Tuberculosis in Migrant Populations in India

Rapid Assessment Report (2024)

Acknowledgments

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EXECUTIVE SUMMARY

Across the world, there are a billion people classified as "migrants". This is astounding considering that there is no single globally accepted definition of the term "migrant". Of these billion people, 740 million are migrants who move within the borders of their country. Nearly three-quarters of the global estimate of these "internal migrants", i.e., 454 million people, are in India.

Migrants are well-known to have social and economic vulnerabilities which adversely impact their health. Various global and Indian studies have examined health conditions of migrants and have found increased risk of several infectious and non-infectious diseases as well as suboptimal diagnosis and treatment outcomes. Tuberculosis (TB) is recognised as a major area of concern for this group, and migrants are classified as a key population by India's National Strategic Plan for TB Elimination (2020-25).

In this context, REACH, an India-based non-profit organisation, undertook a rapid assessment of TB and migration-related issues in India with the objectives of:

- Building an understanding of the current policy, data trends and systemic practices for migrants with TB,

- Identifying challenges and gaps in services being provided to migrants with TB, and

- Making recommendations to provide more migrant-friendly services. The rapid assessment was supported by the Stop TB Partnership through the TB REACH mechanism (Wave 9).

The National Strategic Plan (NSP) has recommended various mechanisms to provide need-based solutions to this cohort. These solutions cover nearly a dozen thematic areas –

from rights-based care and targeted demand generation activities to prioritization for TB prevention therapy (TPT) and operational research. However, there are no clear operational guidelines or manuals on how to provide services to this key populations and there is no clarity on how the accountability for these services is to be shared between states and centre. In addition, sharing of knowledge, experiences and best practices for implementing health services for migrants remains limited.

In order to build a field-level understanding of migrants' experiences with accessing TB services, a qualitative exercise involving focus group discussions (FGDs) and interviews was carried out. This included FGDs and interviews with migrants with TB in Chhattisgarh, Odisha and Tamil Nadu as well as interviews with experts experienced in service delivery to migrants.

There emerged four major takeaways from the process. **First,** migrants are not a homogeneous group; they have major differences in terms of their experiences, challenges and needs. **Second,** migrants have a higher degree of vulnerability to all the TB care cascade challenges in comparison to a non-migrant (within the cascade, the pre-diagnosis phase is the most challenging one). **Thirdly** (and hearteningly), there already exists a certain degree of migrant-responsiveness inbuilt into NTEP's care-delivery system at the state level. However, and **finally**, there is a large variation across the country in terms of migrant-focused activities. This variation is due to four main factors – absence of any clear national guidelines, contextual differences in states, operational challenges related to the state-specific context, and capacity gaps among service providers.

Based on the insights from the rapid assessment, there are a few recommendations which can potentially shape responsive, rights-based systems for migrants. *One,* there is a need for accurate estimation of the TB burden among migrants. Even though Ni-kshay's transfer module provides the NTEP with significant amount of data on the movement of people with TB, it is possible that a sizeable number of migrants with TB continue to get missed. *Two,* strategic communication campaigns focused on migrants need to be designed and implemented at scale. *Three,* migrant-focused capacity-building activities among service providers is a key requirement. *Four,* there is a need for specific operational guidelines focused on service provision to migrant populations. These guidelines, which should ideally be developed centrally and include scope for state-specific customization should include all the thematic elements recommended by the NSP.

Migrants form the backbone of India's commitment to become a developed nation by 2047, a commitment which has resulted in large-scale movements of people in the country. Building responsive, barrier-free care systems that migrants can freely access is the key to developing healthcare systems of the future. As we build the foundation for a developed India, it is imperative that policymakers, healthcare practitioners, and stakeholders collaborate to implement evidence-based strategies that address the migrant communities' needs in relation to TB and other health threats.

1 INTRODUCTION

1.1 Background

Global context for Migrants

Globally, one billion people - nearly one-eighth of the world's population - are migrants[1] . The UN Migration Agency, International Organization for Migration (IOM), defines a "migrant" as a person who *"moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons."* The agency notes that there is no universally accepted definition for "migrant" at the international level, which can perhaps be seen as an indication of the many complexities faced by this group of people. Given the above definition, it can be seen that migrants are a non-homogeneous group and can include including many different types, from labour migrants to asylum seekers[2].

Among the one billion migrants, 244 million are international migrants, and a majority - 740 million - are "internal migrants", i.e., migrants who move within the borders of their country. This number, based on a conservative estimate from UNDP in 2009, is acknowledged to be uncertain, because of the complexity of defining internal migration (for e.g., distance from place of origin, duration of mobilization)[3].

Migrants in India

Indian estimates indicate that there were 454 million internal migrants in the country in 2011, up from 315 million in 2001, and that an average of around 14 million people migrate every year[4]. An analysis of the 64th Round National Sample Survey data indicates that among India's internal migrants, a substantial proportion consists of people working in the informal sector[5].

Challenges

Size and classification not withstanding, all migrants can be expected to have shared vulnerabilities that come from (a) losing familiar support systems and from (b) coping with new and unknown social, cultural, and economic contexts. The impact of migration on the health and well-being of individuals and families has been documented globally: barriers can include their 'temporary' status and lack of official documentation which impedes continued access to services from diagnosis to cure, occupational risks and prolonged exposure associated with working in challenging environments (like construction and mining) which impacts health outcomes, the absence of information in preferred languages, and inadequate tracking or transfer systems for a continuum of care across different locations. Migrant populations have been recognized to be both socially and economically vulnerable, often living in overcrowded housing with poor sanitation and experiencing stigma and discrimination[6].

Various Indian studies have examined the health conditions of internal migrants in India and have found an increased risk of several infectious diseases, work-related illness, sexually

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[1] United Nations Development Programme. Human Development Report 2009: Overcoming barriers: Human mobility and development. Available: https://hdr.undp.org/content/human-development-report-2009. Accessed 08 March 2024.

[2] Lönnroth K, Shah NS, Lange C. State-of-the-art series on tuberculosis and migration. Int J Tuberc Lung Dis. 2016 Oct;20(10):1280-1281. doi: 10.5588/ijtld.16.0543. PMID: 27725031; PMCID: PMC5931384.

[3] International Organization for Migration. Blogpost: https://rosanjose.iom.int/en/blogs/what-do-you-call-person-who-moves-within-same-country. Accessed 08 Mar 2024

[4] Ministry of Housing and Urban Poverty Alleviation. (2017). Report of the working group on migration. http://mohua.gov.in/upload/uploadfiles/files/1566.pdf. Accessed 08 Mar 2024

[5] Yadlapalli, Kusuma & Babu, Bontha. (2018). Migration and health: A systematic review on health and health care of internal migrants in India. The International journal of health planning and management. 33. 10.1002/hpm.2570.

[6] Stop TB Partnership. Key Populations Brief: Mobile Populations. Accessed 11 Mar 24

transmitted infections (STI) and psychological disorders[7]. Many studies also report a higher prevalence of use of tobacco products and alcohol intake among migrant labourers[8]. Further, the care-seeking behavior in this population increases their health risk: there is evidence that the majority of migrant workers tend to seek care from the private sector and on an outpatient basis[9], and tend to prefer friendly neighbourhood non-formal health providers (NFHPs)[10].

Tuberculosis and Migration

Tuberculosis (TB) is a major area of concern in migrant health for a number of reasons. Migrants face an increased risk of tuberculous infection, TB disease, poor treatment outcomes, as well as drug resistance because of the risk factors mentioned above: including crowded living conditions and poor access to healthcare services[11]. India's National Strategic Plan for TB Elimination (2020-25) or NSP has acknowledged that migration is a significant vulnerability that results in delayed diagnosis in those with symptoms and poor treatment outcomes in those diagnosed with TB. The NSP has classified migrants as a "key population" and has recommended various mechanisms to provide responsive, need based solutions to this cohort.

Despite the enormity of the challenge, and the substantial population it impacts, there remains a dearth of information on TB and migration in India, reflective of the paucity of overall research on migrants' health and health care access[12]. Studies in India have shown high TB incidence among migrants working in stone quarries and brick kilns[13] and it is anecdotally known that migration contributes disproportionately to loss-to-follow-up statistics in every state. However, there is no disaggregated data which can be used to analyse how LTFU varies among migrants and local residents. While there are several treatment adherence solutions – both human and digital – for various communities in India, there have been few successful models for migrant populations. Similarily, while there are mechanisms in place within the National TB Elimination Programme (NTEP) to facilitate 'transfer-in' and 'transfer-out' of people with TB between facilities, these remain fragmented with implementation remaining uneven, and transfer data inadequately analysed. In particular, there is little to no information on how migration impacts an individual's journey through the care cascade – their experiences at individual, facility, district, and state levels, both within the public and private sectors.

In this context, REACH undertook a rapid assessment of TB and migration issues in India, identifying current practices, challenges and solutions.

[7]Ministry of Housing and Urban Poverty Alleviation. (2017). Report of the working group on migration. http://mohua.gov.in/upload/uploadfiles/files/1566.pdf. Accessed 08 Mar 2024

[8]Yadlapalli, Kusuma & Babu, Bontha. (2018). Migration and health: A systematic review on health and health care of internal migrants in India. The International journal of health planning and management. 33. 10.1002/hpm.2570.

[9]Kumar P., M., & S., G. (2020). Health seeking behaviour among construction workers in Kancheepuram district, Tamil Nadu: a descriptive study. International Journal Of Community Medicine And Public Health, 7(8), 3171–3177. https://doi.org/10.18203/2394-6040.ijcmph20203396

[10]Dutta A, Pattanaik S, Choudhury R, Nanda P, Sahu S, et al. (2018) Impact of involvement of non-formal health providers on TB case notification among migrant slum-dwelling populations in Odisha, India. PLOS ONE 13(5): e0196067. https://doi.org/10.1371/journal.pone.0196067

[11]Lönnroth K, Shah NS, Lange C. State-of-the-art series on tuberculosis and migration. Int J Tuberc Lung Dis. 2016 Oct;20(10):1280-1281. doi: 10.5588/ijtld.16.0543. PMID: 27725031; PMCID: PMC5931384.

[11]International Organization for Migration. Blogpost: https://rosanjose.iom.int/en/blogs/what-do-you-call-person-who-moves-within-same-country. Accessed 08 Mar 2024

[12]Krishna, P., & Raj, A. (2022). Health Condition of Internal Migrants in India: A Review. Indian Journal of Human Development, 16(1), 169-179. https://doi.org/10.1177/09737030221101567

[13]Krishna, P., & Raj, A. (2022). Health Condition of Internal Migrants in India: A Review. Indian Journal of Human Development, 16(1), 169-179. https://doi.org/10.1177/09737030221101567

1.2 Objectives

Through this rapid assessment, REACH proposes to strengthen the collective understanding of the unique challenges faced by Indian migrants when accessing TB care. The intention is to initiate discussions through which the country can re-examine and refine existing service delivery models to better meet the needs of migrants with TB. The rapid assessment was carried out with the following three objectives:

- To build an understanding of the **current policy, data trends and systemic practices** in relation to migrants with TB

- To identify **challenges and gaps** in services being provided to migrants with TB

- To make **recommendations** for more migrant-friendly services

1.3 Methodology

Desk review

The desk review focused on the first objective, i.e. it looked at two aspects:

- Data trends on migrants with TB
- Existing policies and frameworks for migrants

Sources used for this information included India's annual TB reports, the National strategic plan (2020-2025), Technical and Operational Guidelines for Tuberculosis control in India (2016) and other relevant documents.

Qualitative research

The qualitative research was aimed at building on knowledge gleaned from desk research and consisted of:

- Three focus group discussions (FGDs) with migrants with TB. These were carried out in Raipur (Chhattisgarh) and Bhubaneswar (Odisha), with participation from 17 people

- Interviews with 3 migrants with TB (in Tamil Nadu)

- Interviews with 21 experts who have experience of working with migrants

Please see appendices 1 and 2 for a complete list of participants.

1.4 Limitations

- The sources of information for the assessment were derived from a limited dataset selected via **convenience sampling** rather than a representative sample.

- The experts and community members who participated in qualitative research were from **five states** (Chhattisgarh, Odisha, Punjab, Tamil Nadu, and Uttarakhand).

- Questionnaires for the interviews and FGDs focused on the three areas mentioned in objectives, i.e.,

  - what are the existing systemic practices for service delivery to migrants

  - what are the gaps and challenges and

  - recommendations for more migrant-friendly services

- The focus of the assessment were **internal migrants,** i.e., migrants who travelled within the country across districts or across states. India's NTEP does sometimes provide services to a very small number of international migrants (in collaboration with the Ministry of External Affairs and WHO's International Health Regulation division), but their experiences are not covered in this rapid assessment.

2 SUMMARY OF DESK REVIEW

As previously mentioned, the desk review focused on two aspects, which are summarised below:

- Data trends on migrants with TB
- Existing policies and frameworks for migrants

2.1 Data trends in migrants with TB

India's National TB Elimination Program (NTEP) recognises that movement of people with TB is a critical aspect which influences treatment initiation as well as successful treatment completion. The program has observed that this aspect – i.e. the movement of people with TB – has become increasingly important because people tend to seek diagnosis at higher, central facilities and treatment at peripheral, closer to home institutions[14]. Ni-kshay, India's flagship patient management and data tracking system, includes data fields for the movement of people with TB and can therefore enable service providers to effectively follow up with their clients.

The year 2019 was a milestone year for TB in India - not only because of its record high of 24 lakh (2.4 million) notifications, but also because the annual TB report released in March 2020 took a detailed look at the movement of people with TB. It reported that, in 2019, as much as 55% (13.26 lakh or 1.3 million) of notifications – were transferred after notification. Other nuances observed in the 2019 transfer data were:

- The majority of the transfers took place within the same state, i.e., included transfers across districts, treatment units (TUs)[15] or health facilities. Just over 55,000 people with TB (2% of total notification) were transferred between states.

- Six states contributed to nearly 60% of the outward movement of people with TB- Delhi, UP, Maharashtra, Madhya Pradesh, Chandigarh, and Gujarat. Likewise, five states received over 60% of inward movement: Uttar Pradesh, Bihar, Haryana, Madhya Pradesh, and Tamil Nadu.

- The highest proportion of movement - accounting for 14% of all transfers – took place between the states of Delhi and UP.

Transfer data was gathered and reported in subsequent annual TB reports in 2021 and 2022 as well (**Figure 1**), pointing to a continued successful implementation of Ni-kshay.

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[14] India TB report 2020. Available: https://tbcindia.gov.in/showfile.php?lid=3538 Accessed 08 March 2024
[15] A TU is the sub-district level supervisory unit of the NTEP. There is one TU per 2,00,000 population for rural and urban populations and 1 TU per 1,00,000 population in hilly/tribal/difficult areas. There are a total of 700 districts and 6,700 TUs in the country.

Figure 1 - India TB reports from 2020, 2021 and 2022 included detailed data analysis of migrants with TB

Patient Transfer Status & Treatment Initiation Status 2020

State	Patients notified	Transfer Out	Transfer In	Net TB Patients Notified		
				Total	Public	Private
Andaman & Nicobar Islands	587	9	35	613	601	12
Andhra Pradesh	98869	714	1749	99904	75931	23973
Arunachal Pradesh	2938	26	112	3024	2974	50
Assam	48669	507	603	48765	43055	5710
Bihar	122671	656	4401	126416	80294	46122
Chandigarh	7026	3828	359	3557	3471	86
Chhattisgarh	43718	272	345	43791	32723	11068
Dadra & Nagar Haveli	937	386	21	572	494	78
Daman & Diu	560	149	46	457	379	78
Delhi	107982	11536	1296	97742	71414	26328
Goa	2410	149	83	2344	1883	461
Gujarat	159158	3805	818	156171	103012	53159
Haryana	73997	3432	4169	74734	54841	19893
Himachal Pradesh	17446	415	957	17988	16933	1055
Jammu & Kashmir	11860	100	164	11924	11156	768
Jharkhand	56632	327	1127	57432	44696	12736
Karnataka	91703	2742	936	89897	72990	16907
Kerala	25617	485	516	25648	22223	3425
Lakshadweep	15	0	1	16	16	
Madhya Pradesh	187407	3842	3946	187511	146677	40834
Maharashtra	227348	4296	1514	224566	148422	76144
Manipur	2553	5	99	2647	2277	370
Meghalaya	5528	220	81	5389	4772	617
Mizoram	2944	6	53	2991	2931	60
Nagaland	4794	101	89	4782	4075	707
Odisha	53612	723	398	53287	49279	4008
Puducherry	4606	3020	77	1663	1657	6
Punjab	58204	1400	2733	59537	45911	13626
Rajasthan	175218	2557	2764	175425	123004	52421
Sikkim	1432	23	60	1469	1438	31
Tamil Nadu	110845	1012	3680	113513	85495	28018
Telangana	71655	1044	871	71482	49334	22148
Tripura	2761	11	277	3027	3015	12
Uttar Pradesh	486385	4388	17759	499756	355347	144409
Uttarakhand	26060	1880	1043	25223	19882	5341
West Bengal	110668	1198	2082	111552	94566	16986
India	2404815	55264	55264	2404815	1777168	627647

Net TB Patients – TB Notified patients that are currently in the facility/ District/ State whom are accounted after transferred out and transferred in patients.

Patient Transfer Status & Treatment Initiation Status 2022

State	Patients Notified	Transfer Out	Transfer In	Net TB Patients Notified	Net TB Patients Initiated on Treatment
Andaman & Nicobar Islands	507	8	17	516	497 (96%)
Andhra Pradesh	86832	510	1440	87762	86146 (98%)
Arunachal Pradesh	2724	42	190	2872	2707 (94%)
Assam	37641	569	658	37730	35807 (95%)
Bihar	131703	842	4627	135488	128535 (95%)
Chandigarh	4720	1847	369	3242	3052 (94%)
Chhattisgarh	32416	248	447	32615	31871 (98%)
Dadra and Nagar Haveli and Daman and Diu	1013	314	65	764	750 (98%)
Delhi	103038	20017	1281	84302	73226 (87%)
Goa	2018	113	133	2038	1942 (95%)
Gujarat	144731	4169	722	141284	138983 (98%)
Haryana	69083	3053	5223	71253	65704 (92%)
Himachal Pradesh	14492	339	644	14797	14430 (98%)
Jammu & Kashmir	10826	129	308	11005	10237 (93%)
Jharkhand	52179	370	1367	53176	51466 (97%)
Karnataka	72435	1926	933	71442	68641 (96%)
Kerala	21872	361	513	22024	20950 (95%)
Ladakh	291	17	45	319	308 (97%)
Lakshadweep	12	1	9	20	20 (100%)
Madhya Pradesh	166346	1817	3719	168248	163022 (97%)
Maharashtra	199976	4931	1550	196595	186264 (95%)
Manipur	1793	14	95	1874	1734 (93%)
Meghalaya	4152	112	153	4193	3957 (94%)
Mizoram	1749	8	40	1781	1757 (99%)
Nagaland	3648	41	80	3687	3611 (98%)
Odisha	52381	620	386	52147	50657 (97%)
Puducherry	3444	2099	64	1409	1303 (93%)
Punjab	50142	863	2797	52076	48160 (92%)
Rajasthan	149225	2151	3960	151034	140997 (93%)
Sikkim	1373	31	97	1439	1387 (96%)
Tamil Nadu	82823	749	2936	85010	81562 (96%)
Telangana	60714	825	1035	60924	59141 (97%)
Tripura	2543	13	247	2777	2670 (96%)
Uttar Pradesh	453712	4023	15210	464899	439242 (94%)
Uttarakhand	22789	974	1761	23576	22180 (94%)
West Bengal	90487	1078	2103	91512	87593 (96%)
INDIA	2135830	55224	55224	2135830	2030509 (95%)

Net TB Patients – TB Notified patients that are currently in the facility/ District/ State whom are accounted after transferred out and transferred in patients.

Patient Transfer Status & Treatment Initiation Status 2021

State	TB Patients notified	Trans-ferred Out	Trans-ferred In	Net TB Patients Notified			Net TB Patients initiated on treatment		
				Public	Private	Total	Public	Private	Total
Andaman & Nicobar Islands	478	4	10	484	0	484	456 (94%)	(NA)	456 (94%)
Andhra Pradesh	64065	343	1099	47652	17169	64821	46459 (97%)	17082 (99%)	63541 (98%)
Arunachal Pradesh	2522	25	98	2591	4	2595	2503 (97%)	4 (100%)	2507 (97%)
Assam	35261	350	365	31587	3689	35276	30023 (95%)	3556 (96%)	33579 (95%)
Bihar	98994	501	3195	54422	47266	101688	48548 (89%)	46738 (99%)	95286 (94%)
Chandigarh	4294	1604	292	2703	279	2982	2563 (95%)	241 (86%)	2804 (94%)
Chhattisgarh	29339	193	340	22238	7248	29486	21832 (98%)	7192 (99%)	29024 (98%)
Dadra and Nagar Haveli and Daman and Diu	965	231	48	707	75	782	691 (98%)	74 (99%)	765 (98%)
Delhi	86842	11916	1410	57895	18441	76336	51408 (89%)	13860 (75%)	65268 (86%)
Goa	1660	72	55	1336	307	1643	1275 (95%)	303 (99%)	1578 (96%)
Gujarat	120560	2033	437	80322	38642	118964	78221 (97%)	38402 (99%)	116623 (98%)
Haryana	62697	2026	3679	46152	18198	64350	41035 (89%)	17164 (94%)	58199 (90%)
Himachal Pradesh	13424	235	479	13018	650	13668	12757 (98%)	629 (97%)	13386 (98%)
Jammu & Kashmir	8830	78	174	8321	605	8926	7962 (96%)	596 (99%)	8558 (96%)
Jharkhand	45505	266	808	31012	15035	46047	29590 (95%)	14935 (99%)	44525 (97%)
Karnataka	65785	1476	684	52162	12831	64993	49957 (96%)	11948 (93%)	61905 (95%)
Kerala	20835	322	376	17896	2993	20889	17334 (97%)	2808 (94%)	20142 (96%)
Ladakh	239	12	20	230	17	247	225 (98%)	17 (100%)	242 (98%)
Lakshadweep	20	2	1	19	0	19	19 (100%)	(NA)	19 (100%)
Madhya Pradesh	137648	1201	2467	108846	30068	138914	104285 (96%)	29295 (97%)	133580 (96%)
Maharashtra	159663	3359	909	104089	53124	157213	97867 (94%)	50877 (96%)	148744 (95%)
Manipur	1563	7	40	1411	185	1596	1338 (95%)	146 (79%)	1484 (93%)
Meghalaya	4139	65	75	3727	422	4149	3524 (95%)	408 (97%)	3932 (95%)
Mizoram	2334	2	38	2162	208	2370	1914 (89%)	167 (80%)	2081 (88%)
Nagaland	3487	32	52	2832	675	3507	2798 (99%)	675 (100%)	3473 (99%)

The transfer data from 2020 to 2022 indicates that the proportion of people getting transferred between states continues to be between 2% and 3% of the total notification over these years (**Table 1**).

Table 1 - Transfer data trends (2020-2022)

	Total notification (million)	Transferred between states	% notified that were transferred
2020	24.05	55,264	2.3%
2021	18.06	35,986	2.0%
2022	21.36	55,224	2.6%

Need for more data

- **Inconsistent data tracking in annual reports:** Only the 2019 TB report examined transfer data at levels below the state i.e., transfers between districts and TUs. TB reports from 2021 and 2022 only reported transfer data between states, and the 2023 TB report did not report any transfer data at all.

- **Limited focus on early and last stages of cascade:** The transfer data begins at the diagnosis and ends at treatment initiation, i.e., it does not seem to collect or examine data on movement of people at the stage of pre-diagnosis (people with symptoms suggestive of TB), nor does it report information on treatment completion or treatment outcomes for this group. This is a missed opportunity to assess the degree of challenges experienced by migrants, especially related to delayed diagnosis, treatment adherence, loss to follow up and so on.

- **Prevalence survey:** The nationwide prevalence survey carried out between 2019 and 2021 did not gather any information on the migrant status of people with TB.

With Ni-kshay features and adoption improving year on year, it is not a too ambitious goal to visualise a future where disaggregated data can be collected and analysed to better understand access and care delivery challenges for this key population.

2.2 NTEP guidance for migrant populations with TB

Migrants are recognized by NTEP as one of the key and vulnerable populations (these include, in addition to migrants, women, children, elderly, scheduled castes, scheduled tribes, slum dwellers, and others). It is understood that these populations have a *"reduced access to health services and the underlying determinants of health such as safe and potable drinking water, nutrition, housing, sanitation etc."* and have vulnerabilities that *"have the effect of nullifying or impairing the equal enjoyment or exercise of the right to health"*[16]. The National Strategic Plan (NSP) provides various pointers on service provision for migrants which can be summarised under ten headings:

1. **Rights-based care**

   - Provide respectful, rights-based care which takes into account their various difficulties related to extreme poverty, stigma and discrimination faced by migrants

   - Build migrant-specific support systems

2. **Enhanced surveillance and active case finding**

   - Identify and line list all the areas in Panchayats and wards where migratory labourers come and work, for e.g. farms and brick kilns

   - Maintain surveillance data separately for migrant population for periodic review to create a data base to work on improving service delivery especially outcomes

   - Carry out migrants mapping and camp-based approaches for active case finding

   - Arrange for on-site sample collection and treatment provision whenever possible

3. **Targeted IEC, behavior change and demand generation**

   - Create, publish and provide customized IEC materials for advocacy and public education around TB (transmission and care); conduct IEC activities at places of stay and work for migrants

   - Raise health service providers' and professionals' cultural and gender sensitivity to migrants' health issues

4. **Community engagement**

   - Build capacity of community structures and institutions which work with vulnerable groups like migrant labours

5. **Priority for multi-Sectoral Collaboration**

   - Work with ministries, PSUs and private sector partners to support migrants and other vulnerable populations

6. **Priority for additional financing and infrastructure**

   - Prioritise investment (for filling infrastructure and human resources gaps) in districts which have populations living in listed and unlisted slums, homeless, rag-pickers, street children, rickshaw pullers, construction workers, sex workers and migrants

7. **Operational research priority**

   - Carry out TB prevalence surveys to understand epidemiological factors at play in special groups like tribal, migrants, slums, paediatric population etc.

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[16] National Strategic Plan To End TB in India 2020-25.
Available at: https://tbcindia.gov.in/index1.php?lang=1&level=1&sublinkid=5506&lid=3578. Accessed 08 Mar 2024.

8. TB preventive therapy (TPT)

- Prioritise TPT in high TB transmission settings (which include migrant labourers in addition to health care workers, prisons, mines, slums, tribal areas)

- Institute activities to detect and treat LTBI at the beginning of a migration season for labourers who stay work at the same place for six months

9. Ni-kshay improvements

- Develop a "patient transfer module" to ensure initiation and tracking of people with TB who move from one TU to another

10. Guidelines

- Develop guidelines on Programmatic Management of TB among Mobile Populations and define as well as implement essential TB service package for migrant population

Policy and guidance gaps

Of the above, creditable progress was made on the guidance to make Ni-kshay improvements. The transfer module was completed and is playing an important role in service provision. For the remaining goals, there are a few gaps:

- No clear **operational guidelines** or manuals on how to provide services to the key populations

- No clarity on how the **accountability** for these services is to be shared between states and center, but likely to largely be states' work

- States do make and implement their own plans, but there seem to be **no reporting or M&E frameworks** to measure implementation

- There is no sharing of best practices or other opportunities for **knowledge sharing**

As mentioned, a key goal of this rapid assessment was to build a picture of how the NSP guidance is being implemented in terms of TB services for migrants. Findings indicate that the absence of clear operational frameworks results in states implementing varying and sporadic service delivery models which, in turn, contribute to varying experiences and outcomes among people with TB.

Box 1 – Examples of successful migrant-focused interventions

- Below are some examples of migrant-focused interventions implemented in the past or currently being implemented [**Source:** *Annual TB report and interviews with CTD leadership*]

- The **NTEP has partnered with the National Health Mission (NHM)** to carry out various activities at the state level:

  - Outreach activities in migrant-friendly activities

  - OPD timings for Treatment Units aligned with migrants' work schedules

  - Trainings for Urban PHC staff

  - Design Patient Provider Support Agency (PPSA) contracts targeted for care delivery to migrants

- The U.S. **Centers for Disease Control and Prevention (CDC) India collaborated with CTD and Maharashtra state NTEP to implement the End DR-TB project** in Dharavi slum of Mumbai. The project was aimed improving treatment outcomes among people with DR-TB by monitoring for adverse drug reactions (ADRs) using point-of-care technology, reducing lost to follow-ups (LTFU) by tracking migration, and diagnosing tuberculosis earlier through active case finding among household contacts. In addition, trained project field coordinators successfully tracked migrant people with TB and re-engaged them in care during COVID-19 pandemic.

- The state of **Kerala has a specialised, state-specific "guest worker scheme" for migrants** (who are referred to as "guest workers") through which many offerings are made available to migrants. These include health insurance, transportation support for care-seeking and so on.

- Examples of **CSR projects aimed at migrants:**

  - Fujifilm has launched a mobile X-ray van initiative; the van with portable digital X-ray will cover around nine lakh people in selected north and east India pockets, focusing on truckers, migrants, and slum dwellers.

  - Apollo Tyres Foundation has launched and is running 17 designated microscopy centres (DMCs) across the country to improve access for truckers and migrants.

3   FINDINGS FROM QUALITATIVE ASSESSMENT

There are four major takeaways from the rapid assessment:

- It is important to understand that migrants are not a homogeneous group; they differ a lot in terms of their experiences and needs.

- In spite of their differences, all migrants have this in common – compared to a non-migrant they have a higher degree of vulnerability to all the TB care cascade challenges experienced by a person with TB. Within the cascade, the pre-diagnosis phase is the most challenging one.

- Across India, there is a certain degree of migrant-responsiveness inbuilt into NTEP's care-delivery system. Ni-kshay especially has been a game-changer and has had a positive impact on service delivery for migrants even though some gaps continue to need attention.

- However, there is a large variation across the country in terms of migrant focused activities, and this variation is due to four main factors – absence of any clear nationwide guidelines, contextual differences in states, and operational challenges specific to migrant context, and capacity gaps among service providers.

These findings are elaborated upon in this section and subsequent ones.

3.1 Migrants are a non-homogenous group

As mentioned, there is no one standard definition of migrants. Even the NSP, which mentions migrants as a key population, does not define them. In practice, those interviewed including District TB officers (DTOs) and Senior Treatment Supervisors (STSs) use different operational definitions. REACH's "TB and Migration" project team also initially grappled with a comprehensive definition and finally evolved one specific to the project context.

The working definition from IOM, that a migrant is a person who "moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons", resonates with everyone who works with migrants, but the parameters contained within the definition are complex and challenging. For example, how far has the migrant travelled from their residence, how long have they stayed in their new location, what was the purpose of their migration, and so on. These parameters are important because they determine the contexts and frameworks which, in turn, define the migrants' experience and vulnerabilities.

> *In my view, people who migrate for the purpose of care-seeking should not even be considered migrants. Their challenges are not going to be as severe as a migrant who has travelled because of their work or other economic needs.*
>
> **– Expert**

Discussions with community members during the rapid assessment indicated that for India, there may be five major metrics that define migrants' contexts, their challenges as well as their needs for TB care services (**Figure 2**):

- The type or degree of migration
- Purpose of migration
- Duration of stay in new location
- Other vulnerabilities (like gender and economic status)
- Post diagnosis cascade

Figure 2 - Indian migrants' experiences with TB care are likely to be shaped by five key parameters

Type of movement/degree of migration:	
• Moved from a different district in the same state • Moved from a different state • Moved from a different country	
Purpose of migration: • Education • Formal work • Informal work • Marriage • Care-seeking • Other purpose	**Length of stay in new location:** • Less than a year • 1-5 years • More than 5 years
	Vulnerabilities: • Gender • Social power • Economic power
Post-diagnosis cascade: • Remain at place of migration to continue treatment • Leave the place of migration to go to home location after diagnosis, after treatment initiation or during treatment	

It can be readily seen how the above parameters can combine in various different permutations and combinations to create an infinite number of "migrant archetypes" – i.e., prototypes with specific characteristics and experiences. Each archetype has their unique set of difficulties and needs. For example, the experiences and contexts of a seasonal migrant receiving minimum wages are very different from a student migrant - and when they get TB, their care cascade journeys, challenges and needs are very different as well. Three such archetypes are described below to illustrate this better.

All three archetypes are based on real-life experiences shared by community members who participated in the interviews and FGDs.

Migrant Archetype 1

Lakshmidhar Chandra (name changed)

Description

45-year-old man working in a steel plant in Chhattisgarh; lives in a one room home with two other workers (his family is in a village 200 km away in the same state)

Care cascade journey

This individual developed a cough of a few weeks' duration and sought care at a local private practitioner (PP) who put him on multiple rounds of cough remedies and antibiotics. The PP did not prescribe any chest x-ray or any other diagnostic test. Not finding any relief, and on advice from colleagues, Lakshmidhar went to three other private providers over the next six months, none of whom offered a firm diagnosis. The fourth PP, who asked him to get two MRIs and still did not offer a clear diagnosis, advised him to seek care in the government medical college, which is also a district TB centre. After that point, Lakshmidhar's experience was, in his own words, quite satisfactory. He underwent a CBNAAT test and chest X-ray, was diagnosed with drug-sensitive TB, and was put on treatment.

At the time of the FGD, he had completed his treatment two months ago, and was feeling healthy. He shared that he had received a lot of support from the local STS and TB champions, including support for management of minor adverse drug reactions. He had received half of his direct benefits transfer (DBT), i.e., INR 1500 in his account.

Figure 3 – Migrant archetype 1

Type of movement/degree of migration: Moved from a different district in the same state		
Purpose of migration: Formal job – a steel worker	**Length of stay in new location:** 4 years	
	Vulnerabilities: Male/45; 5 lakh/year annual income (moderate socio-economic power)	
Post-diagnosis cascade: Remain at place of migration to continue treatment		

Challenges

For this archetype, the biggest challenges were:

- **Delayed diagnosis:** Diagnosed 6 months after the onset of his first symptoms

- **Out of pocket expenses and other financial losses:** He spent an estimated INR 50,000 prior to diagnosis. The main cost drivers were medicines, diagnostics (MRI) and transport costs. He did not inform his employer about his diagnosis for fear of losing his loss, took two months' unpaid leave and resumed work after a month of treatment initiation

- **Stigma:** Colleagues and roommates were kind and understanding at first, but later requested him to move out of the house

- **Mental health challenges:** He experienced immense psychological distress when he did not know his diagnosis, and also when he was first diagnosed with TB. He stayed on his own through the course of treatment and experienced isolation and loneliness

Solutions

The following interventions could have helped migrant archetype 1:

- Information on where to seek care

- Private providers engaged and sensitised on TB and migration

- Community support systems

- Employer engagement – workplace TB screening, support after diagnosis (in the form of paid leave) and other "TB-free workplace" interventions

- Community level campaigns to address stigma

Migrant Archetype 2

Abdul Hasan (not his real name)

Description

21-year-old man working as a carpenter in Vellore under a building contractor (informal contract); lives in a one-room home with four other workers (his family is in West Bengal)

Care cascade journey

Abdul had been experiencing cough of 2 weeks' duration when he chanced upon a TB awareness event organised by a community health worker (CHW) in his neighbourhood. He reached out to the CHW after the meeting and asked for information on TB testing. The CHW accompanied him to the district TB centre, where he was diagnosed and put on treatment.

His main challenge was the language barrier - the CHW (as well as the staff at the district TB centre) do not speak any Hindi, and Abdul only speaks Bengali and Hindi. They found help in Abdul's roommates as well as friends of the CHW who helped with the translation. At the time of the interview, Abdul was on his fourth month of treatment. He had not taken any time off work because of financial pressures and had not informed his employer about his diagnosis. He had continued to work through the entire course of treatment, even though it had been physically challenging during the initial weeks. His two roommates had been tested for TB by the district health staff, TB had been ruled out, but no TPT was offered.

Figure 4 - Migrant archetype 2

Type of movement/degree of migration: Moved from a different state		
Purpose of migration: Informal job - a carpenter	**Length of stay in new location:** 18 months	
	Vulnerabilities: Male/25; 3 lakh/year annual income (low socio-economic power)	
Post-diagnosis cascade: Remain at place of migration to continue treatment		

Challenges

For this archetype, the challenges were:

- **Language barriers:** He struggled to understand the treatment and adverse events

- **Mental health challenges:** Experienced loneliness and isolation; fear of sharing

information with employer and fear of losing his job

Solutions

- Migrant help desk at care facility with appropriate language support

- Employer engagement - workplace TB screening, support after diagnosis (in the form of paid leave) and other "TB-free workplace" interventions

Migrant Archetype 3

Rani Chaudhary (not her real name)

Description

35-year-old woman, homemaker, married 7 years ago, and moved to Bhubaneswar where her husband lives and works. Her family (and her husband's family) live in a village about 300 km away from Bhubaneswar

Care cascade journey

Rani lives with her husband in a one-room house in Bhubaneswar. Her husband works in a factory. She noticed a swelling in her neck sometime last year and went to a government hospital to get it checked. A biopsy was done, TB was diagnosed, and treatment initiated. She did not have any out-of-pocket expenses but has had a very difficult time in terms of drug side effects, stigma and social isolation. She was convinced that TB care in Bhubaneswar would be better than in her village and chose not to be transferred to her home location in spite of the sense of isolation. She completed her treatment a few months ago and is doing well.

Figure 5 – Migrant archetype 3

Type of movement/degree of migration: Moved from a different district in the same state		
Purpose of migration: Marriage	**Length of stay in new location:** 7 years	
	Vulnerabilities: Female/35; economically dependent (low socio-economic power)	
Post-diagnosis cascade: Remain at place of migration to continue treatment		

Challenges

- **Stigma:** Rani and her husband were both worried that the landlord would ask them to leave their rented home on learning about her TB diagnosis, so they were extremely careful

about protecting the information. They asked the TBHV to not visit her home, but the visit was still made. Her neighbours noticed the TB HV visit, noticed her frequent trips to the hospital, asked her questions, and eventually started to shun her

- **Isolation:** All her family and friends live in a village which is a six-hour bus ride away. She also speaks a different dialect which makes it evident that she is not from Bhubaneswar. These factors contributed to making her feel extremely isolated and lonely during her treatment period

Solutions

The following interventions could have helped migrant archetype 3:

- Community support systems
- Community level campaigns to address stigma

3.2 Migrants have an increased vulnerability to all care-cascade challenges

When it comes to service-delivery, challenges faced by people with TB in India are reasonably well understood. This rapid assessment revealed that migrants face *all* of those challenges to a greater degree as compared to non-migrants. The contextual parameters mentioned in the previous section play a role in increasing migrants' vulnerability to all care cascade

challenges. For example:

- Diagnostic delays due to uninformed private providers are common. Migrants, because of their limited access to social structures and reliable sources of information, are far more likely to seek care through informal providers and unengaged private providers, and therefore, experience greater diagnostic delays.

> " *People who migrate experience a lot of stigma and discrimination simply from being outsiders. Getting TB adds a whole new layer of stigma.*
>
> **– Expert, Internation Organization for Migration (IOM)**

● Treatment adherence challenges due to inadequate psychosocial support are well-known. Migrants face these to a greater degree because of multiple factors – the counselling may be carried out in a language they are not comfortable with, community-based social support systems could not reach them because their local addresses are not known.

● In times of drug shortages or stockouts, migrants are often the first group of people given treatment refills of shorter durations (a few days).

Table 2 lists some challenges experienced by those migrants who participated in the rapid assessment and provides a view into the vulnerability that this key group faces. Some of these vulnerabilities may have a disproportionately high impact on the migrants'

experiences and may therefore need more attention. For instance, the pre-diagnosis phase - i.e., the period when a person with symptoms has not yet been linked to an accurate diagnosis – is very likely to be the most challenging part of the care cascade (described in detail in the next section). In the treatment phase, the biggest challenges may be poor access to information on adverse events, and delays in receipt of social support schemes or incentives.

> *My phone number is given out to all Hindi-speaking people with TB. I get about 2-3 calls a week. And they mostly ask about two things – one is how to manage side effects, and the other is when will their DBT payments come.*
>
> – **Community outreach worker, Tamil Nadu**

3.2.1 The pre-diagnosis phase is the most challenging step of the care-cascade

> *For a migrant, the toughest part is reaching the correct healthcare facility on time. Once they reach the facility, their experiences are likely to be the same as any other patient.*
>
> – **State NTEP official**

As mentioned, in comparison to local residents, migrants are at a greater risk of experiencing barriers at each step of the care cascade. However, the majority of the interviewed experts opined that the first step – the pre-diagnosis phase – is the most challenging step for migrants with TB. This was borne out in the discussions with people with TB and their family members. As **Table 3** shows, migrants experience a multitude of challenges that prevent them from accessing timely and accurate diagnosis. A few pain points were

common in the experiences shared by the majority of the people with TB who participated in the rapid assessment[17]:

● High out of pocket expenses, especially through care-seeking in the private sector

● Lack of reliable information, complicated by language barriers

● Mental health challenges – loneliness and isolation (from the absence of family support and a lack of belonging in the new location)

● Insecurity about finances and employment

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[17]A total of 22 people with TB participated in the rapid assessment. See **"Appendix 2 – Discussion with community members"** for a list.

There were three heartening exceptions – two in Tamil Nadu and one in Odisha – who seem to have experienced rapid, high quality diagnosis. Two out of the three went to the local district TB centre within a few days of experiencing symptoms, underwent a chest x-ray and NAAT test on the same day, and received a diagnosis and treatment initiation two days later. Both of these people had early access to their local community health workers who shared information about diagnostic services in the public sector. The third person went to a local private provider who was an NTEP engaged provider and immediately referred the person with symptoms to the nearest public health facility.

> *All the health services, whether they are related to RCH, NCD or TB, are provided free of cost to everyone living in the state and that includes the migrants. And they are eligible to all the social schemes as well. That is the state's policy.*
>
> **- District TB Officer**

3.3 A degree of migrant-responsiveness is built into NTEP care delivery system

In principle, a migrant with TB gets access to all the services that a local resident with TB would. A point that was stressed by nearly all the experts was that once a person with TB gets diagnosed and initiated on treatment, their experiences are the same, regardless of whether they are a migrant or a local resident.

In addition, there are a few specific activities and interventions being implemented which have (or have the potential to have) a positive impact on migrants' experience. The most important one among these is the Ni-kshay transfer module.

Ni-kshay's transfer module

Ni-kshay is India's "national data management system for TB surveillance and patient tracking". Ni-kshay has become an integral part of the data management processes in India recording the care cascade milestones for nearly three million people with TB annually. A transfer module was added to the system and rolled out in 2019. The module has been playing an important role in ensuring treatment continuation for migrating people with TB and has shaped the experiences of many migrants in a positive way.

> *It was very difficult in the pre-Ni-kshay era. When we transferred a patient, we made two copies of the treatment card – gave one to the patient and sent the second copy to the DTO (of the transferred-out district) by speed post. Then we followed up with the DTO through phone calls. It has become quite straightforward now – we use Ni-kshay to confirm that the transferred patient has been accepted at the DTC in their home district.*
>
> **- District TB Officer**

Table 3 – Migrants have an increased vulnerability to all care-cascade challenge

Symptomatic phase (Pre-diagnosis phase)	Diagnosis	Initiation and completion of treatment	Getting cured and getting back on track
- **Migrants often live in crowded conditions with poor sanitation** which puts them at a higher risk of contracting TB - **Migrants lack access to reliable information** because of unfamiliar settings; with no clarity on where to seek care, they are more likely to seek care from inappropriate settings - **Health is often not a priority** due to socio-economic challenges, and this contributes to poor health seeking - **Fear of stigma,** loss of employment or loss of the already limited social support structures - **Lack of family support** contributes to delay in care-seeking (no one to accompany the person with symptoms to health facility visits) - **Language barriers** also inhibit care-seeking - Migrants face **financial restrictions** (due to the need to send money to family at home) and **out of pocket expenses** can delay facility visits	- **Poor information leads to multiple health facility visits** before correct diagnosis is made - **Financial restrictions** cause even small **out of pocket expenses** like transport costs for diagnosis and follow-up can discourage health facility visits - Fear of **loss of daily wages,** especially for informal workers discourages health facility visits - When TB is diagnosed, many migrants experience **dis-crimination at the work-place** (loss of employ- ment) **and residence** (loss of rented accommodation or rejection from roommates)	- During **drug supply chain interrup-tions,** migrants become low priority and are often the first group to be given smaller drug supplies or not given the drugs at all - **Language barriers** make it harder for migrants to access psychosocial counseling, especially related to treatment compliance and adverse event management - **Poor nutrition because of absent family support systems** can impact treatment completion - There is small but significant degree of **discrimination and low trust from service providers** - **Migrants often live in temporary accommodations** which makes it difficult for service providers to provide follow up services; assigned treatment supporters sometimes lose track of people - For people who have been trans-ferred after treatment initiation, there may be **delays in public health action and support functions,** espe-cially DBT transfers	- **Poor health and disability** resulting from TB can threaten the already fragile employment status of migrants - **Risk of recurrence of disease is likely to be high** among migrants due to the sub-optimal nutrition and physically demanding work

Box 2 - Gender is an important determinant of migrants' experiences with care-seeking

Many experts estimated that the majority of migrants were male because the most jobs (formal and informal) seem to employ more men than women. There would be certain specific jobs that would employ more women – and these would mostly be small scale enterprises like garment or jewellery making. However, the fact is that women make up the larger share of internal migration globally as well as India. As per the International Labor Organization, female migrants accounted for almost half of the world's migrants in 2017. According to Indian Census data, women make up two-thirds of the total internal migrants [**Source:** *Institute for Social and Economic Change, Bangalore. Working paper: Patterns and Determinants of Female Migration in India: Insights from Census. 2010*]. The absence of focus on women's migration can be attributed to emphasis on economic theories of migration where migration is seen as motivated by economic opportunities i.e. men migrate for economic reasons and women migrate for social and family-related reasons.

There are many interlinked factors that add an additional layer of vulnerability to women migrants who have symptoms of TB or woman migrants diagnosed with TB, largely related to access to health facilities:

- Women migrants often need male **companions** to accompany them to health facility, therefore creating the need for two people to take time off and additional transport costs for the companion.

- **Evening clinics** are often seen as a solution for migrants because their opening hours do not coincide with working hours. But for women, issue of safety and fears of harassment in new locations make evening clinics daunting.

- Men often have **better and more informed social networks** which may make it slightly easier for them to find reliable diagnostic services.

Potential solutions need to be designed keeping these complexities in view; instituting screening and treatment services closer to workplaces and residential areas are far likelier to improve access for women rather than evening clinics.

When a person diagnosed with TB at a facility wants to move and continue their treatment in a new location, the public health staff of the first facility (the "transfer out" facility) can initiate a transfer to a facility nearest to the location the person is migrating to (the "transfer in facility"). Managers (usually STSs) at each facility track the transfer module on a periodic basis (usually once a week) and "accept" the transferred people with TB. The module has been working well, which is partly attributable to the efforts of many DTOs and STSs: after making the transfer on Ni-kshay, they follow up with their counterparts via phone to check if the transferred client has arrived at and has been registered at the new location for treatment. Central TB Division (CTD) has carried out extensive training programmes – in-person and online - across the country to build data management capacity among facility staff (**Figure 6**). There are however a few implementation challenges that remain work-in-progress:

- Technical issues lead to frequent downtime in the Ni-kshay application (downtime seems to

occur in both web-based and app-based modes).

- Sometimes the staff at the transfer-in facility does not accept the transferred person with TB out of concerns that these transferred clients may not be traceable and may contribute to the district's lost to follow up statistics. Therefore, an unknown number of people with TB continue to "fall through the cracks" in the system.

> *"* *The DTO directory and the STS directory is useful. Whenever I transfer a patient on the Nikshay transfer module, I use the directory to get in touch with the DTO and STS of the transfer-in facility. Sometimes we are even part of the same WhatsApp group – if the transfer in facility is in the same state. I also call up the person with TB and confirm that they have reached and has been registered there.*
>
> **- STS, Raipur**

Figure 6 – Snapshot of training material on Ni-kshay transfer module
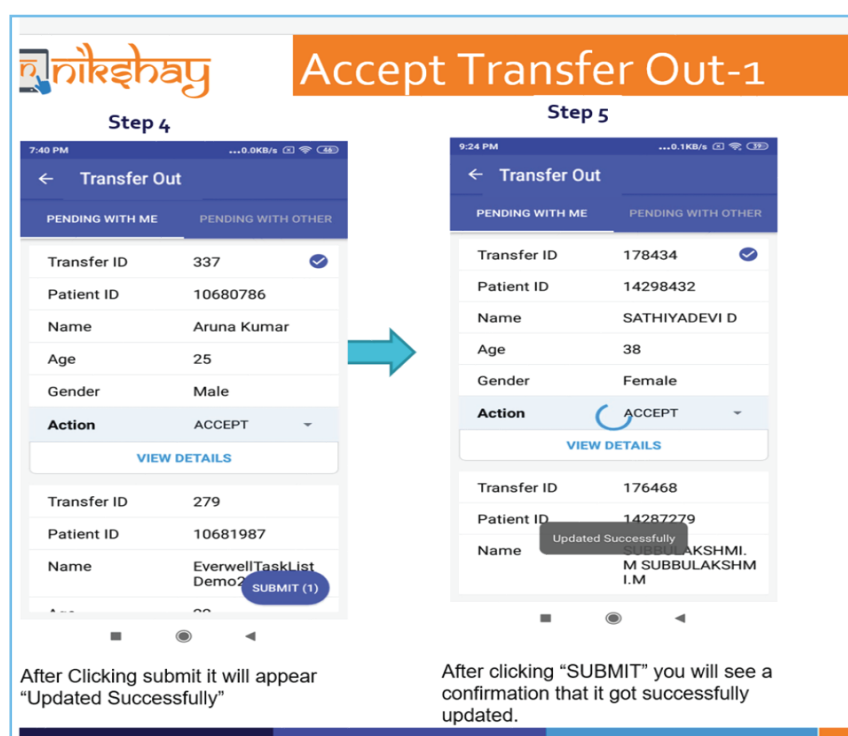
B. Industry collaborations

Multisectoral collaborations have become a key metric of success for all state TB cells. "TB free workplace" activities are included in the annual workplan and implemented. For example, the state TB cell in Tamil Nadu works with Larsen and Toubro company and carries out TB screening using Mobile Diagnostic Units twice a year. As of the last screening cycle, 2500 employees have been screened, three people were diagnosed with TB and initiated on treatment.

C. Trainings for UDST and public health action

NTEP has issued guidance that UDST, public health actions and support functions are the responsibility of the facility where diagnosis and notification is carried out. This guidance is reinforced via capacity-building efforts, and ensures that any person diagnosed with TB receives the right kind of care regardless of their migrant status.

D. Simplified DBT transfer mechanism

NTEP has recently simplified the direct benefit transfer scheme – instead of the original transfer of a fixed amount every month making a total of six transfers, the payment will now be done in two tranches. This is likely to improve overall disbursement and especially benefit people who are transferred between facilities and can get the first tranche from the transfer-out facility and the second tranche from the transfer-in facility, instead of having to follow up on multiple payment tranches.

> *The transfer was so easy. Three months after her treatment started, my wife decided to go home to Bihar. Our STS in Chennai called the TB person in Madhubani. They did a home visit as soon as we reached home and brought medicines also. They already had our treatment information. And the Chennai STS called twice to check that my wife was comfortable.*
>
> **– Husband of person with TB**

3.4 Implementation of migrant-focused activities is sporadic and variable

> *I have seen some very proactive primary health centres and health and wellness centres where the staff take responsibility for migrants and regularly visit migrant settlements. But it is not common.*
> – **Expert, WHO**

Similar to the heterogeneity seen among migrants (Section 3.1), implementation of service-delivery to this population varies a lot across states. Four factors emerged as causes for this variation:

- Contextual differences in states
- Absence of any clear nationwide guidelines for migrants
- Operational challenges specific to service delivery to migrants and
- Capacity gaps among caregivers

(i) Contextual differences

States which have large migrant populations have significant differences in terms of their migrant situations. For example:

- Assam has a large number of brick factories which are operational for a few months every year. A large number of "seasonal labourers" travel from the neighbouring states of Jharkhand and Bihar and return to their home districts at the end of each brick-making season.

- Punjab has many textile industries which employ people from other states (like Uttar Pradesh and Bihar). These industry workers have been living in Punjab for years, decades in some cases, but are still "migrants" because of their sociocultural differences, their residence in areas clearly seen as "migrant neighbourhoods" and their experience of the same type of vulnerabilities described previously – crowded living conditions, limited access to information, and so on.

- Tea-garden workers in Assam have been living in their 'new' location for long periods but are still at risk of migrant-specific vulnerabilities.

(ii) Absence of clear operational guidelines

As mentioned, the National Strategic Plan (NSP) provides various pointers on service provision for migrants. These recommendations can be classified under ten key areas (**Table 2**). Of these, the recommendation to develop a "patient transfer module" in Ni-kshay (described in section 3.3) - has been a resounding success. Among the rest, recommendation to develop guidelines on "Programmatic Management of TB among Mobile Populations" is perhaps the most critical one and can impact the implementation of all the others. In the absence of clear operational guidelines, states make and implement their own strategies for migrants, resulting in varied outcomes, the impact of which is not easy to ascertain in the absence of any reporting frameworks or opportunities for best practice sharing. Below are some examples of where the lack of clear operational instructions creates challenges for service providers.

- In the absence of firm instructions on how to carry out **screening** for migrants (and other key populations), there are instances of screening using low-yield methods leading to wasteful expenditure. For example, an expert shared an anecdote where over 60,000 migrant labourers were screened for TB in their workplaces and

only one person with TB was diagnosed. The screening was carried out using verbal symptom screening instead of CXR or any other tool.

● Migrants often live in temporary accommodations (in areas that are readily recognized as "migrant neighbourhoods" with "non-numbered houses"). This may contribute to discrimination, but also leads to poor treatment support because these areas may fall outside the mapped areas assigned to STSs and TBHVs. How to carry out **mapping** to include these areas is less clear.

● There is no routine guidance on how to include (or even whether to include) migrants in **PIP planning;** some states do this, and others don't, and it is possible that not including migrants in planning processes can contribute to not understanding their specific needs.

● There are no clear guidelines on the **number and type of patient identifiers and addresses to record** when a person with TB is registered for treatment. Different states collect different identifiers (or combinations) among the following:

● Phone numbers
● PAN numbers
● Aadhar card information (with adequate data privacy safeguards)
● ABHA ID

The address question is an especially challenging one – there is only data field for addresses in Ni-kshay, so there's no possibility of collecting any "local address" or "permanent address", both of which are often relevant for migrants. In the absence of guidelines, people carrying out data entry record only the local address of the person with TB, thereby missing their migrant status altogether. Another layer of challenge is added when the migrant themselves share only their local address and not their home address (which may be in a different district state) out of fear that they may be refused treatment on the basis of their migrant status.

> *I know Aadhar is not mandatory to collect for treatment initiation, but we try to collect it here for our own internal records. It serves as a proof of address. We also test the accuracy of the phone number they are giving us. It saves us a lot of time later on when we are running around looking for the patient.*
>
> – **State NTEP official**

(iii) Service delivery challenges

Recognizing the importance of this key population, all states do create and implement migrant-focused service provision agendas. These agendas can cover the entire cascade of TB services – from mapping to treatment support and often run into unique operational challenges which are specific to this key population (**Table 4**).

> *We have one STS for 10 lakh population, instead of the ideal ratio which is one for 5 lakh population. It is very difficult for him to spend so much time looking for people who are not available at the addresses they gave during diagnosis.*
>
> – **State NTEP official**

Table 2 – Implementation of NSP guidance for migrants

	Area	Specifics of guidance	Implementation and gaps
1	Rights-based care	- Provide respectful, rights-based care which takes into account the difficulties relatedto extreme poverty, stigma and discrimination faced by migrants - Build migrant-specific support systems	- No clear guidelines on how to provide these services - No clarity on how the accountability for these services is to be shared between states and centre, but likely to largely be states' work
2	Enhanced surveillance and active case finding	- Identify and line list all the areas in Panchayats and wards where migrants come and work, for e.g. farms and brick kilns - Maintain surveillance data separately for migrant population for periodic review to create a data base to work on improving service delivery, especially outcomes - Carry out migrants mapping and camp-based approaches for active case finding - Arrange for on-site sample collection and treatment provision whenever possible	- States do make and implement their own plans, but there seem to be no reporting or M&E frameworks to measure implementation
3	Targeted IEC and behavior change Demand Generation	- Create, publish and provide customized IEC materials for advocacy and education around TB (transmission and care) - Conduct IEC activities at places of stay and work for migrants - Raise health service providers' and professionals' cultural and gender sensitivity to migrants' health issues	- There is no sharing of best practices or other opportunities for knowledge sharing
4	Community engagement	Build capacity of community structures and institutions which work with vulnerable groups like migrant labours	
5	Multi-sectoral Collaboration	Work with ministries, PSUs and private sector partners to support migrants and other vulnerable populations	
6	TB preventive therapy (TPT)	- Prioritise TPT in high TB transmission settings (which include migrant labourers) - Institute activities to detect and treat LTBI at the beginning of a migration season for labourers who stay for work at the same place for six months	
7	Additional financing and infrastructure	Prioritise investment (for infrastructure and human resources gaps) in districts which have key populations (including migrants)	No clarity on whether (or to what extent) this is implemented
8	Operational research	Carry out TB prevalence surveys to understand epidemiological factors at play in special groups (like migrants)	Recent prevalence survey (2019 - 2021) did not look at migrant data
9	Ni-kshay improvements	Develop a "patient transfer module" to ensure initiation and tracking of people with TB who move from one TU to another	This was completed and is playing an important role in service provision
10	Guidelines	Develop guidelines on Programmatic Management of TB among Mobile Populations and define as well as implement essential TB service package for migrant population	No guidelines developed so far

Table 4 – Operational challenges faced by healthcare system when providing service to migrants with TB

Pre-diagnosis

- **Mapping** is relatively easier to do in locations which have long-term migrants or even "permanent-migrants" – for example, tea gardens in Assam, textile factories in Ludhiana, steel factories in Chhattisgarh. However, it is a complex exercise when it comes to areas inhabited by informal migrants, **temporary migrants or seasonal migrants,** i.e., people working in infrastructure projects in Mizoram, or people working in residential projects in Tamil Nadu.

Diagnosis and notification

- Migrants experience additional layers of stigma compared to local residents and do not want home visits from public health staff, therefore, sometimes share **inaccurate addresses or phone numbers** during testing, making it hard for care providers to follow up.

- Sometimes, migrants share only their local address, **not disclosing their migrant status** out of fear of being denied treatment on the basis of their migrant status, so the caregiver may not even know of the potential challenges that this client may be facing.

- Anecdotes indicate that there is a **high loss to follow up** among migrants during the sample collection and diagnosis stage.

Treatment initiation and treatment completion

- Migrants often live in **temporary accommodations** which makes it difficult for service providers to provide follow up services; assigned treatment supporters sometimes lose track of people.

- There are many instances of people moving away after treatment initiation **without informing** the service provider, and without any Ni-kshay transfer mechanisms being initiated.

- For people who have been transferred after treatment initiation, there may be **delays in public health action and support functions,** especially DBT transfers.

- Migrants sometimes have **shared bank accounts and phone numbers** – which makes it hard to do Ni-kshay data entry.

- Migrants with TB often do not want their neighbours and roommates to know about their diagnosis for fear of stigma and fear of losing their accommodation, so **follow up and contact testing** is difficult.

- **Language barriers** make it challenging to provide support especially for adverse effects

- Incomplete data on migrants often creates situations where data "patient treatment boxes" cannot be reconciled. Such **drug stock data reconciliation** challenges lead to supply chain issues, which, in turn, worsen drug shortage situations.

> *At tea gardens or cement factories, we set up treatment support centre in partnership with the employer. Sometimes they even have their own doctors or pharmacists who help with treatment support. But when it comes to infrastructure projects, it is difficult to set up support mechanisms because the workers keep moving. It's not uncommon that the STS goes to follow up with a client after treatment initiation and finds that the entire worker settlement has moved away, and the phone number doesn't work.*
>
> **– Expert, WHO**

(iv) Capacity gaps among caregivers

All the interviewed service providers seemed to demonstrate a high level of compassion, professional ethics and understanding of the challenges experienced by migrants. Many anecdotes were shared (by people with TB as well as service providers themselves) of an STS or TBHV going above and beyond the call of duty to respond to migrants' needs and challenges – arranging translators to manage language barriers, providing support during off-duty hours, following up diligently (with the counterpart STS as well as the person with TB) at the home district after transfers, and so on.

At the same time, it was also evident that there are a few capacity gaps which can contribute to uneven care. For example:

● Before migrants can be offered migrant-responsive services, they need to be identified as a migrant. As per the NTEP protocols and as described in **Ni-kshay training modules,** this identification is done at the diagnosis and pre-diagnosis level. When the "Patient ID" is first created, a field called "key population" is required to filled and can serve as a source of information that the person with symptoms is a migrant. This field is not a mandatory field and is often left blank, which implies that there could be a large number of "missing migrants", i.e., people diagnosed with TB which are not identified as migrants.

● A small but not-insignificant degree of **discrimination or insensitivity** may be demonstrated by caregivers especially when dealing with people from different sociocultural contexts. Some of the language used by healthcare workers may contribute to "othering" of migrants. Some examples of terms which cropped during interviews were - "those people", "those Odia speaking people", "those Hindi speaking people" and so on. There is a need for "migrant sensitivity training" along the lines of gender sensitivity training instituted by NTEP in the recent past.

● Capacity gaps related to **language and poor understanding of social/cultural differences** create situations where caregivers are not able to provide adequate psychosocial counselling, information about follow-up testing, adverse effects, and so on.

● Although NTEP has issued guidance that public health actions and support functions are the responsibility of the facility where diagnosis and notification is done, there was a lack of clarity around the **shared responsibility between transfer-in and transfer-out districts**, with some caregivers believing that DBT should be paid by the home district of the person with TB.

> *Are India's healthcare providers receiving adequate capacity building on managing migrants? My answer is a firm no.*
>
> **– Expert, WHO**

4   RECOMMENDATIONS

Based on the insights described above, especially the one related to the sporadic, inconsistent implementation of migrant-focused activities, there emerge a few recommendations which can shape rights-based systems which are responsive to the needs and challenges for this specific key population.

4.1 Build systems for accurate estimation of TB burden among migrants

A large majority of service providers who participated in the assessment believed that Ni-kshay's transfer module is the primary mechanism to track migration (rather than the "key population" field in the treatment card, which is often left blank, therefore missing the migrant status of the person on treatment). With Ni-kshay improving year on year both in terms of features and adoption, and with the transfer module implementation, NTEP does have access to large swathes of data on the movement of people with TB. But even if this transfer data were used as a way of estimating the number of migrants of TB, it is very likely that many migrants with TB continue to "slip through the cracks" in many situations, for example -

- If they migrate before they have been notified (especially if diagnosed in the private sector)
- If they migrate without informing the local STS (in which case the information of their movement does not get recorded in Ni-kshay)
- If they only share their local, temporary address and therefore do not get recorded as migrants at all
- If they don't transfer at all and continue their treatment at the location where they were diagnosed. It is worth noting that of the 20 people with TB who participated in the rapid assessment (through FGDs and interviews), only 5 transferred to their home location after diagnosis. The remaining continued their treatment at the

location of diagnosis – the cause was nearly equally split between personal preference or circumstantial needs.

Given the above, it is possible that Ni-kshay captures only a proportion of the actual number of migrants. In other words, it is possible that NTEP's estimation of migrants with TB is an underestimation, which is reflected in the lack of prioritization afforded to them – there are no dedicated guidelines for them and there are no epidemiological studies carried out on them (they weren't included in the prevalence survey), and very few of the interviewed experts believed that they were likely to be underserved population. Below are some possible solutions address this information gap:

- Carry out refresher trainings for service providers stressing the importance of the filling in the "key population" data fields in the treatment card
- Carry out periodic assessments of Ni-kshay transfer data and triangulate them with other data sources/methods like data from PRI institutions
- Consider Aadhar linkages if feasible (only if adequate data privacy safeguards can be built in), and provide it doesn't result in treatment being denied to any individual

4.2 Implement strategic communication campaigns

Based on the understanding that the maximum number of challenges faced by migrants are during the pre-diagnosis phase, it is easy to see that well-designed and well-implemented educational campaigns are a critical tool for early diagnosis in this key population. Below are some themes to consider:

- TB-free workplace activities in collaboration with industries
- Behaviour Change Campaigns (BCC) to address stigma and to encourage early TB testing near migrant workplaces and residences
- Engagement with migrant peer-groups and unions
- Engagement with PRI institutions and inclusion of migrant issues in TB-free gram panchayat activities; sarpanches and other PRI leaders often understand the migrant movements and challenges in their area well
- Collaboration with NHM to include HWCs and CHOs in migrant-focused activities
- Utilization of recourse mechanisms – call centers and "Nikshay Sampark"
- Expanding IEC material in all languages necessary to a specific areas

Some of these communication strategies can be institutionalised through migrant-focused operational guidelines.

4.3 Build capacity among service providers

As described in section 3.4, capacity gaps among service providers contribute to uneven and suboptimal care to migrants with TB. Below are some areas where capacity building efforts can focus on in order to build responsive, rights-based care systems:

- Providing culturally sensitive psychosocial counselling in appropriate languages
- Stigma experienced by migrants
- Expanding a sense of inclusion through an understanding of identities and cultures
- Practising sensitivity in language and behaviour
- Respectful home visits only after explicit consent from the person with TB
- Setting up help desks at facilities with necessary language support

These capacity-building efforts can be aligned with gender-sensitivity training efforts. They need to include all levels of providers who interact with people with TB – not only NTEP officials (DTOs, STSs, TBHVs, and so on), but also their NHM colleagues (CHOs and other community workers). It needs to be reiterated that these capacity building efforts can be institutionalised through migrant-focused operational guidelines.

4.4 Develop operational guidelines

There is need for specific operational guidelines focused on service provision to migrant populations. These guidelines, which should ideally be developed centrally and include scope for state-specific customization should include all the elements highlighted by the NSP (**Table 2**). In particular, the theme of multisectoral collaboration can play a significant role in improving migrants' experiences in accessing healthcare services in general. And TB services in particular. For example:

Collaboration with industry

- Engagement with corporations/builders who employ large numbers of migrants
- Setting up evening clinics and clinics close to factories and workplaces in collaboration with employers
- Include broader health efforts in addition to TB services, and institute screening of multiple diseases

- Facilitate group insurance models

Collaboration with NHM and PRI institutions

- Link migrant issues PRI activities, especially TB free panchayat and TB free village initiatives
- Include migrant services into KRAs for CHOs and HWCs

Collaboration with government ministries

- Partnerships with ministries which oversee areas with large migrant movements, i.e., agriculture, labour, women and child welfare, housing and urban affairs, petroleum, railways and so on
- Inclusion of TB-focused services and IEC campaigns in ministry priorities

4.5 Other systemic improvements

In addition to the areas mentioned in the NSP, there are a few other areas which can improve migrant experiences and can be institutionalised via guidelines:

Insurance for migrants

Many countries (including Philippines and Bangladesh) have health insurance for migrants. In India, the state of Kerala has successfully implemented insurance models for "guest workers". If PMJAY makes outpatient services for TB eligible for insurance coverage, it is likely to benefit the broader population, but especially migrants who undergo extreme financial restrictions.

Include migrant estimates in PIP planning

Accurate budgeting for diagnostic and treatment supplies again benefits the broader population, but especially benefits migrants because they are often the first to suffer from stockouts.

Build on Ni-kshay capabilities

- Address the technical issues underlying the frequent downtime in the system
- Include an additional field for address so that both permanent and temporary addresses and be recorded
- Add in features like transfer management dashboards and notification alerts to capture real-time status of migrants' status

4.6 Recommendations for research

At present, evidence on migrants' experiences with health care access comes from a small handful of microstudies, and often, statistics from health of people living in slums are used as proxy for understanding migrant health[18]. There is a need for disaggregated data and focused studies on migrants. For example, most interviewed NTEP staff believed that the loss to follow up was higher among migrants as compared to local residents; it would be worthwhile to study if there are indeed any treatment outcomes variations based on migrant status. Below are some examples of operational research areas specific to TB which can advance the understanding of this key population:

Predictors for unfavourable outcomes among migrants with TB

For example:

- What is the treatment completion rates among migrants with TB, and how they compare with treatment completion rates of non-migrants in the vicinity?
- How do loss to follow up rates vary between migrants and non-migrants?

- What is the prevalence of substance use (especially alcohol and tobacco) among migrants and impact on outcomes?
- What are the co-morbidities most commonly seen among migrants and how do they impact treatment outcomes?
- What proportion of migrants complete their treatment at the point of diagnosis vs choosing to get transferred to their home location? How does this impact treatment completion and outcomes?

Implementation of public health action and treatment support for migrants

For example:

- What proportion of migrants with TB receive direct benefit transfers in their entirety, and how does this compare with local residents /non migrants?
- What proportion of migrants completed their co-morbidity testing?
- Contact tracing and household contact testing was carried out for what proportion of migrants with TB?

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[18] Yadlapalli, Kusuma & Babu, Bontha. (2018). Migration and health: A systematic review on health and health care of internal migrants in India. The International journal of health planning and management. 33. 10.1002/hpm.2570

CONCLUSION

India is on a journey to become a developed nation by 2047, a goal which is being pushed through the massive investments in infrastructure projects. The government's commitment towards the goal is evident through its allocation of 3.3% of GDP to the infrastructure sector in the fiscal year 2024 (allocation to healthcare is 2.5%). As of early 2024, there are 15,580 projects worth USD 2,388 Billion at various stages of development in India[19]. These ambitious projects have created large-scale movements of people in the country. It is one of the many ironies of India that migrants, who form the backbone of India's march towards development, are excluded from health policy, research and programmatic implementation.

The intricate relationship between migration and tuberculosis (TB) underscores the multifaceted nature of global public health challenges. Through this rapid assessment, REACH has explored some dimensions of this relationship – the heightened vulnerability of migrant populations to TB, their challenge-ridden journey through the care cascade, as well as the issues caregivers face when serving this population.

There are many, many things to celebrate – service providers are clearly working hard to ensure adequate service delivery to migrants. But many people continue to stay under the radar, slipping through the cracks. Addressing TB among migrant populations requires a multifaceted approach that encompasses rights-based, equitable healthcare access, culturally sensitive interventions, and robust surveillance systems. In addition to the claims of a rights-based approach, there are epidemiological reasons why the current lack of attention towards TB in migrants needs to urgently shift: persistence of TB in this large cohort is contributing to pool of infection in the community.

The health fragility of migrants, evident in livelihood insecurity, negligence, and alienation in the new sociocultural environment is not limited to TB. Studies have also shown higher prevalence of NCDs among younger recent migrants as well as older settled migrants. A related consequence of migration is the increase in urbanization – India's urban population increased from 27% in 2001 to 31% in 2011; it is believed that internal migration contributes to nearly a quarter of this increase in urbanization (the rest is due to national increase in population)[20]. It is easy to see how these population movements put additional pressure on overburdened urban healthcare systems.

Building responsive, barrier-free care systems that migrants can freely access is the key to developing the healthcare systems of the future. As we continue to build the foundation for a developed India, it is imperative that policymakers, healthcare practitioners, and stakeholders collaborate to implement evidence-based strategies that address the unique challenges faced by migrant communities in relation to TB and other health threats. By prioritizing comprehensive interventions and leveraging the ongoing investments in infrastructure, we can arrive at a future where all individuals, regardless of their residence status, have access to quality healthcare and the opportunity to live healthy, fulfilling lives.

> *India is the only country trying to become a global economic power with an uneducated and unhealthy labour force.*
> **– Amartya Sen**

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[19] India Investment Grid (IIG) database. Available: https://indiainvestmentgrid.gov.in/index.jsp. Accessed 21 Mar 2024

[20] Krishna, P., & Raj, A. (2022). Health Condition of Internal Migrants in India: A Review. Indian Journal of Human Development, 16(1), 169-179. https://doi.org/10.1177/09737030221101567

APPENDIX

Appendix 1 – List of experts interviewed

#	Name	Position	Organisation
1	Dr Raghuram Rao	ADDG TB, Central TB Division	National TB Elimination Program (NTEP)
2	Dr Nevin Wilson	Senior Regional Project Coordinator, Middle East Response (TB, HIV and Malaria)	International Organization for Migration (IOM) Amman, Jordan
3	Dr Samir Howlader	Senior Technical Officer (Public Health, M&E)	International Organization for Migration (IOM) Amman, Jordan
4	Dr Shamim Manan	Associate Director	CHAI
5	Dr Shibu Balakrishnan	National Professional Officer (NPO)	World Health Organization (WHO)
6	Dr Dhrubajyoti Deka	Regional Team Lead with WHO-NTEP Technical Assistance Project	World Health Organization (WHO)
7	Dr Suma Shivakumar	Public Health Consultant	World Health Organization (WHO)
8	Dr Malik Parmar	National Professional Officer (NPO)	World Health Organization (WHO)
9	Dr Delphina Pathinathan	Public Health Consultant	World Health Organization (WHO)
10	Dr Ambarish Datta	Additional Professor – Epidemiology	Indian Institute of Public Health, Bhubaneswar
11	Dr Ashish Chawla	District TB Officer, Ludhiana	National TB Elimination Program (NTEP)
12	Mr Bidesi Jena	District Program Coordinator, Ganjam, Odisha	National TB Elimination Program (NTEP)
13	Dr Kaleeswari	District TB officer, Kanchipuram	National TB Elimination Program (NTEP)
14	Dr Manoj Verma	DTO Dehradun	National TB Elimination Program (NTEP)
15	Dr Pankaj Singh	STO Uttarakhand	National TB Elimination Program (NTEP)
16	Mr Alok Pandey	DPC Raipur, Chhattisgarh	National TB Elimination Program (NTEP)
17	Mr Parmanand Patil	TB Health Visitor, Raipur	National TB Elimination Program (NTEP)
18	Mr Loknath Pradhan	PMDT Coordinator, Bhubaneswar	National TB Elimination Program (NTEP)
19	Mr Sagar Ranjan Nayak	Senior Treatment Supervisor, Bhubaneswar	National TB Elimination Program (NTEP)
20	Mr V. Farmaan	Community health worker, TB and Migration project	REACH
21	Ms P. Radhika	Community Health Worker, TB and Migration project	REACH

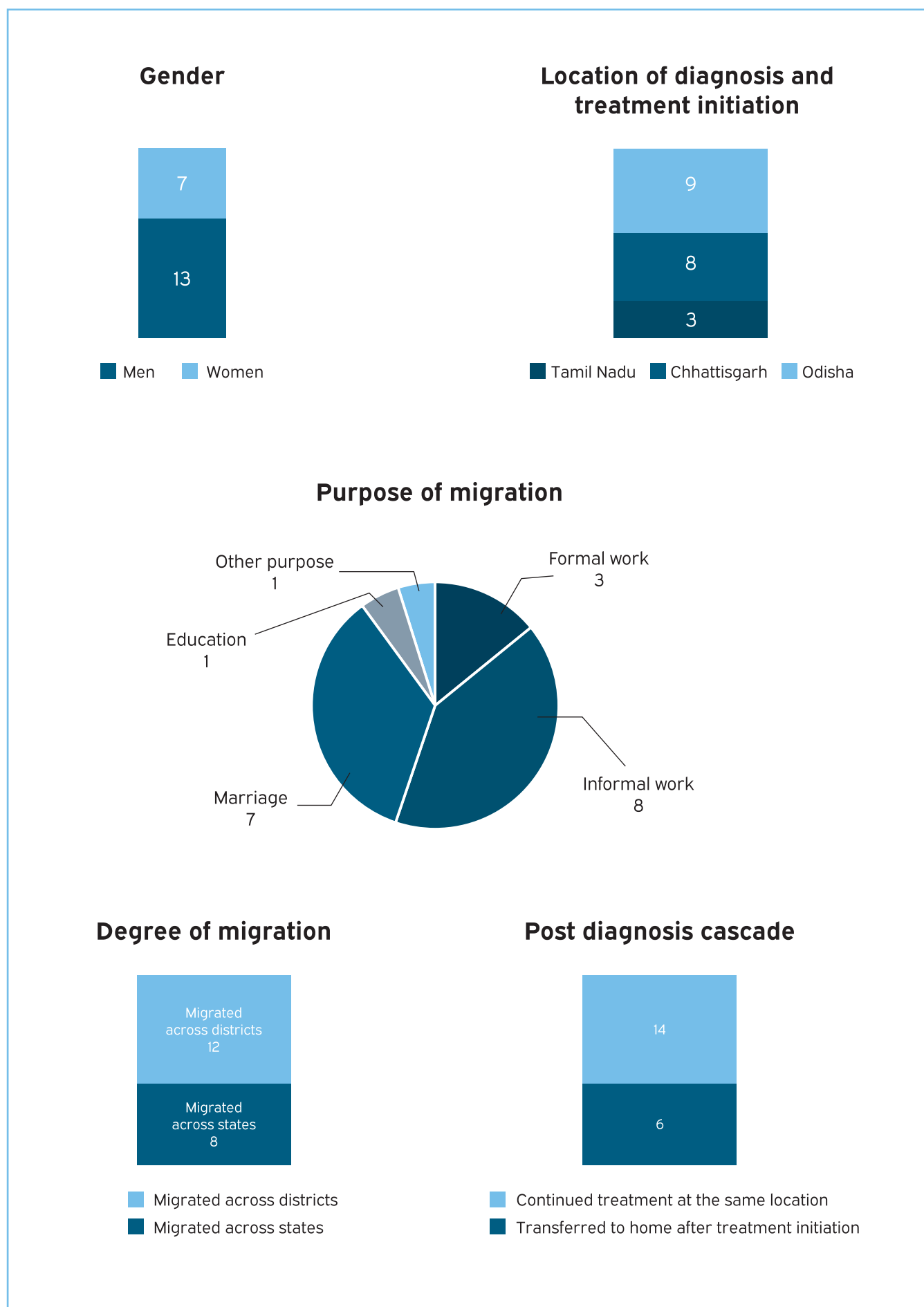# Appendix 2 – Discussion with community members

Names of community members who participated in the interviews and discussions have been redacted.

Grey highlighted cells – people who were transferred out after treatment initiation

Bold font – transfer across states

#	Description	Type and purpose of migration	Stay in new location	Post diagnosis cascade
Interviewees				
1	21 year old man with TB	Migrated across states (West Bengal to TN) for informal work	Less than 1 year	Initiated on treatment and remained at place of migration for treatment continuation; currently on treatment
2	19 year old man with TB	Migrated across states (Uttar Pradesh to Tamil Nadu) for informal work	Less than 1 year	Initiated on treatment and remained at place of migration for treatment continuation; currently on treatment
3	23 year old woman with TB	Migrated across states (Bihar to Tamil Nadu) after marriage	3 years	Transferred to home district after treatment initiation; currently on treatment
Participants in focus group discussions (FGDs) – Odisha				
1	28 year old woman with TB	Migrated across district for education	2 years	Initiated on treatment and remained at place of migration for treatment continuation; completed treatment
2	25 year old woman with TB	Migrated across districts after she got married	5 years	Initiated on treatment and remained at place of migration for treatment continuation; currently on treatment
3	**41 year old man with TB**	**Migrated across states for informal work (Odisha to Delhi)**	**5 years**	**Initiated on treatment in Delhi and transferred to home location (Bhubaneswar) after 2 months of treatment; currently on treatment**
4	25 year old man with TB	Migrated across districts for education	7 months	Initiated on treatment at Ganjam district, transferred to home location within a week of treatment completion; completed treatment and returned to Ganjam district
5	**28 year old man with TB**	**Migrated across states (Odisha to Karnataka) for formal work**	**1 year**	**Initiated on treatment in Bangalore and transferred to home location (Bhubaneswar) after 1 month of treatment; currently on treatment**
6	44 year old man with TB	Migrated across districts for informal work	2 years	Initiated on treatment and remained at place of migration for treatment continuation; currently on treatment
7	62 year old male with TB	Migrated across districts to live with married daughters' family	1 year	Transferred to a different district after treatment initiation to be with family; completed treatment 6 months ago
8	35 year old woman with TB	Migrated across districts after marriage	7 years	Initiated on treatment and remained at place of migration for treatment continuation; completed treatment
9	42 year old man with TB	Migrated across districts for formal work	10 years	Initiated on treatment and remained at place of migration for treatment continuation; completed treatment

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#	Description	Type and purpose of migration	Stay in new location	Post diagnosis cascade
Participants in focus group discussions (FGDs) – Raipur				
1	39 year old man with TB	Migrated across states (Madhya Pradesh to Chhattisgarh) for formal work	2 years	Initiated on treatment and remained at place of migration for treatment continuation; completed treatment
2	31 year old man with TB	Migrated across districts for informal work	5 years	Transferred to home district after treatment initiation; completed treatment 2 months ago, came back to Raipur and resumed work
3	22 year old woman with TB	Migrated across districts after marriage	10 months	Initiated on treatment 3 months ago, has remained at place of migration for treatment
4	41 year old man with TB	Migrated across states (Bihar to Chhattisgarh) for informal work at construction site	2 years	Initiated on treatment 2 months ago, has remained at place of migration for treatment
5	**33 year old woman with TB**	**Migrated across states (Bihar to Chhattisgarh) after marriage**	**10 years**	**Initiated on treatment 5 months ago, has remained at place of migration for treatment**
6	**43 year old man with TB**	**Migrated across states (Bihar to Chhattisgarh) for informal work**	**5 years**	**Initiated on treatment 5 months ago, has remained at place of migration for treatment**
7	**45 year old man with TB**	**Migrated across states (Odisha to Chhattisgarh) for informal work**	**7 years**	**Initiated on treatment and remained at place of migration for treatment continuation; completed treatment**
8	34 year old woman with TB	Migrated across districts after marriage	10 years	Initiated on treatment and remained at place of migration for treatment continuation; completed treatment

Figure 7 – Attributes of the 20 people with TB who participated in the rapid assessment

Gender

Men — 13
Women — 7

Location of diagnosis and treatment initiation

9
8
3

Tamil Nadu   Chhattisgarh   Odisha

Purpose of migration

Other purpose 1
Education 1
Marriage 7
Formal work 3
Informal work 8

Degree of migration

Migrated across districts 12
Migrated across states 8

Migrated across districts
Migrated across states

Post diagnosis cascade

14
6

Continued treatment at the same location
Transferred to home after treatment initiation

Appendix 3 – Questionnaires

Questions for migrant people with TB

1. Please share your experiences with accessing TB care services.

2. What have your experiences been like at the different points along the care cascade (the care cascade was described).

3. How do your experiences of care-seeking differ between your home location and the location of your migration?

4. What were your biggest challenges?

5. Who were your touch points through this process? (leading question - would having had a single touch point helped)

6. What kind of systems would have helped you manage these challenges? What does an ideal experience look like?

Questions for experts

1. How do you define a migrant in the context of healthcare services access in general? How do you define it in the context of TB care services?

2. In your view, is the healthcare system in general (and TB care system in particular) responsive to the needs of migrants with TB? Why/why not?

3. What are the key challenges that migrants face in their TB care cascade?

4. Under the TB care system which parts of the care cascade are easier to navigate, and which ones are particularly complex? Why is this?

5. What are the specific service provisions and policies under the NTEP which have been designed with migrants in view?

6. Do you know of examples from other countries where TB policies/service provisions aimed at migrants have been particularly notable/impactful?

7. Are there any national/global best practices for healthcare provision (not just TB) to migrants that we could learn from?

8. What would multi-sectoral engagement in care for migrants look like? Are there any national/global best practices for such multi-sectoral engagements?

9. Questions specifically for implementers

● How do you identify the migrants in your districts or in your care facility/facilities?

● How do you record the migration-related data?

● Can you share some of your recent experiences related to service provision to migrants with TB?

10. Questions specifically for CTD leadership

● How is the TB burden among migrants in India estimated/measured? Do we have a sense of what proportion of people with TB are migrants? Or what proportion of migrants with TB get notified to the NTEP? Any sense of scale, basically.

● NTEP reports include an annexure table for "bridge populations"– which are defined as truckers and migrants – what proportion of this population are migrants? The term "bridge population", we understand, has been derived from the HIV care program/NACO; to what extent is the term used and understood by the TB program?

● In 2022, NTEP's screening target for bridge population of 3 million (30 lakh); 2.8 million people were screened (93% target), 70,000 were referred for testing (2% of screened), 14 thousand got tested (21% of referred) and 345 were diagnosed (2% of tested). This is as per page 204 of the annual report. There is no data on linkage to treatment. Why is this?

11. Are migrants a priority among the key populations? Are there any plans to design/implement models for service provision to migrants with TB?

12. Are there any gender dimensions to migrants' experiences with TB?

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