

INTRODUCTION

Costing to support economic evaluations in global health

Carol Levin, Ph.D

Clinical Associate Professor, Department of Global
Health, University of Washington



Health Economic Impact Studies for Translation

UNIVERSITY of WASHINGTON

Interest is high

Childhood Pneumonia and Diarrhoea 2

Interventions to address deaths from childhood pneumonia and diarrhoea equitably: what works and at what cost?



Maternal and Child Nutrition 2

Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost?

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

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

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

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

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

What do we know? A lot as it turns out

- Published systematic literature reviews on costs for
 - HIV
 - Immunization
 - TB
 - Cardiovascular disease
 - Nutrition
- Disease Control Priorities Project
- Global Health Cost Consortium
- EPIC Immunization Costing community of practice

Disease Control Priority literature reviews

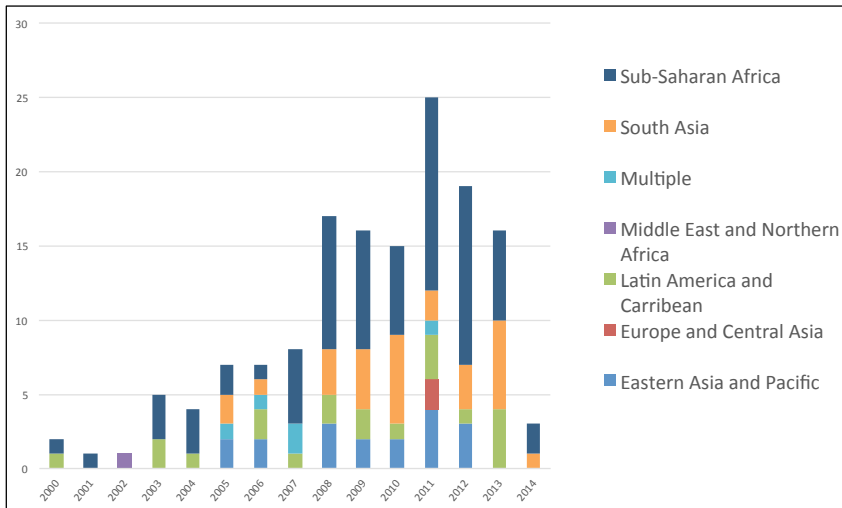
- Searches for economic evaluations (costs, CEA)
- RMNCH
 - Reproductive health and family planning
 - Maternal, Child and Neonatal health and nutrition
 - PMTCT
- Non-communicable disease
 - CVD, diabetes, respiratory
 - Cancers (Breast, cervical, pediatric, liver, colon)
 - Mental Health
- Essential Surgery
- HIV, TB, Malaria,
- Injury Prevention

DCP systematic reviews: Inclusion criteria

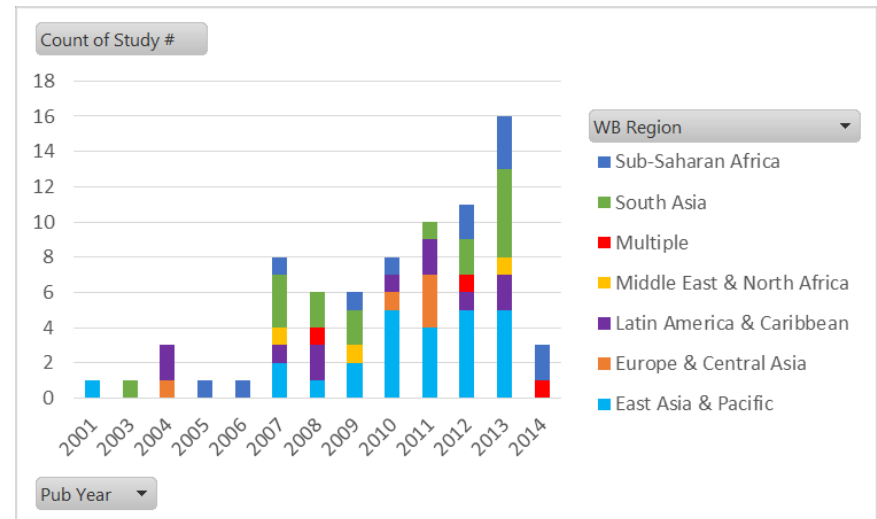
- Type of evaluation
 - Partial economic evaluation
 - Includes only costing data
 - Full economic evaluation:
 - Includes both costs and effectiveness
 - Only keep if it has good cost data
- Measurement/Study Type
 - Must have either or both:
 - Unit costs
 - Cost of intervention
- Includes direct costs, or both direct and direct non-medical
 - Focus on costs of implementing the interventions
 - Treatment costs
- Only English articles

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

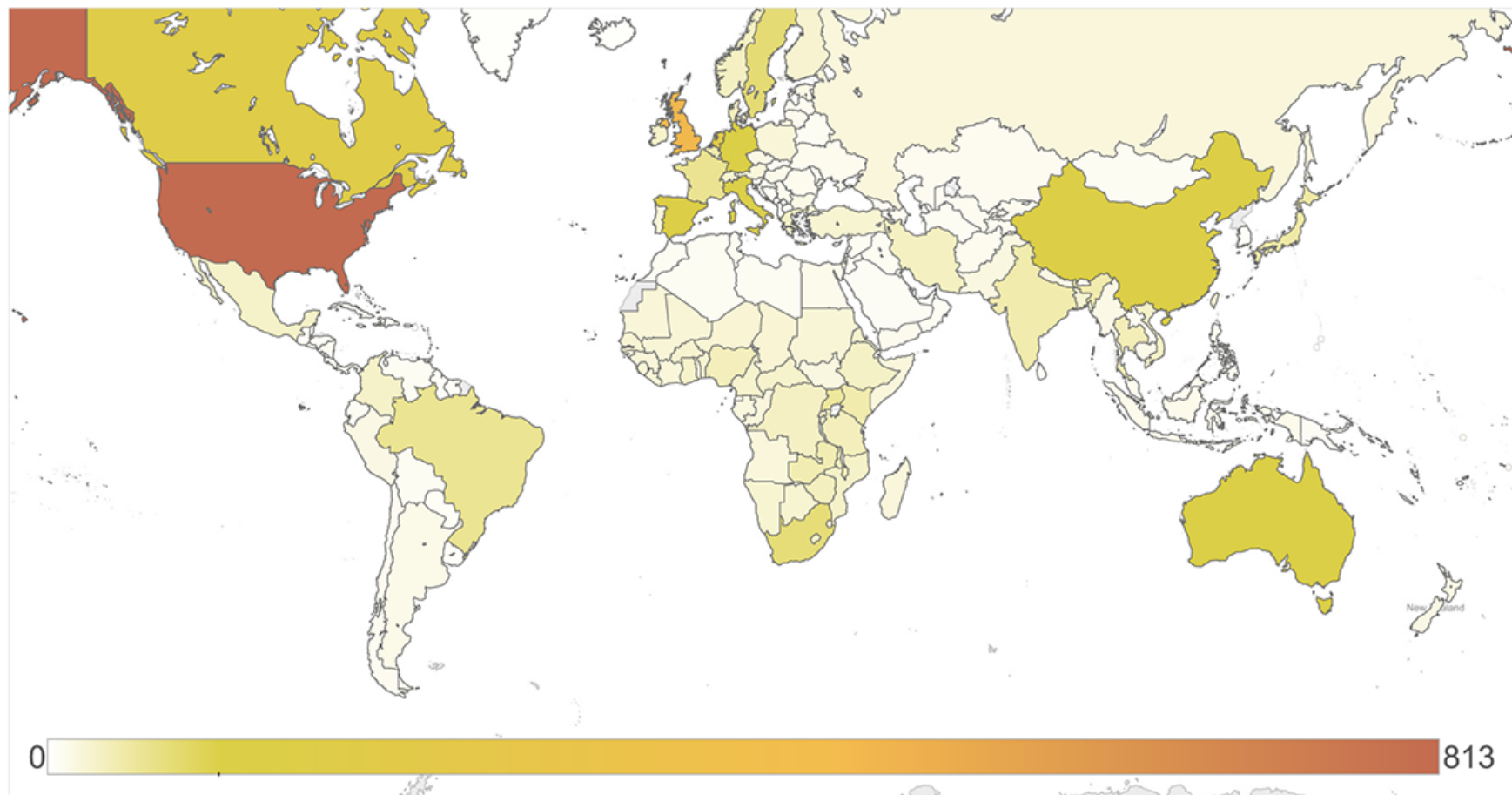
So what's the problem? Depends on your perspective

- Donor “Do we need more cost studies?”
 - Can't we use the data we have?
- Researchers “We need better data”
 - Understand costs alongside clinical trials and demonstration projects to improve service delivery for wide range of conditions and diseases
 - Health Economists are 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

- Program costs are inadequate and of mixed quality
- Costs are not locally relevant, are not quality adjusted, or are available from a limited perspective (e.g. the payers)
- Costs don't capture full system costs and fail to capture variations in cost by delivery strategy/platform.
- No valid methods for projecting costs from one setting to others.
- Lack of standard methods or standard reporting for costing studies
 - Multiplicity of ways to estimate costs
 - Little attention by authors to quality check lists for costs, although they do exist.
- Limited packages of interventions estimated using costing tools

Economic Evaluation in Global Perspective: A Bibliometric Analysis of the Recent Literature



Source: Pitt, C., Goodman, C. and Hanson, K., 2016. Economic evaluation in global perspective: A bibliometric analysis of the recent literature. *Health economics*, 25(S1), pp.9-28.

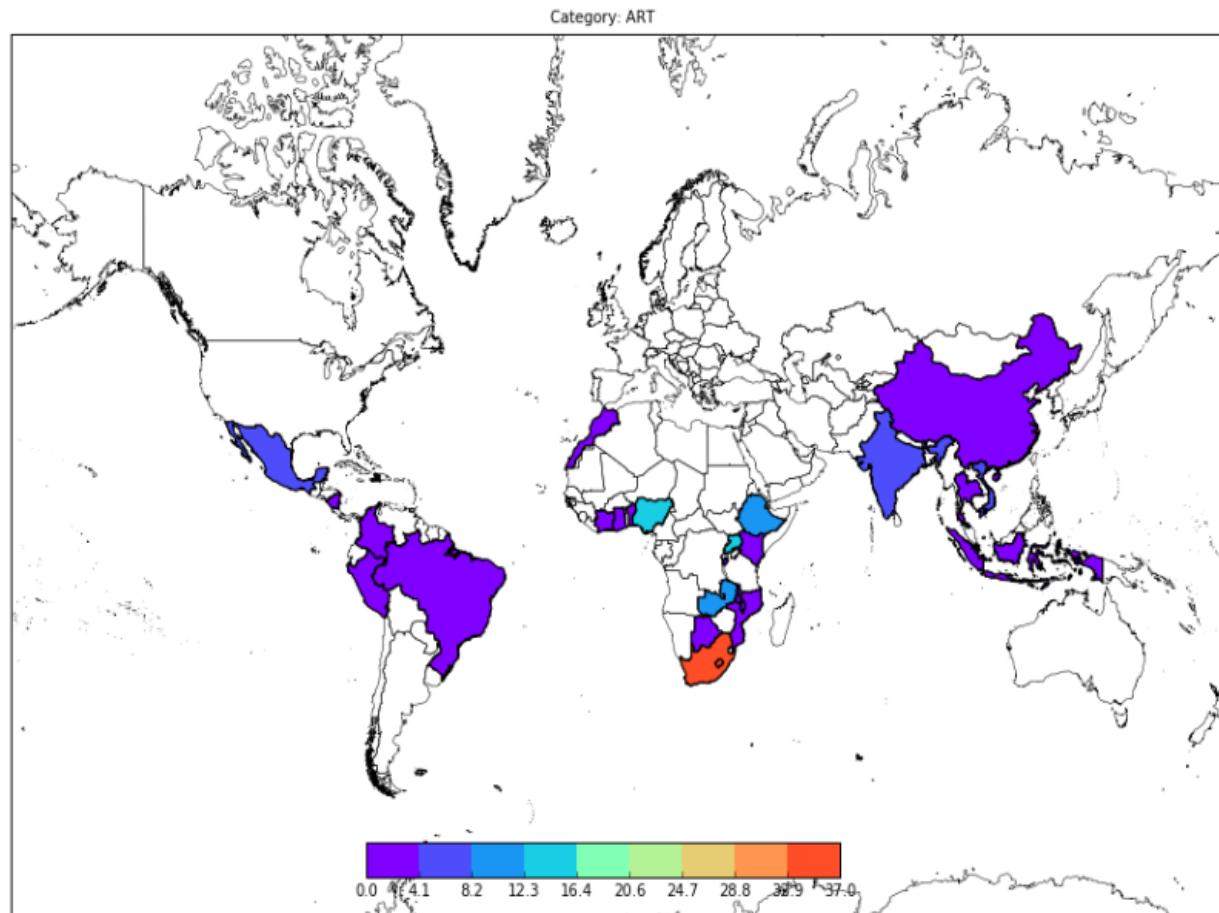
Health Economics

pages 9-28, 25 JAN 2016 DOI: 10.1002/hec.3305

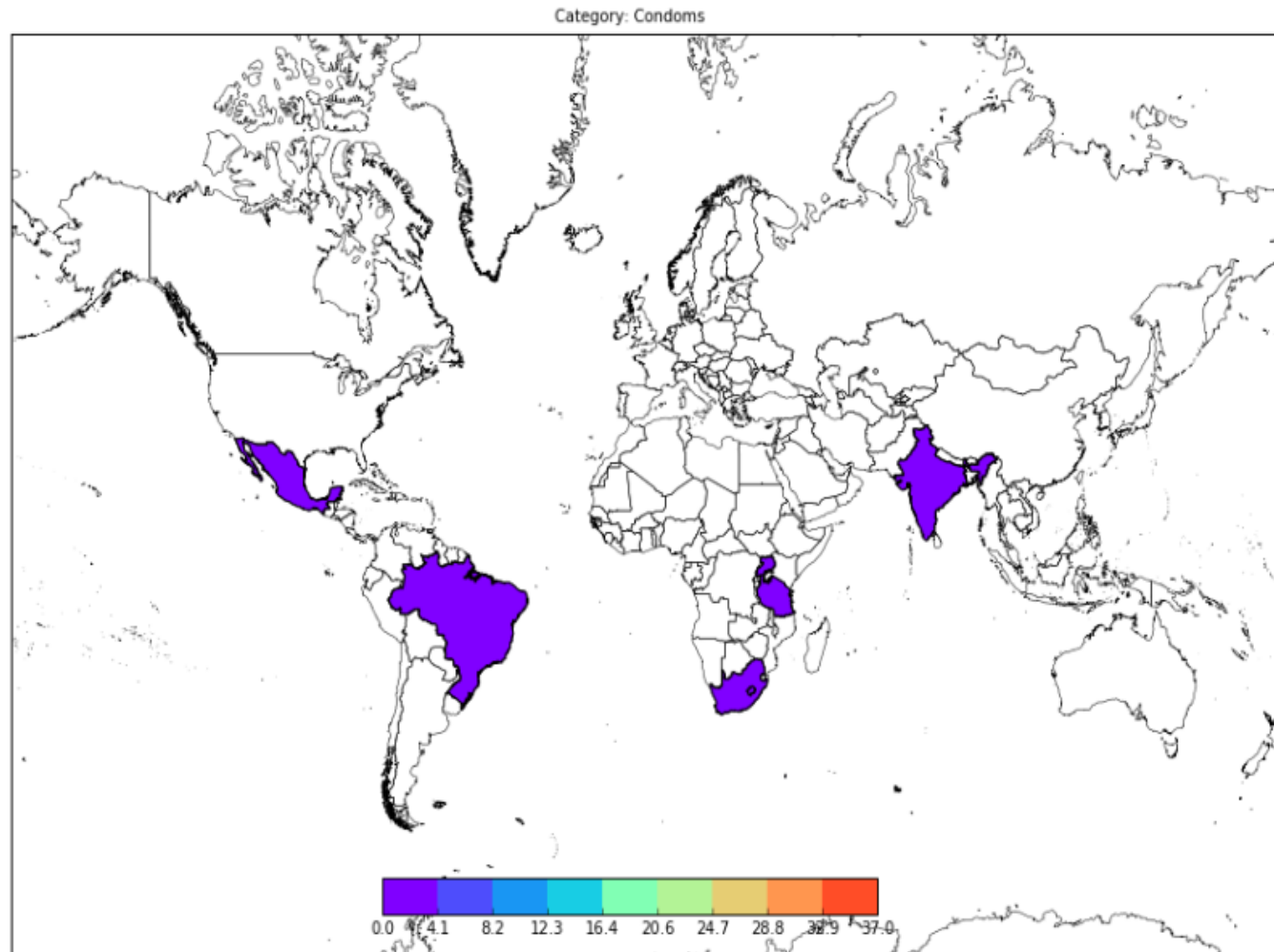
<http://onlinelibrary.wiley.com/doi/10.1002/hec.3305/full#hec3305-fig-0001>

Limited availability of ART cost data

Category: ART

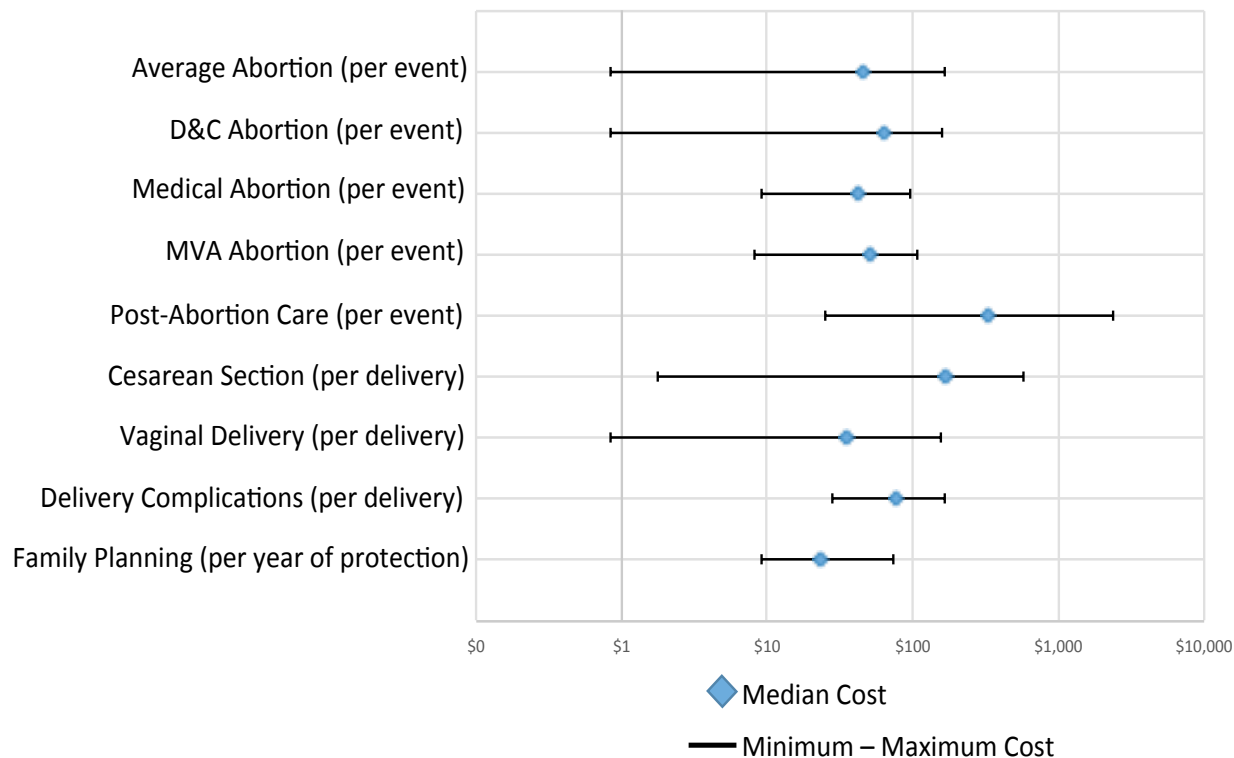


Limited availability of condom cost data

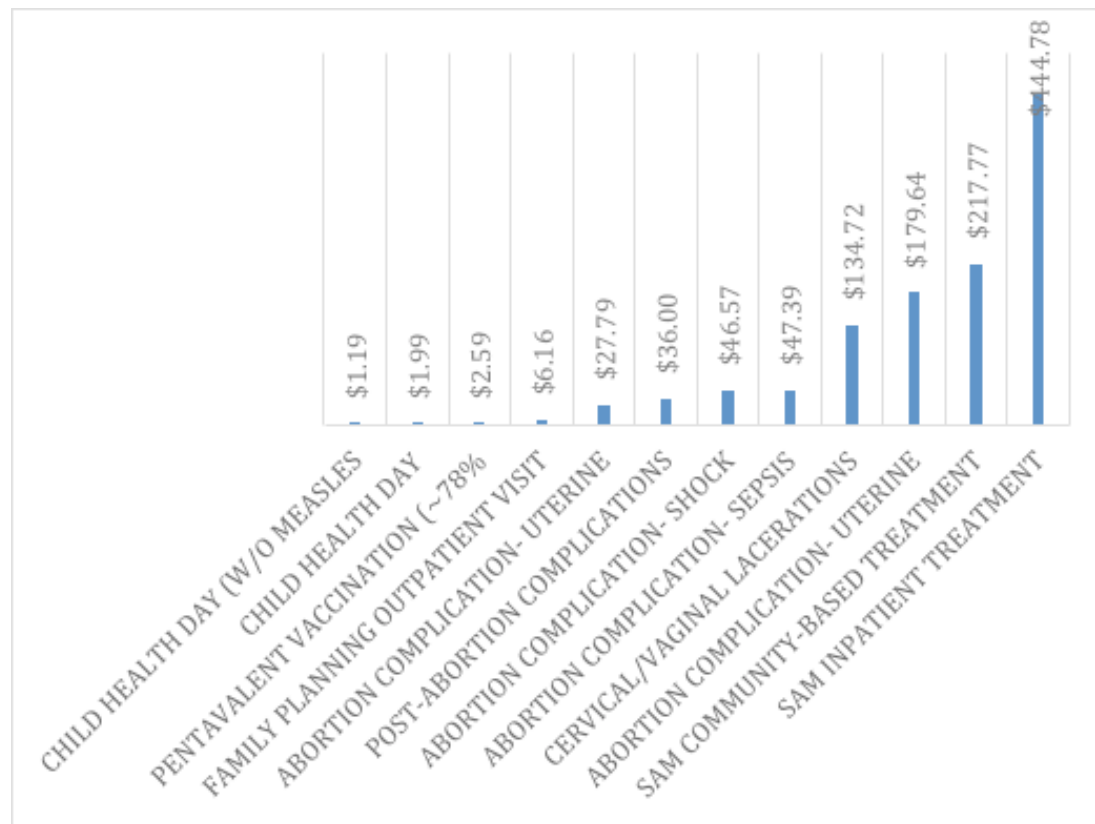


Variability in costs: example: Reproductive and maternal health

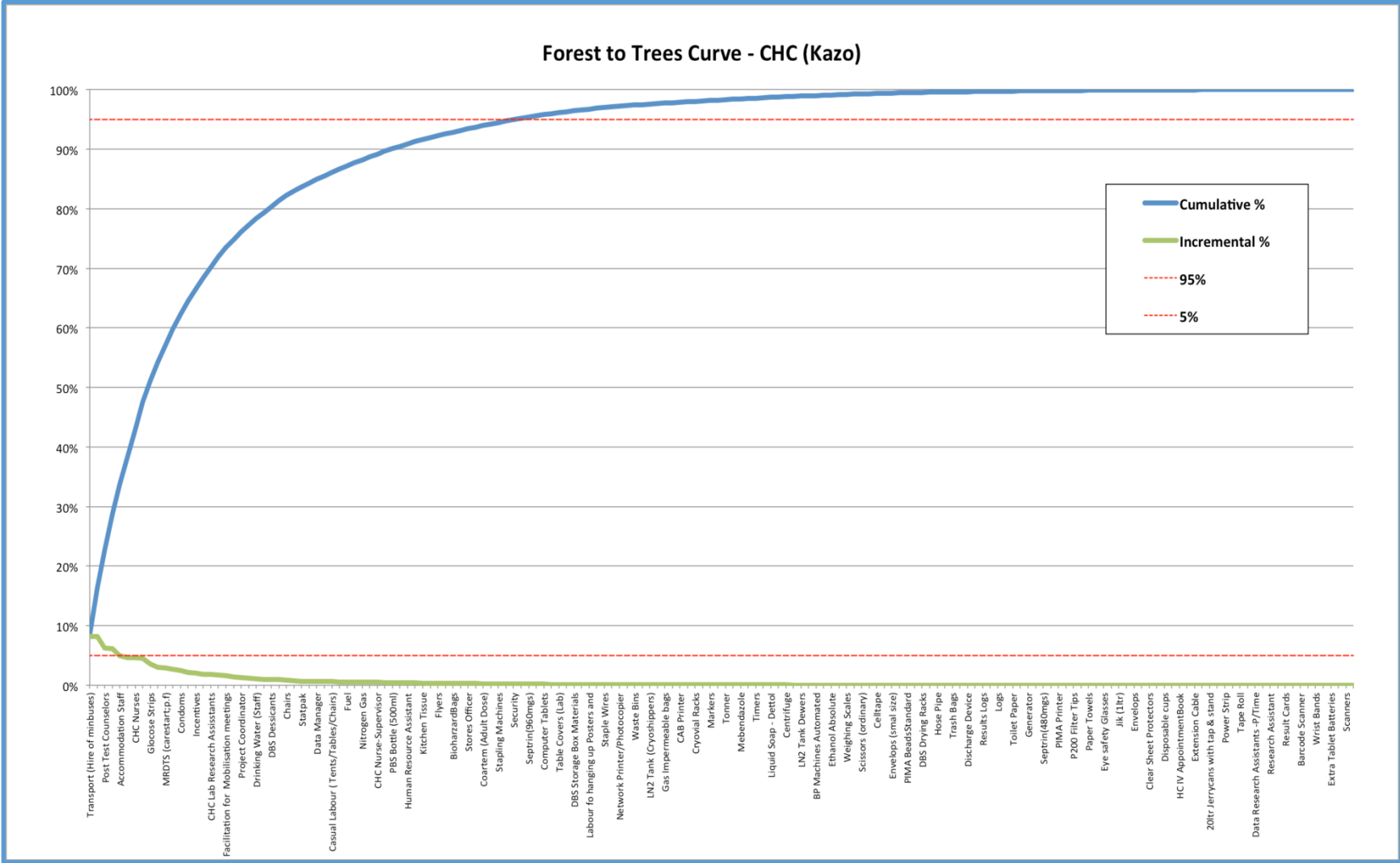
Reproductive and Maternal Health Costs in Low- and Middle-Income Countries (USD 2012)



Lack of cost data for low capacity settings: RMNCH cost data for Ethiopia



Efficient micro-costing: Challenge / Opportunity



Why does it matter? Consequences

- Are new health technologies and innovative service delivery interventions good value for money? Are they cost-effective?
- 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 cost reference case for economic evaluation in low-resource settings
 - Reference case for cost-effectiveness already exists
- Global health costing consortium is generating improved costs for HIV and TB
- New Gates funded project on immunization financing is generating improved estimates for vaccines
- At UW, HEIST!

So let's get busy. What are we waiting for?