Table 5. Proposed TB program performance indicators specific to urban and foreign-born populations. Dark green notes indicators considered high priority by the discussion group.

Domain	Indicator group	Priority	Potential Indicator	Additional stratification (beyond age & sex)	Rationale	Extra Notes
Incidence and Inequalities	ADDED - Locally acquired TB		Need an indicator for local transmission	Stratify by age, country of origin, foreign borne, indigenous group		Locally acquired touches on outbreak measure; **Potential benchmark**: Overall foreign born locally acquired < 5%;
	ADDED - Homeless- TB therapy					
	EXTRA NOTES	Incidence, prevalence, mortality- higher risk/enhance are all given. Need to consider: 1) Length of exposure within country of birth, in relation to year landing in Canada, 2) Immigration classification (refugee, transition) and 3) Age, eg) < 5 years old; Note: Could use WHO regions nationally and country of origin locally;				
Lab reporting	Timely Smear		PHN indicator selected- AFB smear > 48 hrs, or NAAT although NAAT may be more valuable because something can be smear negative and culture positive;			Discordance between lab reporting across Canada; Labs should be determining their own turn-around-time
	Timely NAAT		Same day NAAT result with smear result			
	Timely DST (Culture)		2 weeks from positive culture to primary susceptibility results			
	ADDED- Timely DST (Molecular)					
Case Management and Treatment (Should be part of regular surveillance)	Early Diagnosis-Smear positive				Routine surveillance	Given; Every positive smear needs to be typed
	Early Diagnosis-symptoms-to-treatment		Replace with Indicator described by Fanning & Orr; Onset of cough to 1st AFB			
	Drug-Resistant Treatment Outcome		Create Drug-Resistant Report which could include: Proportion on drug resistant treatment, proportion that completed treatment, and proportion that died;			

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Change Management and Treatment (continued)	HIV - Treatment				Should be in the HIV Program Performance Indicators	
	DOT				Treatment support not DOT; Only important for high risk populations; not useful as an indicator;	
	Underserved populations		Could use England indicator "… patients with social risk factors recorded who received enhanced case management" as a potential program-oriented indicator		Need a patient-oriented indicator such as catastrophic clinical consequences (proportion of job loss, that can't access social support, expenses paid out of pocket), or employment benefits, social supports, patient satisfaction	
Contacts	Contact Identification		Priorities list generated in 7 days of diagnosis of index case; Then full contact list within a month (30 days)		Reasonable to prioritize high risk and close contacts (household, close contact, immunocompromised, young children < 5 years old); Timeline may need to depend on patient group (e.g. may require > 7 days to find contacts of an inner-city IDU or crystal meth patient)	**Challenges**: Time benchmark- Individuals may have new memories of who they've had contact with; Limited literature on success in finding contacts; system performance limitations of iPHIS;
	Contacts - Close					
	Contact Examination Adapted to: ADDED – High Priority Contact Examination		Could modify Heffernan & Long indicator to "Proportion of high risk/priority contacts of smear-positive pulmonary cases completely assessed (define "completely assessed"); Indicators should be different for adult vs children: 1) Proportion of children < 5 years old assessed within 7 days for pulmonary TB, starting prophylaxis; 2) Proportion of children < 5 starting treatment; 3) Proportion of other high priority contacts assessed within 30 days; 4) Proportion of high priority contacts that completed screening			**Potential benchmark**: > 90% High priority contacts identified within 48 hours and examined 8 days later;
	Contacts - LTBI Treatment				This indicator is subjective because it is based on providers	**Challenges**: Requires a chart review; Difficult to know reason for not starting LTBI treatment;

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Contacts (continued)	Recommended (offered)					
	Contacts - LTBI Treatment Acceptance				If treatment is initiated, can assume that it was accepted	
	Contacts – Timely LTBI Treatment Initiation		Proportion of high priority contacts start within 30 days of LTBI diagnosis; Indicator described by PHN and Fanning		Individuals that are initially negative can convert to positive so 28 days might not be useful. Need to consider time to specialist referral; Focusing on high priority contacts may be more feasible;	**Potential benchmark:** > 80%
	Contacts - LTBI - Decline Treatment F/up				Should not encourage as a metric, gives credence to bad care	
Screening and Follow up	People Living with HIV				Individuals tested for TB should also be tested for HIV;	Not certain if collected by HIV Programs
	People with Impaired Immunity		Indicator described by PHN although can make it less complex- Proportion of TB individuals in dialysis, TNF, Transplant;		Implementation easier as there are already biologic screening clinics in Canada; Easy to collect denominator; Can easily do cascade; IGRA in country of origin for HIV, TNF, Dialysis and silicosis;	**Challenge:** TST & IGRA testing not funded in some provinces
	IRCC Referrals - Examination Initiation		Cascade measure on highest risk people; EG) Renal program- linking dialysis codes with IGRA- potential place to focus and change reporting structure (TNF-inhibitor, high risk, IGRA positive, LTBI screened);			IRCC-PHAC study with looking at screening high risk migrants – current groups using IGRAs in country of origin for LTBI, HIV, end-stage kidney, silicosis, close contacts, TNF → Broaden screening in long term; IGRA system better than TST- allows for reporting;
	IRCC Referrals - Examination Completion				Already being reported	Will become relevant if screening is done; Keep as part of KPI?
	IRCC Referrals - Treatment Initiation				If the patient has an IGRA then LTBI treatment initiation will be measurable	
	IRCC Referrals - Treatment Completion				Need to revisit this topic	

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Screening & Follow up (continued)	New Entrant LTBI Screening Initiative		Proportion of refugees screened? Prioritize based on country of origin – Proportion of refugees screened from countries with > 30 or 200/100 000 incidence?		Difficult to define indicator since challenges with capturing data, and issues with decentralized systems (Patients may see multiple family physicians- could maybe add prompt)	**Challenges**: In some jurisdictions, immigrants from high incidence countries have higher burden than refugees but not formal screening process (no strategy to tackle this large LTBI reservoir); Stigma can be challenging when partnering with community; Some people don't believe TST- follow-up is with IGRA- 5% risk of activation doesn't concern them;
Other programmatic	Outbreaks - New			Locally acquired TB vs TB acquired overall		
	CTBRS Reporting - Completeness				Important surveillance priority which can improve program performance/ quality	
	Report Publication				Need to have real-time reporting to partners as well as agreements for reporting, metrics and info sharing to make informed decision making	
	Education- Health care provider		Not sure how to measure or the impact on change of behavior		Building health care capacity (i.e. primary physician competency) can aid in prevention and control of TB	
	Ethics		Need a community-oriented metric to measure community engagement activities;			National and international activities should promote collaboration; Involve TB affected individuals;
Determinants	Nutrition		Measure food security both pre and post treatment			
	ADDED- Support for System Navigation					
	ADDED - Addictions and Psychiatric comorbidities		Proportion that have addiction; What proportions are referred to services;			Trauma informed care
	ADDED - Housing status/homelessness		Indicator to measure housing status at diagnosis	Spectrum of homelessness		Social worker logs what is provided

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Determinants (continued)	ADDED -Meaningful engagement					**Challenge**: Data and capacity
	ADDED - Access to care		Proportion that have access to care; proportion that have access to care with a co-morbidity;			
	ADDED - Discharge support		Proportion that have a GP when they leave care		Re-linkage to primary care is important; Want patients to be better off after care	
	ADDED - Health literacy		Has health literacy improved over the course of care			
	ADDED - Catastrophic costs		Need a measure of patient hardship (e.g. Proportion that lost their job, became homeless, or can't access social welfare services)		Having a patient-oriented metric would allow patients to better tell their story and inform practice	Look to HIV for patient experience metrics
	ADDED - Mortality, post treatment				Beneficial to know the reason behind mortality post treatment such as trauma, drug-use, co-morbidity, cardiac or respiratory issues	
	ADDED - Migration			Choice vs forced;	Individuals often move from high incidence communities to cities or between jurisdictions	Housing stability; need for core housing
	EXTRA NOTES	**Challenges**: Stigma; Leadership changes often so buy-in is not there; Should include package of factors that reflects principles of the TRC; Need to address: 1) Who owns/ controls data, 2) how information reported to the community, 3) understanding within community 4) how the community can take action; May need to customize by community; Need peer navigator, peer education, and community champions for capacity building				