Methods for Benefit-Cost Analysis in Low- and Middle-Income Countries

Introduction and Overview

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Plan for Today

- **Introduction and Overview** (Lisa A. Robinson, Harvard University)
- **Valuing Mortality Risk Reductions** (James K. Hammitt, Harvard University)
- **Valuing Nonfatal Risk Reductions** (Lisa A. Robinson, Harvard University)
- **Assessing Economy-Wide Effects** (James E. Neumann, Industrial Economics)
- **Audience Feedback and Discussion**

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Goals and Objectives

• **Goals:** Increase the comparability of benefit-cost analyses, improve their quality, and expand their use.
  
  – Focus on improving health and development in low- and middle-income countries.
  – Include policies implemented both within and outside of the health care sector.

• Funded by the Bill and Melinda Gates Foundation.
Goals and Objectives

- **Objectives**: Expand the existing iDSI Reference Case to address benefit-cost analysis.
  
  – iDSI Reference Case
    
    - Includes principles, methodological specifications, and reporting standards.
    - Provides general framework for all types of economic evaluation.
    - Also addresses the conduct of cost-effectiveness analysis.

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Goals and Objectives

BMGF Priorities for Analytic Development (May 2017)

Neglected Infectious Diseases
- Tuberculosis
- HIV
- Malaria
- Enteric and Diarrheal Diseases
- Pneumonia
- Vaccine Delivery
- Maternal, Neonatal, and Child Health
- Family Planning
- Nutrition
- Water, Sanitation, and Hygiene
- Agriculture
- Financial Services for the Poor
  (e.g., Education, Polio Eradication)

Current CEA focus

Initial priorities for CEA/BCA expansion

Subsequent priorities for CEA/BCA expansion

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Goals and Objectives

Basic Analytic Components

1) Define the problem
2) Identify policy options
3) Determine standing (perspective)
4) Predict baseline conditions (comparator)
5) Predict policy responses
6a) Estimate costs
6b) Estimate benefits
7) Calculate net benefits
8) Estimate the distribution

Primary focus: Monetary values for health and non-health outcomes

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Project Components

Next? More outreach, technical assistance, primary research, illustrative case studies, enhancements to guidance...?

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(1) **Scoping phase** (completed)

- Includes:
  - Scoping report
  - Stakeholder survey
  - May 2017 scoping workshop

- Addresses:
  - General framework and conceptual foundations
  - Existing guidance and current practices
  - Barriers, challenges, and opportunities

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(2) Methods and case studies phase (in process)

• Includes:
  – Methods papers and case studies
  – November 2017 workshop
  ➢ Review and revision of papers
    – Additional case studies
• Papers provide the basis for the reference case guidance.
  – Guidance will likely address additional topics.
  – May deviate from methods paper recommendations in some cases.
  – Case studies will test and illustrate the recommendations.

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Methods papers

• Valuing Mortality Risk Reductions in Global Benefit-Cost Analysis, Lisa A. Robinson, James K. Hammitt, and Lucy O’Keeffe (Harvard University)

• Valuing Nonfatal Health Risk Reductions in Global Benefit-Cost Analysis, Lisa A. Robinson and James K. Hammitt (Harvard University)

• Assessing the Economy-wide Effects of Health and Environmental Interventions in Support of Benefit-Cost Analysis, Kenneth M. Strzepek (MIT), Collins Amany (Ugandan Ministry of Water and Environment), and James E. Neumann (Industrial Economics)

• Accounting for the Timing of Costs and Benefits in the Evaluation of Health Projects Relevant to LMICs, Karl Claxton (University of York)

• Valuing Changes in Time Use in Low- and Middle-Income Countries, Dale Whittington (University of North Carolina) and Joseph Cook (Washington State University)

• Assessing the Distribution of Impacts in Global Benefit-Cost Analysis, Lisa A. Robinson and James K. Hammitt (Harvard University) with supplement by Matthew Adler (Duke University)

• Valuing Protection against Health-Related Financial Risks, Dean Jamison (University of California – San Francisco) and Jonathan Skinner (Dartmouth College)

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Case Studies

Initial drafts available for review:

• Standardized Sensitivity Analysis in BCA: An Education Case Study, Elina Pradhan (World Bank) and Dean Jamison (University of California — San Francisco)

• Cost-Benefit Analysis of an Early Childhood Nutrition Intervention to Prevent Stunting in Haiti, Brad Wong (Copenhagen Consensus Center) and Peter F. Orazem (Iowa State University)

Additional case studies in process:

• Coal-fired Power Plants, Maureen Cropper (University of Maryland), Sarath Guttikunda and Puja Jawahar (Urban Emissions)

• Improved Water Supply and Quality; Cook Stoves, James Neumann, James (Industrial Economics), Kenneth Strzepek (MIT), Collins Amany (Ugandan Ministry of Water and Environment)

• Community-lead Total Sanitation, Dale Whittington and Mark Radin (University of North Carolina), Marc Jeuland (Duke University), Hua Wang (Remin University)

• Tuberculosis Control, Tommy Wilkinson (University of Cape Town), Fiammetta Bozzani, Michelle Remme, Anna Vassall, and Edina Sinanovic (London School of Hygiene and Tropical Medicine)

➢ Will be soliciting additional case studies; please join our email list to receive related announcements.

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(3) Guidance development phase (through October 2018)

• Develop step-by-step guidance, building on methods papers and including illustrations from the case studies.

• Recommend best practices based on currently available data and valuation research, with appropriate recognition of uncertainty.

• Identify priorities for future work, including training and technical assistance as well as new primary research.

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