



WHO Global Task Force on TB Impact Measurement

3rd meeting of the TB estimates subgroup: methods to use for WHO's definitive assessment of whether 2015 global TB targets are met

Glion-sur-Montreux, 31 March – 2 April 2015

FINAL AGENDA

Objectives

1. To present an overview of the work of the WHO Global Task Force on TB Impact Measurement.
2. To present and discuss current methods used by WHO to produce estimates of TB disease burden, and alternative methods that could be used instead of or in combination with these methods:
 - a. incidence;
 - b. mortality;
 - c. prevalence.
3. To produce recommendations on methods to be used for producing estimates of TB incidence, prevalence and mortality in 2015/2016, as well as future work that is needed to improve upon these methods.
4. To present and discuss WHO's current methods for producing estimates of TB disease burden disaggregated by age and sex, and alternative methods that could be used instead of or in combination with these methods.
5. To discuss topics in TB burden estimation (disease and infection) that the Task Force should address in future.

Expected Outcomes

1. All participants are informed about the Task Force's mandate, membership, strategic areas of work and progress made to date.
2. All participants are informed about WHO's existing approach to producing estimates of TB disease burden (incidence, prevalence, mortality) and alternative methods that could be used.
3. The group has defined clear recommendations for the methods to be used for WHO's definitive assessment of whether 2015 global TB targets for incidence, prevalence and mortality are met at global, regional and country levels,¹ as well as other work needed in the next 2–3 years to improve upon these methods.
4. All participants are informed about current WHO methods used to produce TB burden estimates disaggregated by age and sex and alternative methods that could be used, and the group has provided either endorsement of current methods or recommendations for their improvement.
5. Topics in disease burden estimation that the Task Force should address in future, and ideas for how these should be approached, suggested.

¹ This may include endorsement of current methods, and/or adaptation/refinement of current methods, and/or adoption of new methods in combination with or as substitutes for current methods.

Meeting rationale and approach

Global targets for reductions in TB disease burden by 2015 were set within the context of the United Nations' Millennium Development Goals (MDGs). The targets are that TB incidence should be falling,² and that TB mortality and prevalence rates should be halved by 2015 compared with their level in 1990. These targets have been adopted at regional and country levels. Each year, WHO publishes estimates of TB incidence, prevalence and mortality at global, regional and country levels and an assessment of progress towards 2015 targets in its annual global TB report. In 2015/2016, a definitive assessment of whether the 2015 targets were met is required.

Under the umbrella of the WHO Global Task Force on TB Impact Measurement, this 2.5 day global consultation is being held to allow for expert review and discussion of the methods that WHO is currently using to produce TB disease burden estimates; to allow for expert review and discussion of alternative methods that could be used either in place of or in combination with current methods (the two major alternatives that will be reviewed are dynamic modelling and predictive statistical modelling, based on new work commissioned in advance of the meeting as well as a comparison with estimates produced by the Institute of Health Metrics and Evaluation that are used for the Global Burden of Disease study); and to define recommendations for the methods to be used for the definitive assessment of whether 2015 targets are achieved. It follows from two previous meetings of the Task Force's subgroup on methods for producing estimates of TB disease burden (in June 2008 and October 2009), and associated discussions at two meetings of the full Task Force (June 2006; March 2010).

About half a day will be dedicated to presenting and discussing existing and alternative methods for the estimation of each of TB incidence, TB mortality and TB prevalence. A further half day will be used to discuss the disaggregation of these estimates by age and sex, with most attention to estimates of TB incidence and mortality among children.

Incidence will be covered first, since estimates of TB incidence are grounded in the most widely available direct measurement of TB disease burden: TB case notifications. These are reported to WHO on an annual basis by around 200 countries and territories that collectively account for more than 99% of the world's population and TB cases. This part of the meeting will include review of the three most obvious shortcomings of case notifications in relation to estimation of TB incidence, and how these limitations are currently addressed. The three limitations are: 1) notifications may underestimate the true number of incident TB cases because of under-reporting (TB cases may be diagnosed in the private or public sector but not reported to national authorities and thus missed in official statistics); 2) notifications do not include cases that were not diagnosed (TB cases that remain undiagnosed in the community); and 3) notifications may include people that did not actually have TB, especially when clinical diagnosis is relied upon without any confirmatory test result.

Mortality will be covered second. This will include review of the direct measurements that are used (mostly from vital registration systems with standard coding of causes of death, but also a few mortality surveys and verbal autopsy studies) and indirect estimation methods.

Prevalence will be covered third. This is the indicator for which the fewest direct measurements (from national TB prevalence surveys) exist. However, the body of evidence from national TB prevalence surveys has grown substantially since 2009.

For each indicator, presentation of current and alternative methods will be followed by small group work (four groups, each with a facilitator who will be briefed in advance). Each group will work on a standard template in which (i) current methods and the countries for which they are used will already be listed and (ii) alternative options will already be listed. The task of each group will be to discuss the current and alternative methods as a basis for defining (within the template): (i) recommendations for which method to use, with rationale, alongside

² MDG 6 is defined as "Combat HIV/AIDS, malaria and other diseases". Under this goal, target 6.c is defined as "Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases". TB incidence, prevalence and mortality rates are MDG indicators.

recommendations about future work that is also needed; (ii) requirements to implement recommendations (such as further technical work and additional funding); and (iii) the agencies or individuals willing to contribute to future work. Groups will be asked to feed back in plenary and the secretariat will work on synthesising overall recommendations arising from group work.

The fourth major session of the meeting will focus on current and alternative methods for producing TB burden estimates disaggregated by age and sex. These are not required for the assessment of whether 2015 global TB targets were met, but are in high and growing demand. A similar approach of group work and plenary discussion will be used.

The last part of the meeting will be used for a final review of recommendations on methods to be used for each indicator. There will also be discussion of additional topics that the group could cover in future.

DAY 1: Tuesday 31 March 2015

Time	Topic	Presenter
08.30 – 09:00	Registration	
09:00 – 09:15	Welcome and introduction of participants Declaration of conflict of interest	Jaap Broekmans (Chair)
09:15 – 09:30	Meeting objectives and expected outcomes Review and adoption of agenda	Katherine Floyd Jaap Broekmans
Objective 1. Overview of the work of the WHO Global Task Force on TB Impact Measurement		
09:30 – 10:00	Presentation: The WHO Global Task Force on TB Impact Measurement: An overview (Background document #1)	Katherine Floyd
Objective 2. Current and alternative approaches to TB disease burden estimation: <u>overview</u>		
10:00 – 10:30	Presentation: Current WHO methods for TB disease burden estimation: A “high-level” overview (Background documents #2a-d)	Philippe Glaziou
10:30 – 10:45 Coffee break		
10:45 – 11:15	Presentation: Current IHME methods for TB disease burden estimation: A “high-level” overview	Theo Vos
11:15 – 11:35	Presentation: TB disease burden estimates published by WHO and IHME: comparison of methods and results (Background document #3)	Laura Anderson, Philippe Glaziou
11:35 – 12:00	Questions and answers	All
12:00 – 12:30	Presentation: Predictive statistical modelling approach to estimating TB disease burden (Background document #4a)	LSHTM team
12:30 – 13:00	Presentation: Predictive statistical modelling approach to estimating TB disease burden (Background document #4b)	KIT team
13:00 – 14:15 Lunch		
Objectives 2 & 3. Current and alternative approaches to TB disease burden estimation: <u>incidence</u>		
14:15 – 15:00	Interactive presentation: Current WHO methods used to estimate TB incidence (Background document #5a)	Philippe Glaziou
15:00 – 15:30	Presentation: Mathematical modelling approach to estimating TB incidence (Background document #5b)	Pete Dodd
15:30 – 15:45 Tea break		
15:45 – 18:30	Group work including periodic and final feedback in plenary: TB incidence	All

DAY 2: Wednesday 1 April 2015

Time	Topic	Presenter
09:00 – 09:15	Summary of main discussion/outcomes from Day 1	Jaap Broekmans
Objectives 2 & 3. Current and alternative approaches to TB disease burden estimation: <u>mortality</u>		
09:15 – 10:00	Presentation: Current WHO methods used to estimate TB mortality (Background document #6)	Babis Sismanidis, Carel Pretorius
10:00 – 12:00	Group work: TB mortality	All in groups
<i>10:30 – 10:45 Coffee break</i>		
12:00 – 12:30	Feedback in plenary: TB mortality	All
<i>12:30 – 14:00 Lunch</i>		
Objectives 2 & 3. Current and alternative approaches to TB disease burden estimation: <u>prevalence</u>		
14:00 – 14:20	Presentation: Current WHO methods used to estimate TB prevalence (Background document #7)	Babis Sismanidis
14:20 – 14:40	Presentation: Predictive statistical modelling approach to estimating TB prevalence	KIT team
14:40 – 16:00	Group work: TB prevalence	All in groups
<i>15:30 – 15:45 Tea break</i>		
16:00 – 16:30	Feedback in plenary: TB prevalence	All
Objective 4. Current and alternative approaches to TB disease burden estimation: <u>disaggregation by age and sex</u>		
16.30 – 17.00	Presentation: Overview of existing data sources and methods used for the disaggregation of TB disease burden estimates by age and sex (Background document #8a)	Babis Sismanidis
17:00 – 17:30	Presentation: Mathematical modelling approach to estimating TB disease burden in children (Background document #8b)	Pete Dodd, James Seddon
17:30 – 18:00	Presentation: Alternative statistical modelling approach to estimating TB disease burden in children (Background document #8c)	Ted Cohen, Helen Jenkins

DAY 3: Thursday 2 April 2015

Time	Topic	Presenter
09:00 – 09:30	Summary of main outcomes from Day 2	Jaap Broekmans
Objective 4. Existing and alternative approaches to TB disease burden estimation: <u>disaggregation by age and sex</u>		
09:30 – 11:00	<u>Group work:</u> TB disease burden disaggregation by age and sex	All in groups
11:00 – 11:15 Coffee break		
11:15 – 11:45	<u>Feedback in plenary:</u> TB disease burden disaggregation by age and sex	All
Objective 5. Future efforts in TB disease burden estimation		
11:45 – 12:30	<u>Presentation & discussion:</u> Latent tuberculous infection burden: summary results from mathematical modelling exercises (Background document #9)	Rein Houben, Richard White
	<u>Discussion:</u> Other topics to address in future	All
12:30 – 13:00	Review and finalization of recommendations from Day 2 Meeting outcomes and concluding remarks	Jaap Broekmans Katherine Floyd
13:00 – 14:30 Lunch followed by departure		