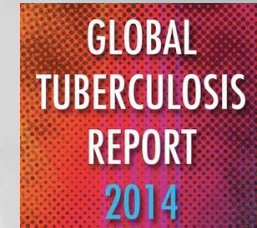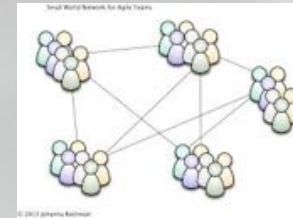# TB MAC rationale

- Complex natural history, range of interventions, variation in settings => global and country decision makers face great uncertainty

- Modelling can be used to compare strategies and quantify uncertainty

- But
  - Lack of co-ordination
  - Limited data, models and modellers
  - Decision makers & modellers uninformed
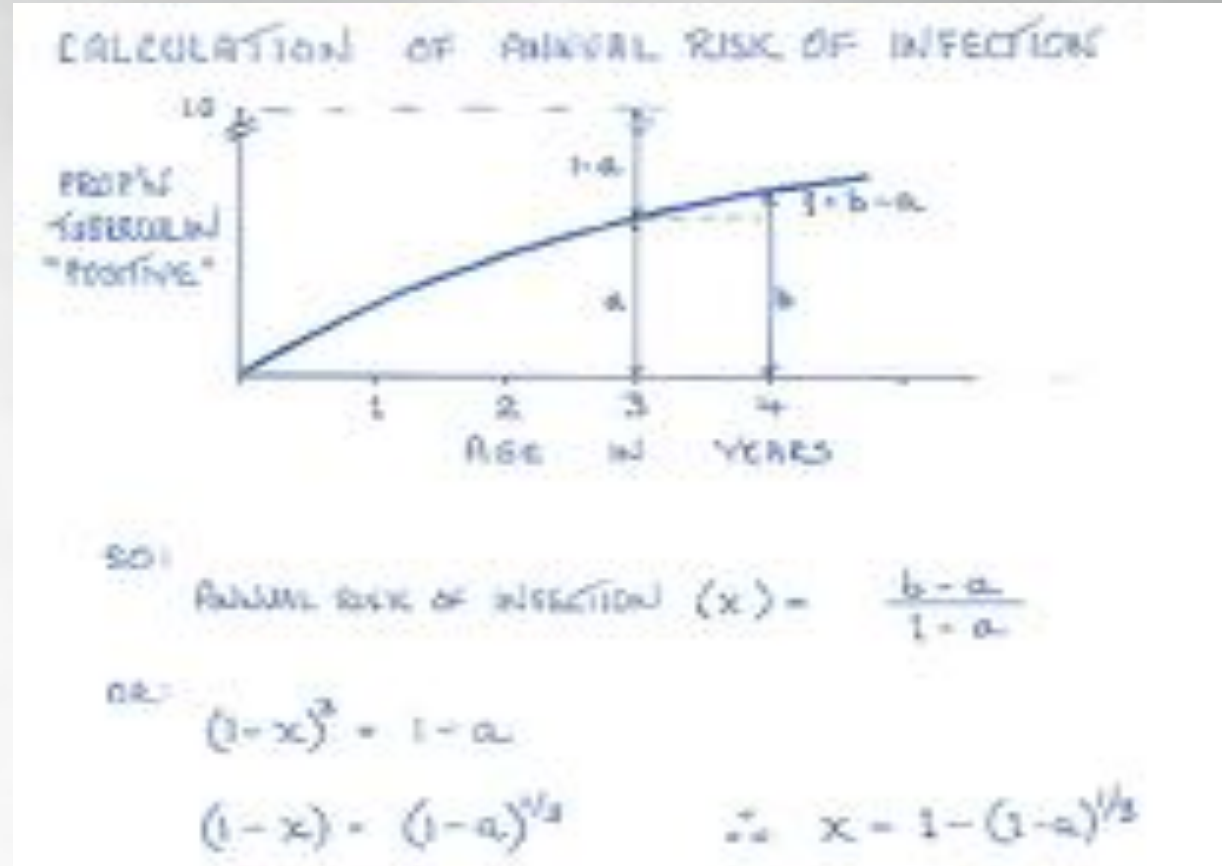
TB MAC impact 2012-16

- Helped foster modeller <--> stakeholder links

- Provided evidence at numerous high level meetings
  - GFATM decision not to reduce the % of funds allocated to TB

- Influenced development of models/methods with impact at
  - Global level
    - WHO GTB methods for HIV+/- TB incidence and mortality

  - Country level
    - South Africa: 'Targets' work used for 1st TB&HIV investment case, first ringfenced TB grant & increased domestic funding
    - TB MAC influenced models supported NSP and GFATM submissions in increasing # countries

- Supported WHO Task Force for TB Impact and Measurement to include modelling in mandate

But much more to do…

TB MAC Strategy '17-20

Activities and Outputs

Outcomes

Impact

Strengthening networks

Creating solutions

Empowering decision makers

1 Strong and effective links between decision makers and modelers & economists

2 New high quality resources available/accessible to decision makers

3 TB decision makers are better equipped to integrate these resources in their decision making

Improved TB control policy decision making and practice at global and country level

Increased effectiveness and efficiency of TB control policy and practice at global and country level

TB Modelling and Analysis Consortium
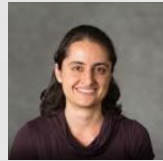
TB Modelling and Analysis Consortium - Who

Steering Committee

- Katherine Floyd - WHO
- Anna Vassall - LSHTM
- Anna Bershteyn - IDM
- Frank Cobelens - AIGHD
- Geoff Garnett – BMGF
- David Dowdy – JHU
- Michael Kimerling - KNCV
- Nick Menzies – Harvard
- Ted Cohen - Yale

Advisory Panel

- Dr Jeremiah Chakaya Muhwa – The Union
- Liz Corbett - LSHTM
- Philippe Glaziou - WHO
- David Wilson – World Bank
- Sevim Ahmedov – USAID
- Johannes Hunger – GFATM
- Adam Macneil - CDC
- Geoff Garnett – BMGF
- Sahu Suvanand – StopTB

Secretariat

- Finn McQuaid
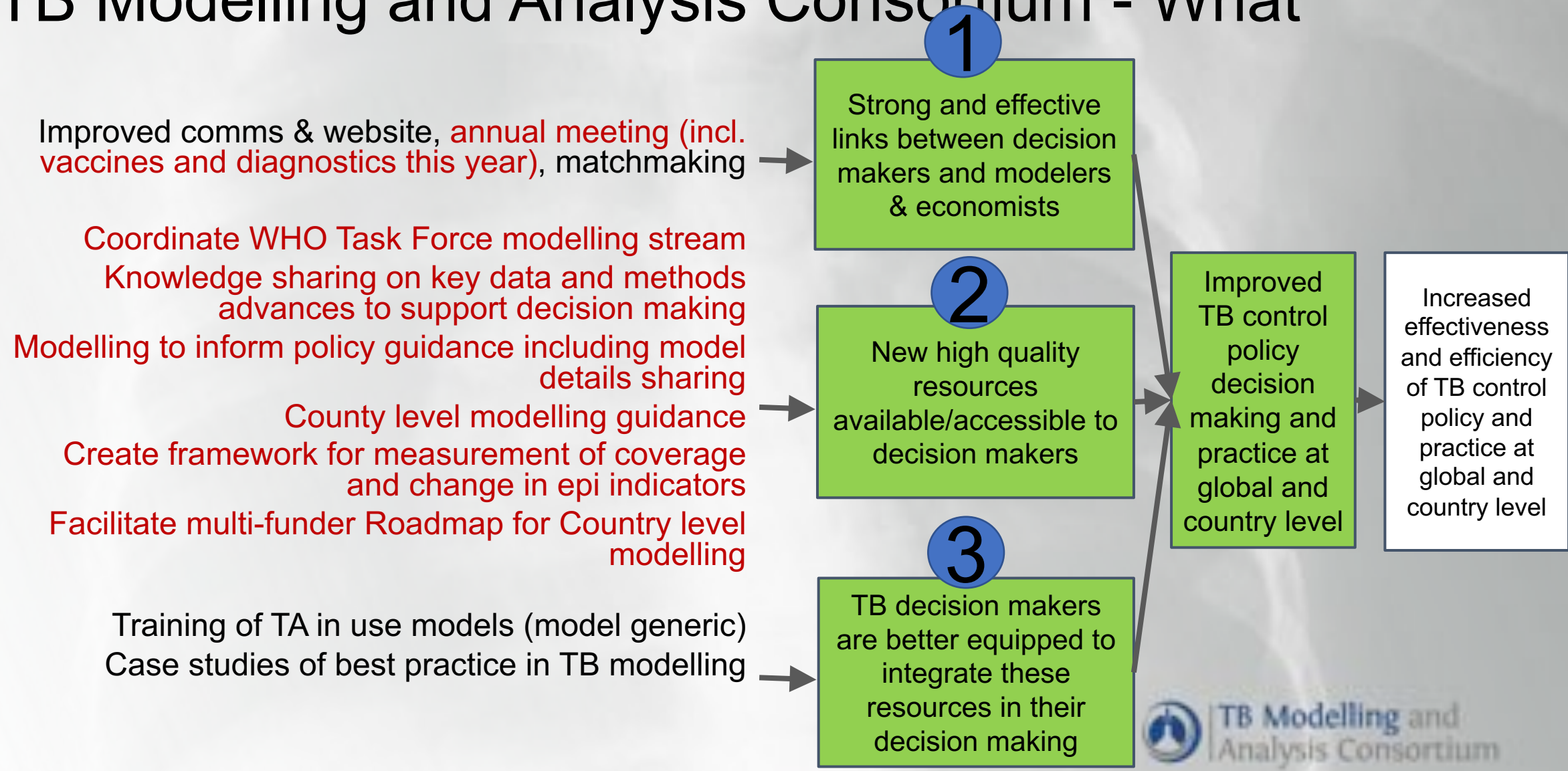- Tina Sachs/ Kristian Godfrey
- Richard White

Funding:

BILL & MELINDA GATES foundation

TB Modelling and Analysis Consortium

TB Modelling and Analysis Consortium - What

Improved comms & website, annual meeting (incl. vaccines and diagnostics this year), matchmaking

Coordinate WHO Task Force modelling stream
Knowledge sharing on key data and methods advances to support decision making
Modelling to inform policy guidance including model details sharing
County level modelling guidance
Create framework for measurement of coverage and change in epi indicators
Facilitate multi-funder Roadmap for Country level modelling

Training of TA in use models (model generic)
Case studies of best practice in TB modelling

1 Strong and effective links between decision makers and modelers & economists

2 New high quality resources available/accessible to decision makers

3 TB decision makers are better equipped to integrate these resources in their decision making

Improved TB control policy decision making and practice at global and country level

Increased effectiveness and efficiency of TB control policy and practice at global and country level

TB Modelling and Analysis Consortium

tb-mac.org

TB Modelling and Analysis Consortium

Increasing the effectiveness of TB care and prevention

- Catalogue of country-level TB models
- Collection of country-level applications
- Case studies of working with decision-makers
- Compendium of modelling tools
- County level modelling guidance

Guidance for country-level TB modelling

World Health Organization · TB Modelling and Analysis Consortium

Modelling for TB policy-makers

Policy-making for TB modellers

TB Modelling and Analysis Consortium

Increasing the Effectiveness of TB Care and Prevention

Overview of this meeting
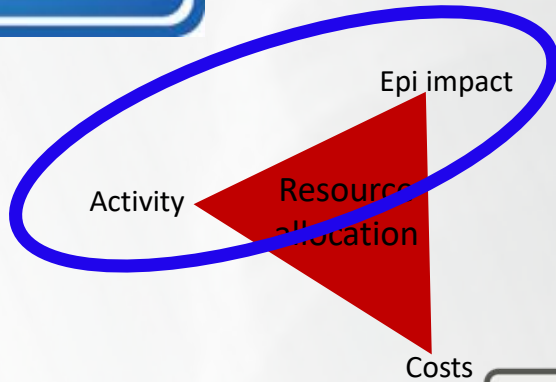
Mon / Tue   **Wed / Thur**   **Fri**

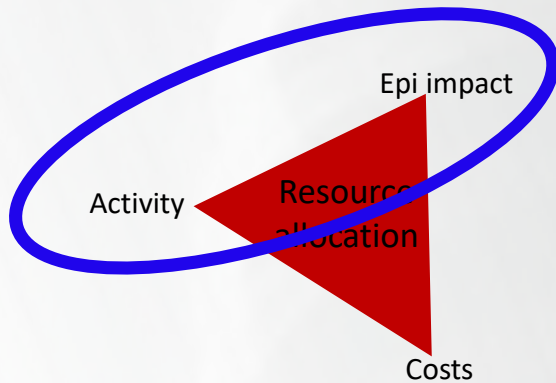# What we will have by end of meeting…

Mon / Tue

- Country level modelling benchmarking, reporting and review
  - Summarise efforts so far
  - Discussed how to improve the approach
  - Discussed its role in country-level modelling applications
  - Identified next steps for implementation

What we will have by end of meeting…

Mon / Tue

- Activity->Impact evidence gaps for country level resource allocation
  - Summarise rationale for work
  - Leant of modelers recent experiences and new data extraction on ACF
  - Discussed if to bin or improve approach, how to scale up, and what (if any) TB MAC's role should be

What we will have by end of meeting...

Mon / Tue

- **Health Economics**
    - Update attendees on TB MAC activities and links to consortia/ initiatives – focus on resources useful for modellers
        - GHCC
            - Ref case
            - Unit cost study repository
        - WHO catastrophic cost data
        - Equity workshop
        - Tufts – CE analysis registry and DALY tools
    - Your input on plans for next year

What we will have by end of meeting...

Wed / Thur

- TB MAC Modelling Research Group - Key considerations for modelling of TB prevention
  - Updated stakeholders on 5 "big" qus in modeling TB prevention
  - Prioritize potential manuscripts, tools, documents etc
  - Increased networking and sharing of knowledge between modelers, epidemiologists and other stakeholders

What we will have by end of meeting…

Fri

- TB MAC Modelling Research Group - TB Vaccines
  - Updated all w/ new preclinical/ clinical/ modelling results + upcoming data
  - Created Framework on quant modelling to accelerate TB vaccine devt
    - Manuscript submission?
  - ID'ed key problems/actions to improve utility of quant modelling
    - Vaccine dose/regimen selection
    - TB vaccine TPPs/PPCs and implementation
  - Increased networking

TB Modelling and Analysis Consortium

What we will have by end of meeting…

Fri

- TB MAC Modelling Research Group - TB Diagnostics
  - Updated stakeholders on incorporating diagnostic tests into TB models
    - Epidemiological impact, economics, early stages of TB, special populations, etc.
  - Potential manuscript
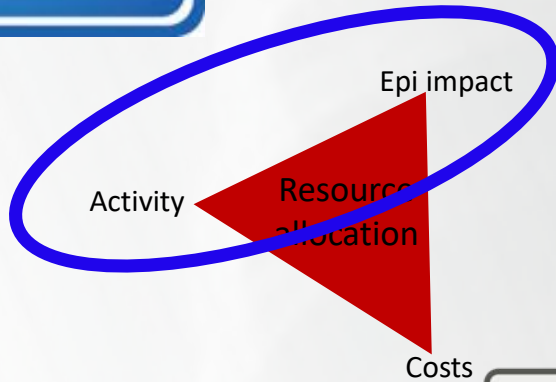 - Increased networking

TB Modelling and Analysis Consortium

What we will have by end of meeting…

Mon - Fri

- Opportunity to access $100k funding
  - shared across TB prevention, diagnostic, & vaccines
- Report with next steps

TB Modelling and Analysis Consortium

Overall outputs

Mon / Tue   **Wed / Thur**   **Fri**

Committee member input, logistics and questions

?

TB Modelling and Analysis Consortium

Let's get on with today…

Mon / Tue

- Country level modelling benchmarking, reporting and review
  - Summarise efforts so far
  - Discussed how to improve the approach
  - Discussed its role in country-level modelling applications
  - Identified next steps for implementation

The TB Modelling Roadmap - Rationale

- TB funders and stakeholders (BMGF, WHO, GFATM, USAID and World Bank) met in 2017

- Discussed how modelling could best support country level TB decision making

- Vision –
    - *Priority countries to have applied TB models and other decision tools to increase the efficiency, effectiveness, and resourcing of their TB response*

Area	
1. Close data gaps	a) Data collation/collection for model parameterisation to lim...
	b) Data collation/collection for model parameterisation on e...
	c) Data collation/collection for model parameterisation on p...
	d) Data collation/collection for model parameterisation on p...
	e) Cost data collation/collection for model parameterisation...
	f) Definition of standardised TB health seeking behaviour a...
2. Model development and associated guidance linked to NSP processes	a) Clear guidance available on appropriate modelling appro...
	b) Increased opportunities for models to validate assumptio...
	c) Models appropriately represent the health system charac...
3. Build 'international' and 'in-country' capacity to develop and apply models and guidance for the purpose of national policy and planning	a) Training package - Define standards and requirements fo...
	b) Training package - Catalogue of existing modelling tools...
	c) Building capacity - Tool developers - Epi/Cost/Budg mod...
	d) Building capacity - Train 'international' TA
	e) Building capacity - Train 'in-country' teams/TA
	f) Community - Catalogue of (trained) modelling capacity (a...
	g) Community - Include trained individuals/teams in TB MA...
4. Models applied to	a) Prioritize policy questions - Determine key stakeholders t...

The TB Modelling Roadmap - Objectives

- Objectives
  1. Closing data gaps
  2. model development and associated guidance
  3. building 'international' and 'in-country' capacity
  4. applying models to answer country policy questions
  5. coordinating and sharing experiences

- Being taken forward by the TB Modelling Roadmap Steering Committee
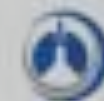 - BMGF, WHO, GFATM, USAID and World Bank

The TB Modelling Roadmap - TB MAC's Role

- Stakeholders asked TB MAC to:
  1. Facilitate the roadmap
  2. Create benchmarks, and set up reporting and review processes

The TB Modelling Roadmap - TB MAC's Role

1. TB MAC asked to facilitate
   - Asked to <u>collate information</u>, from modelling groups and global TB stakeholders on activities undertaken to support the Roadmap

   - To <u>inform </u>the TB Modelling Roadmap Steering Committee and help <u>identify where gaps</u> remain

The TB Modelling Roadmap - TB MAC's Role

2. TB MAC asked to create benchmarks, and set up reporting and review processes
   - developing a set of benchmarks against which modelling assumptions and results can be compared
   - developing standard reporting templates and checklists
   - developing an external review system

The TB Modelling Roadmap - TB MAC's Role

- TB MAC's role focuses on 'public good' activities that support the TB modelling community, as a whole
  - include collating, and sharing, information on activities towards the Roadmap, and developing guidelines

- All decisions relating to the Roadmap remain those of the Modelling Roadmap Steering Committee
  - Funding or prioritisation decisions remain those of the individual funder / stakeholders

Stakeholder input and questions

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