

**TB MAC/WHO Annual Meeting
10 - 14th September
World Bank offices, Washington DC**

Agenda

Monday, 10th September

BENCHMARKING, REPORTING & REVIEW, EVIDENCE GAPS			
Time	Content as	Speaker	Chair
0830-0900	Registration		
0900-0920	Welcome, context & overall meeting objectives <i>TB MAC and the TB Modelling Roadmap</i>	Richard White Daniel Chin	Michael Kimmerling
0920-0950	Overview of planned BRR activities <i>Motivation, efforts to date, session objectives</i>	Nick Menzies	
0950-1010	The stakeholder's perspective <i>Need for these activities, wider context</i>	Daniel Chin Shufang Zhang	
1010-1030	Tea break		
1030-1110	Presentation of proposed modelling benchmarks and discussion <i>General benchmarks (not country-specific)</i>	Nick Menzies	
1110-1150	<i>Country-specific epidemiological benchmarks</i>	Andrew Siroka	
1150-1230	<i>Country-specific economic benchmarks</i>	Anna Vassall	
1230-1300	<i>Additional standard outputs</i>	Ted Cohen	

1300-1400	Lunch break		
1400-1440	Presentation of proposed reporting approach and discussion	Finn McQuaid	Frank Cobelens
1440-1500	Presentation of proposed approach for external review and discussion	David Dowdy	
1500-1525	Tea break		
1525-1615	Activity->Impact evidence gaps for country level resource allocation	Richard White	
1615-1645	Discussion	All	
1645-1700	Wrap up of the day, assignments for group work	Nick Menzies Richard White	

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Tuesday, 11th September

BENCHMARKING, REPORTING & REVIEW, EVIDENCE GAPS			
Time	Content as	Speaker	Chair
0900-0920	Summary of the previous day, group work assignments and objectives	Nick Menzies	Michael Kimmerling
0920-1045	Small group work to suggest revisions B1 - General benchmarks B2 - Country-specific epi benchmarks B3 - Country-specific econ benchmarks B4 - Additional standard outputs RR - Reporting/Review EG - Act>Imp evidence gaps	Nick Menzies Andrew Siroka Anna Vassall Ted Cohen Finn McQuaid Richard White	
1045-1115	Tea break		
1115-1245	Feedback and discussion (15 min/group) B1 - General benchmarks B2 - Country-specific epi benchmarks B3 - Country-specific econ benchmarks B4 - Additional standard outputs RR - Reporting/Review EG - Act>Imp evidence gaps	Nick Menzies Andrew Siroka Anna Vassall Ted Cohen Finn McQuaid Richard White	
1245-1300	Wrap up from morning & next steps	Nick Menzies Finn McQuaid	
1300-1400	Lunch break		

ECONOMICS IN TB MAC: ACTIVITIES AND EXTERNAL LINKS			
1400-1410	Session overview and objectives	Gabriela Gomez	Gabriela Gomez
1410-1430	GHCC: Reference case and reporting tools	Anna Vassall	
1430-1500	GHCC: Update on Unit Cost Study Repository	Lori Bollinger	
1500-1530	GHCC: Patient-incurred costs and catastrophic expenditures	Sedona Sweeney	
1530-1600	Tea break		
1600-1620	WHO: Update catastrophic costs surveys	Andrew Siroka	Anna Vassall
1620-1640	TB MAC/IDSI: Feedback from Equity workshop	Gabriela Gomez	
1640-1700	Global Health CEA registry and DALYs	David Kim	
1700-1715	Discussion and activities for next year	Anna Vassall	
1715-1730	Wrap up of the TB MAC / WHO Task Force meeting	Richard White	

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Wednesday, 12th September

KEY CONSIDERATIONS FOR MODELLING OF TB PREVENTION		
Time	Content as	Speaker
0830-0900	Introductions and scope/goals of the meeting	David Dowdy
Session 1: What new insights from immunology and natural history should be investigated or incorporated into models of TB prevention?		
0900–1000	Immunology of TB: insights from in vivo models and implications for prevention	Louis Joslyn
	Role of subclinical TB - can we model prevention of TB in the subclinical stages?	Paul Drain
	Thinking of TB from the perspective of the infectious host	Hanif Esmail
	TB prevention among individual previously treated with TB	Florian Marx
1000-1030	Questions & Discussion	All
1030-1045	Tea break	
Session 2: What are the most important modelling considerations for TB drugs and drug development in TB prevention		
1045-1145	Shorter and novel regimens for TB prevention: what are the most important epidemiological considerations?	Robert Horsburgh
	Considering population level impact in prioritising profile of novel TB drugs	Emily Kendall

	Considering emergence of drug resistance in development of novel drug regimens	Amber Kunkel
	Costs and economic considerations for novel regimens of TB prevention	Gabriela Gomez
1145-1215	Questions & Discussion	All
1215-1315	Lunch break	
Session 3: What are the implications of global targets and epidemic trends for models of TB prevention?		
1315-1415	The role of TB prevention in countries and regions targeting pre-elimination	Marieke van der Werf
	Modeling TB epidemics in the face of evolving global demography	Joaquin Sanz Remon
	What is the role of treatment for LTBI in the changing global landscape?	Anete Trajman
	Patient costs in models of TB prevention: an increasingly important consideration?	Hassan Haghparast-Bidgoli
1415-1515	Questions & Discussion	All
1515-1530	Tea break	
1530-1615	Keynote and group discussion	Dick Menzies
1615-1650	Group discussion	All
1650-1700	Wrap up & Summary	David Dowdy

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Thursday, 13th September

Time	Content as	Speaker
0830-0845	Recap of previous day	David Dowdy
0845-0900	Introduction to the day	Sourya Shrestha
Session 4: How should models consider the role of social determinants, comorbidities, nutrition and the environment in prevention of TB?		
0900-1000	Outside the biomedical -- modelling the socio-economic drivers and consequences of TB	Rein Houben
	TB in the context of changing social determinants	Olivia Oxlade
	Is it worth it? Economic and ethical considerations of targeting social-level factors to prevent TB	Stephane Verguet
	Catastrophic costs at the patient level and implications for models	Tom Wingfield
1000-1030	Questions & Discussion	All
1030-1045	Tea break	
Session 5: Implementing TB prevention: what aspects of implementation should models approve upon?		
1045-1145	Modeling TB interventions in high burden settings: what are the gaps in evidence?	Sandip Mandal

	Challenges associated with implementation of TB prevention at large megacities	Hamidah Hussain
	Internal migration and Transmission of Tuberculosis in China: Socio-demographic factors in TB prevention	Chongguang Yang
	TB interventions in high burden settings: what role can models play?	
1145-1215	Questions & Discussion	All
1215-1315	Lunch break	
1315-1415	Small group discussions	Break into three small groups
1415-1430	5 minute summary	Group representatives
1430-1515	Group discussion (specific to today)	All
1515-1600	Next steps & closing: Group discussion about next steps and areas for further methods development	All

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Friday, 14th September

Overarching theme

- Maximising the utility of quant modelling to support TB vaccine candidate development and implementation

Goals

- Update vaccine modellers/ immunologists/ epidemiologists/ etc on new preclinical/ clinical/ modelling results + upcoming data
- [Framework](#) for the use of quantitative modelling to accelerate TB vaccine development
 - Potential manuscript submission on Framework
- Summary of key problems/actions to improve utility of quantitative TB modelling for
 - Vaccine dose/regimen selection
 - TB vaccine TPPs/PPCs and implementation
- Increased networking amongst and sharing of knowledge between vaccine modellers/ immunologists/ epidemiologists/ etc)
- \$100k funding opportunity call (shared across TB prevention, diagnostic, & vaccines)

TB VACCINE QUANTITATIVE MODELLING MEETING			
Time		Speaker	Chair
0800-0830	Registration		Richard White
0830-0840	Welcome and aims for the day	Richard White	
0840-0910	Plenary - Update on new discovery, preclinical, clinical, modelling TB vaccine results + expected upcoming data	Willem Hanekom	

Session 1: Framework for the use of quantitative modelling to accelerate TB vaccine development			
0910-0925	Consumers #1: Development need statement - how would we like to use quant modelling to accelerate vaccine development, and draft framework	Jeff Barrett	
0925-0940	Consumers #2+: Input from other stakeholders (1 min each)	Decision makers	
0940-0955	Producers: Input from producers of modelling evidence (1 min each)	Modellers	
0955-1010	General discussion	All participants	
1010-1040	Tea break		
1040-1120	Group work - Flesh out Framework	Jeff Barrett Sophie Rhodes Rebecca Harris Richard White	
1120-1140	Feedback from group work	Group leads	
1140-1240	Lunch break		
Session 2: Issues in using quant models for TB vaccine dose/regimen selection			
1240-1255	Consumer: Need statement - how do we want quant modelling to improve TB vaccine dose/regimen selection?	Tom Evans	Willem Hanekom
1255-1310	Producer #1: Bridging knowledge and methods used in drug development to vaccine development	Rada Savic	
1310-1325	Producer #2: Integrating NHP, human, and modeling to determine the influence of BCG timing on H56 vaccine outcomes	Louis Joslyn	
1325-1340	Producer #3: Modelling for vaccine dose/regimen selection	Sophie Rhodes	

1340-1425	Group work	Jeff Barrett Rada Savic Louis Joslyn Sophie Rhodes	
1425-1445	Feedback from groups	Group leads	
1445-1515	Tea break		
Session 3: Issues in using quant models for informing vaccine characteristics in TPP/PPCs, target-population-informed development, and implementation strategy			
1515-1530	Consumers: Needs statement for informing vaccine characteristics in TPP/PPCs and target-population-informed development and for informing implementation strategy (eg BCG revac RCTs/roll out)	Willem Hanekom Johan Vekemans Dereck Tait	Helen Fletcher
1530-1545	Producer #1: Modelling for informing TB vaccine TPPs and PPCs	Rebecca Harris	
1545-1600	Producer #2: Importance of/issues in natural history parameterisation and vaccine characteristic assumptions	Joaquin Sanz	
1600-1615	Producer #3: Importance of implementation strategy (age, spatial, risk groups ...) in TB Vaccine impact modelling	Sourya Shrestha	
1615-1700	Group work	Willem Hanekom Johan Vekemans Dereck Tait Rebecca Harris	
1700-1720	Feedback from groups (5m each)	Group leads	
1720-1730	Wrap up and next steps	Richard White	

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Friday, 14th September

TB MAC DIAGNOSTICS MEETING: Across the Disease Spectrum: The Future of Modeling TB Diagnostic Testing		
Time	Content as	Speaker
0830-0845	Introductions and scope/goals of the meeting	David Dowdy
0845-0900	TB survivor perspective	Phumela Tisile
Session 1: Modeling Diagnosis of Latent/Incipient/Subclinical/Clinical TB		
0900-1000	The biology of incipient and subclinical TB: considerations for modelers	Shuyi Ma
	Using models to advance the diagnosis of incipient and subclinical TB	Saskia Ricks
	Closing the gap in TB diagnosis in children	Eleanor Click
	Economic considerations for models of diagnostic testing for latent, incipient, and subclinical TB	Ricardo Steffen
1000-1030	Questions & Discussion	All
1030-1045	Tea break	

Session 2: Modeling Diagnosis of Adult Pulmonary TB (including “trriage” testing)		
1045-1145	Implementing TB diagnostic testing in high burden settings: challenges and the role of models	Liesl PageShipp
	Cost considerations for implementing novel diagnostic testing in vulnerable populations	Alice Zwerling
	CRP as a potential “trriage” test for TB: epidemiological and economic considerations for modelers	Christina Yoon
	Evaluating epidemiological and economic implications of improving TB diagnosis	Hoon Sohn
1145-1215	Questions & Discussion	All Participants
1215-1315	Lunch break	
1315-1345	Keynote	Madhukar Pai
Session 3: Advancing the Modeling of Diagnostic Testing in Key Populations: Children and People Living with HIV		
1345-1445	Modeling Pediatric Tuberculosis: how can we improve?	Leonardo Martinez
	What role can modeling play in advancing pediatric TB interventions?	Courtney Yuen
	Modeling the diagnosis of HIV-associated TB: key research questions and data gaps	Patrick Cudahy
	Epidemiological considerations for models of TB diagnosis in HIV-endemic settings	Chris Whalen
1445-1515	Questions & Discussions	All
1515-1530	Tea break	

Session 4: Modeling the Diagnosis of TB Drug Resistance		
1530-1630	The global epidemiology of TB drug resistance and key questions for modelers	Matteo Zignol Andrew Siroka
	How will better diagnosis of TB drug resistance translate into better clinical outcomes?	Grant Theron
	Modeling the epidemiological impact and cost-effectiveness of improved diagnostic testing for drug-resistant TB	Emily Kendall
1630-1700	Questions & Discussion	All