Economic evaluation in healthcare programmes and interventions

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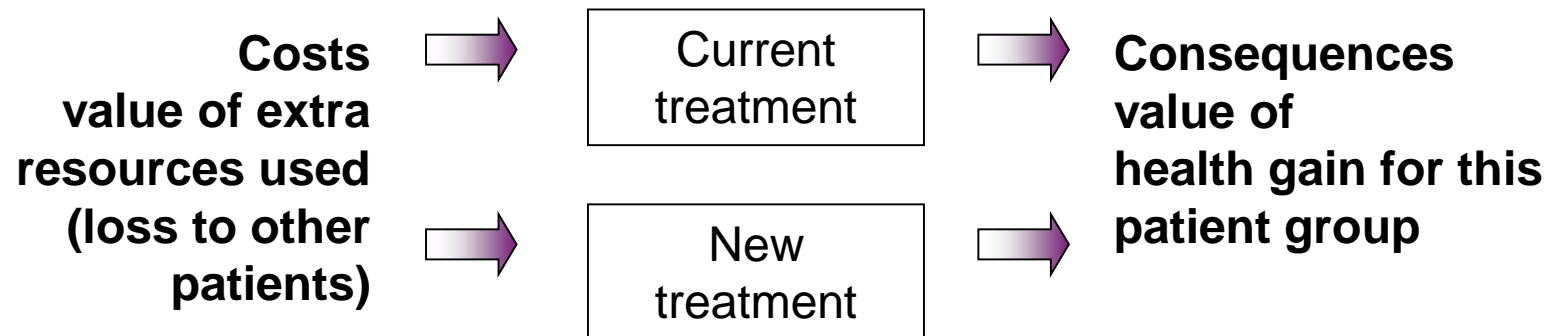# Concerns in health technology/policy adoption

- Safety

- Efficacy/Effectiveness (benefits)

- **Value for money (economic evaluation)**

- Social, institutional and ethical implications

- Affordability

Economic Evaluation

"... the comparative analysis of alternative courses of action in terms of both their costs and consequences."

Drummond, Stoddart & Torrance, 1987

**Costs
value of extra
resources used
(loss to other
patients)**
→
| Current treatment |
→
**Consequences
value of
health gain for this
patient group**

| New treatment |

3

Type of economic evaluation

|	Nominator	Denominator
Cost-minimization	$	-
Cost-effectiveness	$	Process or health outcome in natural unit e.g. case detected (screening) or case averted (prevention & treatment)
Cost-utility	$	Outcome in a common unit e.g. QALY, DALY
Cost-benefit	$	$

Waste costs lives
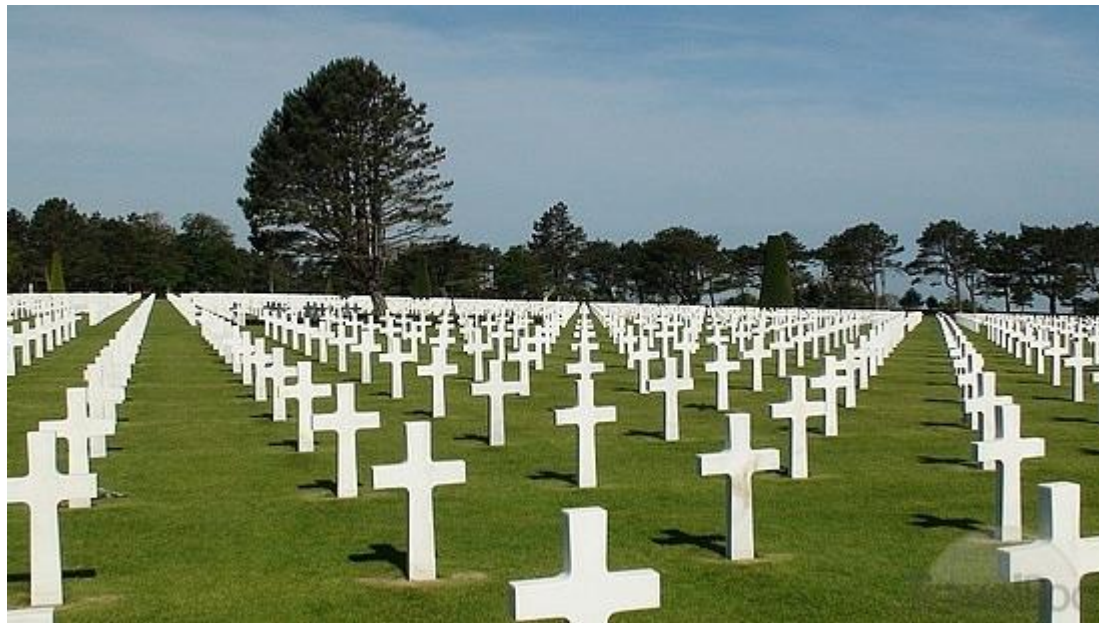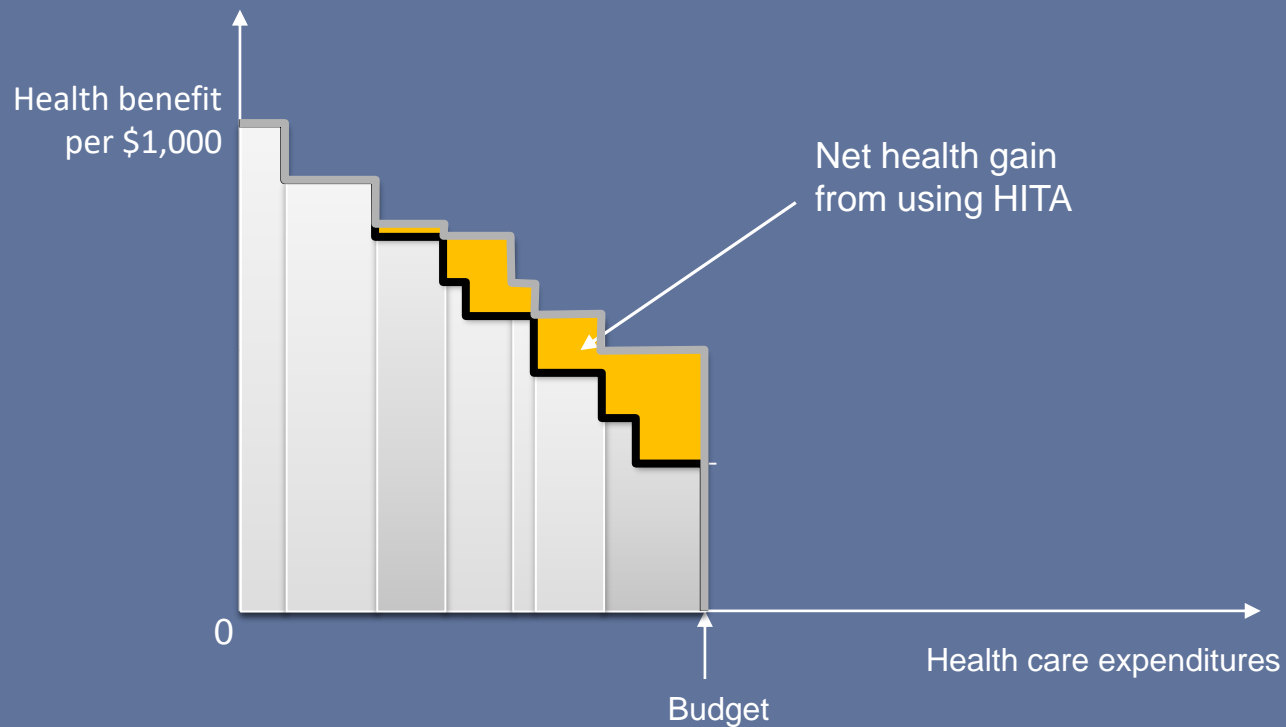
Interventions that are in – and out

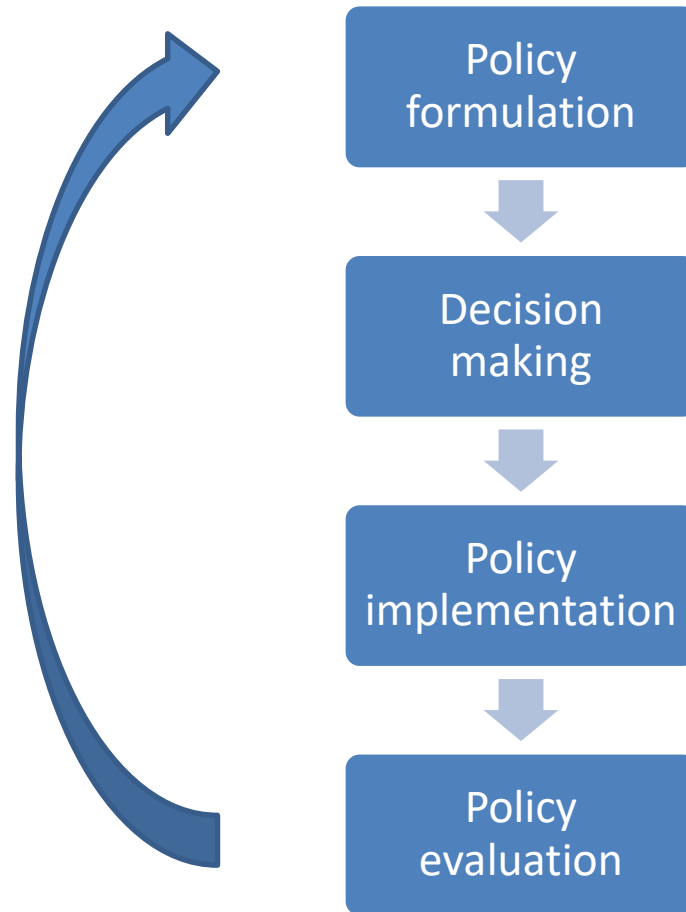**thanks to Chris McCabe and Richard Edlin for some animation of Culyer et al. (2007)**
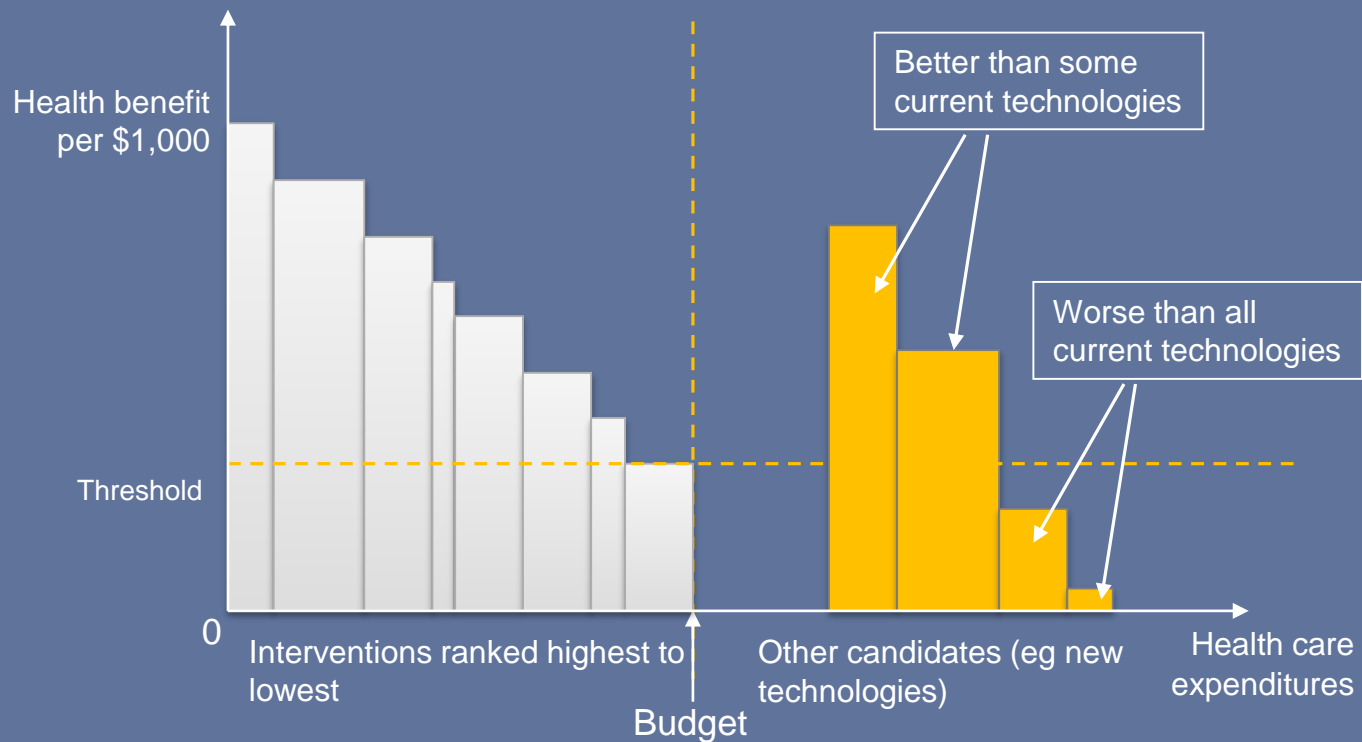
Interventions that are in – and out
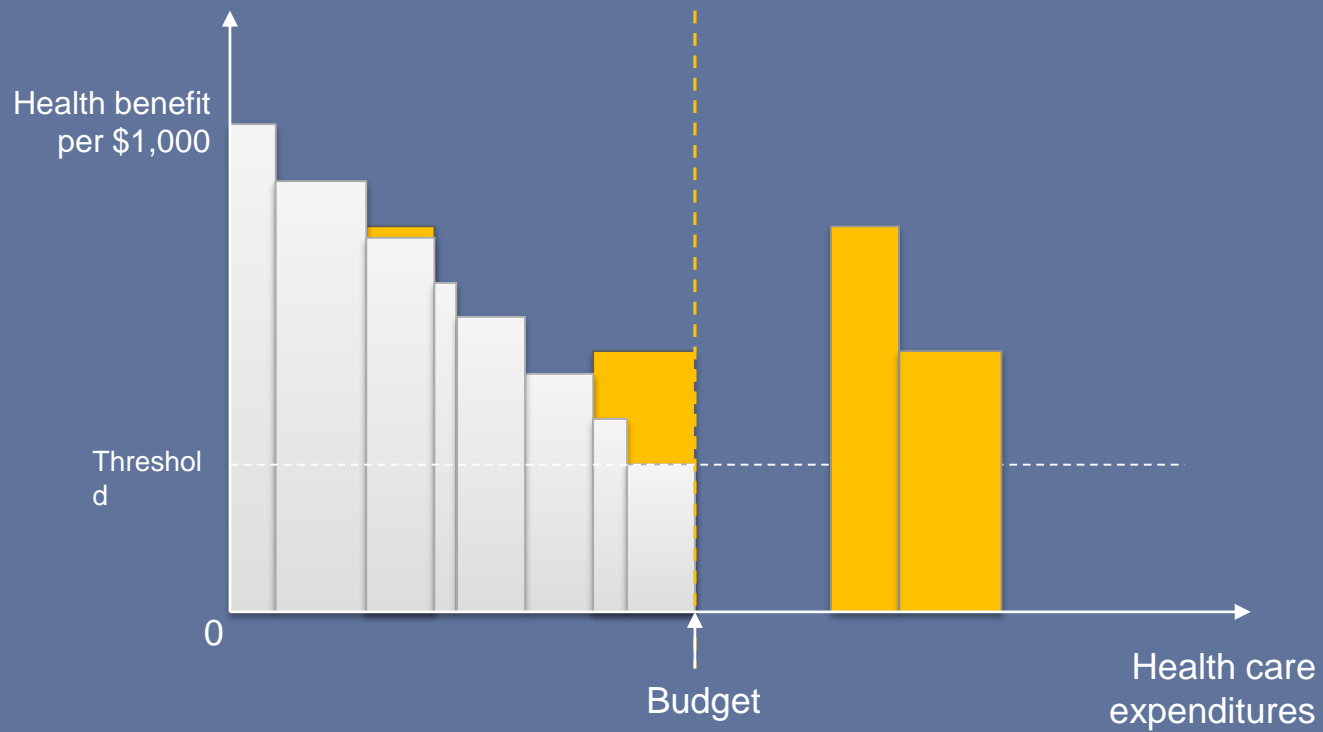
Interventions that are in – and out
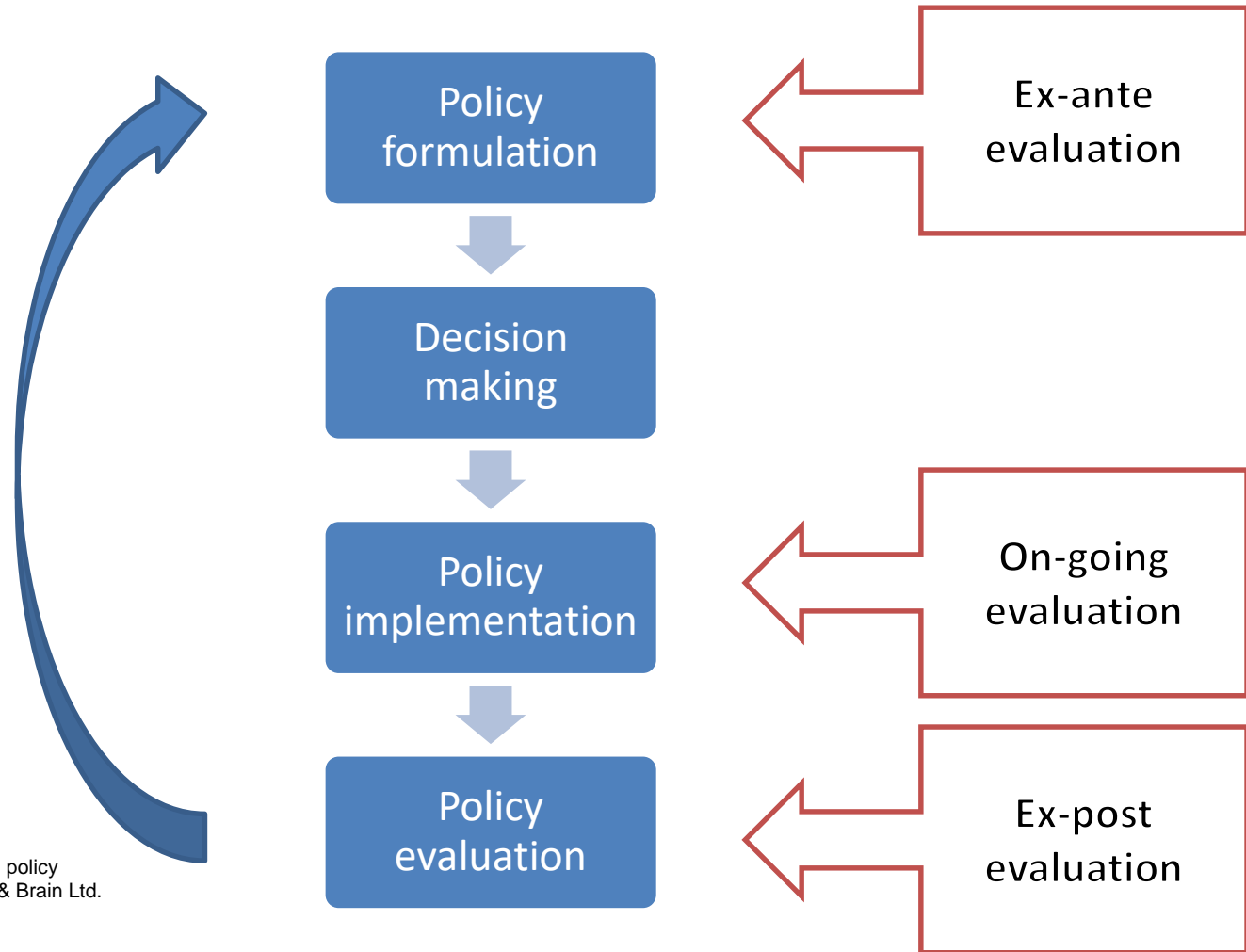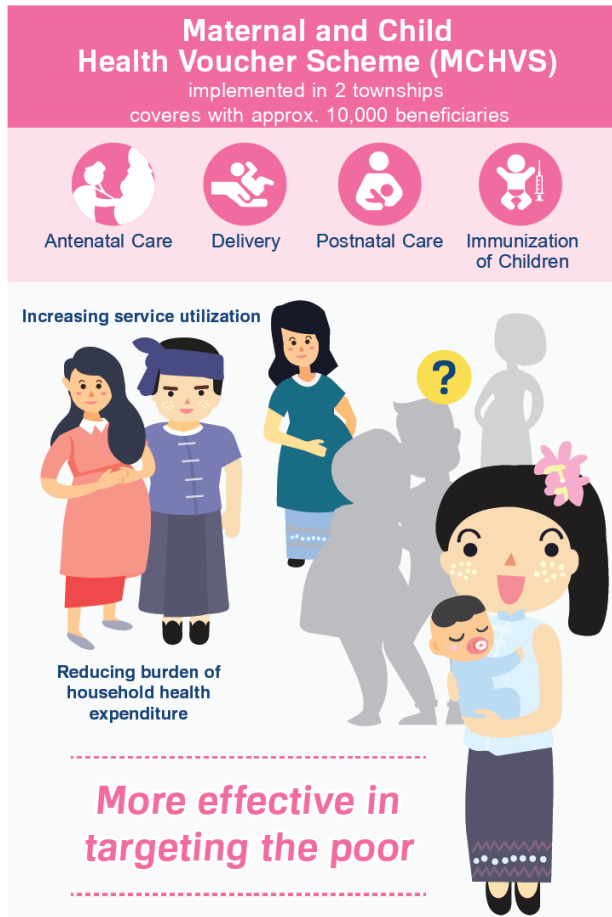
Policy cycle model


```
Policy
formulation
    ↓
Decision
making
    ↓
Policy
implementation
    ↓
Policy
evaluation
```

Buse K, Mays N, Walt G. Making health policy
(understanding public health). UK: Bell & Brain Ltd.
2005.

Policy cycle model

Policy formulation → Ex-ante evaluation

Policy implementation → On-going evaluation

Policy evaluation → Ex-post evaluation

Buse K, Mays N, Walt G. Making health policy (understanding public health). UK: Bell & Brain Ltd. 2005.

A case study in Myanmar

Summary of the policy process and HTA for MCHVS in Myanmar

Stages heuristic	Agenda setting	Formulation	Implementation	Evaluation
Type of studies	Situation analysis	Ex-ante HTA	On-going HTA	Ex-post HTA
Year	2008	2010-11	2013	2016-17
Objectives	Setting policy direction, goal(s) and target(s)	- Predict likely costs and impact - Assess value for money and financial and program feasibility to inform decision makers to select the best possible option	- Evaluate key parameters to direct more effective program implementation and ensure impact.	- Assess whether the program achieved its goal
Approach	Stakeholder consultation, health system gap analysis	Document review Consultations Evidence synthesis Model-based evaluation	Self-reported questionnaires Collection and analysis of hospital utilization data Focus group discussions and interviews Direct observation	Document review Self-assessment form Analysis of M&E data Household survey
Key results	The need to address issues of high out-of-pocket health expenditures and inability to pay for maternal and child health services provided by skill-birth attendants	Key interventions and their likely cost and value for money determined	Willingness of target populations to participate in the MCHVS, adherence to intervention protocol by providers and end-users	Targeting of beneficiaries is key. Effective in reducing out of pocket expenditure.
Implication for the next phase	Impetus for community health insurance scheme	Key parameters for implementation success developed.	Recommendations to improve implementation	Knowing whether MCHVS should be continued using other financial sources

Methodological Approach for Measuring the Impact of HTA

Figure 1: The Conceptual Framework
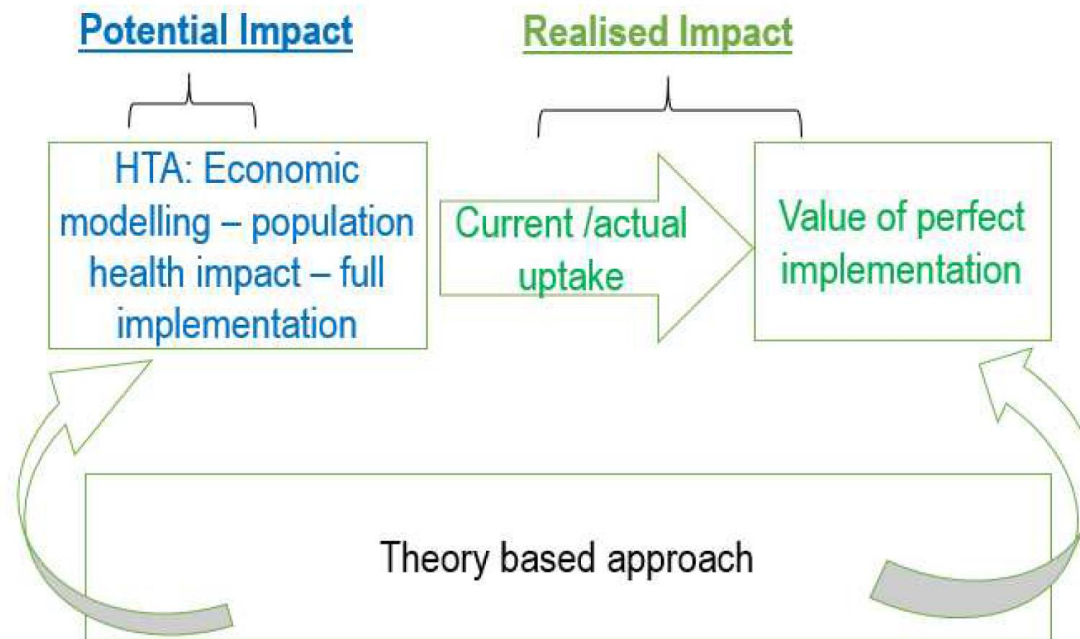
Eleanor Grieve & Andrew Briggs 2015

Table 2: Potential net health benefits

	Ex-ante GBP £	Ex-post GBP £
Incremental cost	96	94
Incremental life year saved	0.2513	0.2782
Incremental DALY averted	0.2531	0.2789
ICER per DALY averted	**384**	**336**

GDP Myanmar (2010)   414
Threshold used = 1 GDP

NHBs = ΔH - ΔC/λ

Net health benefits (per person)   0.02   0.05
Scaled to pilot (11532 pregnant women) **231 DALYs   576 DALYs**

GLOBALIZATION AND HEALTH

REVIEW   **Open Access**

Health technology assessments as a mechanism for increased value for money: recommendations to the Global Fund

Yot Teerawattananon[1*], Kate McQueston[2], Amanda Glassman[2], Jomkwan Yothasamut[1,2] and Chaw Yin Myint[1,2]

Figure 1 Potential use of Health Technology Assessment (HTA) to enhance value for money of Global Fund initiatives.

Debate

IJHPM
International Journal of Health Policy and Management

How Should Global Fund Use Value-for-Money Information to Sustain its Investments in Graduating Countries?

Kitti Kanpirom[1], Alia Cynthia G. Luz[2*], Kalipso Chalkidou[3], Yot Teerawattananon[4]
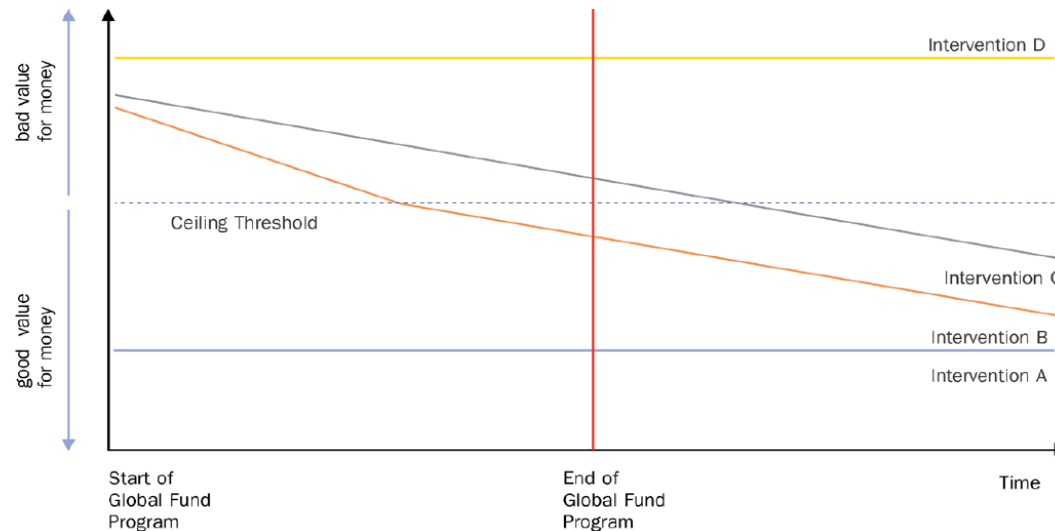
Figure. VFM of Possible Global Fund Programs/Interventions. Abbreviation: VFM, value-for-money.

Points for discussion

- Methodological difficulties in conducting health economic evaluations at various stages of policy process

- Potential of using health economic evaluation to inform global health donors

- Measuring HTA impact