



# KNCV benchmarking tool for Childhood TB policies and practice

## Background

Diagnosing TB in children is more difficult than in adults and treatment for children needs to take into account the specific needs of children and their families.

Children with TB differ from adults in their response to the disease; they are at increased risk to develop to serious forms of TB, especially TB meningitis and miliary TB; they also are at an increased risk of progressing from primary TB infection to active TB, and are therefore a target group for preventive treatment.

Therefore TB control interventions need to address the specific vulnerabilities and needs of children and their families.

WHO has developed guidance for countries how to address childhood TB; countries are in the process of aligning their policies with these guidelines.

## The benchmarking tool

*Objective:* The benchmarking tool is a self-assessment tool, meant to serve as a basis for discussions, brainstorming, and strategic planning and as a tool for monitoring progress in the realization of childhood TB policies towards alignment with WHO guidelines, in the framework of a TB program.

The tool provides insight in

- Political commitment, management and partner coordination for childhood TB, also including human resource development and data collection
- Technical approaches for childhood TB and the place of childhood TB in the national TB policy, like the appropriateness of the procedures used to identify TB in children and the quality of the case-management of children with TB
- The status of implementation of the national childhood TB policies and access to Childhood TB care
- The agreed actions to improve approaches or implementation of childhood TB

This benchmarking tool is based on the WHO '*Framework for conducting reviews of tuberculosis programmes – Assessing activities to address childhood TB*' and the Second Edition of the WHO Guidance for national Tuberculosis programmes on the management of tuberculosis in children (2014). From these documents a benchmarking tool was created. The benchmarking tool assists TB programs to self-assess and quantify the implementation of the WHO childhood TB. It consists of a short data collection section and 12 standards with their associated

benchmarks. The standards are general statements about the characteristics that define a childhood TB program that is aligned with the latest WHO policies. For each standard the benchmarking team is requested to describe the situation and to define whether this criterion is met. If it is not or only partially met, the team should develop plans for future actions to improve the performance on this standard.

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## Part A: indicators for assessing activities to address childhood TB

Before completing the benchmark tool, it is important to fill in the key figures of childhood TB in your country / province / districts

Indicator	Calculation	Source of info	Results	
Total number of children aged <ul style="list-style-type: none"> <li>• 0-4 years</li> <li>• 5-14 years</li> <li>• 0-14 years</li> </ul> Adolescents: ..... - ..... yrs (national definition)	Total number of children in the population belonging to each group	National demographic register	<ul style="list-style-type: none"> <li>• 0-4 years</li> </ul>	
			<ul style="list-style-type: none"> <li>• 5-14 years</li> </ul>	
			<ul style="list-style-type: none"> <li>• 0-14 years</li> </ul>	
			<ul style="list-style-type: none"> <li>• .... - .... years</li> </ul>	
Number of children with TB aged <ul style="list-style-type: none"> <li>• 0-4 years</li> <li>• 5-14 years</li> <li>• 0-14 years</li> </ul>	Number of children with TB belonging to each group	TB treatment register, relevant reports	<ul style="list-style-type: none"> <li>• 0-4 years</li> </ul>	
			<ul style="list-style-type: none"> <li>• 5-14 years</li> </ul>	
			<ul style="list-style-type: none"> <li>• 0-14 years</li> </ul>	
			<ul style="list-style-type: none"> <li>• .... - .... years</li> </ul>	
BCG vaccination rate at the age of one year	Reported percentage of BCG vaccination in eligible children ( at one year of age	EPI, NTP reports	Specify eligible group of children:_____	
Number of children with TB who have <ul style="list-style-type: none"> <li>• Bacteriologically confirmed pulmonary TB</li> <li>• Not bacteriologically confirmed pulmonary TB</li> <li>• Extrapulmonary TB</li> <li>• MDR TB</li> </ul>	Number of children belonging to each category	TB treatment register, relevant reports	<ul style="list-style-type: none"> <li>• Bacteriologically-positive pulmonary TB</li> </ul>	
			<ul style="list-style-type: none"> <li>• Bacteriologically-negative pulmonary TB</li> </ul>	
			<ul style="list-style-type: none"> <li>• Extra pulmonary TB</li> </ul>	
			<ul style="list-style-type: none"> <li>• MDR TB</li> </ul>	
Treatment success rate for childhood TB (Cat I/III) treatment)	Numerator: number of children with TB who were cured or who completed Cat I/III TB treatment within a specified period of time  Denominator: number of children with TB who were registered during the same period on CatI/III	TB treatment register, relevant reports	<ul style="list-style-type: none"> <li>• 0-4 years</li> </ul>	
			<ul style="list-style-type: none"> <li>• 5-14 years</li> </ul>	
			<ul style="list-style-type: none"> <li>• 0-14 years</li> </ul>	
			<ul style="list-style-type: none"> <li>• .... - .... years</li> </ul>	

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Treatment success rate for childhood MDR TB	Numerator: number of children with TB who were cured or who completed TB treatment within a specified period of time  Denominator: number of children with TB who started during the same period	MDR treatment register, relevant reports	Success rate (specify the year of the cohort _____)	
Acceptance rate for preventive therapy for the age groups: <ul style="list-style-type: none"> <li>• 0-4 years</li> <li>• 5-14 years</li> <li>• 0-14 years</li> </ul>	Nominator: number of children who were prescribed preventive therapy in the last year  Denominator: number of children eligible for preventive therapy	Contact investigation information system, HIV/AIDS information system, IPT register, relevant reports	• 0-4 years:	
			• 5-14 years	
			• 0-14 years	
			• .... - .... years	
Proportion of children who completed preventive therapy for the age groups <ul style="list-style-type: none"> <li>• 0-4 years</li> <li>• 5-14 years</li> <li>• 0-14 years</li> </ul>	Numerator: number of children who completed preventive therapy in the most recent cohort that finalized preventive therapy  Denominator: number of children who were prescribed preventive therapy in the most recent cohort that finalized preventive therapy	Contact investigation information system, IPT register, relevant reports	• 0-4 years	
			• 5-14 years	
			• 0-14 years	
			• .... - .... years	
Percentage of children tested for HIV	Numerator: the number of children with TB with an HIV test result  Denominator: all children diagnosed with TB			
Number and percentage of HIV positive children with TB	The number of children with TB known to be HIV positive  Denominator: the number of children with TB with an HIV test result			
Number and percentage of children with TB known to be HIV positive who receive ARV therapy	Number of HIV positive children with TB receiving ARV therapy  Denominator: the total number of children with TB known to be HIV positive			

### **Part B: Standards and benchmarks for childhood TB**

For each standard, please assess whether the system is able to satisfy the associated benchmark(s). Indicate 'Met', 'Partially met', "Not met" in the Results column. Indicate 'Met' for a standard if all associated benchmarks are satisfied. Indicate 'Partially Met' if not all but at least one benchmark is satisfied. Indicate 'Not Met' if none of the associated benchmarks is satisfied. Describe the key results for each standard. If a standard is 'Not Met' or 'Partially Met', please describe actions recommended to improve the quality of this standard.

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>1. Political commitment</b>				
<b>1.1 There is evidence of political commitment for childhood TB</b>	<ul style="list-style-type: none"> <li>• Childhood TB is included in the national strategic plan to prevent and control TB</li> <li>• The national strategic plan includes sections on prevention, monitoring&amp;evaluation, surveillance, operational research, diagnosis, treatment and technical assistance for childhood TB</li> <li>• There is earmarked budget available for all components of childhood TB</li> <li>• The budget for childhood TB is fully funded</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>2. Childhood TB coordination and stakeholder engagement at national level</b>				
<b>2.1 There is an active national working group on childhood TB</b>	<ul style="list-style-type: none"> <li>• There is a national childhood TB working group</li> <li>• In this working group there is representation from all stakeholders, especially the HIV program, PHC and maternal and child-health services and the national paediatric association or an equivalent body and relevant NGO's and NTP</li> <li>• The working group has clear terms of reference</li> <li>• The working groups has planned meetings and action plans</li> <li>• The TWG actively monitors and follows up on the implementation of the action plans</li> <li>• There is a NTP focal person for childhood TB</li> <li>• The focal person for childhood TB is familiar with the WHO recommended policies for management of childhood TB</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>3. Overall technical strategy on childhood TB</b>				
<b>3.1 There is national guidance for childhood TB</b>	<ul style="list-style-type: none"> <li>• National TB guidelines include specific guidance, standard operating procures on childhood TB</li> <li>• Guidelines, standard operating procedures and strategy for childhood TB have been updated following the latest WHO childhood TB guidelines</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		
<b>3.2 There is effective technical assistance for childhood TB</b>	<ul style="list-style-type: none"> <li>• Necessary technical assistance for childhood TB is identified.</li> <li>• Technical assistance missions are implemented</li> <li>• Actions plans are developed based on TA recommendations</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>3.3 The childhood TB strategy is fully implemented</b>	<ul style="list-style-type: none"> <li>• The national strategy on childhood TB is implemented throughout the country</li> <li>• Guidelines and standard operating procedures are available at health clinics</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>4. Engagement of all providers</b>				
<b>4.1 National policies provide guidance for all providers of paediatric care are involved in diagnosis, prevention and treatment of childhood TB</b>	<ul style="list-style-type: none"> <li>• The national program clearly defines a role for private providers / private health facilities in the childhood TB care</li> <li>• Private health facilities are required to report children with TB to the NTP</li> <li>• There are interventions addressing childhood TB on primary, secondary and tertiary level of the public health system</li> <li>• National guidance includes specific interventions for childhood TB as part of routine childhood healthcare in general and mother and child care settings</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		
<b>4.2 All providers of paediatric care are involved in diagnosis, prevention and treatment of childhood TB</b>	<ul style="list-style-type: none"> <li>• Private health facilities are reporting children with TB to the NTP</li> <li>• Interventions for childhood TB are offered as part of routine childhood healthcare in general and mother and child care settings</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		



STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>5. Primary prevention</b>				
<b>5.1 All eligible children receive BCG vaccination</b>	<ul style="list-style-type: none"> <li>• There is a section in the national TB guidelines on BCG vaccination</li> <li>• Policy is in accordance with the latest WHO guidelines on childhood TB, especially also regarding BCG for HIV infected children</li> <li>• The vaccination rate is known and above 80% in eligible children</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>6. Contact investigation</b>				
<b>6.1 Investigation of childhood contacts of infectious TB patients is part of the national strategy</b>	<ul style="list-style-type: none"> <li>• There is a section in the national TB guidelines on childhood TB contact investigation with an algorithm for screening of childhood contacts for TB</li> <li>• The national strategy on contact investigation is in accordance with the latest WHO guidelines on childhood TB</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		
<b>6.2 Investigation of child contacts of infectious TB patients is fully implemented</b>	<ul style="list-style-type: none"> <li>• Childhood TB contact investigation is routinely initiated regardless of where the index is diagnosed</li> <li>• Childhood TB contact investigation is routinely performed by the primary care level</li> <li>• Children with relevant symptoms are referred for the relevant examinations</li> <li>• Childhood contact investigation is implemented throughout the country</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>7. Preventive treatment</b>				
<b>7.1 The national strategy provides for preventive treatment of eligible children</b>	<ul style="list-style-type: none"> <li>• The national strategy provides counselling for eligible children for preventive therapy</li> <li>• The recording and reporting system allows follow up of preventive treatment and possible development of active TB for all children eligible for preventive therapy for a period of two years</li> <li>• Child adjusted dosages and paediatric formulations are used</li> <li>• The secondary prevention strategy is in accordance with the latest WHO guidelines on childhood TB</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		
<b>7.2 All eligible children have access to preventive treatment</b>	<ul style="list-style-type: none"> <li>• Preventive treatment for eligible children is implemented throughout the country</li> <li>• All children eligible for preventive therapy are followed-up for 2 years</li> <li>• The acceptance rate of preventive treatment for eligible children is &gt; 80%</li> <li>• The adherence rate is known and above 80%</li> <li>• Paediatric formulations are used</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>8. Childhood TB diagnosis</b>				
<b>8.1 Special approaches for diagnosis of TB in children are included in the national guidance on TB</b>	<ul style="list-style-type: none"> <li>• There is a diagnostic algorithm for childhood TB</li> <li>• The diagnostic algorithm defines which children are tested for TB (symptoms, risk groups) and MDR TB</li> <li>• The diagnostic algorithm gives guidance on how testing is performed</li> <li>• Eligible children are tested for MDR TB</li> <li>• The diagnostic algorithm also identifies children eligible for HIV counselling</li> <li>• The diagnostic algorithm is in accordance with the latest WHO guidelines on childhood TB</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		
<b>8.2 Special diagnostic approaches for TB in children are applied</b>	<ul style="list-style-type: none"> <li>• The diagnostic algorithm for childhood TB is used throughout the country</li> <li>• The diagnostic algorithm is available and routinely used at the health facility</li> <li>• Diagnosis of childhood TB is accessible close to the patients home</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>9. Treatment of TB in children</b>				
<b>9.1 The national treatment guidelines for TB and MDR TB have appropriate and specific adjustments for children</b>	<ul style="list-style-type: none"> <li>• There is a section in the national TB guidelines on treatment of childhood TB</li> <li>• The treatment regimen for drug susceptible TB is in line with the latest WHO recommendations</li> <li>• The treatment regimen for drug MDR TB is in line with the latest WHO recommendations</li> <li>• The treatment delivery method is determined by the treatment provider in consultation with the child and caretaker:                             <ol style="list-style-type: none"> <li>1. Children are not routinely hospitalized</li> <li>2. Administration of anti-TB drugs is supervised by the caretaker, nurse or DOT assistant</li> </ol> </li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		
<b>9.2 Child friendly formulations are available</b>	<ul style="list-style-type: none"> <li>• There are TB drugs available for the use in children</li> <li>• First line TB medication is available in paediatric formulations</li> <li>• Fixed dose combinations of FL drugs are available for paediatric use</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		
<b>9.3 The national treatment strategy of children is universally accessible for children</b>	<p>The specific guidance for treatment of susceptible childhood TB is applied throughout the country</p> <p>The specific guidance for treatment of MDR TB in children is applied throughout the country</p> <p>All eligible children have access to paediatric formulation anti TB drugs</p>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>10. Recording and reporting</b>				
<b>10.1 Data on childhood TB are available and used at the NTP</b>	<ul style="list-style-type: none"> <li>Childhood TB data are available at all levels of the NTP</li> <li>Data include at least notification of TB in children vaccination rate, treatment success rate, number of children on preventive therapy, number of children detected through contact investigation, type of TB: new previously treated, bacteriologically confirmed or negative, extrapulmonary TB, MDR TB</li> <li>Data are evaluated and used for planning</li> <li>All children diagnosed and treated for TB are recorded and reported by NTP in one of two age bands (0-4 and 5-14 years)</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>11. Human resources for childhood TB</b>				
<b>11.1 There is a plan for human resource capacity building for childhood TB</b>	<p>All aspects of childhood TB are included in the checklists for monitoring and supportive supervision for all health system levels and all cadres of staff.</p> <p>Capacity building and training on childhood TB is provided for the following groups</p> <ul style="list-style-type: none"> <li>Health workers at secondary- and primary-level facilities that provide care for sick children</li> <li>Health workers who are involved in the management of mothers and children with HIV</li> <li>Community health workers, volunteers and treatment support groups (who carry out contact tracing in the community)</li> <li>Health workers involved in the management of adult TB cases in the community</li> </ul> <p>The training curricula cover at least:</p>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
	<ul style="list-style-type: none"> <li>• The child presumed to have TB disease</li> <li>• The child treated for TB in the community</li> <li>• The child who is a close contact of a TB case</li> <li>• Initiation of contact investigation for each infectious TB patient</li> </ul>			

STANDARD	BENCHMARK(S)	RESULTS	RESULTS (DESCRIPTION)	AGREED NEXT STEPS
<b>12. Enabling environment, patient centred care</b>				
<b>12.1 The NTP and partners deploy specific initiatives to promote a patient and family centred approach in childhood TB care</b>	<ul style="list-style-type: none"> <li>• Educational materials on TB in children are available</li> <li>• Activities are undertaken to reduce stigmatization and discrimination in the communities and at school</li> <li>• Public sector TB care for children is free of charge</li> <li>• Diagnosis and treatment are accessible close to patients' home</li> <li>• Children are not routinely hospitalized</li> <li>• Children sputum and/or culture negative are allowed to attend school</li> <li>• There are initiatives to support caretakers how to manage children with TB</li> </ul>	<input type="checkbox"/> Met <input type="checkbox"/> Partially met <input type="checkbox"/> Not met		

