Terms of Reference

Pakistan National Tuberculosis Prevalence Survey

Background

National TB prevalence surveys are most valuable in areas where notification data obtained through routine surveillance are of unproven accuracy or incomplete, and in areas with an estimated prevalence of bacteriologically confirmed TB of more than 100 per 100 000 population.[1] A systematic review[2] of 21 Asian TB prevalence in 12 countries between 1990 and 2012 and national tuberculosis prevalence surveys in Africa, 2008-2016[3]; show that TB prevalence is still high in most countries, more men have TB disease in this region and TB epidemics are ageing. However, with many prevalent cases not reporting classic TB symptoms, all countries face the challenge of defining and implementing strategies that will result in earlier detection and treatment of cases. The 3rd National TB prevalence survey in Pakistan was conducted in 2010-2011. The survey revealed that the vast majority of TB cases remain undetected and the smear-positive TB prevalence was higher in Azad-Jammu and Kashmir, Sindh and Gilgit, Baltistan and, in rural areas, and in males[4.] These findings imply necessity of acceleration of case-finding activities through improved access to diagnostic services and improved TB screening tools and algorithms, and also contributed to refine and develop evidence based national TB strategic plans.

It is essential for the NTP to monitor and evaluate the epidemiological situation of TB in the country, particularly the size and trend of the problem to make effective resource allocation. To develop a baseline data for the End TB strategy and to know the recent epidemiological trend of TB in Pakistan (compared with the previous survey), according to WHO, Joint Review

[1] Glaziou P, Van der Werf MJ, Onozaki I, Dye C. Tuberculosis prevalence surveys: rationale and cost [Educational series: prevalence surveys. Serialised guidelines. Assessing tuberculosis prevalence through population-based surveys. Number 1 in the series]. The International Journal of Tuberculosis and Lung Disease. 2008 Sep 1;12(9):1003-8.

2 Onozaki I, Law I, Sismanidis C, Zignol M, Glaziou P, Floyd K. National tuberculosis prevalence surveys in Asia, 1990–2012: an overview of results and lessons learned. Tropical Medicine & International Health. 2015 Sep;20(9):1128-45.

3 Law I, Floyd K, African TB Prevalence Survey Group, Abukaraig EA, Addo KK, Adetifa I, Alebachew Z, Banda R, Bashorun A, Bloss E, Bonsu FA. National tuberculosis prevalence surveys in Africa, 2008–2016: an overview of results and lessons learned. Tropical Medicine & International Health. 2020 Nov;25(11):1308-27.

4 Qadeer E, Fatima R, Yaqoob A, Tahseen S, Haq MU, Ghafoor A, Asif M, Straetemans M, Tiemersma EW. Population based national tuberculosis prevalence survey among adults (> 15 years) in Pakistan, 2010–2011. PloS one. 2016 Feb 10;11(2)

Board Mission recommendation the 4th national TB prevalence survey is proposed with one of our ambitious objectives to also estimate subnational level prevalence.

Objectives

To support the preparation of the Pakistan Prevalence Survey, a series of **international technical assistance (TA) missions**, under the supervision of and in close collaboration with the NTP/CMU and the Survey Technical Committee, will be required to support the following activities:

1. Development of survey protocol including data collection tools, according to international best-practice methods[5].
2. Production of sampling design and sample size determination scenarios for review by the Survey Committee.
3. Development of detailed budget with assumptions
4. Development of standard operating procedures according to international best-practice methods.

[5] World Health Organization. Tuberculosis prevalence surveys: a handbook. World Health Organization; 2011.

International Institution Qualification and Experience Requirement:

The international institution should have a leading role in previous prevalence surveys in different countries with the key role in design, sample size and implementation and data management of survey. The institute should have ample experience in designing and evaluating disease programs. Together with multilateral and international partners, the institute should have experience in the monitoring and evaluation of TB case finding activities, providing technical assistance to National Tuberculosis Programs and conducting research to inform regional, national and subnational TB program planning. The institute should have experience in collecting health advance data and information management system including research services.

The professional team of international institute must at-least have following professionals:

1. **Senior Epidemiologist:** Master degree (preferably PhD) in epidemiology/public health from international university with a background in health science and public health, and 8-10 years' experience in operational/field research of tuberculosis.
2. **Data management & Surveillance Specialist:** Advanced University degree (master or medical degree or PhD) preferably in statistics, health or a data related science. A minimum of 5 years' experience. He / she must have experience of analyze/surveillance of prevalence surveys, inventory studies and complex health surveys at national / international level.
3. **Technical Advisor – TB Laboratory Expert (Optional):** Master degree in Medical Laboratory Sciences or equivalent (but a PhD will be a plus). Must have worked in TB diagnostic laboratory and culture laboratory for a period of at least six years. He/She has demonstrated experience and understanding of the public health and clinical functions of a TB Reference Lab; Knowledge in Laboratory Quality Control Assurance, and strong experience of instituting good lab practice; ability to effectively monitor and manage all aspects of QC within the laboratory.

1. Development of survey protocol including data collection tools, according to international best-practice methods

To support the NTP in developing the survey protocol including data collection tools for the nationwide Pakistan Prevalence survey. The recently published BRIDGE guidelines, standards and criteria should be used to ensure the accountability of funder, institutions and researchers to the communities that are being studied. [6,7]

Tasks, Timeline, Deliverables

	1. Development of survey protocol including data collection tools			**2. Production of sampling design and sample size determination scenarios for review by SC**			**3. Development of standard operating procedures**		
	Task	LoE in days *	Deliverables	Task	LoE in days *	Deliverables	Task	LoE in days *	Deliverables
1	Review background documents, meetings minutes, virtual meetings to become updated on status of preparations	2	Linked with below	Meetings with Bureau of Statistic & Expended program for immunization for identification of sampling units (including Travel)	7	Minutes of	Development of Detailed SOPs for quality assurance and monitoring	8	Protocol for Quality Assurance & Survey Monitoring
2	Facilitate virtual kick-off meeting organized by NTP including relevant stakeholders to agree on main and specific	3	Minutes of meeting	calculate final sample size	3	Sample size for subnational estimate and survey algorithm	Attend virtual meetings with project	2	Minutes of meeting

[6] World Health Organization. Tuberculosis prevalence surveys: a handbook. World Health Organization; 2011.

[7] Alba S., Verdonk K., Lenglet A., et all. Briding research integrity and global health epidemiology (BRIDGE) statement: guidelines for epidemiological practice. BMJ Global Health 2020;5: :e003236. doi:10.1136/ bmjgh-2020-003236. Available at https://gh.bmj.com/content/5/10/e003236 (last accessed 2-2-2021)

	objectives of the survey and other relevant decision points regarding diagnostic algorithm						team at regular basis		
3	Draft protocol in consultation with the survey committee and WHO	6	Draft TB prevalence protocol	Development of sampling frame for selection of districts	3	i. Sampling frame ii. List of selected clusters with details of UCs			
4	Review and provide feedback to development of data collection tools	3	Draft Data Collection Tools / annexures of tools	Attend virtual meetings with project team at regular basis	2	Minutes of meeting			
5	Facilitate 2-3 days virtual protocol development workshop	2	Power-point including overview of decisions made, pending tasks	Development of budget	5	Detailed budget with assumptions			
6	Final draft protocol	2	Final protocol & Data Collection Tools ready						
7	Attend virtual meetings with project team at regular basis	2	Minutes of meeting						
		20 days			**20 days**			**10 days**	

* Level of efforts in days include backstopping support by international technical expert; due to uncertainties around COVID-19 pandemic and travel restrictions.

Duration of the assignment:

The duration of the consultancy is 20 days for first & second TAs and 10 days for third TA from the award of contract.

Ownership of the material:

The Common Management Unit (CMU) to manage the Global Fund Grants on AIDS, TB & Malaria, M0NHS&C will be the exclusive owner of the protocol developed and studies tools developed and consulting institute shall not be allowed to use these in any of their future assignments, unless permitted in writing by the CMU management.

Payment terms:

1. 10% upon submission of inception report on basis of desk review ad its acceptance by CMU
2. 20% on submission of draft protocol along data collections
3. 70% on submission and acceptance of final version of protocol along data collections