Costing to support economic evaluations in global health

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Interest is high

Cost-effectiveness of HIV prevention for high-risk groups at scale: an economic evaluation of the Avahan programme in south India

Is there scope for cost savings and efficiency gains in HIV services? A systematic review of the evidence from low- and middle-income countries

Avahan and the cost-effectiveness of "prevention as prevention"

Patient costs of accessing collaborative tuberculosis and human immunodeficiency virus interventions in Ethiopia

Integrated HIV Testing, Malaria, and Diarrhea Prevention Campaign in Kenya: Modeled Health Impact and Cost-Effectiveness

Advancing social and economic development by investing in women’s and children’s health: a new Global Investment Framework
Multiple uses for cost data

- Priority setting for new interventions or introducing new technologies, drugs, vaccines
- Resource requirements and advocacy
- Financial planning and budgeting
- Improving technical efficiency
DCP Literature reviews

• Searches completed for economic evaluations (costs, CEA)
• RMNCH
  – Reproductive health and family planning
  – Maternal, Child and Neonatal health and nutrition
  – PMTCT
• Non-communicable disease
  – CVD, diabetes, respiratory
  – Cancers (Breast, cervical, pediatric, liver, colon)
  – Mental Health
• Essential Surgery
Inclusion criteria

• **Type of evaluation**
  – Partial economic evaluation
    • Includes only costing data
  – Full economic evaluation:
    • Includes both costs and effectiveness
    • Only keep if it has good cost data

• **Measurement/Study Type**
  – Must have either or both:
    • Unit costs
    • Cost of intervention

• **Includes direct costs, or both direct and direct non-medical**
  – Focus on costs of implementing the interventions
  – Treatment costs

• **Only English articles**
By the numbers: Article retrieval and unit cost extraction

<table>
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<tr>
<th>Process</th>
<th>RMNCH</th>
<th>Surgery</th>
<th>CVD</th>
<th>Mental Health</th>
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<td>132</td>
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</table>
Increase in number of studies over time

Reproductive, maternal, neonatal and child health

Cardiovascular and respiratory cost studies

Growing body of literature in low and middle income countries

UCSF
Berkeley
Stanford
GHECon Global Health Economics Consortium
Advancing precision health policy
So what’s the problem?

- Depends on your perspective.
- Donor “Do we need more cost studies?”
  - Can’t we use the data we have?
- Researchers “We need better data”
  - Moving toward more expensive studies
  - Larger samples sizes to improve precision, accuracy and robustness.
- Decision makers “We need information today”
- WHO “Let’s build a sustainable system for routine cost collection.”
Challenges

• Many estimates of program costs are inadequate and of mixed quality.
• Relevant data are sometimes absent, are not locally relevant, are not quality adjusted, or are available from a limited perspective (e.g. the payers), do not capture full system costs, and fail to capture variations in cost by delivery strategy/platform.
• There are no validated methods for projecting costs from one setting to others.
• Very little standard methods or reporting for costing studies
  – Multiplicity of ways to estimate costs
  – Little attention by authors to quality check lists for costs, although they do exist.
  – Little reporting on discount rate, whether tradable or non-tradable
• Scarce or absent published literature for interventions to address adolescents, maternal depression, care and care practices, gender based violence.
• Limited packages of interventions estimated using costing tools
Variability in costs: example: Reproductive and maternal health costs

Reproductive and Maternal Health Costs in Low- and Middle-Income Countries (USD 2012)

- Average Abortion (per event)
- D&C Abortion (per event)
- Medical Abortion (per event)
- MVA Abortion (per event)
- Post-Abortion Care (per event)
- Cesarean Section (per delivery)
- Vaginal Delivery (per delivery)
- Delivery Complications (per delivery)
- Family Planning (per year of protection)

Median Cost
Minimum – Maximum Cost
Lack of cost data for low capacity settings: RMNCH cost data for Ethiopia
Why does it matter? Consequences

• Countries and donors often do not know the correct cost estimates to use in financial planning, resource allocation and budgeting.
  – resources are misallocated and health benefits are foregone.

• Over time, efficiency improvements cannot be measured.

• Donors, funders and National Finance Ministries cannot assess whether they are getting value for their money, and cannot provide effective incentives for greater efficiency.
Actions to improve costing

• Development of a reference case for economic evaluation in low-resource settings

• Development of a global health costing consortium
Disease Control Priorities Network

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THANK YOU!