer help to patients with TB who want to quit tobacco use

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
76.5	88.2	94.1	100	100	100	86.7	92.9	76.9

In Nepal, all respondents stated that they always offer help to patients with TB who want to quit tobacco use. In Bangladesh, percentage of those who offer help increased between follow-ups.

Q22: Do you use any flipbooks or leaflets or other materials to support patients with the management of their TB

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
17.6	52.9	76.5	100	75.0	85.7	80.0	64.3	69.2

The number of those who use flipbooks or leaflets to support patients with TB dramatically increased in respondents from Bangladesh.

Q23: Do you use any flipbooks or leaflets or other materials to support patients to quit tobacco?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
35.3	64.7	64.7	71.4	75.0	85.7	73.3	64.3	38.5

The number of those who use flipbooks or leaflets to support patients with TB increased in respondents from Bangladesh and Nepal. Less respondents were using these materials in the 3rd wave when compared to 1st wave in Pakistan.

For questions 24–27 respondents were asked to answer the question by ticking "Yes" or "No".

The following tables show the percentage of participants who responded "No".

Q24: I smoke tobacco

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
100	94.1	94.1	100	100	100	100	100	100

All respondents in Nepal and Pakistan stated they did not smoke tobacco. In Bangladesh, there was a small percentage of respondents who stated that they smoked tobacco (in the 2nd and 3rd waves).

Q25: I use smokeless tobacco

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
88.2	88.2	88.2	100	100	100	100	100	100

All respondents in Nepal and Pakistan stated they did not use smokeless tobacco. In Bangladesh, there was 12% of respondents who stated that they used tobacco (in the 2nd and 3rd waves).

Q26: I smoked or used smokeless tobacco in the past, but not now

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
94.1	82.4	82.4	100	100	100	100	0	0

Note: The question 26 was probably misunderstood in participants from Pakistan.

Q27: I do not smoke or use smokeless tobacco and have never done so in the past

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
17.6	11.8	23.5	0	0	0	6.7	0	0

None of the respondents from Nepal smoked or used tobacco in the past or during the follow-ups. In Bangladesh 23.5% respondents stated they do or did so in the past.

Statistical comparison between waves (N = 29)

	Between 1st and 2nd wave (p value)	Between 2nd and 3rd wave (p value)	Between 1st and 3rd wave (p value)
1	0,845	0,227	0,258
2	0,043	0,264	0,231
3	0,165	0,243	0,055
4	0,023	0,424	0,005
5	0,025	0,169	0,002
6	0,580	1,000	0,588
7	0,019	0,326	0,118
8	0,037	0,625	0,090
9	0,602	0,056	0,043
10	0,088	0,712	0,165
11	1,000	0,573	0,662
12	0,791	0,202	0,354
13	0,054	0,769	0,043
14	0,326	0,712	0,165
15	0,017	0,103	0,006
16	0,050	0,326	0,169
17	0,380	0,489	0,136
18	0,281	0,265	0,774

Note: red colour highlights questions in which the average score was statistically different between waves ($p < 0.05$)

Between 1st and 3rd wave comparison

There was statistically significant difference between 1st and 3rd wave in the level of confidence the respondents have in describing the principles and effectiveness of typical behavioural support and facilitating and advising on the use of social support and in emphasising the importance of the 'not a puff' rule.

There was also a difference in a mean score in question 15 (how important it is to provide tobacco dependence treatment to improve TB treatment outcome). The mean score increased for Bangladesh and Pakistan, whereas it decreased for respondents from Nepal.

Statistically significant differences were also observed in questions 21 (offering help to patients with TB), 23 (usage of flipbooks and leaflets), 25 (smoking), 27 (smoking in the past).

COACH

For the number of respondents in each wave stratified by country see the following table.

	1st wave	2nd wave	3rd wave	Complete data from 3 waves
Bangladesh	17	17	17	17
Nepal	7	8	7	5
Pakistan	12	12	13	7
All	**36**	**37**	**37**	**28**

Frequency tables were used to assess between-waves changes in the whole sample. It was not possible to use statistical tests to compare means due to a low number of participants in each of the three sites ($n<20$). Therefore, the paired t-test (questions 1-21, 27-49 and 54-56) applied to compare means in the three waves in the whole sample. Only respondents who participated in all three waves were included in the testing.

For questions 1–21 respondents were asked to indicate their agreement on 5-item scale from "Strongly Disagree" to "Strongly Agree".

Q1. My unit has enough workers with the right training and skills to do everything that needs to be done.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.6	4.2	4.8	3.3	3.5	3.6	4.3	4.1	4.2

The average score increased (meaning higher agreement with the statement in average) in Bangladesh and Nepal.

Q2: My unit has enough workers with the right training and skills to do their job in the best possible way.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.8	4.1	4.8	2.7	3.4	3.7	4.2	4.3	4.3

The average score increased (meaning higher agreement with the statement in average) in Bangladesh, Nepal and even slightly in Pakistan (from 4.2 in the 1st wave to 4.3 in the last follow-up)

Q3: My unit has enough space to provide healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.8	4.1	4.8	3.3	3.0	3.1	4.0	3.8	3.6

The average score increased in Bangladesh, however it decreased in both Nepal and Pakistan.

Q4: My unit has access to the transport and fuel that are needed to provide healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.1	2.9	4.1	4.4	2.4	2.6	2.7	2.8	2.9

The average score increased in Bangladesh (by 1 point), however it dramatically decreased in Nepal.

Q5: My unit has access to the communication tools (e.g. telephones or radios) that are needed to provide healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.5	3.6	4.4	3.7	2.9	2.9	4.0	3.8	4.2

The average score increased in Bangladesh and Pakistan, however the participants from Nepal agreed that they have access to communication tools less in the 3rd wave.

Q6: My unit has enough medicine to provide healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.4	4.5	4.8	3.0	3.6	3.7	4.3	3.8	4.5

Participants from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q7: My unit has enough functional equipment, such as a thermometer and blood pressure cuff, to provide healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.1	4.0	4.4	4.0	4.4	3.9	4.6	4.2	4.2

The average score increased in Bangladesh and it decreased in both Nepal and Pakistan.

Q8: My unit has enough disposable medical equipment to provide healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.5	4.2	4.7	3.6	4.0	3.7	4.8	4.3	4.5

Participants from Bangladesh and Nepal agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q9: If the workload increases, my unit can get additional resources such as medicine and equipment.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.8	4.1	4.6	3.1	3.4	3.3	4.2	4.0	4.1

Participants from Bangladesh and Nepal agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The average score in participants from Pakistan decreased by 0.1 point.

Q10: My unit receives money according to an established financial plan.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
2.8	3.3	4.5	2.1	2.3	2.0	3.2	3.8	3.7

Participants from Bangladesh and Pakistan agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The average score in participants from Nepal decreased by 0.1 point.

Q11: My unit has money that we can decide how to use.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
2.6	3.2	4.5	2.1	2.0	2.0	2.5	2.9	3.2

Participants from Bangladesh and Pakistan agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The average score in participants from Nepal decreased by 0.1 point.

Q12: In my unit we ask community members what they think about the healthcare services that we provide.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.6	3.9	4.6	3.4	3.8	3.9	3.4	3.7	3.5

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up. In Bangladesh, the average score increased by 1 point.

Q13: In my unit we listen to what community members think about the healthcare services we provide.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.8	4.1	4.6	4.3	4.5	4.1	3.5	3.8	3.6

Participants from Bangladesh and Pakistan agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The average score in participants from Nepal decreased by 0.2 point.

Q14: In my unit we have meetings with community members to discuss health matters.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.1	4.4	4.6	3.7	3.5	3.0	3.2	3.4	3.2

Only participants from Bangladesh agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q15: In my unit we encourage community members to contribute to improving the health of the community.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.9	4.3	4.7	4.0	3.4	3.7	3.6	4.2	3.8

Participants from Bangladesh and Pakistan agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q16: In my unit we encourage other organizations to contribute to improving the health of the community.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.1	4.5	4.8	4.0	3.6	4.3	4.1	4.2	3.8

Respondents from Bangladesh and Nepal agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q17: I receive regular updates about my unit's performance based on information/data collected from our unit.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.7	4.0	4.8	4.0	3.1	3.6	4.3	4.2	4.5

Respondents from Bangladesh and Pakistan agreed with the statement more in the 3rd wave when compared to the 1st follow-up. Participants from Nepal agreed less in the 3rd wave that they receive regular updates about their unit's performance.

Q18: My unit discusses information/data from our unit in a regular, formal way, such as in regularly scheduled meetings.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.1	4.3	4.8	3.7	3.1	3.7	4.3	4.2	4.3

Respondents from Bangladesh agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The average score did not change during the follow-up in respondents from Nepal and Pakistan.

Q19: My unit regularly uses unit information/data to make plans for improving its healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.1	4.4	4.9	3.9	3.6	3.9	4.1	4.3	4.5

Respondents from Bangladesh and Pakistan agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The average score decreased and then again increased during the follow-up in respondents from Nepal.

Q20: My unit regularly monitors its work by comparing it with the unit's action plans.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.9	3.8	4.8	3.4	3.3	3.9	4.1	4.3	4.2

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up. In Bangladesh, the average score increased by 0.9 point.

Q21: My unit regularly compares its work with national or other guidelines.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.2	4.4	4.8	3.9	3.4	4.0	4.3	4.2	4.2

Respondents from Bangladesh and Nepal agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The average score slightly decreased during the follow-up in respondents from Pakistan.

For items 22–26 respondents were asked how often they used the following types of information at work in the last month. They indicated their answer on 5-item scale from "Never" (0 times) to "Almost always" (16 times or more).

The following tables show the percentage of participants who responded "not available in my centre", "never" or "rarely".

Q22: Clinical practice guidelines

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
47.1	23.5	5.9	71.4	62.5	57.1	0	0	0

All participants from Pakistan stated that they used clinical practice guidelines at least sometimes. The number of respondents who never or rarely use guidelines in Nepal and Bangladesh decreased during the follow-ups.

Q23: Other printed material for work (e.g. textbooks, journals)

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
47.1	17.6	29.4	71.4	87.5	100	8.3	0	0

The number of respondents who never or rarely use other printed materials in Pakistan and Bangladesh decreased during the follow-ups. On the other hand, during the 3rd follow-up, all respondents from Nepal stated that they use these materials either rarely or never.

Q24: The Internet

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
52.9	41.2	29.4	85.7	87.5	85.7	8.3	8.3	0

The number of respondents who never or rarely use the internet in Pakistan and Bangladesh decreased during the follow-ups. The number of respondents who do not use the internet in Nepal remained stable during the follow-ups.

Q25: Electronic decision support

(e.g. mobile phone applications or other electronic devices to assist with care and decision-making)

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
41.2	29.4	5.9	42.9	100	100	16.7	0	0

The number of respondents who never or rarely use other electronic decision support in Pakistan and Bangladesh decreased during the follow-ups. On the other hand, during the 3rd follow-up, all respondents from Nepal stated that they use electronic decision support either rarely or never.

Q26: In-service training/workshops/courses

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
47.1	41.2	35.3	42.9	100	100	8.3	0	15.4

The number of respondents who never or rarely use other in-service training in Bangladesh decreased during the follow-ups. On the other hand, during the 3rd follow-up, all respondents from Nepal stated that they use training either rarely or never. Also, the number of respondents from Nepal who use these trainings regularly decreased.

For questions 27–49 respondents were asked to indicate their agreement on 5-item scale from "Strongly Disagree" to "Strongly Agree".

Q27: I am proud to work in this unit.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.2	4.6	4.9	4.3	4.6	4.3	4.4	4.6	4.8

The average score increased in Bangladesh and Pakistan. The respondents from Nepal felt as proud to work at their unit as they did in the first follow-up.

Q28: I am satisfied to work in this unit.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.0	4.5	4.8	3.6	4.3	4.3	4.2	4.6	4.8

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q29: I feel encouraged to do my very best at work.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.2	4.7	4.9	4.1	4.6	4.6	4.1	4.5	4.7

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q30: My unit is willing to use new healthcare practices such as guidelines and recommendations.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.6	4.5	4.7	4.1	4.8	4.4	4.3	4.2	4.2

Respondents from all Bangladesh and Nepal agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The average score decreased by 0.1 point in respondents from Pakistan.

Q31: My unit helps me to improve and develop my skills.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.2	4.5	4.8	3.7	4.1	4.1	4.1	4.4	4.5

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q32: I am encouraged to seek new information on healthcare practices.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.4	4.7	4.9	3.9	4.5	4.6	4.3	4.3	4.4

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up, they felt more encouraged to seek new information.

Q33: My unit works for the good of the clients and puts their needs first.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.6	4.6	4.8	4.1	4.9	4.4	4.4	4.3	4.5

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q34: Members of the unit feel personally responsible for improving healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.1	4.2	4.6	3.9	4.4	4.1	4.3	4.3	4.6

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q35: Members of the unit approach clients with respect.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.5	4.6	4.9	3.9	4.6	4.1	4.2	4.4	4.6

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up.

Q36: I trust the unit leader

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.5	4.5	4.6	3.9	4.5	4.3	4.3	4.5	4.7

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up, they trusted their unit leaders more.

Q37: The leader handles stressful situations calmly

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.4	4.5	4.6	2.9	3.8	3.7	4.3	4.5	4.6

Respondents from all three sites agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The average score in Nepal was much lower in comparison with Bangladesh and Pakistan sites.

Q38: The leader actively listens, acknowledges, and then responds to requests and concerns.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.3	4.4	4.6	3.7	3.4	3.4	4.4	4.5	4.5

Respondents from Bangladesh and Nepal agreed with the statement more in the 3rd wave when compared to the 1st follow-up. The respondents from Nepal were less happy with how their leader listens, acknowledge and responds.

Q39: The leader effectively resolves any conflicts that arise.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.5	4.5	4.8	3.1	3.4	3.4	4.3	4.4	4.4

The average score increased in all three sites. The average score in respondents from Nepal was much lower in comparison with Bangladesh and Pakistan sites.

Q40: The leader encourages the introduction of new ideas and practices.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.6	4.5	4.6	3.1	3.6	3.7	4.3	4.6	4.3

The average score increased only in Nepal. The score remained the same in Bangladesh and Pakistan, where the average score was already quite high in the 1st wave.

Q41: The leader makes things happen.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.4	4.4	4.6	3.3	3.6	3.7	4.4	4.5	4.2

Respondents from all Bangladesh and Nepal agreed with the statement more in the 3rd wave when compared to the 1st follow-up, respondents from Pakistan felt less sure that their leader makes things happen.

Q42: Clients must always give informal payment to health workers to access healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
1.4	1.6	1.2	1.0	1.1	1.0	1.4	1.9	2.4

The average score increased in Pakistan from 1.4 to 2.4 meaning that respondents agreed more that the clients must always give informal payment to health workers to access healthcare services.

Q43: Clients are treated more quickly if they make informal payments to health workers.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
1.4	1.7	1.2	1.0	1.1	1.0	1.5	2.4	2.5

The average score increased in Pakistan from 1.5 to 2.5 meaning that respondents agreed more that the clients are treated more quickly if they make informal payments to health workers.

Q44: Medicines or equipment that should be available for free to clients have been sold in my unit.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
1.2	1.4	1.1	1.3	1.0	1.0	1.3	1.4	1.5

The average score increased only in Pakistan site.

Q45: Health workers are sometimes absent from work earning money at other places.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
1.2	1.8	1.2	1.7	1.4	1.1	1.4	1.6	1.4

The average score decreased or remained the same in all three sites.

Q46: Health workers in my unit give healthcare services to friends and family first.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
1.6	1.6	1.2	2.9	2.0	1.7	2.7	2.1	1.8

Respondents from all Bangladesh and Nepal agreed with the statement less in the 3rd wave when compared to the 1st follow-up

Q47: Health workers in my unit give jobs or other benefits to friends and family first.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
1.5	1.5	1.2	2.3	2.0	1.7	2.3	2.0	1.8

Respondents from all Bangladesh and Nepal agreed with the statement less in the 3rd wave when compared to the 1st follow-up

Q48: Efforts are made to stop clients from providing informal payment to get appropriate healthcare services.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.1	4.1	2.2	4.9	4.6	4.3	4.3	4.2	3.6

Respondents from all Bangladesh and Nepal agreed with the statement less in the 3rd wave when compared to the 1st follow-up, the difference was significant especially in Bangladesh.

Q49: Efforts are made to stop health workers from asking clients for informal payment.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.2	4.1	2.1	4.9	4.6	4.3	4.6	4.4	4.5

Respondents from all Bangladesh and Nepal agreed with the statement less in the 3rd wave when compared to the 1st follow-up, but the difference was significant especially in Bangladesh.

For questions 50–53 respondents were asked to answer the question by ticking "Yes" or "No".

The following tables show the percentage of participants who responded "No".

Q50: Does your health care centre provide medication for tobacco cessation or has it ever done so in the past?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
100	100	100	100	100	100	100	66.7	53.8

None of the centres in Bangladesh and Nepal provided medication. In Pakistan the number of the centres that provided medication increased during the follow-ups.

Q51: Are there any other centres or pharmacies nearby that provide medication for tobacco cessation that you know of

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
100	100	100	71.4	87.5	100	100	100	84.6

During the last follow-up, all respondents from Bangladesh and Nepal stated that there was no other centre or pharmacy providing medication for tobacco cessation. In Pakistan, 15.4% of respondents stated that they knew about such a centre.

Q52: Is it possible to smoke indoors in your health care centre?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
100	100	100	85.7	100	100	41.7	75.0	61.5

During the last follow-up, all respondents from Bangladesh and Nepal stated that it was not possible to smoke indoors in their centre. However, only 61.5% of respondents from Pakistan stated that it was not possible to smoke indoors (increase from 41.7% in the first follow-up).

Q53: Is it possible to use other forms of tobacco indoors in your health care centre?

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
88.2	88.2	88.2	71.4	100	100	66.7	58.3	69.2

The situation did not change in Bangladesh site, where 88.2% respondents stated that it was not possible to use other forms of tobacco inside. However, the situation improved in Nepal, where 100% of the participants stated in the 3rd follow-up that it was not possible to use any form of tobacco indoors.

For questions 54–56 respondents were asked to indicate their agreement on 5-item scale from "Strongly Disagree" to "Strongly Agree".

Q54: My centre helps to improve and develop staff skills on tobacco cessation interventions (in addition to the TB & Tobacco training)

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.8	3.9	4.1	2.3	4.5	4.7	3.2	3.8	4.1

Respondents from all Bangladesh and Nepal agreed with the statement less in the 3rd wave when compared to the 1st follow-up, they believed that their centre helps to improve and develop staff skills.

Q55: My centre has enough staff with the right training and skills to provide tobacco cessation intervention

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
3.5	4.4	4.4	2.1	2.5	2.7	3.0	3.5	3.8

Respondents from all Bangladesh and Nepal agreed with the statement less in the 3rd wave when compared to the 1st follow-up.

Q56: Offering a tobacco cessation programme to staff members who smoke and wish to quit would be useful.

Bangladesh			Nepal			Pakistan		
1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave	1st wave	2nd wave	3rd wave
4.6	4.7	4.8	4.4	4.4	4.4	4.5	4.2	4.3

Respondents from Bangladesh agreed more with the statement during the last follow-up (average score increased by 0.2 point from 4.6 to 4.8). The average score in Nepal remained the same during follow-ups and it even decreased in Pakistan site.

Statistical comparison between waves (N = 28)

	Between 1st and 2nd wave (p value)	Between 2nd and 3rd wave (p value)	Between 1st and 3rd wave (p value)		Between 1st and 2nd wave (p value)	Between 2nd and 3rd wave (p value)	Between 1st and 3rd wave (p value)
1	0,184	0,021	0,002	29	0,032	0,212	0,014
2	0,200	0,016	0,001	30	0,602	0,415	0,823
3	0,869	0,023	0,021	31	0,110	0,017	0,006
4	0,045	0,006	0,360	32	0,110	0,170	0,021
5	0,501	0,029	0,117	33	0,448	0,375	0,110
6	0,502	0,059	0,030	34	1,000	0,096	0,057
7	0,012	0,873	0,047	35	0,170	0,110	0,005
8	0,070	0,174	0,014	36	0,626	0,293	0,161
9	0,281	0,187	0,041	37	0,415	0,293	0,110
10	0,110	0,007	0,000	38	0,691	0,161	0,702
11	0,110	0,001	0,000	39	0,787	0,212	0,134
12	0,037	0,010	0,001	40	0,787	1,000	0,813
13	0,110	0,083	0,011	41	0,573	0,212	0,136
14	0,702	0,869	0,621	42	0,030	0,573	0,362
15	0,702	0,039	0,050	43	0,011	0,095	0,558
16	0,702	0,257	0,130	44	0,326	0,096	0,326
17	0,722	0,002	0,015	45	0,115	0,008	0,326
18	0,730	0,031	0,096	46	0,408	0,021	0,024
19	0,206	0,003	0,001	47	0,646	0,039	0,058
20	0,489	0,000	0,000	48	0,212	0,000	0,000
21	0,421	0,003	0,016	49	0,110	0,001	0,000
27	0,118	0,293	0,043	54	0,009	0,170	0,001
28	0,020	0,110	0,001	55	0,017	0,305	0,006
				56	0,258	0,043	0,801

Note: red colour highlights questions in which the average score was statistically different between waves ($p < 0.05$)

Between 1st and 3rd wave comparison

There was a statistically significant differences in questions 1-3, 6-13, 15, 17, 19-21, meaning that there was a difference in the level of agreement with the statements.

For questions 27–49 respondents were asked to indicate their agreement and we observed differences between average scores between waves 1 and 3 in questions 27-29, 31-32, 35, 46, 48-49 and 54-55.

Attachment 2
Tobacco Control Policy in Bangladesh, Nepal and Pakistan

Introduction
In 2008, WHO (1) introduced first version of MPOWER, a regularly updated package of measures intended to assist in the country-level implementation of the below listed articles of the WHO Framework Convention on Tobacco Control (WHO FCTC):

- Article 20 – Research, surveillance and exchange of information (**M**onitoring)
- Article 8 – **P**rotection from exposure to tobacco smoke (Smoke-free environments)
- Article 14 – Demand reduction measures concerning tobacco dependence and cessation (**O**ffer cessation programmes)
- Article 11 – Packaging and labelling of tobacco products (**W**arning labels)
- Article 12+13 – **E**ducation, communication, training and public awareness (Mass media), Tobacco advertising, promotion and sponsorship (Advertising bans)
- Article 6 – Price and tax measures to reduce the demand for tobacco (**R**ise Tobacco Taxes)

The six components of MPOWER are:
Monitor tobacco use and prevention policies
Protect people from tobacco smoke
Offer help to quit tobacco use
Warn about the dangers of tobacco
Enforce bans on tobacco advertising, promotion and sponsorship
Raise taxes on tobacco

WHO states that while there has been a commendable progress with most MPOWER strategies, increased taxation on tobacco products and cessation programs have not received due attention (2).

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1. World Health organization (2014) *Global Health Observatory (GHO) data.* Available at: https://www.who.int/gho/tobacco/policies/en/
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BANGLADESH
Bangladesh became a Party to the WHO Framework Convention on Tobacco Control on February 27, 2005.

Monitoring
According to GATS (Global Adults Tobacco Use Survey), 2019, presenting 2017 data (1), over 35 % of the population aged 15+ uses some kind of tobacco, over 20 percent of the country's population currently use smokeless tobacco - mostly betel quid (paan) with chewing tobacco and powdered tobacco (gul); 18 percent use smoking tobacco products, mostly cigarettes and bidi.

The number of bidi smokers declined more than half than it was in 2009, but the percentage of cigarette smokers remained almost unchanged (around 14 percent), the survey found.
It also found that tobacco usage among the male population reduced more (20.8 percent) than that of females (12.2 percent). Smoking prevalence is the highest among the slum population, followed by the tribal population, the national population and the border area population, suggesting greater burden of tobacco use among the disadvantaged groups. The overall decline in tobacco use can be viewed as a structural shift in the tobacco market in Bangladesh from low value products such as bidi and smokeless tobacco to high value cigarettes, which is expected with the growth in income and purchasing power of the general population.
Bangladesh is one of the largest tobacco consuming countries in the world.

- 35 % of all adults (age 15+) use tobacco;
- 18 % smoke tobacco; 21 % use smokeless tobacco.

Protect people from tobacco smoke
Smoking is prohibited in the majority of indoor public places and workplaces e.g healthcare facilities, schools, universities, government facilities, bars and pubs and private offices. Smoking is not prohibited in restaurants with fewer than four walls. Certain outdoor places may have outdoor designated smoking zones. Healthcare and educational facilities shall not have such zones. Smoking is prohibited in one room means of public transport. Public transport with two or more rooms may have designated smoking zones. Children's parks, fairs and queues of passengers riding public vehicles are smoke free. Sub-national jurisdictions may enact smoke free laws that are more stringent than the national law (2).

Offer help to quit tobacco use
NRT (Nicotine replacement therapy) and/or some cessation services (neither cost-covered). There is no national Quitline in Bangladesh (3).

Warn about the dangers of tobacco
Tobacco Packaging and Labelling:
The law requires graphic health warnings to cover at least the top 50 percent of the main display areas of all tobacco products. This law includes graphic and written warnings in the principal language(s). One of nine warnings (seven warnings for smoked products and two warnings for smokeless products) must be rotated every three months. Misleading terms such as "light" and "low tar" are prohibited on tobacco packaging. Other misleading packaging e.g. colours, numbers and symbols, is not banned (2).

Enforce bans on tobacco advertising, promotion and sponsorship
Tobacco advertising is prohibited in all print and electronic media, including at the point-of-sale. Free and discounted tobacco products also are prohibited, but internet tobacco sales and tobacco products bearing non-tobacco brand names are allowed. Although sponsorship by the tobacco industry is not completely prohibited, publicity of the sponsorship is prohibited.

Taxes on tobacco
The current tobacco tax structure in Bangladesh is complex and does not discourage tobacco use (4):

- A complex multi-tiered ad-valorem excise tax which includes large variations in tax bases and tax rates depending on the type of tobacco product (cigarettes, bidis, and smokeless), the product characteristics (filter or without filter) and the cigarette brand type (low local, low international, high and premium);
- The multi-tiered tax system for cigarettes has resulted in:
    - smokers switching to cheaper cigarettes instead of quitting;
    - extremely cheap and affordable cigarettes
    - rising cigarette sales in recent years;
    - a relatively constant smoking prevalence in recent years.
- Low taxes on bidis and smokeless tobacco keep these products highly affordable vii

The WHO recommends raising tobacco excise taxes so that they account for at least 70% of retail prices. Tobacco excise taxes in Bangladesh are well below these recommendations at 61% of retail prices (2).

Roadmap to Tobacco Control Legislation

A roadmap to Tobacco Control Legislation see in Table 1. The 2005 Act was passed after Bangladesh became a party to the WHO Framework Convention on Tobacco Control, and was enacted as an addition to, not in derogation of, existing laws, at least to the extent that there were no contradictory provisions. The non-exclusive list of existing legislation includes the Railways Act, 1890 (governing smoking in railway compartments) (2).

Table 1: Roadmap to Tobacco Control Legislation in Bangladesh (2)

Year	Legislation	Main features
2005	Tobacco control law (The Smoking and Tobacco Products Usage (Control) Act) was enacted.	• Banned smoking in selected public places and public transports • Partially banned 'Tobacco Advertisement, Promotion and Sponsorship (TAPS') • Introduced health warning on packs • Smokeless tobacco (SLT) was not included in definition of Tobacco
2006	Rules passed to support the enforcement of the law	
2013	The tobacco control law (The Smoking and Tobacco Products Usage (Control) (Amendment) Act) amended.	• The list of smoke-free public places extended; • Penalty for violation of law increased; • Ban on TAPS made comprehensive. Advertisement at point of sale banned; • Sale of tobacco to and by minors banned;

		• The owners/ managers of public places/ public transports made responsible to keep the area under their jurisdiction smoke-free; • Pictorial health warning on packs covering at least 50% of the main display area introduced; • Use of deceptive words as brand element is barred • SLT is included in definition of Tobacco
2015	Rules (The Smoking and Tobacco Products Usage (Control) Rules) amended to support the enforcement of the law.	
2017	Rule passed to adopt 'Health Development Surcharge'	1% 'Health Development Surcharge' added on tax base of all types of tobacco products

Conclusions:

Bangladesh has expressed its commitment to achieve tobacco-related targets under the Global Action Plan for the Prevention and Control of NCDs and the Sustainable Development Goals (SDGs). Raising taxes on tobacco is a cost effective way to reach those targets. It is also a major step towards achieving the vision of a tobacco free Bangladesh by 2040 (5, 6).

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NEPAL

Nepal became a Party to the WHO Framework Convention on Tobacco Control on February 5, 2007.

Monitoring

Prevalence of tobacco use according to STEPS-2013: 30.8% adults (15-64 years) were tobacco users (48.1% men, 14.1% women) - 18.5% were tobacco smokers (27% men, 10.3% women) and 17.8% were smokeless tobacco users (31.3% men, 4.8% women) (1).

Protect people from tobacco smoke

Smoking is banned in most public places, workplaces, public transport, private homes and vehicles. The law allows managers of airports, prisons and hotels to designate smoking areas which generally these should be outside, however they can be inside if no outside space is available. Regulations need to explicitly state the designated smoking area must be outdoors to ensure 100% smoke free workplaces (2).

Outdoor Areas: Pilgramage and religious places, stadiums, outdoor areas of industries and factories, and children's parks and clubs must be smoke free.

Government of Nepal has the right to deem any place public by publishing a notice in the Nepal Gazette thus requiring the area to be smoke free.

Ministry of Science, Technology and Environment (MOSTE) measure the content of second-hand tobacco smoke in the air of workplaces and public places. Further collaboration with MOSTE and Ministry of Health and Population (MOHP) to assess the impact of smoke-free interventions.

The ban on smoking in public places remains ineffective. There seems to be some penalty mechanism in places within the Kathmandu Valley even though it is not so consistent; but elsewhere in the country, people smoke openly in public places (3). To promote effective implementation of this ban, the government has appointed the assistant Chief District Officer (CDO) as the monitoring officer for each district to look into the implementation of the measure (4).

Warn about the dangers of tobacco

Health warnings must be composed of both pictures and text and cover 90% of smoked and smokeless tobacco. Progress implementing the law has been halted due to cases filed by the tobacco industry against provisions on packaging and labelling (2).

Nepali law specifies the ministry may change the required four pictorial health warnings within a year. Nepal has not established standards to regulate the ingredients of tobacco products and does not have testing.

Misleading packaging and labelling, including terms such as 'less tar' and 'light' and other signs, is prohibited.

While the government has already endorsed the regulation mandating 90% graphic warning coverage of product package, it is yet to be implemented by all tobacco companies. All the international tobacco brands entering Nepal have already packaged their products as required while some Nepali products have also followed suit (4). Nepal is also aiming to adopt plain packaging of tobacco products by 2018 which requires removal of all branding-color, imagery, corporate logos and trademark--and manufacturers have to print only the brand name in a mandated size, font and place on the packet, in addition to health warnings (5).

Applicable from March 14, 2017 the Government of Nepal introduced a regulation wherein all shops selling tobacco products need to registered with the Inland Revenue Department and get the license (4).

Enforce bans on tobacco advertising, promotion and sponsorship

There is a ban on most forms of tobacco advertising in media, outdoors and point of sale. Tobacco products are still displayed on shelves at points of sale and youth exposure to tobacco advertising remains high. Ministry of Information and Communication's Censor Board has begun including health warnings in films and television programmes in which tobacco products appear. Brand stretching and promotions with tobacco product purchases are permitted. Health warnings of tobacco could further stretch to health warnings of associated diseases i.e. TB and the associated risk of tobacco. There are some restrictions on tobacco sponsorship and publicity of such sponsorship. Laws include the prohibition of cross-border advertising, promotion and sponsorship.

Taxes on tobacco

Health Tax Fund is used to control tobacco consumption and the prevent and control tobacco-related diseases 'at least 25% of the total amount raised from the revenue levied from the excise tax upon smoking and tobacco products by the Government of Nepal as per the financial Act shall be deposited in the Health Tax Fund'. The fund is allocated primarily to curative activities. 75% to government owned hospitals for diagnosis, treatment and investigation of diseases caused by tobacco. Taxes are levied on all types of cigarettes, cigars, bidis, pipe tobacco, smokeless tobacco products, and on imported cigarettes. Ad valorem and specific excise duties, import tax and value added tax are imposed on different types of tobacco products - monitored by Inland Revenue Department (IRD). Current taxation structure is complex with too many rates. This makes tax increases less effective since smokers can switch to cheaper tobacco products. For the fiscal year 2017-18, Nepal government has increased excise duty on different types of cigarettes and tobacco products in the budget. The New Health Policy, 2074 also envisages increased taxation in tobacco products[2]. The government of Nepal levies excise tax on tobacco products and import duty on foreign brands. The tax rate in Nepal is 28 percent, which is quite low compared to Bangladesh, where it is 76 percent, Sri Lanka 74 percent, Thailand 73 percent, Maldives 66 percent and India 60 percent (2, 3).

Illicit Trade

All tobacco products are required to have an excise stamp - enables IRD to monitor illicit trade. No tracking or tracing system in place. Cooperation with South Asian Association for Regional Cooperation (SAARC) countries to tackle illicit trade over open borders. A licence, with a fee of 5000 rupees per document, is required for importing tobacco issued by the Department of Commerce and Suppy Management.

Roadmap to Tobacco Control Legislation

The Tobacco Product (Control and Regulation) Act, 2010 is the primary tobacco control law in Nepal. One regulation and three directives have been issued under the Act to implement its provisions, in detail see Table 2 (2).

Table 2: A roadmap of Tobacco Control Legislation in Nepal (2)

Year	Legislation	Main features
2010	The Tobacco Product (Control and Regulation) Act	• the primary law governing tobacco control in Nepal and regulates, among other things, smoking in public places, work places and public transport; tobacco advertising, promotion and sponsorship; and tobacco packaging and labelling.
2011	The Tobacco Products (Control and Regulation) Regulation – 2068 (2011)	
	the Directive for Printing and Labelling of Warning Message and Graphics in the Boxes, Packets, Wrappers, Cartons, Parcels and Packaging of Tobacco Products	
2014	Tobacco Product Control and Regulatory Directive	
2014	Directive on Printing Warning Messages and Pictures on Tobacco Product Boxes, Packets, Cartons, Parcels and Packaging Materials	It listed increased the size of the graphic health warnings from 75 percent to 90 percent of the front and back of all tobacco product packaging beginning in 2015. Reports indicate that implementation has not been comprehensive/widespread.

2017 and forward

The National Health Education Information and Communication Centre (NHEICC) under the Ministry of Health is the government body responsible for tobacco control activities in Nepal.

An important event demonstrating the seriousness of the government to curb tobacco use was the South Asian Tobacco Control Leadership Program. The Johns Hopkins Bloomberg School of Public Health (Baltimore), Ministry of Health and Family Welfare (Government of Nepal), The International Union Against Tuberculosis and Lung Diseases (The Union) and Action Nepal

organized a South Asia Tobacco Control Leadership Program in Kathmandu from 7-13 May 2017. The weeklong program had participants from government and non-government agencies from all the SAARC countries. The program covered various aspects of tobacco control including building effective leadership (6). According to organizers, the program course focused on a myriad of tobacco topics, including policy development, advocacy, communications, implementation and evaluation, and management and leadership (7).

During his tenure as Minister for Health, Minister Thapa shed light on the government's plan to declare the country tobacco-free by 2030. The government is also seeking collaboration with relevant sectoral ministries. The then Minister for Agricultural Development, Gauri Shankar Chaudhary informed that the government was making necessary preparations to provide to tobacco farmers cash incentive and agricultural inputs to encourage them to switch to cultivation of cash crops, fruits and vegetables as part of its tobacco control initiative. Similarly, Krishna Prasad Devkota, the then secretary at the Ministry of Land Reform and Management, said the government was committed to utilising the agricultural land for the promotion of food crops while discouraging tobacco farming (8).

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PAKISTAN

Pakistan became a Party to the WHO Framework Convention on Tobacco Control on February 27, 2005.

Monitoring

Prevalence of tobacco use: Based on World Health Organization's 2014 standardized estimate of smoking prevalence, 31.8 % of men, 5.8 % of women, and 19.1% of Pakistan's adult population currently use tobacco in one form or another. Of these, 17.9 % of men, 1 % of women and 9.6 %

of the adult population overall are daily cigarette smokers, while 4.4 % men, 1 % women and 2.7 % of the adult population are daily water pipe smokers. Moreover, 10.5 % men, 3.5 % women and 7.1 % of adults use smokeless tobacco daily (1).

Protect people from tobacco smoke
Smoking is prohibited in all places of public work or use, and on all public transport. Smoking is prohibited in outdoor waiting areas for buses and trains. Smoking is permitted in hotel rooms. Sub-national jurisdictions may enact smoke free laws that are more stringent than the national law (2).

Offer help to quit tobacco use
NRT (Nicotine replacement therapy) and/or some cessation services (neither cost-covered).
There is no national Quitline in Pakistan (3).

Warn about the dangers of tobacco
The Ministry of Health has issued one warning containing both a picture and text that must be placed on all cigarette packs. The warning must occupy 50 percent of the pack and be placed on the front top of the pack in Urdu and on the back top of the pack in English. The size of health warnings will increase to 60 percent beginning June 1, 2019. The increases in size announced in SRO 127(KE)/2017 (to 50 percent and, subsequently, 60 percent) replace the 2015 notification (SRO 22(KE)/2015) that would have increased the size to 85 percent of packaging. This notification, however, was delayed several times and, ultimately, never implemented. Health warnings are not required on smokeless tobacco products (2).

Enforce bans on tobacco advertising, promotion and sponsorship
Advertising on domestic TV, radio, billboards and print media is prohibited
There are some restrictions on tobacco sponsorship and publicity of such sponsorship
Prohibition of storage, sale and distribution of cigarettes, etc., in the immediate vicinity of educational institutions. Prohibition of sale of cigarettes, etc., to minors (2).

Taxes on tobacco:
The WHO recommends raising tobacco excise taxes so that they account for at least 70% of retail prices. Excise taxes in Pakistan are well below these recommendations at 46% of retail prices (3).
Recommendation (4):
Severe capacity constraints in the country's tax administration are resulting in a small tax base, massive tax evasion and an overall inefficient taxation system. Within its narrow fiscal space, the government has to look towards the tobacco industry for tax revenue and cannot afford to squeeze it too much. This demands introducing serious tax reforms, one that are owned by the FBR machinery. At least three broader sets of reforms are suggested:
a. An overarching framework for reforming the tax administration in Pakistan would be breaking the existing field formation on sectoral lines and reorganizing the FBR operations along functional lines, i.e., tax revenue collection, monitoring, audit and compliance should be the responsibility of different departments. This will break the responsibility hubs, discourage discretions among field officials and introduce positive checks and rewards in the system that may result in reducing the leakages, improving efficiencies and changing reward and punishment mechanisms.
b. Tobacco taxation should be earmarked, keeping in context the disease burden created by tobacco consumption. Revenue generated from tobacco products should be used to finance the health cost

incurred by health damages caused, in turn, by tobacco consumption. Any revenue generated is offset if it leads to a mounting health cost on account of tobacco consumption. So, the FBR must be encouraged to focus on net revenues. This is against the current practice where the FBR remains satisfied if their current collections exceed the previous years' collection by a certain percentage.
c. Generating a discourse that the FED is not the same as the Sales Tax is urgently needed. With an overall improvement in enforcement, the government would be in a better position to realize that the FED on tobacco is not the VAT and its primary purpose is to discourage tobacco consumption instead of to generate revenue. d. To enhance efficiency, technological solutions should be introduced for monitoring, enforcement and compliance, and these could include e-tagging and tracking systems. Enlarging political support for the FBR: Breaking the political back behind the tobacco industry and building a mechanism of social compliance, including value promotion that discourages tax evasion, public demand for tax invoices, and refusal to purchase smuggled goods need to be encouraged through strategic leadership and effective communication. Until these issues are addressed, the FBR's performance, like any other institution's, will remain sub-optimal.
Simplifying tax structures: Ideally, a single-tier tax structure should be in place, which would lower the administrative effort required for implementation as well as give fewer incentives to tobacco companies for tweaking prices and increasing the overall tax rate, but it may entail a high probability of enhancing the illicit trade, thus affecting both health and revenue outcomes. Aiming for such a system in the long run, efforts should be made to reduce illicit trade. In the short term, however, a twotiered tax structure, with increased tax rates, is recommended

Roadmap to Tobacco Control Legislation

There are two principal ordinances governing tobacco control in Pakistan. Using the powers conferred by the two ordinances, officials in Pakistan have issued a series of SROs (or statutory notifications) to implement, amend, and update its tobacco control laws (see Table 3) (2).

Table 3: Roadmap to Tobacco Control Legislation in Pakistan (2)

Principal ordinances	Year	Legislation	Main features
1.	1979	the Cigarettes (Printing of Warning) Ordinance is the first principal ordinance.	Health warnings be printed on tobacco product packaging
	2009	SRO 86(KE)/2009	It establishes the initial warning text and its accompanying image
	2010	SROs 01(KE)/2010 and 02(KE)/2010	delaying implementation of the pictorial health warning from February 1 to May 31, 2010.

	2017	SROs 127(KE)/2017 and 128(KE)/2017	picture and text warnings are required to cover 50 percent of the front and back of all cigarette packs and outer packaging as of June 1, 2018. The size will increase to 60 percent beginning June 1, 2019.
2.	2002	the Prohibition of Smoking in Enclosed Places and Protection of Non-smokers Health Ordinance	It governs multiple areas of tobacco control, including restrictions on public smoking, sales to minors, and tobacco advertising, promotion and sponsorship.
	2003	SRO 653(I)/2003	It lists additional places as "places of the public work or use" to be included in that ban on the use of tobacco products. It establishes the Committee on Tobacco Advertisement Guidelines.
	2009	SRO 51(KE)/2009	It requires all of such places to be 100% smoke free.
		SRO 863(I)/2010	It established the Prohibition of Sale of Cigarettes to Minors Rules. These rules place duties on manufacturers, importers, and retail sellers to take steps to protect against targeting minors and the sale of cigarettes to minors.
	2011	SRO 277(I)/2011	It identifies those individuals who are authorized to enforce the 2002 Ordinance.

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