

Optima-TB: Supporting Decisions at the Country Level

What have been the main developments since the last TB MAC, and what are key challenges going forward?

Presented by Tom Palmer on behalf of the Optima-TB Group



Overview

Main Developments Since Last TB MAC:

- User interface
- Supporting independent users
- New country applications

Key Challenges:

- “Capacity building”
- Engagement
- Perceived value of analyses
- Data, data, data

Main Developments: A New User Interface



Calibration and reconciliation ?

for
 Parameter set:

Parameters ?

Type here to filter parameters

Category	Parameter	Overall scale factor	Children 0-4 years	Children 5-14 years	Adults 15-64 years	Adults 65+ years	Prisoners
Demographics	Number of births	1	264,000	0	0	0	0
Demographics	Non-TB deaths	1	0.009	0.001	0.008	0.075	0.01
Demographics	Number of new immigrants	1	0	0	0	0	0
Demographics	Number of departing emigrants	1	0	0	0	0	0
Initialization	Initialization proportion of the population with active TB	1	0.003	0.004	0.008	0.005	0.025
Initialization	Initialization proportion of the population with latent TB	1	0.03	0.08	0.33	0.33	0.5
Initialization	Initialization proportion of latent TB cases that are early latent	1	0.8	0.5	0.1	0.02	0.2
Initialization	Initialization proportion of latent TB cases that are on treatment	1	0	0	0	0	0
Initialization	Initialization proportion of active TB cases that are diagnosed	1	0.2	0.3	0.3	0.3	0.4
Initialization	Initialization proportion of diagnosed TB cases that are on treatment	1	0.4	0.4	0.4	0.4	0.4
Initialization	Initialization proportion of the population that have previously been vaccinated	1	0.4	0.5	0.4	0.3	0.3
Initialization	Initialization proportion of the population that have previously been infected with TB	1	0	0	0.01	0.02	0.05
TB smear/strain	New active infections: proportion of new TB cases that are SP	1	0.6	0.6	0.6	0.6	0.4
TB smear/strain	New active infections: proportion of new TB cases that are SN	1	0.4	0.4	0.4	0.4	0.6
TB							

Main Developments: A New User Interface



Define optimizations ?

Name	Status	Actions						
Default outcome optimization	Completed after 00:00:37	Run	Test run	Plot results	Clear run			

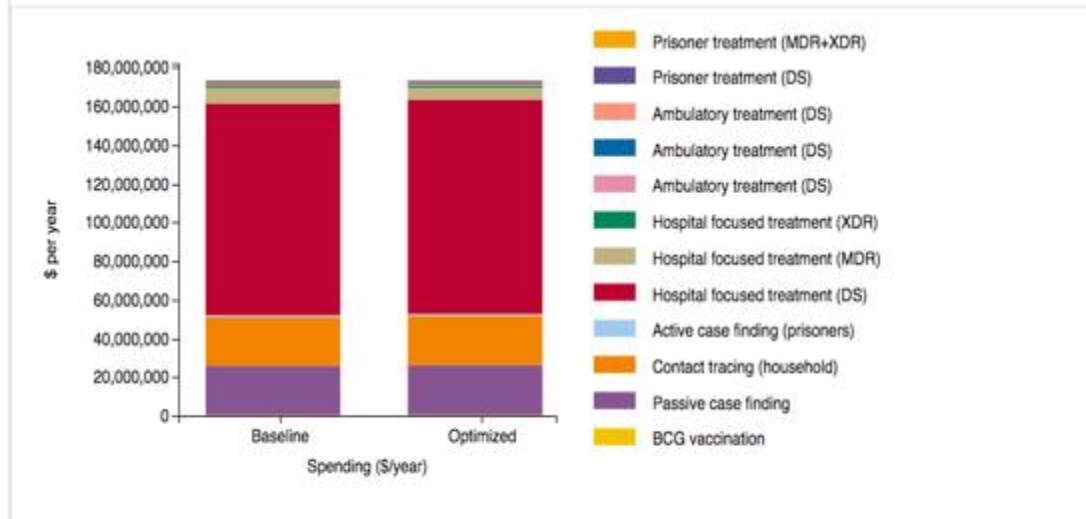
[Add outcome optimization](#) [Add money optimization](#)

Reset zoom

Results ?

Year: 2035 Population: All [Refresh](#) [Show plot selection](#) [Export graphs](#) [Export data](#)

Program Spending Plots



Program Coverage Plots

BCG vaccination	Passive case finding	Contact tracing (household)
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Main Developments: Supporting Independent Users

Training:

- Workshops conducted in Romania, South Africa and Thailand
- ~50 participants attending
- Aims to promote greater country ownership of the analysis process

Key challenges:

- Little experience with Excel, can be a barrier to 'starting'
- Unsure how much critical understanding of the model is built during these workshops – tends to be a focus on input/output

Main Developments: New Country Applications

Country applications completed:

- Belarus
- Peru
- South Africa
- Moldova
- Romania

Country applications underway:

- Mozambique
- Malawi
- Kyrgyzstan
- Armenia
- Indonesia



Key Challenges

Engagement:

- Relationship between modelers and countries is often indirect
- Motivation to conduct the study at the country level? Obligated?

Perceived value of analyses:

- How/who will use these analyses?
- Can recommendations be implemented?

Data, data, data:

- Need to find the key person willing/able to find the data
- Reduces likelihood of independent use
- Divergence between model requirements and real-world practice makes data input less straightforward

Questions for discussion

What can we (realistically) achieve in terms of 'capacity building' in the context of TB modelling?

Do countries want to lead modelling analysis themselves?

What is the best way to organize training to support independent country-led modelling analysis?

How can effective arrangements for ongoing troubleshooting and quality assurance be established?