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Insights into culturally appropriate latent tuberculosis infection (LTBI) screening in NSW: perspectives of Indian and Pakistani migrants

Abstract

2020 The Authors Objective: Latent tuberculosis (LTBI) case-finding and treatment are a focus of TB elimination in Australia. We sought the perspectives of migrants from two high-burden countries likely to be targeted by this strategy. Methods: To understand perceptions of migrant groups in Australia on LTBI screening, 28 in-depth interviews were conducted with Indian and Pakistani community members recruited purposively through local organisations in the Illawarra region, New South Wales. Drawing on local TB policy, data collected qualitatively was analysed using framework methodologies. Results: Australia's immigration system prioritises migrants of higher socioeconomic status. Participants supported elimination but perceived TB as a disease of the poor and not relevant to them. Lack of understanding of LTBI and sensitivity to being 'targeted' are further barriers to screening participation. Conclusion: Information provision and targeting rationale are an essential preamble to LTBI screening. Migration appears to modify cultural attitudes to TB, but not significantly. Despite less stigma surrounding TB in Australian contexts, testing privacy and confidentiality, and limiting public identification of specific groups remain important to program acceptability. Implications for public health: Progress towards TB elimination can be enhanced by consulting with targeted communities, using existing networks for communication and service provision; emphasising prevention benefits.

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Insights into culturally appropriate latent tuberculosis infection (LTBI) screening in NSW: perspectives of Indian and Pakistani migrants

Julie Hall,¹ Tajmmal Muhammad Kabir,² Patti Shih,¹ Chris Degeling¹

Australia has agreed to the targets established by the World Health Organization's *Framework towards tuberculosis elimination in low-incidence countries*.¹ In response, the National Tuberculosis Advisory Committee (NTAC) formulated a new *Strategic Plan for TB Control* that positions diagnosis and treatment of latent tuberculosis infection (LTBI) as a pathway for TB elimination in Australia.² Approximately 87% of TB cases in Australia occur in people born overseas,³ with the disease typically reactivating less than two years after arrival.⁴ The pursuit of elimination will require Australian TB programs to make significant changes in operational focus.⁵ In order to optimise effectiveness, LTBI screening programs may target groups who are at highest risk of past TB infection and future progression to active TB, such as immigrants from high-burden settings.⁶ LTBI screening uptake and the cooperation of targeted migrant communities, therefore, is potentially of great importance to the future of TB elimination in low-incidence settings like Australia.⁷

Past experience shows that effective targeted population screening depends on alignment of the program with stakeholder values,⁸ and on public perceptions of the benefits and harms of participation. The key feature of LTBI is that it is not an active disease. People with LTBI carry *Mycobacterium tuberculosis* in their bodies but do not have symptoms and cannot transmit the infection. A person with LTBI poses no immediate risk to others.

Abstract

Objective: Latent tuberculosis (LTBI) case-finding and treatment are a focus of TB elimination in Australia. We sought the perspectives of migrants from two high-burden countries likely to be targeted by this strategy.

Methods: To understand perceptions of migrant groups in Australia on LTBI screening, 28 in-depth interviews were conducted with Indian and Pakistani community members recruited purposively through local organisations in the Illawarra region, New South Wales. Drawing on local TB policy, data collected qualitatively was analysed using framework methodologies.

Results: Australia's immigration system prioritises migrants of higher socioeconomic status. Participants supported elimination but perceived TB as a disease of the poor and not relevant to them. Lack of understanding of LTBI and sensitivity to being 'targeted' are further barriers to screening participation.

Conclusion: Information provision and targeting rationale are an essential preamble to LTBI screening. Migration appears to modify cultural attitudes to TB, but not significantly. Despite less stigma surrounding TB in Australian contexts, testing privacy and confidentiality, and limiting public identification of specific groups remain important to program acceptability.

Implications for public health: Progress towards TB elimination can be enhanced by consulting with targeted communities, using existing networks for communication and service provision; emphasising prevention benefits.

Key words: latent tuberculosis, population screening, migrant health, qualitative research, health policy and planning

However, LTBI does entail an increased risk of developing TB disease (and transmitting infection) in the future. For most people with LTBI the risk of developing active disease is low, with the risk of reactivation being dependent on their age and the time since infection.⁹ Therefore, LTBI is a potential disease for some and an inconsequential infection in the vast majority of people who carry the mycobacteria. Prognostic ambiguity means that LTBI has different ethical and policy implications to active

TB disease.¹⁰ LTBI screening can trigger a complex cascade of testing, information provision, further diagnostic work-up and preventive therapy in someone who feels perfectly well and may never have progressed to active disease.^{11,12} TB elimination programs that offer comprehensive LTBI treatment can cause long-term physical harm through unpredicted complications, create significant economic burdens¹³ and potentially stigmatise treatment recipients in their communities. Without careful

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community-based engagement, individuals can suffer unnecessary harms and trust in the healthcare system can be undermined.^{14,15}

Recent estimates are that Australian residents born in India and Pakistan make substantial contributions to the incidence of LTBI – with median rates of 115 and 17 per one thousand population respectively; making up 12.1% and 1.8% of all LTBI in Australia.⁹ Previous research conducted in India and Pakistan indicate that TB remains highly stigmatised across the different cultural and ethnic groups living in the Indian subcontinent, contributing to delays in diagnosis with negative impacts on treatment compliance.^{16,17} Discriminatory processes such as social exclusion, loss or decline of employment, and diminished educational and marriage opportunities (especially for women) are also associated with a TB diagnosis, largely driven by perceptions of TB infectiousness.¹⁷⁻²² Despite reports of high levels of population awareness that TB is a treatable disease, misconceptions and knowledge deficits regarding aspects of TB aetiology, transmission pathways and treatment protocols have also been widely documented in both the Indian and Pakistani contexts.^{16,23,24} While there are a diverse range of sociocultural, economic and service orientated factors that impact on diagnosis and treatment trajectories, attitudes to and knowledge about TB inhibit diagnosis seeking and treatment compliance in these settings.^{16,25,26}

The sociocultural dimensions of targeted LTBI screening have not been comprehensively assessed in Australia. A qualitative study of Australian health care provider perspectives suggest that migrant groups have difficulty understanding LTBI, and can perceive LTBI screening as discriminatory.²⁷ The TB status of migrants has remained a political and security issue in Australia^{28,29} and migrants from countries where TB is highly stigmatised are likely to continue to share many of the cultural norms and attitudes towards tuberculosis prevalent in their country of origin, which has implications for uptake of TB-related services in low incidence settings.³⁰

Objective

In this paper we report on our work exploring the acceptability and perceived legitimacy of targeted LTBI screening with the Indian and Pakistani communities living in the Illawarra region of New South Wales. Drawing on the emerging policy framework for TB elimination

in Australia^{2,6} and using qualitative research methodologies, our aim was to describe and understand prevailing attitudes to TB of Indian and Pakistani migrants living in the Illawarra-Shoalhaven area, and identify potential sociocultural, ethical and practical barriers to the uptake of targeted LTBI screening by members of these communities.

Methods

Research design

Participatory research paradigms underpinned our approach in which data was collected from members of the Indian and Pakistani communities using in-depth interviews comprised of topic guiding questions. Members of the researcher team met with identified leaders from the local Pakistani and Indian communities in the preparatory phase of this study to discuss the proposed research questions and review the cultural acceptability of research processes. Formal support from community leaders was obtained and minor amendments were made to research protocols as a result of this consultation. Through this process it was established that English language was appropriate for all recruitment materials and for the conduct of interviews due to high levels of English fluency in both the local Indian and Pakistani communities.

Sample and setting

The study was undertaken in Illawarra, a coastal regional area just to the south of Greater Metropolitan Sydney in NSW, Australia. The region has a population of almost 300,000 people, with approximately 25% born overseas.³¹ Twenty-eight participants (13 Pakistani and 15 Indian) were recruited through the social media pages of community-based organisations and by distributing Participant Information Sheets in community venues such as mosques and social clubs (Table 1). People interested in participating in the study were asked to contact researchers at the University of Wollongong to discuss the study details and to organise a convenient interview time. People aged over 18 years of age who identified themselves as belonging to either the Indian or Pakistani communities were included in an initial pool from which participants were then selected purposively; people from these communities working as doctors or registered nurses were excluded because of the likelihood they already have extensive knowledge of TB. Australian Bureau of Statistics data, and the different migration patterns and histories of the Indian and Pakistani communities in the Illawarra region informed the sampling frame.³¹ Accordingly, interview participants from the Indian community were generally older with most migrating more than 10 years ago; whereas, participants from the Pakistani community were generally younger and much more recent migrants to Australia. The sample included people from a range of backgrounds including small business, banking, lawyers, hospitality, homemakers, engineers, academics, optometrists and international students (Table 1). All participants were born overseas but currently lived in Australia as citizens, permanent residents or on skilled migrant or student visas. The final number of participants reflects the point at which it was agreed by study researchers to cease data collection as saturation had been reached across the categories in our analysis Framework.^{32,33}

Data collection

Interviews were conducted by Authors 1 and 4 using a semi-structured interview guide. In line with the precepts of Framework methodologies, the interview questions were informed by policy documents, laws and the peer-reviewed literature relevant to current Australian migration processes,

Table 1: Participant characteristics.

	Cultural background	
	India n=15	Pakistan n=13
Gender		
Male	6	6
Female	9	7
Age (years)		
18-29	0	2
30-44	8	9
45-64	2	1
>65	5	1
Years living in Australia		
0-5	1	6
5-10	4	3
10-20	4	2
>20	6	2
Occupation		
Allied health (optometrists, physiotherapists, etc.)	3	2
Banking / Finance	2	0
Engineer/Information Technology	1	2
Hospitality / Small Business	2	2
Not working currently	3	3
University / Education sector	4	4

and the epidemiological and socio-cultural dimensions of TB and LTBI case finding and treatment in Australia, India and Pakistan (see Appendix for interview guide). The interviews centred on capturing participants' viewpoints and perceptions of three topic areas or themes:

1. Knowledge of the aetiology, testing and treatment of TB and LTBI.
2. Understandings and experiences of the social effects and individual impacts of a TB diagnosis.
3. Perceptions as to the potential benefits, harms and overall fairness of different strategies for targeted LTBI screening of migrant communities in Australia including:
 - mandatory pre-migration LTBI testing of immigrants from high-burden settings;
 - opportunistic GP-based LTBI testing of members of migrant communities from high-burden settings;
 - community-based LTBI testing programs of members of migrant communities from high-burden settings operating through existing network of TB clinics.

Interviews were conducted either face-to-face in participants' homes, offices or other meetings places, or via telephone. Guided by advice from Pakistani cultural leaders, a female researcher conducted all interviews with female Pakistani participants. Most participants were interviewed individually, eight chose to be interviewed with a member of their family or friend. Informed written consent was obtained for face-to-face interviews or via an approved oral consent process for telephone interviews. Interviews were audio-recorded and took between 21 and 55 minutes. Verbatim transcripts of interviews were produced by a professional research service. Preliminary checks indicated, and later more detailed analysis confirmed, that there were no significant differences in the materials collected during face-to-face and telephone interviews. Interview participants were invited to review their transcript and provide feedback or amendments to researchers. None of the participants requested changes to their written transcripts.

Data coding and analysis

Framework methods were used to guide analyses because we were undertaking policy-focused research, wherein key codes

were pre-defined by existing knowledge; and the codebook focused on addressing policy-relevant questions.³² Data analyses took place iteratively, parallel to data collection. Notes taken during the interviews and immediately afterwards served as the basis for a page or two of observations and reflections for each interview. These memos constituted the first level of interpretation removed from the interview context.³⁴ Following member checking, a sample of four transcripts were analysed thematically by the first and last authors identifying minor and major codes, and the relationships between them.³² In order to enhance analytic trustworthiness and rigor this process was undertaken blind, as a form of peer validation. Author 1 coded the remaining 24 transcripts consulting and cross checking with the last author to revise codes to better reflect emergent themes. Further descriptive and interpretive codes were developed using NTAC's *Strategic Plan for TB Control* and associated national and international frameworks and policy documents.^{1,2,6} Following the precepts of framework methodologies, all of this information was entered into a separate tabular matrix of rows (cases), columns (codes) and 'cells' of summarised data. The matrices provides a structure into which the researcher can systematically summarise coded data for inductive synthesis and aide deductive contrast and comparison.^{33,34} The final stage of analysis took place during the course of writing, through discussion between the authorship team and in the process of revising drafts. The study process was approved by the University of Wollongong Human Research Ethics committee (approval number 2019/116).

Results

TB knowledge and misconceptions

Interview participants from both the Indian and Pakistani communities had sound knowledge of TB symptoms, but gaps in understanding of TB aetiology and transmission were evident. Current global TB incidence and the severity of outcomes were under-recognised, with TB described as a disease that is 'no longer a problem'.

Almost all of the participants described themselves as coming from the higher social and economic strata in their countries of origin, which limited their exposure to TB patients. Australia's immigration policy prioritises skilled migrants, including a large

cohort from South Asia. Participants spoke of their elevated class status, level of education, or both, as factors that kept TB at a distance, such that TB was perceived to be a 'disease of the poor'. As one female participant noted:

If you are living in a good tight, secure conditions, you are going to good hospital ... It is more zero per cent that you are going to develop any kind of disease like tuberculosis or anything ... people who are coming over here, it's a little chance that they might have latent TB or any sign of TB (P#1 Pakistani Female)

This lack of exposure to the lived experience of TB appeared to contribute to gaps in understanding of TB. These gaps were most evident in younger participants. Some of the older people we spoke to recounted experiences of relatives with TB in India or Pakistan and being told to keep both social and physical distance from these family members. Some misconceptions were evident amongst participants from both cultural groups regarding modes of transmission and how TB health interventions shaped their personal risk – independent of their age. Firstly, some believed their childhood BCG vaccinations provided them with lifelong immunity. Secondly, others assumed they would have been screened for LTBI as well as active TB disease on migration to Australia, prompting a level of confidence that they had already been cleared of all forms of TB.

Most participants from both Indian and Pakistani backgrounds demonstrated no prior knowledge of LTBI; with a few interpreting the terminology to ascertain the dormancy and asymptomatic characteristics of LTBI. Participants from both cultural groups told us it was highly likely that most Indian and Pakistani community members in Australia are unaware of LTBI and related testing procedures and treatment.

TB/LTBI related stigma

Despite limited personal experience of TB, most interview participants believed that TB was a stigmatised condition in both India and Pakistan, causing social exclusion and isolation. Sociocultural beliefs about TB formed in Pakistan and India were considered by some participants to endure post-migration. Some evidence of this was heard from participants who expressed concern about the potential for a TB/LTBI diagnosis to cause stigma within their community in Australia. Some Indian participants in

particular commented that a TB diagnosis in Australia would be something to be 'kept quiet' and, for one participant, might even prompt a return to India for confidential treatment. Male and female participants from both the Indian and Pakistani communities spoke of local consequences such as exclusion from their cultural group and impacts on their employment opportunities.

From our background everything is kept a secret and admitting to people that you are suffering from this, it is a big stigma is, you could become an outcast. Normal things, like getting old, it's fine, but TB again, it's a bad thing. (P#3 Indian Female)

Many other participants were of the opinion that a TB or LTBI diagnosis in Australia would be a less stigmatised experience than in India or Pakistan. High-quality medical treatment and disease management protocols in Australia were discussed as factors that work to reposition TB as a less threatening, less fearful condition in this context. The Pakistani community, in particular, tended to view the potential for a TB diagnosis received in Australia more as an 'opportunity' to engage with a better standard of healthcare than available in Pakistan. Because members of the Indian and Pakistani communities in Australia are almost all highly-educated, a diagnosis of LTBI in Australia was considered unlikely to provoke shame or fear, as long as scaffolded by the provision of clear LTBI information.

All participants emphasised the importance of effective communication through community networks preceding program implementation to promote understanding of LTBI aetiology and lack of communicability, and reassure people that a TB or LTBI diagnose has no implications for their migration status.

Perceived 'fairness' of targeted LTBI screening

All participants recognised TB as causing significant harm and suffering and strongly supported global efforts towards elimination. However, views on targeting people from high-incidence countries for LTBI screening varied – especially between younger and older participants.

Targeting is justified

For participants in favour, targeted testing was justified because of the benefits it could provide to those at higher risk of LTBI. These discussions, especially with younger participants, tended to focus on the evidence

of risk and health benefit for *individuals*, with far less emphasis on the broader public health benefit of reducing TB incidence globally.

Conversely, our impression was that older participants were less concerned about targeting, and saw an LTBI screening program as a means to maintain current health standards in Australia – which they raised as a key driver for their migration. For these participants selectively deploying resources for LTBI screening was seen as a reasonable response to an identified problem in specific countries.

Targeting is unfair

Participants against targeted LTBI screening saw it as being unfair and unjustified because globalisation means that 'everyone' travels. Australian tourist visits to remote, low income countries are commonplace, which, from their understanding, meant that a broad range of Australians are vulnerable to TB exposure. Allied to this, participants from both groups also expressed some concerns about racial stereotyping. Pakistani females, most notably, were highly sensitised to the potential harms resulting from highlighting any association between their community and TB:

... , people are going to – see the Pakistanis standing there, oh he might or she might have the TB and then you are going to create a stigma around that specific community, the Pakistanis or the Indians. Even when you are living over here, we are like the second citizens ... Already there is some stigma around us ... if any other stamp would be stamped on us, that would be very difficult ... (P#24 Pakistani Female)

Many described possible psychological impact of targeting in terms of 'it will make us feel bad' as well as identifying possible social and employment discrimination resulting from public perceptions of Pakistanis linked to TB. Pakistani participants also raised concerns about the time, cost and inconvenience associated with participating in LTBI screening, which was perceived as being an unfair burden if imposed on some groups only.

LTBI screening strategies

Pre-migration LTBI screening

Most participants thought that establishing a LTBI screening program where testing was undertaken in the country of origin would provide distinct benefits. Blending LTBI testing seamlessly into the existing raft of migration health tests was appealing, offering

a convenient, structured pathway to testing and a less visible process of targeting certain groups. Making the test a mandatory part of standard migration processes was also viewed as a strength by some, providing benefits to more individuals and to public health. The need for Australian authorities to act in the interests of Australian citizens was seen as being sufficiently justified.

At the same time, some Pakistani participants raised concerns about offshore LTBI testing because of the level of burden being experienced by Pakistani nationals for travel and migration procedures. They highlighted extra costs, time and anxiety associated with offshore testing for an additional condition. Three participants were of the view that untreated LTBI should be a barrier to migration, but everyone else we spoke to were adamant that an LTBI diagnosis should not disrupt or delay migration and any required treatment should be provided in Australia.

Community-based post-migration LTBI screening

Establishing a voluntary LTBI screening program in Australia that targeted specific migrant groups raised concerns about acceptability and effectiveness. Pakistani participants were worried about the potential for social or economic discrimination. Their comments indicated some anxiety about anything that could contribute to existing vulnerabilities around social status in Australia and settling in to a new country.

... if such a program could find that particular group who have the latent infection, they might think that we are like segregating them. It may affect their employment – employers that they might think if you're a Pakistani you might have this infection. If it's not private, it's public, it can have some effect. (P#20 Pakistani Male)

At the same time a number of participants compared LTBI screening in the Australian setting with bowel and breast cancer screening programs. Within this frame LTBI screening was viewed as a 'caring', 'inclusive' initiative, demonstrating that the Australian Government was looking after its citizens. Even if the offer of LTBI testing is broadly construed as being a good thing for people who have migrated from countries with high burdens of TB, the voluntariness of post-migration community-based screening was seen as being problematic, particularly for older participants from the Indian

community, as it equated to 'unlikely' or ineffective rates of participation, especially for a condition that presented little immediate risk.

GP-based post-migration LTBI screening

LTBI testing conducted in local GP clinics was acceptable – and particularly favoured by participants from the Indian community. People from both groups told us that a significant number of their local communities are healthcare professionals. As a consequence, primary care providers can offer privacy, advice and a less public and culturally safe environment for dissemination of targeted LTBI information. However, participants from Pakistani and Indian backgrounds expressed culturally distinct attitudes to GP care that may shape their engagement with LTBI testing in this setting. Participants of both genders from the Indian community described regular visits to their GP and a high level of trust in the care and advice received, to the extent of deferring decision making about LTBI testing to their GP.

I think the GP is the best way because you can explain – he or she can explain better and they can straight away ask the question – all of my friends and close relatives I know, they go to GP every – like a few months or – that's the only way you can reach them about this sort of program. (P#6 Indian Male)

In contrast, participants from the Pakistani community described a cultural disinclination to visit doctors regularly or engage in regular screening tests because of high levels of mistrust of doctors and medical processes in Pakistan. These practices were noted to persist among Pakistani migrants in Australia, with the exception of older, long-term residents, who noted they have become more enculturated to regular GP visits and screening tests. Participants with temporary visas raised concerns about direct and indirect costs associated with LTBI screening. Any uncertainty regarding up-front costs of LTBI testing was seen as a barrier to participation – especially because 'free' LTBI testing at GPs may not be free for temporary visa holders who pay upfront fees for all other doctor visits.

Discussion

Our findings indicate broad support for TB elimination among members of Indian and Pakistani migrant groups living in Australia,

but some potential challenges related to their participation and engagement with targeted LTBI testing programs. Key concerns are that injudicious implementation of targeted screening of migrant groups could lead to social exclusion, promote racialised discourses, and disrupt efforts to find and maintain employment. Uncertainty surrounding the significance and trajectory of LTBI also may drive some level of resistance to testing for a disease that 'I probably won't even get' – especially in older and younger members of the community. Implementing a LTBI screening program without first providing information about differences between TB and LTBI and the epidemiological rationale for the targeted screening of specific groups could generate fear and disengagement.

Comparing our findings to the results of previous research conducted in India and Pakistan indicates that high levels of trust in the Australian government and health systems seem to modify attitudes of Indian and Pakistani migrants towards the social and medical impacts of TB disease, but not significantly; and not in ways that circumvent the need for careful community engagement.¹⁷⁻²² Because Australia's immigration system prioritises skilled migrants, most Indian and Pakistani people who have moved to Australia are highly educated. Our research shows that they perceive TB to be a disease of 'poor people' which, therefore, has 'nothing to do with them'. Under these conditions broad cultural targeting of members of these groups for LTBI screening could be seen as alienating, in part, because it fails to capture important nuances and distinctions within their life histories and cultural identity.

Broad disagreement about the potential benefits and risks of different LTBI screening strategies also draws attention to the range of ways in which TB control and Australian immigration policy intersect with the perceptions of migrant groups of their social and political vulnerability. Historically, and in the current era, the fear of TB remains relevant in contemporary political discourses on immigration.^{28,35} Under these conditions LTBI screening practices are not politically benign but have broader social consequences, such that, for many of the people we spoke to, testing privacy and confidentiality, and limiting public identification of specific migrant groups remain important to any LTBI case finding and treatment program

acceptability. The importance of engaging appropriate community networks for reaching across the different generations of cultural groups was emphasised as a necessary first step to LTBI screening program design and implementation.

Finally, for each of the topic areas covered during our interviews, participants spoke of the potential for perceived or enacted stigma, though they did not always use this specific term. Enacted TB stigma refers to exclusion, rejection or devaluation by others based on beliefs of social unacceptability. Perceived TB stigma refers to patient and family fears of inferiority stemming from the anticipation of an adverse judgement related to a TB diagnosis. Both are recognised to be a significant barrier to health care utilisation and adherence to treatments for people who have TB.^{30,36} Recent work draws attention to how analytic and policy approaches to health-related stigma tend to be siloed, focusing only on one disease or condition.³⁷ As the current study highlights, perceptions of 'otherness' and the impacts of discrimination enacted through social, organisational and community structures add complexity to health-related stigmatisation processes.³⁸ With regard to this, even as the stigmatisation of TB varies between cultures, TB stigma commonly arises from public health responses to TB in ways that influence affected populations as well as relevant institutions.^{36,39} This is not to say that manifestations of stigma are inevitable with TB diagnoses – careful attention to appropriate service design and communication strategies can work to mitigate these impacts and risks.^{5,40}

Implications for public health

Health services in NSW have a decentralised organisational structure, such that TB program delivery is devolved to 15 geographically defined Local Health Districts (LHDs). In the context of expanding LTBI case-finding and treatment in NSW, the participants in our study had a strong preference for these services to be provided through trusted community-based primary care providers. Primary care-based screening may meet the needs and preferences of many, but not necessarily all, affected communities. Our findings also suggest that any screening program that requires Pakistani and Indian migrants to be tested for LTBI at a designated TB clinic would meet with significant

resistance because of the associated risks of stigma, a sense of being unfairly targeted and potential to disrupt how members of these communities see themselves. Table 2 contains further recommendations for LTBI screening policy and practice relevant to the Indian and Pakistani communities living in Australia. Even as we only engaged members of these two migrant groups, *The Strategic Plan for the Control of Tuberculosis in Australia* indicates that migrants from other high burden settings such as Vietnam, China, Indonesia and the Greater Horn of Africa, to name a few, will also be asked to participate in any LTBI screening program.² As the timelines tighten towards 2035, further work should be done with all implicated communities to identify acceptable service models for achieving TB elimination in Australia.

Study limitations

Members of the Pakistani and Indian communities living in Illawarra without a high level of English language fluency may have been excluded from the study due to the use of English language in recruitment materials and interviews. Participants had limited understanding of LTBI treatment protocols and side effects so their positive attitudes towards the potential interventions could be modified by exposure to the lived experiences of others. As a qualitative study, our findings are not necessarily generalisable to other settings within or outside Australia, but because our results are largely consistent with the results of similar studies undertaken in India and Pakistan, we have confidence that many of the issues and concerns raised by participants would be shared by members of the same cultural communities living elsewhere.

Table 2: Policy Recommendations for LTBI case-finding in Australian Indian and Pakistani migrant communities.

Misconceptions and knowledge gaps about latent tuberculosis infections (LTBI) need to be addressed to enhance engagement with screening programs.
We recommend that existing community networks are the appropriate channel for the development and dissemination culturally appropriate information on LTBI screening.
Provide risk-related facts to explain reasons for targeted screening to mitigate perceptions of discrimination.
Acknowledge and address concerns about public and community-based messaging that identifies specific communities as a target for LTBI testing.
The feasibility of GP based LTBI screening should be examined because it was a preferred approach to testing – acknowledging that primary care use may vary between cultural communities.
The introduction of a pre-migration LTBI screening program should also be carefully considered as members of both communities found it to be broadly acceptable.
We recommend the communication of clear messages that LTBI status will not interfere with visa or residency status to enhance screening uptake.
The confidentiality and privacy of LTBI screening participants must be protected because of the potential for 'in community' stigma to result from a positive diagnosis.

Conclusions

This Australian study is one of the first conducted in a low-incidence setting to identify the perspectives of migrant groups towards latent tuberculosis screening. There are complex epidemiological, ethical and social dimensions associated with LTBI screening that make understanding the perspectives of those who would be targeted essential to identify and address potential harms.^{10,11} For members of Indian and Pakistani communities living in Australia, information provision and targeting rationale are an essential preamble to LTBI screening. Migration appears to modify cultural attitudes to TB, but not significantly. Despite less stigma surrounding TB for these cultural communities in Australian contexts, testing privacy and confidentiality, and limiting the public identification of specific groups will be important to program acceptability.

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