Preamble

This spreadsheet is a comparison of tuberculosis prevention and control program objectives, performance indicators, and targets compiled from guideline documents published by national and provincial organizations in Canada. This resource is intended for public health professionals involved in tuberculosis and control personnel to demonstrate potential strengths and opportunities for improvement for public health programs in the country.
"Monitoring Categories" formulated below are based on the classifications of objectives provided in the Pan-Canadian Public Health Network's Guidance for Tuberculosis Prevention and Control Programs in Canada and additional ones in Health Canada's Monitoring and Performance Framework for Tuberculosis Programs for First Nations On-Reserve

LEGEND:
*The text indicated in blue (seen in columns for FNIHB and BC) represents program objectives and/or targets that have been adopted from the *Guidance for Tuberculosis Prevention and Control Programs in Canada* for use in Provincial TB programs

*Italicized text blue is used to denote indicators that have been adopted from the Guidance for Tuberculosis and Prevention Control Programs in Canada for potential use but have not yet been implemented in the respective program

A Comparison of Tuberculosis Performance Indicators and Targets across TB Guidelines, Strategy Documents and Published Reports in Canada: National and Select Provinces

Monitoring Categories	Pan-Canadian Public Health Network *Guidance for Tuberculosis Prevention and Control Programs in Canada* *Pan-Canadian Public Health Network, 2012*		Canadian TB Standards, 7th Edition *Canadian TB Standards, 7th Edition* *Public Health Agency of Canada and Canadian Lung Association/Canadian Thoracic Society, 2014*		Health Canada: FNIHB National TB Program **See Appendix D & E for Additional Indicators in the Enhanced Monitoring for High Incidence Tuberculosis Communities** *Health Canada's Monitoring and Performance Framework for Tuberculosis Programs for First Nations On-Reserve: Performance Measurement Indicators - FNIHB National TB Program, 2013-2014*		Alberta *Tuberculosis in Alberta Surveillance Report* *2010 to 2012, Alberta Health, Office of the Chief Medical Officer of Health 2014*		British Columbia *BC Strategic Plan for Tuberculosis Prevention, Treatment and Control: 2016 Status Report, Published in 2017* *BC Centre for Disease Control. (2018). TB in British Columbia: Annual Surveillance Report*	
									Indicators, Objectives, and Targets for 2022	
	High-Risk Populations	**Objective(s)**			**Indicators**	**Targets**	**Indicators**	**Demographic Stratifiers**	**Objectives**	**Additional Stratification by Provincial Report**
Incidence	Indigenous/Aboriginal people: First Nations/Indian, Inuit, and Metis	Reduce the incidence and burden of active TB disease and LTBI	**No specific program objectives and/or performance targets regarding TB incidence rates were outlined in this document**		Number of newly reported cases of active TB (new and re-treatment cases) by age and sex	No Targets or Goals were reported in the objectives	Incidence Rate	National vs Provincial, Health Zones, Treaty Zones Gender (M/F), age group (0-14, 15-34, 35-64, >65 years)	Active TB Incidence Rate (reduce by 50% to 3.1 per 100,000)	yearly, health authority, health service delivery area, age & gender (<1, 1-4, 5-9, 10-19, 20-39-40-59, ≥60 years), country of origin (born outside of Canada, Canadian born), site of disease (respiratory, non-respiratory), treatment completion status (treatment completed in > 12 or <12 months, incomplete treatment, left province drug treatment, no treatment documented)
	Migrant from countries with high TB incidence	Develop targeted programs and policies that improve the detection and management of active TB disease and LTBI			Number of newly reported cases of respiratory TB by age and sex; by primary, pulmonary or other respiratory		Population group	Canadian born, Canadian born Aboriginal/Indigenous (on-reserve or off-reserve), Foreign-born (country of birth)	Active TB Incidence Rates in specific high risk and vulnerable groups such as foreign -born people from TB-endemic countries, HIV-infected people, Aboriginal/Indigenous peoples, homeless and under-housed populations (reduce by 50%)	
	Homeless and Underhoused	To find active cases (refer to PHAC's Homeless and Under-housed guidelines and statements, 2010)			Number of newly reported cases of nonrespiratory TB by age and sex		Site of Tuberculosis Disease	Respiratory, lymph node, miliary, central nervous system)		
	Institutional settings: Correctional facilities & Hospitals and long-term care facilities	a. To secure the earliest possible identification and treatment of disease b. To ensure that appropriate management of contacts within the institution is conducted, in collaboration with public health authorities c. to maintain appropriate infection control through administrative, environmental/engineering and personal controls			Number of newly reported cases of drug resistant TB by age and sex		Drug Resistance	Country of birth, new active or relapse case, drug resistance type		
	TB and HIV co-infection	To secure the necessary coordination of care between health care providers/agencies and individuals in order to provide appropriate treatment and follow-up			Number of newly reported cases of active TB (new and re-treatment cases) who were also co-infected with HIV by age and sex		Infectiousness	Smear-positive culture-positive, smear-negative culture-positive, smear-negative culture-negative		
					See Appendix D & E for Additional Indicators in the Enhanced Monitoring for High Incidence Tuberculosis Communities		HIV Co-Infection	Foreign-born, Canadian non-Aboriginal, Canadian-born Aboriginal		
							TB Mortality	TB was cause of death, TB contributed to death, TB did not contribute to death, age group		
					Deaths (Among Active TB Cases)	**Targets**	**No provincial strategic/guidance documents were publicly available that clearly outlined tuberculosis program objectives or indicators and the corresponding performance targets for reducing TB rates in subpopulations**			
					Number of deaths—TB was direct cause	No Targets or Goals were reported in the objectives				
					Number of deaths—TB contributed but was not cause of death					
					Number of deaths—had TB, but TB did not contribute to death					
	Lab Procedure	**Turnaround Time to Completion or Report for Laboratory Procedures**	**Lab Procedure**	**Turnaround Time to Completion or Report for Laboratory Procedures**	**Lab Procedure**	**Turnaround Time to Completion or Report for Laboratory Procedures**			**Procedure**	**Target Turnaround Time to Completion or Report for Laboratory Procedures**
Microbiological Diagnosis of Active TB Disease/Lab Reporting [Metrics]	Specimen collection and arrival at the laboratory	24 hours	Specimen collection and arrival at the laboratory	24 hours	*Specimen collection and arrival at the laboratory*	*24 hours*			Specimen collection and arrival at the laboratory	24 hours
	AFB smear microscopy	24 hours from specimen receipt	Acid-fast bacteria (AFB) smear microscopy	24 hours from specimen receipt	*AFB smear microscopy*	*24 hours from specimen receipt*			AFB smear microscopy	24 hours from specimen receipt
	Nucleic acid amplification testing for M. tuberculosis complex detection	24 hours from smear result	Nucleic acid amplification testing (NAAT) for MTBC detection	24 hours from smear result or 24 hours from receipt of specimen	*Nucleic acid amplification testing for M. tuberculosis complex detection*	*24 hours from smear result*			Nucleic acid amplification testing for M. tuberculosis complex detection	24 hours from smear result
	Bacteriological diagnosis—culture	Up to 6 weeks for broth cultures and 8 weeks for solid media cultures from specimen receipt	Bacteriological diagnosis – culture	Up to 6 weeks for broth cultures and 8 weeks for solid media cultures from specimen receipt	*Bacteriological diagnosis—culture*	*Up to 6 weeks for broth cultures and 8 weeks for solid media cultures from specimen receipt*			Bacteriological diagnosis—culture	Up to 6 weeks for broth cultures and 8 weeks for solid media cultures from specimen receipt
	Identification of mycobacterial species	21 days from specimen receipt	Identification of mycobacterial species	Maximum 21 days from specimen receipt	*Identification of mycobacterial species*	*21 days from specimen receipt*			Identification of mycobacterial species	21 days from specimen receipt
	Primary susceptibility testing	7-14 days from a positive culture	Primary phenotypic susceptibility testing	15 to 30 days from receipt of specimen in a primary laboratory 7-15 days from a positive culture in reference laboratories	*Primary susceptibility testing*	*7-14 days from a positive culture*			Primary susceptibility testing	7-14 days from a positive culture
	Reporting of all test results (electronically)	24 hours from test completion	Reporting of all test results (electronically)	24 hours from test completion	*Reporting of all test results (electronically)*	*24 hours from test completion*			Reporting of all test results (electronically)	24 hours from test completion
	Reporting of all test results (hard copy by fax or hand delivery)	48 hours from test completion	Reporting of all test results (mailed hard copy)	48 hours from test completion	*Reporting of all test results (hard copy by fax or hand delivery)*	*48 hours from test completion*			Reporting of all test results (hard copy by fax or hand delivery)	48 hours from test completion
HIV Serologic Testing	HIV status known and reported on PHAC Active TB Case Report Form	> 90% of cases by 2015			*HIV status known and reported on PHAC Active TB Case Report Form*	*> 90% of cases by 2015*			% of active TB cases that have been HIV tested	*specific indicators for the Microbiological diagnosis of tuberculosis are under development
	Program Objective	**Performance Target**			**LTBI Indicators**				**Program Objective**	**Performance Target (to be met by 2017)**
Targeted Screening for Active TB Disease and LTBI	HIV-positive individuals	100%	The ideal LTBI treatment delivery program will achieve, at a minimum, 80% acceptance of treatment among people with LTBI in whom treatment is indicated, and at least 80% of those starting will complete the required number of doses		Total number of reported contacts of active TB cases diagnosed in [year] a. Number of close contacts of active TB cases diagnosed in [year] b. Number of Other Contacts (not close) of Active TB Cases diagnosed in [year]	No specific performance targets and timelines were presented			HIV-positive individuals	100%
	End-stage renal disease	100%	The ideal LTBI treatment delivery program will achieve at least 80% of those starting, completing the required number of doses.		Of the total number of reported contacts of active TB cases diagnosed in [year], the number having no known past history of TB or LTBI (positive TST/IGRA), who were screened for LTBI				End-stage renal disease	100%
	Transplant-related immunosuppression	100%			Of the number of contacts screened for LTBI above, the number with a new positive TST/IGRA or TST/IGRA conversion (i.e., number of newly identified LTBI)				Transplant-related immunosuppression	100%
	Tumour necrosis factor alpha inhibitor use	100%			Of the number of contacts with a new positive TST/IGRA or TST/IGRA conversion above, the number recommended for treatment of LTBI				Tumour necrosis factor alpha inhibitor use	100%
	Long-term (≥ 1 month) corticosteroid use (prednisone ≥ 15 mg/day or equivalent)	≥ 75%			Of the number of contacts recommended for treatment of LTBI above, the number who accepted treatment for LTBI				Long-term (≥ 1 month) corticosteroid use (prednisone ≥ 15 mg/day or equivalent)	≥ 75%
					Of the number of contacts accepting treatment of LTBI above, the number who started treatment				**BC-specific indicators are under development**	
					Of the number of contacts accepting treatment of LTBI above, the number (without contraindications to INH or RMP) who started treatment					
					Of the number of contacts starting treatment of LTBI above (and without contraindications to INH or RMP), the number completing treatment within 12 months of treatment initiation					
					Of the number of contacts starting treatment of LTBI above (and without contraindications to INH or RMP), the number completing treatment at the time of reporting (irrespective of length of treatment)					
	Program Objective	**Performance Target**			**Program Objective**	**Performance Target**				**Performance Target (to be met by 2017)**
Contact Follow-Up/Contact Tracing/Contact Investigation	Initial list of contacts for each infectious TB case is completed within 7 calendar days	100%	initial list of contacts for each infectious TB case, completed within 7 calendar days	No performance targets for contact follow up were outlined in the Canadian TB Standards document	*Initial list of contacts for each infectious TB case is completed within 7 calendar days*	*100%*			Initial list of contacts for each infectious TB case is completed within 7 calendar days Average number of contacts per active TB patient Average number of contacts per respiratory active TB patient	100%
	Assessment of close contacts completed and LTBI treatment started, if indicated and not contraindicated or refused, within 28 calendar days	100%	assessment of close contacts completed and LTBI treatment started, if indicated and not contraindicated or refused, within 28 calendar days		*Assessment of close contacts completed and LTBI treatment started, if indicated and not contraindicated or refused, within 28 calendar days*	*100%*			Assessment of close contacts completed and LTBI treatment started, if indicated and not contraindicated or refused, within 28 calendar days	100%
	Proportion of contacts with a diagnosis of LTBI who begin treatment	≥ 80%	proportion of contacts with a diagnosis of LTBI who begin treatment		*Proportion of contacts with a diagnosis of LTBI who begin treatment*	*≥ 80%*			Proportion of contacts with a diagnosis of LTBI who begin treatment	≥ 80%
	Proportion of contacts beginning treatment for LTBI who complete treatment	≥ 80%	proportion of contacts beginning treatment for LTBI who complete treatment		*Proportion of contacts beginning treatment for LTBI who complete treatment*	*≥ 80%*			Proportion of contacts beginning treatment for LTBI who complete treatment	≥ 80%

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"Monitoring Categories" formulated below are based on the classifications of objectives provided in the Pan-Canadian Public Health Network's Guidance for Tuberculosis Prevention and Control Programs in Canada and additional ones in Health Canada's Monitoring and Performance Framework for Tuberculosis Programs for First Nations On-Reserve

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A Comparison of Tuberculosis Performance Indicators and Targets across TB Guidelines, Strategy Documents and Published Reports in Canada: National and Select Provinces

	Pan-Canadian Public Health Network		Canadian TB Standards, 7th Edition	Health Canada: FNIHB National TB Program *See Appendix D & E for Additional Indicators in the Enhanced Monitoring for High Incidence Tuberculosis Communities*		Alberta	British Columbia	
	Guidance for Tuberculosis Prevention and Control Programs in Canada *Pan-Canadian Public Health Network, 2012*		*Canadian TB Standards, 7th Edition* *Public Health Agency of Canada and Canadian Lung Association/Canadian Thoracic Society, 2014*	*Health Canada's Monitoring and Performance Framework for Tuberculosis Programs for First Nations On-Reserve: Performance Measurement Indicators - FNIHB National TB Program, 2013-2014*		*Tuberculosis in Alberta Surveillance Report* *2010 to 2012, Alberta Health, Office of the Chief Medical Officer of Health 2014*	*BC Strategic Plan for Tuberculosis Prevention, Treatment and Control: 2016 Status Report, Published in 2017*	*BC Centre for Disease Control. (2018). TB in British Columbia: Annual Surveillance Report*
Monitoring Categories							**Indicators, Objectives, and Targets for 2022**	
	Proportion of contacts completing treatment who show active TB disease within 2 years after completion	< 0.5 %	proportion of contacts completing LTBI treatment who show active TB disease within 2 years after completion	*Proportion of contacts completing treatment who show active TB disease within 2 years after completion*	< 0.5 %		Proportion of contacts completing treatment who show active TB disease within 2 years after completion	< 0.5 %
	Proportion of contacts with LTBI at high risk of progression to active TB disease, but unable or unwilling to be treated for LTBI who have chest radiography and sputum smear plus culture at 6, 12 and 24 months	≥ 90%		*Proportion of contacts with LTBI at high risk of progression to active TB disease, but unable or unwilling to be treated for LTBI who have chest radiography and sputum smear plus culture at 6, 12 and 24 months*	≥ 90%		Proportion of contacts with LTBI at high risk of progression to active TB disease, but unable or unwilling to be treated for LTBI who have chest radiography and sputum smear plus culture at 6, 12 and 24 months	≥ 90%
				See Appendix D & E for Additional Indicators in the Enhanced Monitoring for High Incidence Tuberculosis Communities				
	Program Objective	**Performance Target**		**Program Objective**	**Performance Target**		**Program Objective**	**Performance Target (to be met by 2017)**
Treatment of Active TB Disease	Started on anti-TB drugs within 48 hours of diagnosis	≥ 95% of cases		Started on anti-TB drugs within 48 hours of diagnosis	≥ 95% of cases		Started on anti-TB drugs within 48 hours of diagnosis	≥ 95% of cases
	Treated by standard or enhanced directly observed therapy	≥ 90% of cases		Treated by standard or enhanced directly observed therapy	≥ 90% of cases		Treated by standard or enhanced directly observed therapy	≥ 90% of cases
	Treatment started with 4 or more anti-TB drugs until drug sensitivity test results are available, unless there are current local drug sensitivity data showing that resistance is not a risk	≥ 90% of cases		Treatment started with 4 or more anti-TB drugs until drug sensitivity test results are available, unless there are current local drug sensitivity data showing that resistance is not a risk	≥ 90% of cases		Treatment started with 4 or more anti-TB drugs until drug sensitivity test results are available, unless there are current local drug sensitivity data showing that resistance is not a risk	≥ 90% of cases
	Sputum culture conversion in culture-positive, drug-sensitive respiratory cases	≥ 80% have 3 consecutive negative sputum cultures within 60 days of treatment initiation		Sputum culture conversion in culture-positive, drug-sensitive respiratory cases	≥ 80% have 3 consecutive negative sputum cultures within 60 days of treatment initiation		Sputum culture conversion in culture-positive, drug-sensitive respiratory cases	≥ 80% have 3 consecutive negative sputum cultures within 60 days of treatment initiation
	Treatment success (cure or completion) within 12 months of treatment initiation for patients who did not die or transfer out during treatment	≥ 90% of cases		Treatment success (cure or completion) within 12 months of treatment initiation for patients who did not die or transfer out during treatment	≥ 90% of cases		Treatment success (cure or completion) within 12 months of treatment initiation for patients who did not die or transfer out during treatment	≥ 90% of cases
	Re-treatment rate within 2 years after the end of previous treatment in Canada	≤ 3%		Re-treatment rate within 2 years after the end of previous treatment in Canada	≤ 3%		Re-treatment rate within 2 years after the end of previous treatment in Canada	≤ 3%
	Acquired drug resistance rate	0%		Acquired drug resistance rate	0%		Acquired drug resistance rate	0%
				Number of TB cases (active and re-treatment) diagnosed in [year]	No national performance targets were given in this document			
				Number of TB cases (active and re-treatment) diagnosed in [year] who completed treatment (including cured) within one year of treatment start date				
				Number of TB cases diagnosed in [year] who died before or during treatment within one year of treatment start date				
				Number of TB cases diagnosed in [year] who transferred out before treatment completion within one year of treatment start date				
	Program Objective	**Performance Target**		**Program Objective**	**Performance Target**		**Program Objective**	**Performance Target**
Immigration Medical Surveillance	Proportion of individuals referred for immigration medical surveillance who (1) keep the first appointment with the clinic/physician or who have been evaluated by public health and (2) the relevant provincial/territorial authorities have reported such information to Citizenship and Immigration Canada	≥ 90%		Proportion of individuals referred for immigration medical surveillance who (1) keep the first appointment with the clinic/physician or who have been evaluated by public health and (2) the relevant provincial/territorial authorities have reported such information to Citizenship and Immigration Canada	≥ 90%		Proportion of individuals referred for immigration medical surveillance who (1) keep the first appointment with the clinic/physician or who have been evaluated by public health and (2) the relevant provincial/territorial authorities have reported such information to Citizenship and Immigration Canada	*Specific Indicators [and targets] are under development*
				Performance Indicator				
BCG Vaccination	The National Advisory Committee on Immunization issues guidelines on the use of BCG vaccine and will provide future guidelines as new TB vaccines become available		BCG is currently recommended in Canada for infants in high-incidence settings and also may be administered to travellers returning for extended stays to a high TB incidence country where BCG is routinely given. Vaccination in infants in First Nations and Inuit communities or groups of people with an average annual rate of smear-positive pulmonary TB greater than 15/100,000 population, or an annual rate of culture-positive pulmonary TB greater than 30/100,000 during the previous 3 years, or an annual risk of TB infection (ARI) greater than 0.1%, or if early identification and treatment of LTBI are not available	Number of communities using BCG vaccination	Only relevant for regions where BCG is still in use			
				Number of BCG vaccinations administered				
				Number of births eligible to receive BCG vaccination during reporting period				
				Number of reported adverse reactions from BCG				
				Adverse reactions from BCG: line list of type of reaction(s) for each adverse event				
				Performance Indicator				
Outbreaks				Number of new outbreaks (new in the reporting period)	No target was published for these performance indicators			
				Number of outbreaks in [year] that were ongoing from previous year				
				Number of active TB cases per new outbreak				
				Number of active TB cases per outbreak ongoing from previous year(s)				
	Resource(s): http://www.phn-rsp.ca/pubs/gtbpcp-oppcttc/pdf/Guidance-for-Tuberculosis-Prevention-eng.pdf		Resource(s): Canadian Tuberculosis Standards, 7th Edition, page 145 & 306 https://ntrauss.ca/CKEMAC/wp-content/uploads/2013/11/Canadian_TB_Standards_7th-edition_English.pdf	Resource(s): https://www.canada.ca/en/health-canada/services/publications/science-research-data/monitoring-performance-framework-tuberculosis-programs-first-nations-reserve-2015.html		Resource(s): https://open.alberta.ca/dataset/968568b1-2c76-41b8-ad2d-1078d23b1463/resource/45c52ff1-e83b-4c96-869f-a14e763c069b/download/8755290-2014-tuberculosis-alberta-surveillance-report-2010-2012-2014-06.pdf	Resource(s): BC Strategic Plan for Tuberculosis Prevention, Treatment and Control: 2016 Status Report http://www.bccdc.ca/resource-gallery/Documents/Statistics%20and%20Research/Statistics%20and%20Reports/TB/TB-Strat-Plan-Progress-Report-2016.pdf	Resource(s): BC Centre for Disease Control. (2018). TB in British Columbia: Annual Surveillance Report 2016. Retrieved from http://www.bccdc.ca/health-professionals/data-reports/tuberculosis-surveillance

Preamble

The following spreadsheet is a tabular compilation of State-level tuberculosis prevention and control program objectives, indicators, and targets in the United States compared to the National TB Program Objectives and Performance set forth by the Center for Disease Control.
This resource is intended for use by those involved in tuberculosis public health programming and will give an insight on what unique indicators are also being measured and reported by the relevant health authorities.
"Monitoring Categories" formulated below are based on the classifications of objectives provided in CDC's National TB Program Objectives & Performance Targets for 2020

A Comparison of TB Performance Indicators from Select States in the United States of America

	United States Center for Disease Control (CDC)	Alaska		California		Minnesota	
	From United States National TB Program Objectives and Performance Targets for 2020 Centers for Disease Control and Prevention, Division of Tuberculosis Elimination, 2015	*Alaska Tuberculosis Program Manual Alaska Department of Health and Social Services, 2017*	*Tuberculosis in Alaska 2014 Annual Report*	*California Objectives and Targets 2015-2019 California Department of Public Health - Tuberculosis Control Branch, 2015*	*California 2017 Provisional Data Tables*	*Tuberculosis (TB) Prevention and Control Program Objectives for Minnesota, 2015 – 2019 Minnesota Department of Health, 2015*	*Tuberculosis Prevention and Control Program Quarterly Surveillance Report, JANUARY 1, 2019 – MARCH 31, 2019*
Monitoring Categories	**Indicators (& 2020 Targets)**	**Indicators (& 2020 Targets)**	**Additional Stratification by State Reports**	**Indicators (& 2019 Targets)**	**Additional Stratification by State Reports**	**Indicators (& 2019 Targets)**	**Additional Stratification by State Reports**
Goals for Reducing TB Incidence							
TB Incidence Rate	1. Reduce the incidence of TB disease (1.4 cases per 100,000)	Reduce the incidence of TB disease (1.4 cases per 100,000)	sex (M/F), median age, regional trends within state, proportion of total cases from the vulnerable populations (homeless, HIV-positive, IV and non-IV drug use, excessive alcohol use > 15 years old), body site of non-pulmonary TB	Reduce the incidence of TB disease (3.4 cases per 100,000)	Percent change in TB incidence rate from previous year and 10 year change (in all demographics), sex (M/F), reporting jurisdiction, homeless, correctional facility resident, long-term care facility resident, drug use (IV/non-IV), alcohol use, occupation of the infected person,	Reduce the incidence of TB disease (-)	geographic region in state (counties), age (<5, 5-14, 15-24, 25-44, 45-64, ≥65 years), risk category (substance use, homeless, HIV-infected, other medical condition, inmate, nursing home resident), specified site of non-pulmonary TB (pulmonary, extrapulmonary, or both)
U.S.-Born Persons	2. Decrease the incidence of TB diseases among U.S-born persons (0.4 cases per 100,000)	a. Decrease the incidence of TB diseases among U.S-born persons (0.4 cases per 100,000) b. Decrease the incidence of TB diseases among among U.S.-born persons who are not Alaska Native (0.4 cases per 100,000) c. Decrease the incidence of TB disease among Alaska Native persons (20 cases per 100,000)	Alaska Native vs Non-Native cases	Decrease the incidence of TB diseases among U.S-born persons (1.1 cases per 100,000)	Race/Ethnicity: White, American Indian/alaska Native, Native Hawaiian/Pacific Islander, Multi-racial	Not indicator or target was explicitly stated in guidance document, however, it is reported in surveillance reports	-
Foreign-Born Persons	3. Decrease the incidence of TB disease among foreign-born persons (11.1 cases per 100,000)	Decrease the incidence of TB disease among foreign-born persons (11.1 cases per 100,000)	Country of origin of foreign-born cases	Decrease the incidence of TB disease among foreign-born persons (10.8 cases per 100,000)	Reporting number of cases and incidence rate per Birthplace	Not indicator or target was explicitly stated in guidance document, however, it is reported in surveillance reports	-
U.S.-Born Non-Hispanic Blacks or African Americans	4. Decrease the incidence of TB disease among U.S.-born non-Hispanic blacks or African Americans (1.5 cases per 100,000)	Decrease the incidence of TB disease among U.S.-born non-Hispanic blacks or African Americans (1.5 cases per 100,000)	Incidence rate stratified by multiple races/ethnicities (eg. white, black/african-american, foreign-born, etc)	Decrease the incidence of TB disease among U.S.-born non-Hispanic blacks or African Americans (2.2 cases per 100,000)	Both the number of cases and the incidence rate per 100,000 population is reported	Not indicator or target was explicitly stated in guidance document, however, it is reported in surveillance reports	Incidence rate stratified by multiple races/ethnicities: white, black, hispanic/latino, asian, hawaiin/other pacific islander, american indian, multi-racial
Children Younger than 5 years of Age	5. Decrease the incidence of TB disease among children younger than 5 years of age (0.3 cases per 100,000)	Decrease the incidence of TB disease among children younger than 5 years of age (0.3 cases per 100,000)	Pediatric case rate for children < 15 years old (0-14); school-based TB program *(Alaska's <15 population has a higher TB incidence rate than the rest of the U.S)*	Decrease the incidence of TB disease among children younger than 5 years of age (pediatric case rate: 1.9 cases per 100,000)	age groups: 0-4, 5-14, 15-24, 25-44, 45-64 and 65+	Not indicator or target was explicitly stated in guidance document, however, it is reported in surveillance reports	-
Objectives on Case Management and Treatment							
Known HIV Status	6. Increase the proportion of TB patients who have a positive or negative HIV test result reported (98%)	Increase the proportion of TB patients who have a positive or negative HIV test result reported (98%)	-	Proportion of TB patients who have a positive or negative HIV test result reported (96.2%)	Stratified by medical risk factors: diabetes mellitus, TNF-alpha Antagonist Therapy, end-stage renal disease, post-organ transplant, other immunosuppressive condition	Proportion of TB patients with a known HIV status reported (94%)	-
Treatment Initiation	7. For TB patients with positive acid-fast bacillus (AFB) sputum-smear results, increase the proportion who initiated treatment within 7 days of specimen collection (97%)	For TB patients with positive acid-fast bacillus (AFB) sputum-smear results, increase the proportion who initiated treatment within 7 days of specimen collection (97%)	-	Proportion of TB patients with positive acid-fast bacillus (AFB) sputum-smear results who initiated treatment within 7 days of specimen collection (95.5%).	-	Proportion of TB patients with positive acid-fast bacillus (AFB) sputum-smear results who initiated treatment within 7 days of specimen collection (98%).	-
Recommended Initial Therapy	8. For patients whose diagnosis is likely to be TB disease, increase the proportion who are started on the recommended initial 4-drug regimen (97%)	For patients whose diagnosis is likely to be TB disease, increase the proportion who are started on the recommended initial 4-drug regimen (97%)	-	For patients whose diagnosis is likely to be TB disease, increase the Proportion who are started on the recommended initial 4-drug regimen (95.2%)	-	For patients whose diagnosis is likely to be TB disease, increase the Proportion who are started on the recommended initial 4-drug regimen (94%)	-
Sputum Culture Result Reported	9. For TB patients ages 12 years or older with a pleural or respiratory site of disease, increase the proportion who have a sputum culture result reported (98%)	For TB patients ages 12 years or older with a pleural or respiratory site of disease, increase the proportion who have a sputum culture result reported (98%)	-	For TB patients ages 12 years or older with a pleural or respiratory site of disease, increase the proportion who have a sputum culture result reported (98%).	-	For TB patients ages 12 years or older with a pleural or respiratory site of disease, increase the proportion who have a sputum culture result reported (96%).	-
Sputum Culture Conversion	10. For TB patients with positive sputum culture results, increase the proportion who have documented conversion to negative results within 60 days of treatment initiation (73%)	For TB patients with positive sputum culture results, increase the proportion who have documented conversion to negative results within 60 days of treatment initiation (73%)	-	For TB patients with positive sputum culture results, increase the proportion who have documented conversion to negative results within 60 days of treatment initiation (76%).	-	For TB patients with positive sputum culture results, increase the proportion who have documented conversion to negative results within 60 days of treatment initiation (72%).	-
Completion of Treatment	11. For patients with newly diagnosed TB disease for whom 12 months or less of treatment is indicated, increase the proportion who complete treatment within 12 months (95%)	For patients with newly diagnosed TB disease for whom 12 months or less of treatment is indicated, increase the proportion who complete treatment within 12 months (95%)	-	For patients with newly diagnosed TB disease for whom 12 months or less of treatment is indicated, increase the proportion who complete treatment within 12 months (88.9%)	Proportion of on directly observed therapy and proportion on self administered therapy; treatment outcomes: completed in less than 12 months, completed in over 12 months, died, lost to follow up, refused, adverse event	For patients with newly diagnosed TB disease for whom 12 months or less of treatment is indicated, increase the proportion who complete treatment within 12 months (95%)	-
				Proportion of deaths due to TB (5.6%)	Stratified by vital status: dead at diagnosis, alive at diagnosis, or alive and started treatment		
				Proportion of inappropriate self-administered therapy (2.0%)	-		
Objectives on Laboratory Reporting							
Turnaround Time - Culture	12. For TB patients with cultures of respiratory specimens identified with M. tuberculosis complex (MTBC), increase the proportion reported by the laboratory within 25 days from the date the specimen was collected (78%). *NOTE: 25 days includes 21 days for culture to grow and 4 days for specimen collection and delivery to lab.*	Percentage of culture-positive or nucleic acid amplification test-positive M. tuberculosis complex results will be reported by the laboratory within 21 days from the date the initial specimen is received (85% by 2015)	Number of patients who received NAA Testing	For TB patients with cultures of respiratory specimens identified with M. tuberculosis complex (MTBC), increase the proportion reported by the laboratory within 25 days from the date the specimen was collected (67.9%). NOTE: 25 days includes 21 days for culture to grow and 4 days for specimen collection and delivery to lab.	-	Turnaround Time for Culture not listed as an indicator in the Minesota strategic document. There are also no targets/goals highlighted for this indicator	
Turnaround Time - NAA	13. For TB patients with respiratory specimens positive for MTBC by nucleic acid amplification (NAA), increase the proportion reported by the laboratory within 6 days from the date the specimen was collected (92%). *NOTE: 6 days includes 2 days for detection and 4 days for specimen collection and delivery to lab .*			For TB patients with respiratory specimens positive for MTBC by nucleic acid amplification (NAA), increase the proportion reported by the laboratory within 6 days from the date the specimen was collected (96.2%). *NOTE: 6 days includes 2 days for detection and 4 days for specimen collection and delivery to lab* *Proportion of Nucleic Acid Amplification Test used - Smear-Positive TB (74.7%) *Proportion of Nucleic Acid Amplification Test used - Smear-Negative TB (30.8%)	-		
Drug-Susceptibility Result	14. For TB patients with positive culture results, increase the proportion who have initial drug-susceptibility results reported (100%)	Percentage of initial M. tuberculosis isolates will undergo susceptibility testing (100%)	Proportion of cases that were isoniazid-resistant & Proportion of cases that were multiple drug resistant (MDR-TB)	For TB patients with positive culture results, increase the proportion who have initial drug-susceptibility results reported (98%)	Country of origin for the drug resistant cases	Drug-susceptibility results reported for culturepositive cases (100%)	Number of cases with any drug resistance to first-line anti-TB medications, Number of cases with any Isoniazid resistance, Number of cases with multi-drug resistantTB

Preamble

The following spreadsheet is a tabular compilation of State-level tuberculosis prevention and control program objectives, indicators, and targets in the United States compared to the National TB Program Objectives and Performance set forth by the Center for Disease Control.
This resource is intended for use by those involved in tuberculosis public health programming and will give an insight on what unique indicators are also being measured and reported by the relevant health authorities.
"Monitoring Categories" formulated below are based on the classifications of objectives provided in CDC's National TB Program Objectives & Performance Targets for 2020

A Comparison of TB Performance Indicators from Select States in the United States of America

	United States Center for Disease Control (CDC)	Alaska		California		Minnesota	
	From United States National TB Program Objectives and Performance Targets for 2020 *Centers for Disease Control and Prevention, Division of Tuberculosis Elimination, 2015*	*Alaska Tuberculosis Program Manual* *Alaska Department of Health and Social Services, 2017*	*Tuberculosis in Alaska 2014 Annual Report*	*California Objectives and Targets 2015-2019* *California Department of Public Health - Tuberculosis Control Branch, 2015*	*California 2017 Provisional Data Tables*	*Tuberculosis (TB) Prevention and Control Program Objectives for Minnesota, 2015 – 2019* *Minnesota Department of Health, 2015*	*Tuberculosis Prevention and Control Program Quarterly Surveillance Report, JANUARY 1, 2019 – MARCH 31, 2019*
Universal Genotyping	15. For TB patients with a positive culture result, increase the proportion who have a MTBC genotyping result reported (100%)			For TB patients with a positive culture result, increase the proportion who have a MTBC genotyping result reported (98%)	Cases are stratified by cluster size	Universal genotyping of culture-positive cases (100%)	-
				Interferon-Gamma Release Assay	Stratified by result: positive, negative, not performed, indeterminate, or unknown		
Objectives on Contact Investigations							
Contact Elicitation	16. For TB patients with positive AFB sputum-smear results, increase the proportion who have contacts elicited (100%)		Count of contacts to smear positive cases Percentage of cases with named contacts	For TB patients with positive AFB sputum-smear results, increase the proportion who have contacts elicited (98%)	-	For TB patients with positive AFB sputum-smear results, increase the proportion who have contacts elicited (100%)	-
Examination	17. For contacts to sputum AFB smear-positive TB cases, increase the proportion who are examined for infection and disease (93%).		Proportion of contacts evaluated for TB infection/disease, percentage of contacts with LTBI, percentage of contacts with [active] TB disease	For contacts to sputum AFB smear-positive TB cases, increase the proportion who are examined for infection and disease (95.6%).	-	For contacts to sputum AFB smear-positive TB cases, increase the proportion who are examined for infection and disease (90%).	-
Treatment Initiation	18. For contacts to sputum AFB smear-positive TB cases diagnosed with latent TB infection, increase the proportion who start treatment (91%).	Percentage of TB patients with positive AFB smears will begin treatment within 7 days of specimen collection (90%).	Proportion of contacts started on therapy	For contacts to sputum AFB smear-positive TB cases diagnosed with latent TB infection, increase the proportion who start treatment (93.8%).	-	For contacts to sputum AFB smear-positive TB cases diagnosed with latent TB infection, increase the proportion who start treatment (91.%).	-
Treatment Completion	19. For contacts to sputum AFB smear-positive TB cases who have started treatment for latent TB infection, increase the proportion who complete treatment (81%)		Proportion of contacts who completed thereapy	For contacts to sputum AFB smear-positive TB cases who have started treatment for latent TB infection, increase the proportion who complete treatment (88%)	-	For contacts to sputum AFB smear-positive TB cases who have started treatment for latent TB infection, increase the proportion who complete treatment (79%)	-
Objectives on Examination of Immigrants and Refugees							
Examination Initiation	20. For immigrants and refugees with abnormal chest radiographs (X-rays) read overseas as consistent with TB, increase the proportion who initiate a medical examination within 30 days of notification (84%).	According to the Tuberculosis Manual 2017, Alaska TB programming uses the same indicators and targets for 2020, unless otherwise indicated	-	For immigrants and refugees with abnormal chest radiographs (X-rays) read overseas as consistent with TB, increase the proportion who initiate a medical examination within 30 days of notification (63.5%).	Proportion of Immigrants and Refugees that completed evaluation	For immigrants and refugees with abnormal chest radiographs (X-rays) read overseas as consistent with TB, increase the proportion who initiate a medical examination within 30 days of notification (64.8%).	Follow-up to Pre-Immigration Exam
Examination Completion	21. For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB, increase the proportion who complete a medical examination within 90 days of notification (76%).		-	For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB, increase the proportion who complete a medical examination within 90 days of notification (45.6%).		For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB, increase the proportion who complete a medical examination within 90 days of notification (62%).	-
Treatment Initiation	22. For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB who are diagnosed with latent TB infection or have radiographic findings consistent with prior pulmonary TB (ATS/CDC Class 4) on the basis of examination in the U.S., for whom treatment was recommended, increase the proportion who start treatment (93%)		-	For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB who are diagnosed with latent TB infection or have radiographic findings consistent with prior pulmonary TB (ATS/CDC Class 4) on the basis of examination in the U.S., for whom treatment was recommended, increase the proportion who start treatment (67.4%)	-	For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB who are diagnosed with latent TB infection or have radiographic findings consistent with prior pulmonary TB (ATS/CDC Class 4) on the basis of examination in the U.S., for whom treatment was recommended, increase the proportion who start treatment (87.3%)	-
Treatment Completion	23. For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB who are diagnosed with latent TB infection or have radiographic findings consistent with prior pulmonary TB (ATS/CDC Class 4) on the basis of examination in the U.S., and who have started on treatment, increase the proportion who complete treatment (83%).		-	For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB who are diagnosed with latent TB infection or have radiographic findings consistent with prior pulmonary TB (ATS/CDC Class 4) on the basis of examination in the U.S., and who have started on treatment, increase the proportion who complete treatment (28.1%).	-	For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB who are diagnosed with latent TB infection or have radiographic findings consistent with prior pulmonary TB (ATS/CDC Class 4) on the basis of examination in the U.S., and who have started on treatment, increase the proportion who complete treatment (75.7%).	-
Objectives on Data Reporting							
RVCT	24. Ensure the completeness of each core Report of Verified Case of Tuberculosis (RVCT) data item reported to CDC, as described in the TB cooperative agreement announcement (100%).	Percentage of core RVCT4 data items will be reported to CDC (99%)	-	Ensure the completeness of each core Report of Verified Case of Tuberculosis (RVCT) data item reported to CDC, as described in the TB cooperative agreement announcement (98%).	-	Ensure the completeness of each core Report of Verified Case of Tuberculosis (RVCT) data item reported to CDC, as described in the TB cooperative agreement announcement (X).	-
ARPE	25. Ensure the completeness of each core Aggregate Reports for Tuberculosis Program Evaluation (ARPE) data items reported to CDC, as described in the TB cooperative agreement announcement (100%).	Percentage of ARPE core data will be reported to CDC (100%)	-	Ensure the completeness of each core Aggregate Reports for Tuberculosis Program Evaluation (ARPE) data items reported to CDC, as described in the TB cooperative agreement announcement (88.9%).	-	Ensure the completeness of each core Aggregate Reports for Tuberculosis Program Evaluation (ARPE) data items reported to CDC, as described in the TB cooperative agreement announcement (100%).	-
EDN	26. Ensure the completeness of each core Electronic Disease Notification (EDN) system data item reported to CDC, as described in the TB cooperative agreement announcement (93%).	For individuals who can be located, the percentage of core EDN data that will be reported to CDC (90% in 2015)	-	Ensure the completeness of each core Electronic Disease Notification (EDN) system data item reported to CDC, as described in the TB cooperative agreement announcement (90%).	-	Ensure the completeness of each core Electronic Disease Notification (EDN) system data item reported to CDC, as described in the TB cooperative agreement announcement (X).	-
Objectives on Program Evaluation							
Evaluation Activities	27. Increase program evaluation activities by monitoring program progress and tracking evaluation status of TB cooperative agreement recipients						
Evaluation Focal Point	28. Increase the percent of TB cooperative agreement recipients that have an evaluation focal point.						
Human Resource Development							
Development Plan	29. Increase the percent of TB cooperative agreement recipients who submit a program-specific human resource development plan (HRD) and a yearly update of progress, as outlined in the TB Cooperative Agreement announcement						
Training Focal Point	30. Increase the percent of TB cooperative agreement recipients that have a TB training focal point						
	Resource(s): National TB Program Objectives https://www.cdc.gov/tb/programs/evaluation/indicators/default.htm	Resource(s): National Tuberculosis Program Objectives and Performance Targets for 2020, Table 1 (page 1.13) http://dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/TB/TB_Manual.pd	Resource(s): Tuberculosis in Alaska 2014 Annual Report http://dhss.alaska.gov/dph/Epi/Documents/pubs/webtb/TB_Report_2014.pdf	Resource(s): https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2657/documents/1_tb-annual-report-2018-10-30.pdf http://www.wales.nhs.uk/sites3/Documents/457/Wales2015AnnualTBReport_v1.pdf	Resource(s): https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/TBCB-TB-Provisional-Tables-2018.pdf	Resource(s): Tuberculosis Prevention and Control Program Objectives for Minnesota, 2019 https://www.health.state.mn.us/diseases/tb/tbprogramobjectives.pdf	Resource(s): https://www.health.state.mn.us/diseases/tb/stats/quarterlystats.pdf

The following table provides a comparison of performance indicators (PIs) for TB prevention and control across four countries in the UK. Indicators and stratification/comparisons are based on information provided in recent annual TB surveillence reports for each country. Two countries (England and Scotland) have developed TB PI frameworks to help guide monitoring and progress towards TB elimination - the indicators described in these frameworks have been highlighted in the table (as noted in the legend).

A Comparison of Performance Indicators for TB Prevention and Control in the United Kingdom

Legend- **Indicators listed in country's TB Strategy or Framework highlighted in pink.**
Indicators listed in Strategy/Framework that are not yet monitored are written in RED

Monitoring Categories	England From:*Tuberculosis in England: 2018 Presenting data to end of 2017 and Collaborative Tuberculosis Strategy for England 2015 to 2020*		Scotland *Enhanced Surveillance of Mycobacterial Infections(ESMI) in Scotland:2018 Tuberculosis Annual Report and TB Framework for Scotland (May2018) .*		Wales *Tuberculosis in Wales Annual Report 2018: Data to the end of 2017*		Northern Ireland *Epidemiology of Tuberculosis in Northern Ireland: Annual Surveillence Report 2016*	
	Indicators	**Stratification/Comparisons**	**Indicators**	**Stratification/Comparisons**	**Tuberculosis in Wales Report Indicators**	**Stratification/Comparisons**	**Epidemiology of Tuberculosis in Northern Ireland- Indicators**	**Stratification/Comparisons**
TB Notifications and Incidence								
Overall numbers, rates and geographical distribution								
	1. Overall TB incidence per 100,000 population (Number of TB notifications and Rates)	10 year trend for England; Notifications and rate by TB Control Board; notification by Public Health of England Centre (PHEC) Three year average TB rate by CCG	1. Incidence rate of TB per 100,000	gender, age	1. Number of cases and rate of TB by Local Health Board and Local Authorities		1. Overall number of cases and rates of infection	Gender, Age group
	2. Number of TB notification and rate by TB Control Board		2. Changes in incidence and cases of TBH	Annual comparision	2.Number of cases and rate of TB	Gender, Age Group, Ethnic group	2.Tuberculosis case reports and rates by Health and Social Care Trust	Local health district
	3. Number of TB notification by Public Health of England Centre (PHEC)		3. ESMI tuberculosis notifications by NHS board		3.Rate of TB per 100,000 population by deprivation quintile (cases, rate, percentage with CI)	Quintile 1 (most deprived) through 5 (least deprived)	3. Northern Ireland three year moving average TB rates per 100,000	Incidence rate, Local Health District, Age group
	4. Three year average TB rate by CCG (Clinical Commisioning Groups)		4.Proportion of tuberculosis caes and deprivation	Quinitle 1 (most deprived) through 5 (least deprived)			4. Rate of TB by deprivation	Quinitle 1 (most deprived) through 5 (least deprived)
	5. Three year average TB rate by Local Authority District		5. Percentage of TB cases reviewed at MDT rounds aiming for review within 6-8 weeks of initial diagnosis					
	6. Rate of TB per 100,000 population by deprivation quintile	quintile1 (most deprived) through 10 (least deprived)	6. Percentage of TB cases reviewed as part of a systematic cohort review	yearly				
Demographic Characteristics								
	1. TB incidence in UK born populations***	ethnic group, UK geographical distribution	1. TB incidence in UK born populations	age group	1. TB incidence in UK born populations	UK Born, Non UK born, Unknown	1. Number and rates in UK born population	Ethnicity
	2. TB incidence in non-UK born populations ***		2.Number and proportion of tuberculosis cases reported to ESMI born outside the UK	ethnicity and place of birth	2. Number and percentage of TB cases by world region of birth for non-UK born cases	Country of birth	2. Number and rates in Non UK born population	Place of birth, ethnicity
	2a.Number of TB notifications and rates by age group and place of birth,		*2a.Tuberculosis cases by age group and place of birth*		3. Number and percentage of time between UK entry and TB diagnosis for non-UK born cases	<2 years; 2-5 years; 6-10 years; >10years; not recorded	3. Number and percentage of time between UK entry and TB diagnosis for non-UK born cases	< 2 years; 3-9 years; >10 years
	2b.Number of TB notifications and rates by PHE Centre and place of birth		*2b.Tuberculosis notification rates by place of birth*					
	2c.Trend in the number of people with TB for the top five countries of birth for those born outside the UK		*2c.Number of tuberculosis cases and rate per 100,000 population by age group and sex*					
	2d. Most frequent countries of birth for people with TB and time between entry to the UK and TB notification		*2d.Most frequent countries of birth for non-UK born and TB cases*					
	2e.Time between entry to the UK and TB notification for people born outside the UK	Diagnosed within two years of entry; between three and nine years of entry, been in Northern Ireland for ten or more years before diagnosis	*2e.Time between entry to the UK and TB notification for people born outside the UK*	Diagnosed within 2 years of entry; within 5 years and 10 years of entry				
Occupation								
	1. Not in education or employed		1. Percentage of people are health care workers					
	2.Studying or working in education		2. Number of attitudinal surveys administered to service users to identify needs of local service users and refinement of framework					
	3.Healthcare workers							
	4. Working in other occupations							
Clinical Characteristics								
Site of disease	1. Proportion of people with pulmonary TB		1. Number and Proportions of Pulmonary TB	age group, gender, UK vs non UK born	1. Number and percentage of TB cases by site of disease	Identify site of disease, pulmonary, extra-pulmonary	1. Number and proportions of Pulmonary TB	with non pulmonary disease and site; age with gender, UK vs Non Uk born. By Local health district
	2.Proportion of people with extra pulmonary TB in at least one other site	site of disease	2. Number and Proportion of Non-Pulmonary TB	age, gender, site of disease, UK vs Non UK born			2. Number and proportion of Non-Pulmonary TB	site of disease, UK vs Non UK born, Local health district, age with gender
Treatment	1. Proportion of people notified that received DOT with new TB diagnosis	proportion of cases reporting at least one social risk factor assigned DOT	1. Percentage of patients enrolled in DOT program	Proportion of cases reporting at least one social risk factor assigned DOT; Medication observation on DOT- 3, 5 or 6 times per week	1. Percentage of patients enrolled in DOT program	pecentage of people with at least one risk factor		
			2. Proportion of people were diagnosed as Hospital inpatients		2. Pecentage of people with planned course of treatment			
			3. Proportion of people admitted to hospital for treatment					
			4. Percentage of people requring ECM or DOT receive assessment of risk/needs prior to commencement of treatment to identify additional supports					
			5. Number of TB cases complete treatment (target >85%)					
			6. Percentage of TB cases managed or consulted by TB expert	age group				
Previous history of TB	1.Previous diagnosis of TB with current notification		1. Proportion of people had previous diagnosis of TB prior to current notification		1.Number and percentage of TB cases with previous TB diagnosis at current notification		1. Number of people had previous diagnosis of tuberculosis with current notification	years since last diagnosis
	1a. Previous treatment for TB with current notification							
	1b. Received DOT during current notification							
	1c. Time known since previous diagnosis							
Co-morbidities	1. Number of people with TB by co-morbidity status							
Travel and visitor risk factors	1. Number & proportion of people with TB with history of travel to and visitors received from a country outside the UK in the last two year prior to diagnosis							
Laboratory confirmation among people notified with TB								
	1.Number and proportion of people with TB not confirkmed with culture rather by alternative method		1. Method of identification of TB cases (%)		1. Number and percentage of TB cases identified with culture confirmation		1. Number and percentage of TB cases identified with culture confirmation	type of bacterial infection identified
	2.Unmatched isolates by specimen year		2.Pecentage people presented with an illness subsequently diagnosed as tuberculosis		2.Number and percentage of culture confirmation with pulmonary cases		2.Number and percentage of culture confirmation with pulmonary cases	type of bacterial infection identified
	3. Proportion of pulmonary TB cases were culture positive		3. Proportion of TB cases were culture positive		3. Number and percentage of pulmonary cases identifed with sputum smears taken		3. Number and percentage of TB cases identified without culture confirmation	clinical/non clinical diagnosis, response to anti tuberculosis therapy
	4. Proportion of sputum smear results known		4. Proportion of TB cases that result of smear test was known	Pulmonary; Non pulmonary	4. Number and percentage of pulmonary cases identifed with positive sputum smear		4. Number and percentage of pulmonary cases culture postive with known sputum smear results	sputum smear positive confirmed with culture; sputum smear negative with postive culture
	5. Proportion of pulmonary cases were sputum smear positive at notification, confirmed by culture		5. Proportion of TB cases tested by sputum smear and confirmed by culture (target >80%)		5. Number and percentage species identification in culture confirmed TB Cases,	M. tuberculosis, M. tuberculosis complex, M. bovis, M. africanium and M. microti	5, Number and percentage of extra pulmonary TB cases that were cultured	positive ; negative; not cultured
	6. Proportion of pulmonary infection cases that were sputum smear negative which were later confirmed by culture	bacterial strain identified: M. tuberculosis or M. bovis	6. Percentage of culture postive TB cases identified by type of infectious bacterial strain	M. tuberculosis,M. bovis, M. avium and M. microti				
	7.Number and proportion of people with culture confirmedTB had WGS to identify clusters	UK vs Non UK born and cluster size	7. Pecentage of patients with M. tuberculosis complex (MTBC) isolates genotype results	Available loci; Molecular clusters; Unique strains				
	8.Number and proportion of people with culture confirmedTB had MIRU-VNTR to identify clusters	place of birth, year and number of new clusters by year						
TB Transmission								
	1. Incidence of TB in UK born children (<15 years)		1. Recorded suspected source of infection (%)					

The UK (represented by England, Scotland, Wales and Northern Ireland) are associated with the European WHO, a subsidary of the World Health Organization. The *Roadmap to Implement the Tuberculosis Action Plan for the WHO European Region 2016–2020* was created to guide Eurpean countries to create a framework for TB monitoring. Listed below are the recommendations set out in this action plan.

World Health Organization

Roadmap to Implement the Tuberculosis Action Plan for the WHO European Region 2016–2020
Towards ending tuberculosis and multidrug-resistant tuberculosis

European WHO Areas of Intervention with Core Indicators for Monitoring and Reporting (in collaboration with European CDC)	Target by 2020 Based on TB action plan for the WHO European Region 2016-2020
1. INTEGRATED, PATIENT-CENTRED CARE AND PREVENTION	
A. Systematic screening of contacts and high-risk groups	
1.A.1 Coverage of population at risk with systmatic screening for active TB abd LTBI	Full coverage
B. Early diagnosis of all forms of tuberculosis and universal access to drug-susceptibility testing, including the use of rapid tests	
1.B.1 Percentage of TB patients diagnosed using WHO-recommended rapid tests	30%
1.B.2 First line DST coverage (%) among all bateriologically confirmed TB cases	Close t o100%
1.B.3 RR/ MDR TB case detection rate	85%
1.B.4 TB notification rate per 100 000 population	24.6
1.B.5 TB case detection rate (%)	Increase
1.B.6 Percentage of RR/MDR TB among new TB patients	Decrease
1.B.7 Percentage of RR/MDR TB among previously treated TB patients	Increase
C. Equitable access to quality treatment and continuum of care for all people with tuberculosis, including drug-resistant tuberculosis, and patient support to facilitate treatment adherence	
1.C.1. Percentage of hospitalisation of New Patients (? Indicator)	Decrease
1.C.2. Percentage of detected RR/MDR TB patients enrolled in treatment	Close to 100%
1.C.3 TB treatment success rate among all new and relapsed TB patients	85%
1.C.4. Treatment success rate (%) among the MDR TB treatment cohort	75%
D. Collaborative tuberculosis/HIV activities, and management of comorbidities	
1.D.1 Percentage of detected out of estimated incident TB/HIV co- infected cases	Close to 100%
1.D.2 HIV testing coverage	Close to 100%
1.D.3 Percentage of HIV co-infection among all TB (new and relapse TB cases)	Decrease
1.D.4 Percentage of TB/HIV co-infected patients enrolled in antiretroviral therapy	Close to 100%
1.D.5 Latent TB infection treatment coverage among people living with HIV/AIDS	30%
E. Management of latent tuberculosis infection and preventive treatment of persons at high risk, and vaccination against tuberculosis	
1.E.1 Contact investigation coverage	90%
1.E.2 LTBI treatment coverage of childhood TB contacts aged under five years	90%
2. BOLD POLICIES AND SUPPORTIVE SYSTEMS	
A. Political commitment with adequate resources, including universal health coverage policy	
2.A.1 Number of Member States that have a regular TB control/elimination performance published every 5 years	53
B. Health systems strengthening in all functions, including well-aligned financing mechanisms for tuberculosis and human resources	
2.B.1 Percentage of TB patients and their households that experience catastrophic financial consequences due to TB	Close to Zero
C. Regulatory frameworks for case-based surveillance, strengthening vital registration, quality and rational use of medicines, and pharmacovigilance	
2.C.1 Treatment coverage with new TB drugs (%)	20%
D. Airborne infection control, including regulated administrative, engineering and personal protection measures in all relevant health-care facilities and congregate settings	
2.D.1 Number of Member States with functioning multi-stakeholder coalitions advocating for TB care and resources	53
E. Social protection, poverty alleviation and actions on other determinants of tuberculosis, such as migration and prisons	
2.E.1 Treatment success (%) of new and relapse TB cases among prisoners	85%

References:

http://www.euro.who.int/__data/assets/pdf_file/0020/318233/50148-WHO-TB-Plan_May17_web.pdf?ua=1

A Comparison of Performance Indicators for TB Prevention and Control in the United Kingdom

The following table provides a comparison of performance indicators (PIs) for TB prevention and control across four countries in the UK. Indicators and stratification/comparisons are based on information provided in recent annual TB surveillence reports for each country. Two countries (England and Scotland) have developed TB PI frameworks to help guide monitoring and progress towards TB elimination - the indicators described in these frameworks have been highlighted in the table (as noted in the legend).

Legend- **Indicators listed in country's TB Strategy or Framework highlighted in pink.**
Indicators listed in Strategy/Framework that are not yet monitored are written in RED

The UK (represented by England, Scotland, Wales and Northern Ireland) are associated with the European WHO, a subsidary of the World Health Organization. The *Roadmap to Implement the Tuberculosis Action Plan for the WHO European Region 2016–2020* was created to guide Eurpean countries to create a framework for TB monitoring. Listed below are the recommendations set out in this action plan.

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Towards ending tuberculosis and multidrug-resistant tuberculosis

	England From:*Tuberculosis in England: 2018 Presenting data to end of 2017 and Collaborative Tuberculosis Strategy for England 2015 to 2020*		Scotland *Enhanced Surveillance of Mycobacterial Infections(ESMI) in Scotland:2018 Tuberculosis Annual Report and TB Framework for Scotland (May2018) .*		Wales *Tuberculosis in Wales Annual Report 2018: Data to the end of 2017*		Northern Ireland *Epidemiology of Tuberculosis in Northern Ireland: Annual Surveillence Report 2016*	
	2. Proportion of TB patients with social risk factors recorded who received enhanced case management		2. Percentage of cases through contract tracing					
	3.Proportion of identified close contacts of pulmonary TB cases that were evaluated		3. Percentage of Pulmonary TB cases have identified contacts through contract tracing	1 or > contacts identifed (target at least 95%); >5 contacts identified (target at least 80%)				
			4. Percentage of contacts that test TB positive	LTBI; activeTB				
			5. Percentage of LTBI eligible contacts offered prophylaxis	started treatment; completed treatment				
Delay from symptom onset to treatment start								
	1.Number and proportion of people with pulmonary TB start treatment within 2 months by time from symptom onset		1. Percentage of people symptomatic at the time of notification				1. Number of people for time between onset of symptoms and start of treatment for pulmonary TB	0-2 months; 2-4 months; >4months
	2. Number and proportion of people with pulmonary TB start treatment within 4 months by time from symptom onset		2. Known length of time between symptom onset and diagnosis (weeks)	pulmonary, non pulmonary			2.Number of people for time between onset of symptoms and start of treatment for non pulmonary TB	0-2 months; 2-4 months; >4months
	3. Number and proportion of people with pulmonary TB by time from symptom onset to treatment start	age group; place of birth	3. Treatment regime recorded as being given at least the standard four-dose first line drug regime	drugs: isoniazid, rifampicin, pyrazinamide, ethambutol				
	4. Number and proportion of people with pulmonary TB who experienced a delay of more than four months between symptom onset and treatment start	age group and gender; geographical distribution	4. Percentage of people requiring standard or enhanced case management for treatment regime at 12 months	Identify reasons for Enhanced Case Management				
			5. Percentage of people with TB started treatment within 2 months of symptom onset					
			6. Percentage of TB cases that started treatment within 7 days of diagnosis					
TB outcomes in the drug sensitive cohort								
	1.Outcome at 12 months for people with drug sensitive TB with expected treatment duration <12 months***		1. Tuberculosis outcomes in drug sensitive cohort at 12 months (target <5% lost to follow up) (target >85% complete treatment)***	Pulmonary vs Non pulmonary; place of birth, age, risk factors, previous vs 1st time Tb diagnosis	1. Percentage and number of TB treatment outcome at 12 months for drug sensitive cases with expected treatment duration <12 months ****	age group, gender, site of disease, by Local Health Board	1.Cases with an expected duration of treatment less than 12 months, treatment outcomes at 12 months.***	
***outcomes broken down into falling categories: Treatment completed, Died, Lost to follow-up, Still on treatment, Treatment stopped, Not evaluated	2. Last recorded TB outcome for drug sensitive cohort with CNS, spinal, miliary or cryptic disseminated***	age, gender, place of birth, geographical distribution, site of disease, time to complete treatment in months	*1a. Relationship between tuberculosis and death in Scotland and case fatality ratio (CFR) at one year*	Pulmonary vs Non pulmonary; place of birth, age, sex	2. Percentage and number of last recorded TB treatment outcome for entire drug sensitive cohort****	by Local Health Board	2. Cases with an expected duration of treatment less than 12 months, excluding cases with CNS, spinal, cryptic disseminated or miliary disease.****	Gender, Uk vs Non UK born
	3. Last recorded TB outcome for the entire drug sensitive cohort***		2.Tuberculosis outcomes in the drug sensitive cohort at 24 month (target <5% lost to follow up) (target >85% complete treatment)***		3. All drug sensitive TB cases reported to have died at last recorded treatment outcome	Total deaths; TB caused or contributed to death; TB incidental to death, unknown, post mortem	3. Case-Fatality Rate of tuberculosis notifications	
Drug resistant TB and outcomes in the drug resistant cohort	****Drug resistance is classed as acquired if identified on repeat culture three or more months after the first specimen date*							
Intial Drug Resistance TB	1.Number and proportion of people notified with culture confirmed MDR/RR TB	Sex, Age Group, Most Frequent Country of Birth, At Least One Social Risk Factor, Prevous Diagnoisis	1. Number and proportion of tuberculosis cases with first line drug resistance (pyrazinamde,ethambutol, isoniazid and rifampicin. (target <2%)	Resistance to at least 1 First line drug; resisitant drug name; MDR TB, sex, age, UK or non UK born	1. Number and proportion of TB cases with first line drug resistance	pyrazinamde,ethambutol, isoniazid and rifampicin, any resistance to 1 > first line drug, MDR/TB, XDR/TB	1. Number of drug susceptibility test results available for culture confirmed cases of TB	
	2.Number and proportion of people notified with ioniazid resistance without MDR-TB						2.Number and proportion of drug resistant cases of tuberculosis	1st line drug resiilance to one drug, MDR, drug resistance start, during, end treatment, UK vs Non UK born; bacterial infecious TB resistant species
	3.Proportion of culture confirmed TB cases with any first line drug resistance							
Drug Resisitant Cohort	1.Number of people with Rifampicin resistant without MDR-TB	Inital Resistance and Aquired Resistance	1. Percentage of people with TB were XDR-TB confirmed					
	2.Number of People with MDR-TB including XDR	Initial resistance, Aquired Reisistance and Treated with an XDR-TB regimen	2. Percentave of MDR/XDR-TB cases discussed with colleagues from MDR-TB clinic regarding disease management					
	3.Number of people with TB with initial and amplified XDR-TB	Initial resistance, Aquired Reisistance and Treated with an XDR-TB regimen	3. Percentage of suspected and confirmed inpatient MDR/XDR-TB cases managed in (or transferred to) a negative pressure facility					
	4.Acquired drug resistance on repeat culture		4.Number of pulmonary MDR-TB cases complete treatment (target >70%)					
	5.TB outcomes for the drug resistant cohort at 24 months and last recorded outcome	Treatment completed, Died, Lost to follow-up, Still on treatment, Treatment stopped, Not evaluated						
	6. Proportion of culture confirmed TB cases with drug susceptibility testing reported for the four first line agents							
	7. Proportion of TB cases with rifampicin resistance or MDR-TB who had completed treatment at 24 months	completed treatment at 24 months, lost to followup and who died at last reported outcome						
	8. Proportion of drug-sensitive TB cases	completed treatment at 12 months, lost to followup and who died at last reported outcome						
TB in under-served populations								
Social risk factors	1.Proprotion of people with TB with at least 1 Social Risk Factor		1. Percentage of people with TB having >1 Risk Factor		1. Number and percentage of people with history of any risk factor		1. Number and percentage of people with history of a risk factor	
	2. Proprotion of people with TB and more than 1 Social Risk Factor		2. Percentage of people with TB that are homeless		2. Number and percentage of people with TB having history of homelessness		2. Number and percentage of people with TB having history of homelessness	
	3.Proportion of people with TB that are homeless		3. Percentage of people with TB that misuse alcohol		3. Number and percentage of people with TB having history alcohol abuse	percentage of data completeness	3. Number and percentage of people with TB having history Place of birth alcohol abuse	
	4.Proportion of people with TB that misuse alcohol	age [>15years of age), sex, birth place and ethnicity, geographical distribution, clinical characteristics, drug resistance, unemployment	4. Percentage of people with TB misuse drugs		4.Number and percentage of people with TB having history drug abuse		4. Number and percentage of people with TB and history of imprisionment within last 5 years	
	5.Proportion of people with TB that are in prision		5.Percentage of peoplewith TB that reside correctional institute		5. Number and percentage of people with TB and history of imprisionment			
	6.Proportion of People with TB that misuse drugs		6.Percentage of people with TB that reside residiential facility					
	7.People with TB who were asylum seekers or resident in an immigration removal centre		7.Percentage of people with TB having refugee status					
	8. Proportion of TB patients with social risk factors recorded who received enhanced case management		8.Percentage of people with TB that are immunosupressed					
			9. Percentage of people notified with TB that are homeless offered accomodation for duration of treatment					
			10. Percentage of people with active TB offered support with finances/benefits for the duration of treatment					
TB-HIV co-infection and HIV testing	****HIV status is not collected in the Enhanced TB Surveillance system (ETS). To estimate TB-HIV co-infection, TB and HIV surveilance data are matched annually for notified people with TB aged 15 years and older							
	1.Number and proportion of people with TB who have HIV co-infection	age group, place of birth, culture confirmed with isoniazid and rifampicin resistance, culture confirmed isoniazid resistance without MDR TB, culture confirmed MDR RR TB	1. Percentage of TB cases have a known HIV status					
			2. Percentage of TB cases offered Hepatitis B and C testing					
	2.Proportion of TB cases offered an HIV test	Age group, Not offered, Offered and Received, Offered but Not Received, Offered but Declined						
BCG Vaccination								
	1. Proportion of babies in areas with a universal BCG programme who received BCG vaccine	Three-year average annual TB rate per 100,000, Number of eligible children	1. Proportion of people that reviced BCG vaccination prior to TB diagnosis	age group	1. Number and percentage of TB cases with a history of BCG vaccination	age group		
			2. Percentage of BCG vaccine uptake for eligible health care workers					
			3. Percentage of children received vaccination by age 12 months (target >85%)					
Latent TB infection testing and treatment								
	1. The number of CCGs with systematic new entratn LTBI testing and treatment in place		1. Percentage of LTBI of eligible new entrants offered and started on prophylaxis					

The following table provides a comparison of performance indicators (PIs) for TB prevention and control across four countries in the UK. Indicators and stratification/comparisons are based on information provided in recent annual TB surveillence reports for each country. Two countries (England and Scotland) have developed TB PI frameworks to help guide monitoring and progress towards TB elimination - the indicators described in these frameworks have been highlighted in the table (as noted in the legend).

A Comparison of Performance Indicators for TB Prevention and Control in the United Kingdom

Legend- **Indicators listed in country's TB Strategy or Framework highlighted in pink.**
Indicators listed in Strategy/Framework that are not yet monitored are written in RED

	England From:*Tuberculosis in England: 2018 Presenting data to end of 2017 and Collaborative Tuberculosis Strategy for England 2015 to 2020*		Scotland *Enhanced Surveillance of Mycobacterial Infections(ESMI) in Scotland:2018 Tuberculosis Annual Report and TB Framework for Scotland (May2018) .*	Wales *Tuberculosis in Wales Annual Report 2018: Data to the end of 2017*	Northern Ireland *Epidemiology of Tuberculosis in Northern Ireland: Annual Surveillence Report 2016*
	1a. Proportion of eligible new entrants covered by the LTBI testing programme who accept LTBI testing		2.Percentage of LTBI eligible new entrants who completed prophylaxis		
	2. The number of eligible people offered a test as a proportion of the total number of individuals tested	age and gender, place of birth, CCG and year, number of LTBI tests by control board	3. Percentage of new healthcare workers from a high risk country (150 TB cases per 100,00 population) are offered screening for LTBI		
	3. The number of people tested positive for LTBI as a proportion of the total number tested with a known result	age and gender, CCG and year, number of LTBI tests by control board			
	3a. The proportion of new entrants that tested positive for LTBI				
	4. Proportion of patients that take up treatment amongst those that have been offered it				
	5. The number of people who complete treatment as a proportion of the number who started treatment				
	6.The proportion of patients who experience significant drug events amongst those who initiated treatment	symptoms of adverse event			
UK tuberculosis pre-entry screening programme					
	1.Number and rate of people with TB detected in high incidence countries through the UK pre-entry screening programme	age	1. Percentage of cases identified through new entrant screening		
	2. Number of people with TB detected by pre-entry screening in the 101 programme countries and those identified within one year of UK entry	TB diagnosed by pre-screening, vs predicted TB cases; TB cases identified in the UK vs Predicted TB cases identified in the UK	2. Percentage of new entrants diagnosed in another country		
Drug susceptibility testing of positive TB cultures for pre-entry screening in the UK	1. Percentage people sensitive to all drugs		3. Percentage of new entrants positive for LTBI and active disease		
	2.Percetnage resistant to one 1st Line drug other than Isoniazid or Rifampicin				
	3.Percentage resistant to 2 or more 1st line drugs, without MDR				
	4.Percentage INH-R but not RR TB or MDR TB				
	5.Percentage RR TB but not INH-R or MDR TB				
	6. Percentage MDR TB but not XDR TB				
	Reference: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/774091/TB_Annual_Report_2018_2.pdf https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/403231/Collaborative_TB_Strategy_for_England_2015_2020_.pdf		**References:** https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2657/documents/1_tb-annual-report-2018-10-30.pdf https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2304/documents/1_TB-Framework-v1.1-May-2018.pdf	**References:** https://hpspubsrepo.blob.core.windows.net/hps-website/nss/2657/documents/1_tb-annual-report-2018-10-30.pdf http://www.wales.nhs.uk/sites3/Documents/457/Wales2015AnnualTBReport_v1.pdf	**References:** https://www.publichealth.hscni.net/sites/default/files/NI%20Ireland%20TB%20Surveillance%20Report%202016%20final.pdf

The UK (represented by England, Scotland, Wales and Northern Ireland) are associated with the European WHO, a subsidary of the World Health Organization. The *Roadmap to Implement the Tuberculosis Action Plan for the WHO European Region 2016–2020* was created to guide Eurpean countries to create a framework for TB monitoring. Listed below are the recommendations set out in this action plan.

World Health Organization

Roadmap to Implement the Tuberculosis Action Plan for the WHO European Region 2016–2020
Towards ending tuberculosis and multidrug-resistant tuberculosis

TB Peformance Indicators for Australia (*Australian Government Department of Health: Tuberculosis notifications in Australia, 2014* and *The strategic plan for control of tuberculosis in Australia: 2011–2015*

The following table provides performance indicators (PIs) for TB prevention and control in Australia as described in their 2014 TB surveillance report and 2011-2015 Strategic Plan.

Legend- **Indicators listed in a country's TB Strategy/Framework highlighted in pink.**
Indicators listed in Strategy/Framework that are not yet monitored are written in RED

Framework Objectives

Rapid diagnosis, treament and notification of TB		Surveillance and Reporting		TB in the Australian Population		Drug Resistant TB		High Risk Group		Global TB control activites	
Indicator with target rates	Stratifier	Indicator with target rates	Stratifier	Indicator with target rates	Stratifier	Indicator with target rates	Stratifier	Indicator with target rates	Stratifier	Indicator with target rates	Stratifier
1. Proportion of cases with a diagnostic delay of greater than 1 month.		1.Proportion of TB cases with a recorded HIV status	Australain born Indigenious/ non indigenious, overseas born	1.Indicence of TB in children <15 years of age by risk group (<0.1/100,000)	Australian born Indigenous; Australian-born Non-indigenious	1.Time to identification of drug resistant TB		1. Incidence of TB in Aboriginal and Torres Strait Islanders		1.Incidence of TB in the region.	by state/territory and year; 5 year mean
2. Ensure awareness of complete and current national guidelines for TB as per WHO to help ensure sound TB control in the country	Annually reporting to the WHO, continuous involvement of stakeholders	2. Proportion of people notified with TB tested for HIV (100%)		2.Indicence of TB in population by risk group (<1.0/100,000)	Australian born Indigenous; Australian-born Non-indigenious; age, gender	2. Incidence and characteristics of drug resistant TB acquired within Australia	name of resistant drug, number of drugs resistants; MDR-TB; XDR-TB; Indigeneous vs Non indigenious, travel history, contact history	2.Indicence and characteristics of TB in overseas born persons	state/territory, country of birth, permanent residents, students, other, age and gender	2. Reporting on Australia's participation in global control activities, annually.	
2.Proportion of TB notifications confirmed by microbiological laboratory diagnosis	lab diagnosed/clincial/radiological	3. Proportion of people notified with HIV tested for TB		3.Number of cases of TB acquired within Australian health care institutions/laboratories		3. Incidence and characteristics of drug resistant TB in migrants	place of birth, pulmonary vs extra pulmonary, sputum smear result, MDR vs XDR-TB	3.Incidence and characteristics of TB in Healthcare workers	place of work at time of diagnosis or within 12months of dignosis; type of TB; sputum smear result		
3. Proportion of laboratories meeting recommended turn around time		4. Proportion of TB cases pulmonary vs extra pulmonary	site of disease, age group	4. Incidence of TB in Australian population by case	new cases, relapsed cases, total cases	4. Proportin of TB cases with postive sputum smear tested drug resistant TB		4.Incidence and characteristics of TB in Irregular Maritime Arrivals			
4.Porportion of successful treatment of TB	cured, completed treatment, place of birth, deaths, subgroup	5.Completeness of quartely reporting.		5. Number of relasped cases by treatment history	full treatment in Australia; partial treatment; full or partial treatment overseas			5. Number of TB cases identifed through offshore premigration screening process	country migrating from; status-student/refugee/temporary visa/visitor		
4a. Percentage of TB cases evaluated for treatment outcome (100%)											
4b. Percentage of TB cases that have completed treatment and are cured (treatment success) (>90%)											
4c. Percentage of cases that are recoreded at treatment failures (<2%)											
5.Proportion of cases initially treated in Australia who relapse within 5 years of treatment.		6. Publication of a combined notification and laboratory annual TB report by December of the following year.		6. Incidence of TB in population overall (<6.0/100,000)				6. Number of cases reported having a household member with TB			
6.Proportion of culture-confirmed cases that undergo drug susceptibility testing		7. Annual reporting to WHO						7. Number of TB cases identifed with past travel to or residence in a high risk country			
7. Proprotion of TB cases bacteriologically/histologically confirmed	pulmonary; extra pulmonary, age group							8. Number of people notified with TB had ever resided in correctional facility	residents; employees		
8. Proportion of TB cases bacterologically confirmed were smear culture positive	sputum, bronchoscpy aspirate, subgroup							9. Number of people notified with TB had ever resided in a aged care facility	resiedents, employess		
								10. Number of people notified with TB were ever homeless			
								11. Number of persons notifed with TB ever have past travel to or residency in high risk countries			
								12. Number of people notifed with TB had chest xray suggestive of old untreated TB			
								13. Number of people notifed with TB receving immunosuppressice therapy			
								14. Number of Australian born children notified with TB have one or more parent born in a high risk country			
								15. Number of people notified with TB none of the above risk factors			

References:

https://www.health.gov.au/internet/main/publishing.nsf/content/cda-cdi3603i.htm

https://www.health.gov.au/internet/main/publishing.nsf/Content/9938F170EAA88BD3CA2581F70014931D/$File/CDI41O3-k.pdf