

Stop TB Partnership

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TB Key and Vulnerable Populations Size Estimation

Key and Vulnerable Population Size Estimation

Organization	Dopasi Foundation
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I. List of Acronyms

AIDS	Acquired Immuno-Deficiency Syndrome
COVID-19	Coronavirus Disease
CRG	Community Rights and Gender
DR-TB	Drug Resistant TB
EMRO	Eastern Mediterranean Regional Office
HIV	Human Immuno-deficiency Virus
IDP	Internally Displaced People
KVP	Key and Vulnerable Population
M&E	Monitoring and Evaluation
NSP	National Strategic Plan
NTP	National TB Control Programme
PLHIV	People Living with HIV
PLW	Pregnant and Lactating Women
STP	Stop TB Partnership
TB	Tuberculosis
UN	United Nations
WHO	World Health Organization

2. Acknowledgement

We extend our sincere gratitude to the Common Management Unit (CMU) for TB, AIDS, and Malaria, as well as the Provincial TB Control Programs of Balochistan, Khyber Pakhtunkhwa, Sindh, and Punjab, for their continuous support, technical guidance, and facilitation in data collection. Their collaboration has been instrumental in ensuring the successful execution of this TB Key and Vulnerable Population (KVP) Size Estimation exercise.

We also appreciate the invaluable contributions of stakeholders, representatives from KVP groups, and relevant associations and organizations, whose insights and facilitation played a crucial role in gathering accurate data. Their willingness to engage in discussions and provide access to essential information has significantly strengthened the study.

Our heartfelt thanks go to the Janna Health Foundation and Dopasi Foundation team and field staff, whose untiring efforts, dedication, and commitment have made this assessment possible. Their meticulous approach to data collection, analysis, and validation has ensured the credibility and impact of this report.

Finally, we acknowledge the support of the Stop TB Partnership for providing technical assistance and resources that enabled this initiative. This collaborative effort is a testament to the shared commitment to ensuring that no one is left behind in the fight against TB in Pakistan.

3. Executive Summary

Despite being a preventable and usually curable, Tuberculosis (TB) was the world's second leading cause of death from a single infectious agent, after Coronavirus disease (COVID-19). Pakistan is estimated to have 686,000 new TB cases and 47,000 deaths every year. With 15,000 developing drug-resistant TB (DR-TB) cases every year, 215,000 people missed to get notified causing further spread of the disease. Due to this, Pakistan is ranked fifth among TB high burden countries worldwide accounting for over 60 percent of the burden in the Eastern Mediterranean Region of World Health Organization (WHO).

In order to prioritize, find and treat people who get missed from diagnosis and treatment by the closure of this decade, Global Plan to End TB Strategy 2023-2030 recommends identifying those with enhanced vulnerability to TB and understanding the socio-economic, gender-related, and systemic barriers that these people experience in seeking TB response services. The Community Rights and Gender (CRG) Assessment conducted in Pakistan during the second half of 2022 identified and finalized total 14 Key and Vulnerable Population (KVP) and also revealed significant challenges faced by them in accessing quality TB diagnosis and treatment services. The CRG assessment findings aim to aid in operationalizing and further enhancing capacity of the National TB Control Program (NTP) to delivering encompassing the seven pillars of TB CRG sensitive response in the context of Pakistan. However, it seems challenging for NTP and other key stakeholders to effectively respond due to the lack of best available estimates along with evidence on KVP size in Pakistan.

To make best estimates available on the size of TB KVP, Dopasi Foundation and NTP with the support of Stop TB Partnership (STP) have successfully completed the exercise of TB KVP size estimation in Pakistan. TB KVP Size Estimation Tool developed by the Stop TB Partnership was used for this assessment. This involved a preliminary discussion with Stop TB Partnership Geneva on 4th October to understand the five guiding principles and three pillars of the Framework on TB KVP size estimation as mentioned in the tool. Dopasi Foundation's approach to KVP size estimation involved a multi-step process based on the methodology provided by Stop TB Partnership that includes: inception meeting, prioritization of TB KVP, desk review and validation findings. Findings regarding KVP size estimation show that all 14 already identified KVP are huge in size and it would be difficult to control TB in Pakistan without focusing on these marginalized KVP.

The Global Plan to End TB 2023-2030 calls for countries to develop ambitious, needs-based National Strategic Plans (NSPs). While countries aim to detect 90 per cent of people with TB, it is very important to ensure that TB KVP are included in the 90 per cent. It is very likely that, unless focused interventions are planned and implemented, TB programmes could miss members of TB KVP. Stop TB Partnership has developed a tool to support countries in developing national TB CRG Costed Action Plans. Incorporating the TB CRG Action Plans into the budget of the NSP requires an understanding of the magnitude and distribution of the TB KVP. Hence, TB KVP size estimates need to be done and used in the costing and budgeting of the NSPs.

Knowing the size and distribution of TB KVP through this assessment, will now help NTP and other key stakeholders in planning focused interventions such as active case-finding, community care, social support (nutritional, financial and occasional support) to TB KVP and their families. The TB KVP size estimation will also help in proper planning and implementation monitoring of TB services to ensure that TB KVP are adequately reached by TB programmes.

4. Background

Despite being preventable and typically curable, Tuberculosis remains world's second leading cause of death from a single infectious agent, after COVID-19, and caused almost twice as many deaths as Human Immuno-deficiency Virus/ Acquired Immuno-deficiency Syndrome (HIV/AIDS). More than 10 million people continue to fall ill with TB every year. The reported global number of people newly diagnosed with TB was 8.5 million and an estimated 1.1 million deaths due to TB during the year 2023. Pakistan is estimated to have 686,000 new TB cases and 47,000 TB-related deaths annually. Additionally, around 15,000 cases of drug-resistant TB (DR-TB) emerge each year, while 215,000 individuals with TB remain undiagnosed or unnotified, contributing to continued transmission. Consequently, Pakistan ranks fifth among high TB burden countries globally and accounts for over 60% of the TB burden in the Eastern Mediterranean Region of the World Health Organization (WHO).¹

To ensure that people who are missed from diagnosis and treatment are identified and supported before 2030, the Global Plan to End TB 2023–2030 recommends prioritizing populations with heightened vulnerability to TB. These populations often face significant socio-economic, legal, gender-related, and systemic barriers in accessing TB services. In line with this, a Community Rights and Gender (CRG) Assessment conducted in 2022 identified 14 Key and Vulnerable Populations (KVPs) in Pakistan and highlighted the specific barriers they face in obtaining timely and quality TB diagnosis and treatment. However, a lack of credible, disaggregated data on the size and distribution of these populations has been a major challenge for effective planning and response.

To address this gap, Dopasi Foundation, in collaboration with the National TB Control Program (NTP) and with technical support from the Stop TB Partnership (STP), conducted a national-level TB KVP size estimation exercise. The TB KVP Size Estimation Tool developed by STP was utilized for this assessment. The methodology followed a multi-step process that included an inception meeting, prioritization of KVPs, desk review, and validation of findings. Data was compiled from national surveillance systems, surveys, operational research, academic sources, and civil society inputs. Notably, the assessment provided updated and expanded estimates for all 14 prioritized KVPs, revealing substantial increases compared to previous figures—or filling in gaps where data was previously unavailable. Findings from the size estimation revealed that many TB KVPs are significantly larger than previously understood.

The Global Plan to End TB 2023–2030 emphasizes the development of ambitious, needs-based National Strategic Plans (NSPs), with a target to detect at least 90% of all people with TB. Achieving this requires a clear understanding of the size and distribution of TB KVPs to ensure they are not left behind. The Stop TB Partnership has also developed a tool to support countries in creating national CRG Costed Action Plans. Accurate KVP size estimates are critical for integrating these action plans into NSP budgets and implementation frameworks.

This assessment now provides a solid evidence base to support the NTP and other stakeholders in designing and implementing focused interventions for TB KVPs, including active case finding, community-based care, and social support services. Additionally, the findings will enhance monitoring of TB programs to ensure equitable coverage and access for marginalized and vulnerable populations.

¹ Global Tuberculosis Report 2024, published by the World Health Organization

5. Summary and Results of KVP Size Estimation Processes as Implemented

Tuberculosis KVP Size Estimation Tool developed by the Stop TB Partnership was used for this assessment. This involved a preliminary discussion with Stop TB Partnership Geneva on 4th October to understand the five guiding principles and three pillars the Framework of TB KVP size estimation as mentioned in the tool. The guiding principles and framework's three pillars highlighted the importance of a TB KVP size estimation and guided the process by which the size estimates are completed. The principles include: i) Human Rights-Based, ii) National Ownership, iii) TB Affected Community-Led, iv) Evidence-Based and v) Multi-sectoral. Framework's three pillars include: i) identification and prioritization, ii) learning and understanding and iii) finally acting and improving.

Dopasi Foundation's approach to Key and Vulnerable Population assessment involves a six-step process based on the methodology provided by Stop TB Partnership that includes:

5.1. Inception Meeting

As an initial step, Dopasi Foundation organized and conducted an inception meeting. The participants of the meeting were guided through the purpose and process of the TB KVP size estimation including the understanding of assessment objectives, detailed methodology, roles of different partners, timeline and how the results will be operationalized. The KVP size estimation methodology and timeline was also discussed, agreed and endorsed by the all the stakeholders who attended the meeting.

5.2. Prioritization of TB KVP

As mentioned earlier in the background section of the document, following thirteen TB related key and vulnerable populations have already been identified during a national multi-stakeholder workshop activity (as part of the CRG assessment), which was inclusive of KVP as participants themselves. Further prioritization of the KVP for size estimation was discussed in detail with NTP and other key stakeholders and it was agreed to include all 14 previously identified key and vulnerable populations as all of them are marginalized and have increased risks & exposure and experience disadvantage in accessing TB care and diagnostic services.

5.3. Desk Review

A comprehensive desk review was conducted to synthesize and consolidate available data for the purpose of estimating the size of key and vulnerable populations (KVPs) affected by tuberculosis (TB) in Pakistan. The risks and vulnerabilities associated with each TB KVP were primarily informed by the Community, Rights and Gender (CRG) Assessment Report (2022).

Multiple data sources were reviewed at both national and global levels, including national TB surveillance systems, population-based surveys, and operational research studies. In addition to official datasets from government and global stakeholders, relevant national and sub-national sources—such as academic institutions, civil society organizations, and community-based networks—were also consulted to ensure a comprehensive understanding of the TB KVP landscape.

As a result of this extensive exercise, Dopasi Foundation successfully estimated the population sizes for 14 key and vulnerable groups across Pakistan, along with their corresponding geographic distribution. This effort enabled a more accurate reflection of the TB burden within these marginalized populations and helped fill significant data gaps. The table below outlines the estimated population sizes for each KVP, both prior to and following the desk review:

Table-1: Estimated Population Size of Key and Vulnerable Populations – Before and After the Estimation Exercise

S/N	Key and Vulnerable Population (KVP)	Estimated Population <u>BEFORE</u> Exercise	Estimated Population <u>AFTER</u> Exercise
1	IDPs/Migrants/Refugees	3,000,000	4,600,000
2	Brick Kiln Workers	795,000	1,300,000
3	Urban Poor	Unknown	21,561,676
4	Transgenders	21,774	31,790
5	Coal Miners	Unknown	300,000
6	People Who Use Drugs (Injectables)	400,000	430,000
7	Prisoners (including former prisoners)	83,000	87,712
8	People Living with HIV (PLHIV)	210,000	270 000
9	Madarsa Students	1,800,000	2,500,000
10	Malnourished People (PLW and Children <5)	6,000,000	7,766,411
11	People with Disabilities	Unknown	371,833
12	Vulnerable Adolescent Girls	Unknown	640,000
13	People with Diabetes	19,000,000	33,000,000
14	Health Care Providers	300,000	543,177

5.4. Additional KVP Size Estimation Methods Employed

No additional method for estimating the size of key vulnerable populations (KVPs) was employed, as reliable data on the overall size of the prioritized KVPs were already available from various credible sources.

5.5. Validation of Findings

The size estimation details of KVP along with data sources have been discussed with NTP and other stakeholders for validation purposes. In principle, all of them agreed to the KVP size estimations made through this assessment. However, their further comments, inputs and feedback (if any) will be incorporated in the final report.

5.6. Utilizing KVP Data for Planning: Next Steps

As soon as the KVP size estimation report is finalized and endorsed by the NTP, a dissemination meeting will be held to inform all the relevant stakeholders regarding the KVP size estimation findings. Knowing the size and distribution of TB KVP through this assessment, will help NTP, Dopasi Foundation and other stakeholders in planning focused interventions such as active case-finding, community care, social support and nutritional/ financial/ occasional support to TB KVP and their families. The TB KVP size and distribution data will also help in engaging other sectors relevant to TB – for example, knowing the size and distribution of the mine-worker population could assist in generating resources from the Mining department. The TB KVP size estimation will also help in proper monitoring of TB services to ensure that TB KVP are adequately reached by TB programmes.

Challenges Encountered and Mitigation Steps Taken

Overall, the entire process of KVP size estimation remained smooth. Most of the data regarding the size of each KVP was available through secondary sources. In some cases, no direct data was available through a single source. For example, data on number of Urban Poor was not mentioned in any of the document. This was calculated using information on various relevant variables like i) total Pakistan's population, ii) total urban population, urban poverty, etc. Through taking these type of measures, Dopasi Foundation has been able to successfully complete the process of KVP size estimation. Also, there is limited data available on TB prevalence and incidence for each of the identified KVP. Dopasi Foundation is still in the process of exploring the disaggregated data on TB incidence and prevalence among the identified KVP, and will incorporate in the final report.

6. Lessons Learnt

During the assessment process, it was learned that the available data on KVP size estimates is fragmented and difficult to access. It was observed that the quality of data is also compromised. In some cases, recent and/ or updated data is not available.

It is strongly recommended that NTP and Dopasi Foundation should have a joint mechanism in place to regularly review, update and consolidate KVP size estimation data in terms of numbers/ figures along with geographic locations. This will enable NTP, Dopasi Foundation and all other stakeholders to use KVP size estimation data in their programming, costing & budgeting and monitoring & evaluation of their relevant projects/ programmes.

7. Conclusion

Despite being a preventable and usually curable, TB was the world's second leading cause of death from a single infectious agent, after Coronavirus disease (COVID-19). As mentioned earlier in the document, TB situation in Pakistan is alarming and ranked fifth among TB high burden countries worldwide (having estimated 686,000 new TB cases and 47,000 deaths every year). The drug-resistant TB and missed people from diagnosis and treatment is also a huge problem that need to be addressed without any further delay.

In an effort to prioritizing finding and treating people who get missed from diagnosis and treatment by the closure of this decade Global Plan to End TB Strategy 2023-2030 recommends identifying those with enhanced vulnerability to TB and understand the barriers that these people experience in seeking TB response services. Fortunately, these key and vulnerable populations have already been identified through the Community Rights and Gender (CRG) Assessment conducted in Pakistan during the second half of 2022. The CRG assessment identified 14 KVP and also revealed significant challenges faced by them in accessing quality TB diagnosis and treatment services.

The CRG assessment findings aim to aid in operationalizing and further enhancing capacity of the NTP in delivering encompassing the seven pillars of TB CRG sensitive response in the context of Pakistan. However, it was challenging for NTP and other key stakeholders to effectively respond due to the lack of best available estimates along with evidence on KVP size in Pakistan.

The Global Plan to End TB 2023-2030 calls countries to develop ambitious, needs-based National Strategic Plans. While countries aim to detect 90 per cent of people with TB, it is very important to ensure that TB KVP are included in that 90 per cent. It is very likely that, unless focused interventions are planned and implemented, TB programmes could miss members of TB KVP. Stop TB Partnership has developed a tool to support countries in developing national TB CRG Costed Action Plans. Incorporating the TB CRG Action Plan into the budget of the NSP requires an understanding of the

magnitude and distribution of the TB KVP. Hence, TB KVP size estimates need to be used in costing and budgeting of NSPs.

Knowing the size and distribution of TB KVP through this assessment, will now help NTP and other key stakeholders in planning focused interventions such as active case-finding, community care, social support and nutritional/ financial/ occasional support to TB KVP and their families. The TB KVP size estimation will also help in proper monitoring of TB services to ensure that TB KVP are adequately reached by TB programmes.

Annex-2:



This is a collage of pictures from meetings with National and Provincial Stakeholders, including National and Deputy National Coordinators from Common Management Unit for TB, AIDS & Malaria, and meetings with Managers and technical teams from Provincial TB Control Programs.