GHCC Stakeholder and Advisory Meeting
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Overview of the Global Health Cost Consortium to improve HIV and TB costs

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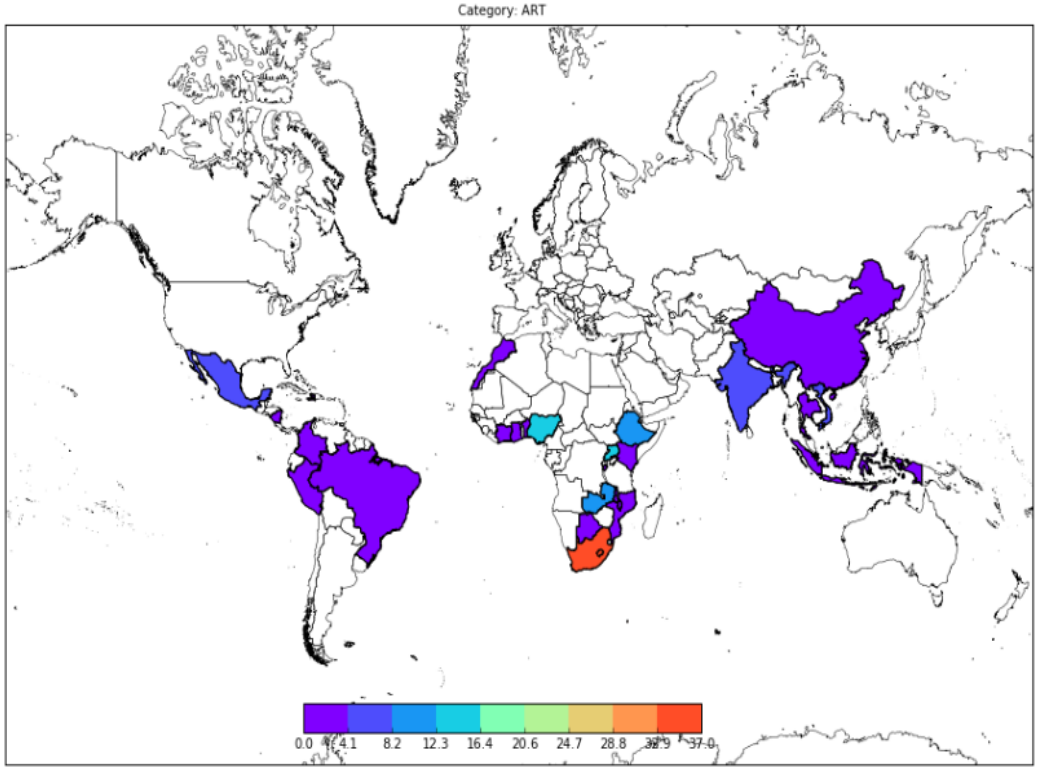
Category: ART



INTRODUCTION

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

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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
- EPIC Immunization Costing community of practice

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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

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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.

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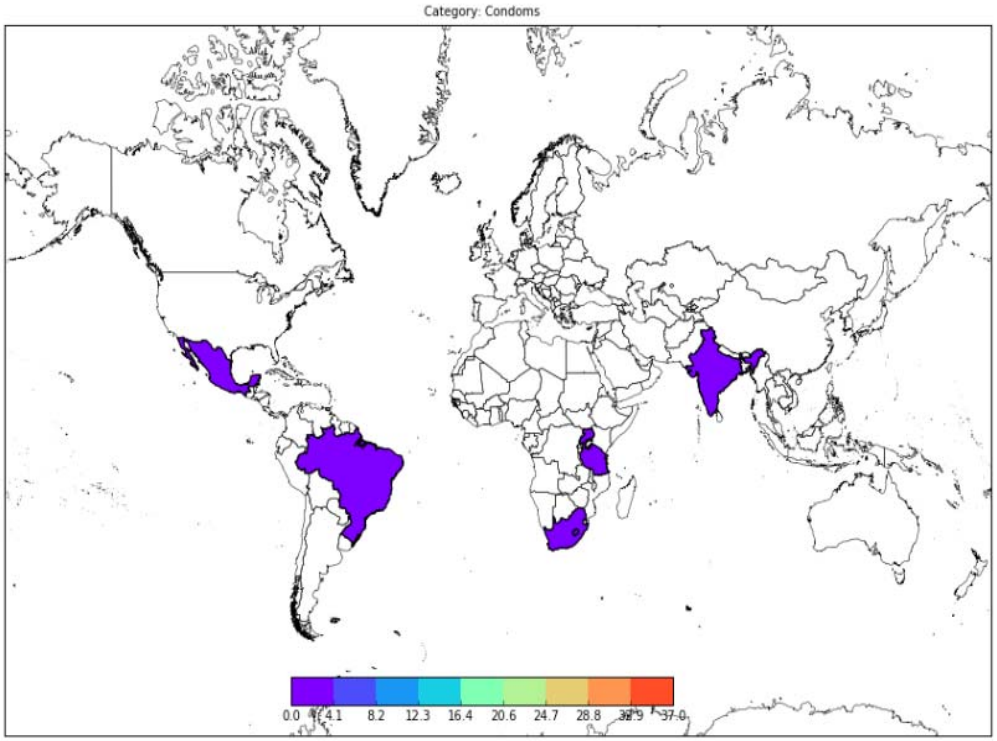

GLOBAL HEALTH COST CONSORTIUM: AN OVERVIEW

Overall GHCC aim

Improve the impact of the TB and HIV response, within available resources by influencing resource allocation and funding by systematically improve the quality, timing, local relevance, interpretation, and use of cost information on HIV/AIDS and tuberculosis.

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GHCC strategic aims

- Improve the interpretation and use of cost information in resource needs estimates, investment planning and efficiency improvement
- Improve the availability, quality, timing and relevance of cost data related to TB/HIV services

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Primary activities

- Establish a global health cost consortium
- Establish new methods and standards for cost data collection, compilation and reporting
- Data analytics to estimate location-adjusted benchmark costs for use in resource needs estimates, investment planning and efficiency improvement
- Develop advocacy, communication tools and incentives to increase appropriate use of cost data in policy and planning

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Who are we?

- UW leads consortium
- Avenir Health leads advocacy and communications
- UCSF leads data and analytics
- LSHTM leads standards work
- INSP leads obtaining data as part of data and analytics
- UCT supports standards work

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User centered design

Working with Stakeholders

- Producers of cost data (individuals conducting cost studies in LMICs)
- Users of cost data (PEPFAR, GFATM, WHO, MOH, Nice International IDSI)
- Experts and practitioners (Academic institutions, other funded initiatives)
- Economic Reference Group of HIV/AIDS (ERG)
- TB modeling consortium and HIV modeling consortium

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Use case scenarios for cost data CL7

- Validating funding requests
  - Support grant management process to validate budgets and for results-based funding
  - The design requirements vary slightly between each process, but the main requirement is for **specific, recent, and granular data**
- Planning, projecting and allocating resources
  - Inform resource allocation at the global level and within countries, estimate replenishment requirements and inform sustainability planning.
  - The design requirements vary slightly between each process, but the main requirement is for a **more comprehensive resource than is currently available**

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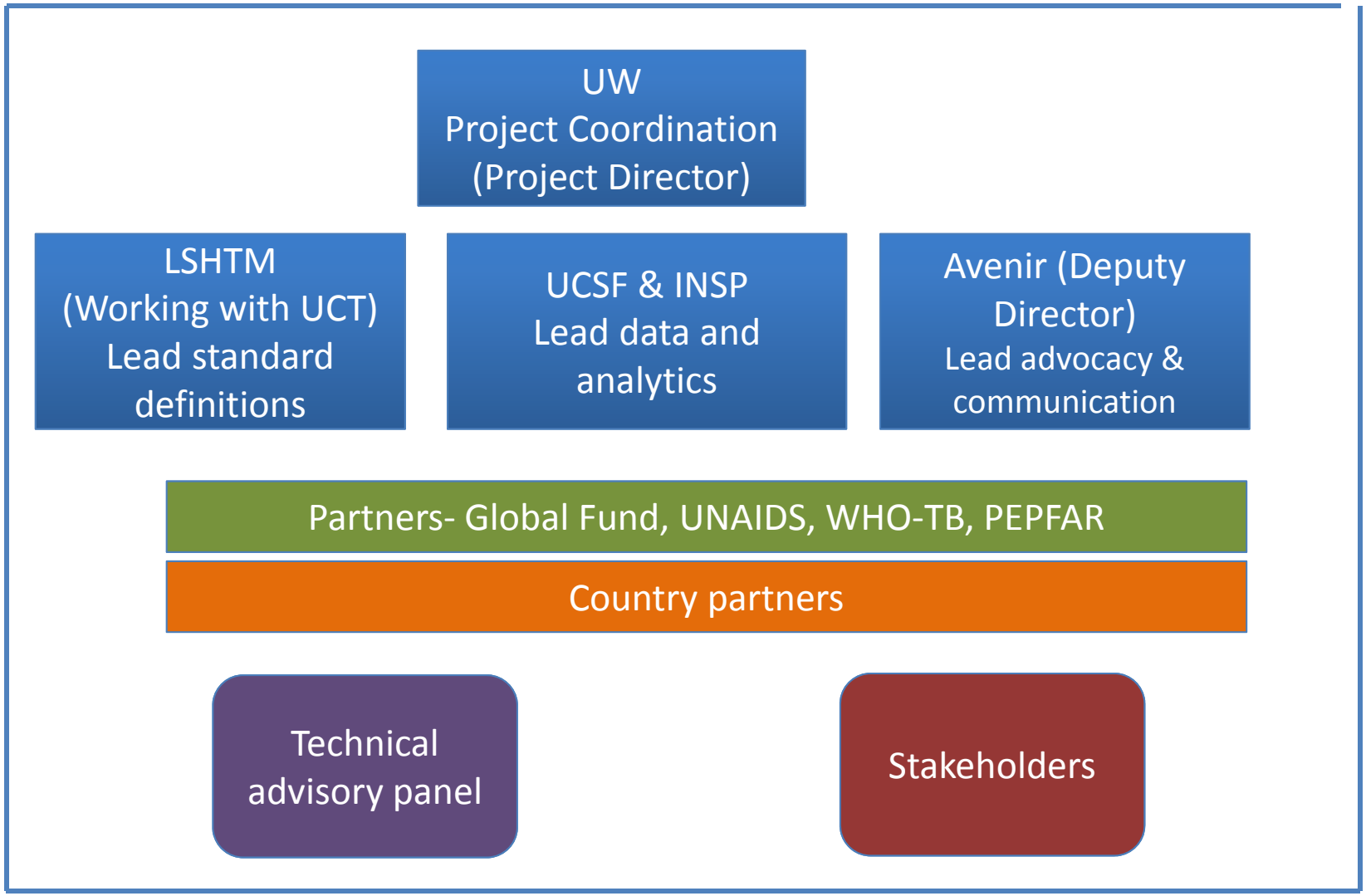
CL7 Keep or toss?

Carol Levin, 18/09/2017

GHCC structure & governance



GHCC Advisory Group

- Technical and strategic oversight
- Help ensure that GHCC are positioned to meet the user's needs
- Facilitate involvement of key stakeholders
- Provide guidance on strategies for data access, incentives for sharing data, developing a reference case for costing and analytical methods for improved cost data
- Review and provide feedback on key documents and products

The good old days…
Our first advisory meeting
Was held on election day
November 2016

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Partners

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Country Engagement

- Country representation on the advisory and stakeholder groups.
- Access to their country partners working closely with external partners
  - Observe and participate in one or more country visits as countries begin the process of costing their HIV and TB national strategic plans.
- Pilot GHCC products in Years 2 & 3
- Through participation in modeling consortium (TB, HIV)
- Leveraging on-going data collection activities

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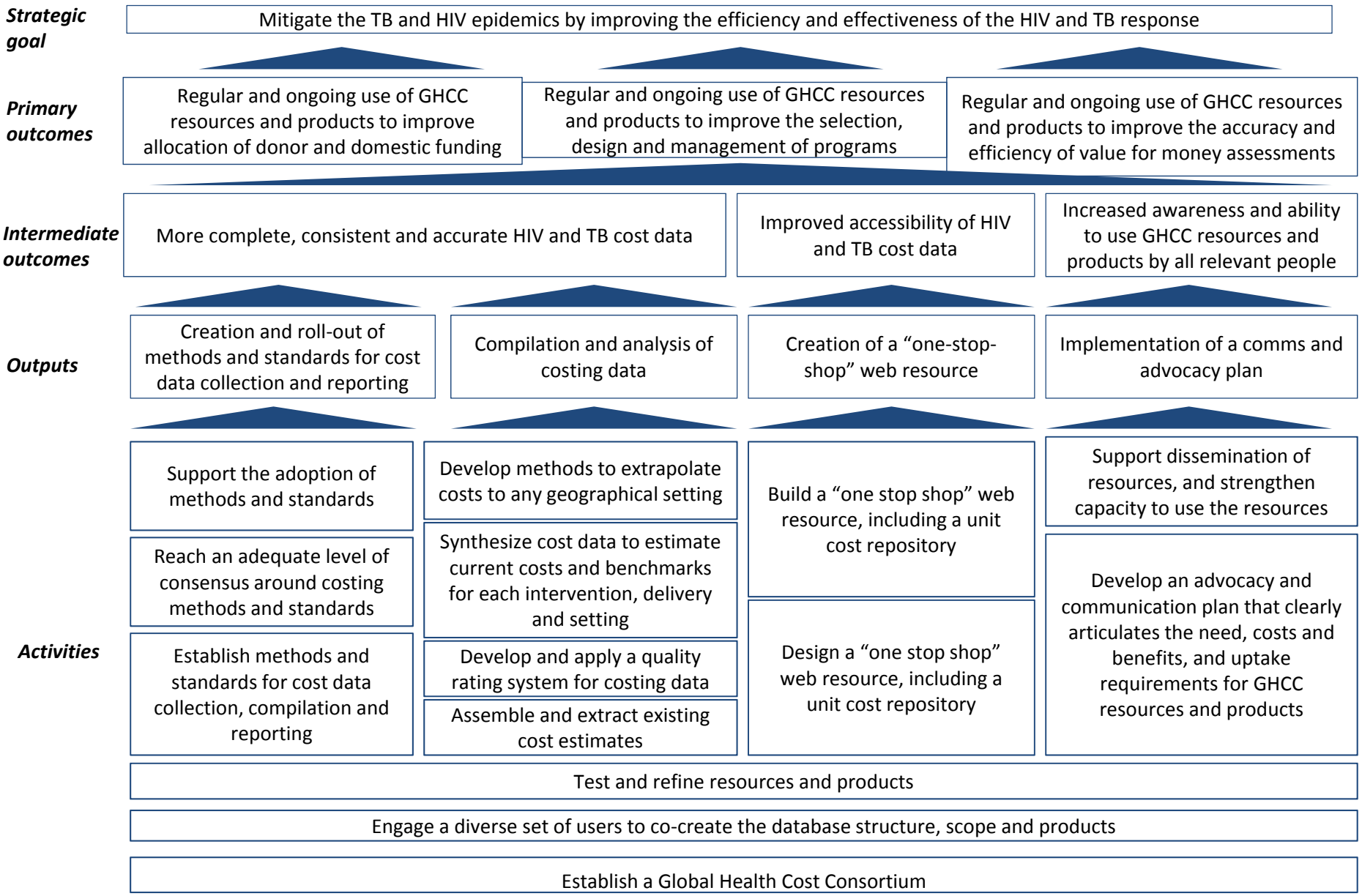
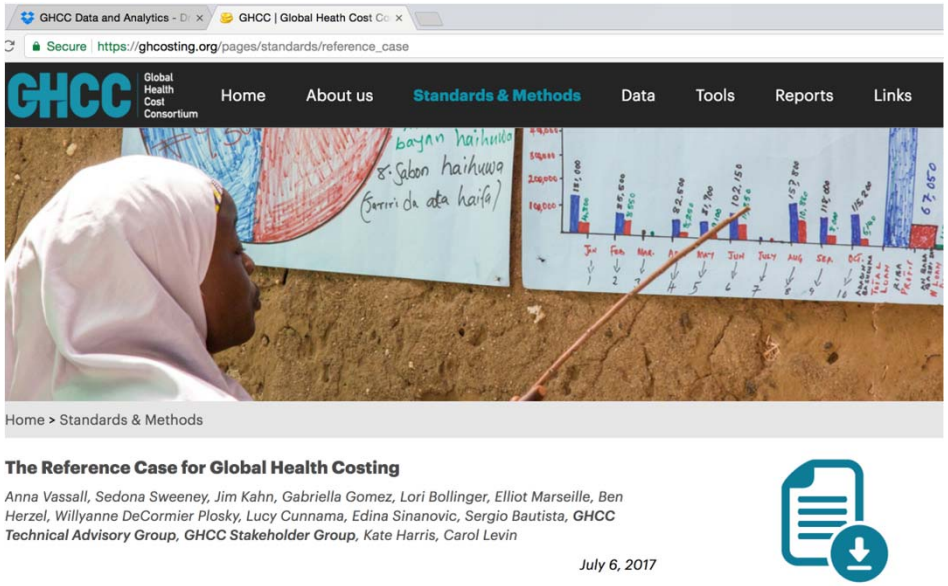
Theory of Change



Overview

GHCC ACTIVITIES AND PRODUCTS



DEVELOPING A REFERENCE CASE FOR GLOBAL HEALTH COSTING

Why set standards in costing?

- Improving the nature and extent of use of cost data:
  - Systematic reviews of costs suggest a wide variety of costing methods and metrics
  - Poor quality may lead to poor decisions - but how to judge poor quality
- Improving the production of cost data
  - Inefficiency – what is important?
  - Limited use of current guidelines
  - Limited capacity in costing

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What do we want to achieve?

Costing is a process of estimation

Two characteristics of a good estimate:

- Precision
- Accuracy

But how accurate and precise is good enough?

- Depends on the decision to be made using the cost

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Other characteristics

Generalisability

- Can we apply the cost to other settings?
- *More important to be relevant to context?*

Comparability

- Are cost estimates comparable with on another?
- *Standards or standardisation?*

Standards and reference case aim

To improve the relevance, use and quality of cost estimates by:

Ensuring that the process of cost estimation is transparent, so that those using the data can apply estimates widely and appropriately

Framework for producers of cost data to consider how their methodological choices influence the quality and relevance of their estimates

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The ‘reference case’ approach

1. Set of ‘acceptable’ principles
2. Methodological guidance on how to achieve those principles (theory and evidence based)
3. Standardisation for specific interventions with additional guidance where available
4. Reporting standards

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DATA AND ANALYTICS TO ESTIMATE IMPROVED UNIT COSTS

Data and Analytics Goals

- Provide unit cost data for budgeting, resource allocation, modeling
- Inform efforts to improve technical efficiency by characterizing ranges in unit costs
- Facilitate more efficient costing
  - Which quality standards most affect results
  - Prioritization (forest & trees) - what input costs are worth intensive effort

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Data and Analytics Tasks

- Obtain HIV & TB intervention cost studies; systematically extract
- Assess content and quality of studies
- Summarize existing cost data & gaps
- Develop methods to estimate unstudied intervention configurations and settings
- Provide analyses to inform reference case

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Search strategies

- Cochrane methods
- Health and economic publication databases
- **HIV** filter from Cochrane HIV/AIDS Group
- **Cost** filter “optimization of sensitivity & specificity” Wilczynski (2004), McKinlay (2006)
- 2006-16. All studies; no categorical exclusions
- Include if primary cost data from LMIC

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Guiding principles for designing data extraction template

- Comprehensive, granular database of cost study methods and findings
- Disaggregate interventions by modality, setting
- Describe unit costs total, and by input and activity categories
- Describe inputs (esp. major) with Ps & Qs
- Permit updating with current Ps.
- Prepare data for UCSR and econometrics
- Assess quality to support reference case

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Study/sub-study attributes categories

- ID, Intervention, Source Data, Perspective, Timeframe, Costing frame, Target Population, Geography, Health system level, Type of Costing, Sampling, Timing, Exclusions, Measurement of Resource Use, Misc Economic Methods, Valuing time, Heterogeneity, Results content, Setting characteristics, Intervention characteristics, Consistency of reporting

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Data extraction to date

VMMC

- 32 studies
- 140 sub-studies
- 1088 costing data points

HIV

- 196 articles

TB

- 139 studies

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	Data Sources			Analyses	Objective	End uses
	Published	Primary	Combined			
Existing unit cost estimates	X			Catalogue unit costs by broad characteristics such as intervention type and country.	Populate unit cost study repository (UCSR).	Users will access point estimates or distributions of specific unit costs.
Existing cost estimates by input & activity category	X	X	X	Describe/estimate composition of unit costs by cost category (e.g. staff, commodities, labs, services) or by activities (e.g. start up, training, direct service delivery, administrative), depending on data.	Populate UCSR.	Users will access point estimates or distributions of composition/relative contribution of specific unit costs.
Imputation across geographic settings	X	X	X	Impute unit costs to other countries/settings.	Parameterize dynamic tool.	Users will obtain imputed unit costs estimates for settings for which there are no existing results.
Predictors of unit cost using standard statistical techniques	X	X	x	Empirical statistical estimations (eg OLS) of determinants of efficiency (i.e. unit cost variation) eg facility type, scale, rural vs. urban, delivery model, integration with other services, task-shifting, fixed vs mobile, demand generation.	Parameterize dynamic tool.	Users will access predicted unit costs based on service provision setting and characteristics.
Predictors of total cost using theoretical cost function models	x	X		-- Assess the fit of theoretical cost functions (e.g. Cobb-Douglas, Leontief, Translog) -- If fit, estimate total costs as function of inputs, prices, outputs, other features of service delivery (eg type of facility, urban/rural, service delivery model)	Parameterize dynamic tool.	Users will access predicted total costs based on service provision setting and characteristics. Can also access marginal and average cost curves, economies of scale and scope, etc.
Constructed functions from disaggregated inputs	x	X		Build cost estimates based on the observed quantity and price of specific inputs (eg counselors, other staff, test kits). Note variation by facility and intervention characteristics.	Parameterize dynamic tool.	Users will access predicted unit costs, and can alter assumptions about resource intensity and price.

Existing unit cost estimates

	Data Sources			Analyses	Objective	End uses
	Published	Primary	Combined			
Existing unit cost estimates	X			Catalogue unit costs by broad characteristics such as intervention type and country.	Populate unit cost study repository (UCSR).	Users will access point estimates or distributions of specific unit costs.

Existing cost estimates by category

	Data Sources			Analyses	Objective	End uses
	Published	Primary	Combined			
Existing cost estimates by input & activity category	X	X	X	Describe/estimate composition of unit costs by cost category (e.g. staff, commodities, labs, services) or by activities (e.g. start up, training, direct service delivery, administrative), depending on data.	Populate UCSR.	Users will access point estimates or distributions of composition/relative contribution of specific unit costs.

Imputation across geographic settings

	Data Sources			Analyses	Objective	End uses
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Imputation across geographic settings	X	X	X	Impute unit costs to other countries/settings.	Parameterize dynamic tool.	Users will obtain imputed unit costs estimates for settings for which there are no existing results.

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Predictors of unit cost

	Data Sources			Analyses	Objective	End uses
	Published	Primary	Combined			
Predictors of unit cost using standard statistical techniques	**X**	**X**	X	Empirical statistical estimations (eg OLS) of **determinants of efficiency** (i.e. unit cost variation) eg facility type, scale, rural vs. urban, delivery model, integration with other services, task-shifting, fixed vs mobile, demand generation.	Parameterize dynamic tool.	Users will access predicted **unit cost variation**, based on service provision setting and characteristics

Predictors of total cost

	Data Sources			Analyses	Objective	End uses
	Published	Primary	Combined			
Predictors of total cost using theoretical cost function models	X		**X**	-- Assess the fit of theoretical **cost functions** (e.g. Cobb-Douglas, Leontief, Translog) -- If fit, estimate total costs as function of inputs, prices, outputs, other features of service delivery (eg type of facility, urban/rural, service delivery model)	Parameterize dynamic tool.	Users will access **predicted total costs** based on service provision setting and characteristics. Can also access marginal and average cost curves, economies of scale and scope, etc.

Constructed functions

	Data Sources			Analyses	Objective	End uses
	Published	Primary	Combined			
Constructed functions from disaggregated inputs	x		**X**	**Build cost estimates** based on the observed quantity and price of specific inputs (eg counselors, other staff, test kits). Note variation by facility and intervention characteristics.	Parameterize dynamic tool.	Users will access **predicted unit costs**, and can alter assumptions about resource intensity and price.

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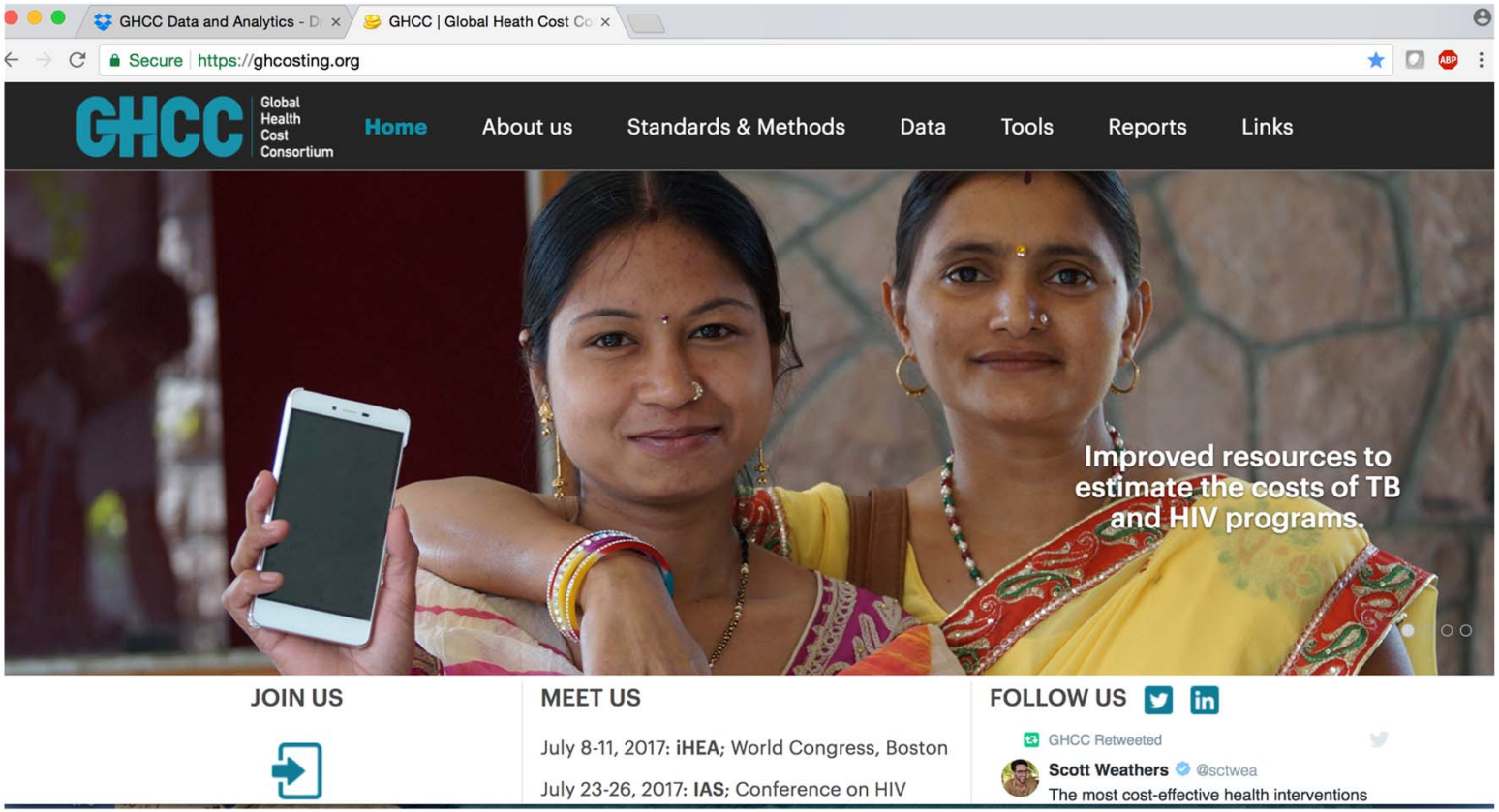
COMMUNICATION AND ADVOCACY

GHCC products to increase availability and use of cost data

- Unit cost study repository (UCSR)
- Ucost- dynamic costing tool

Visit our website! www.ghccosting.org



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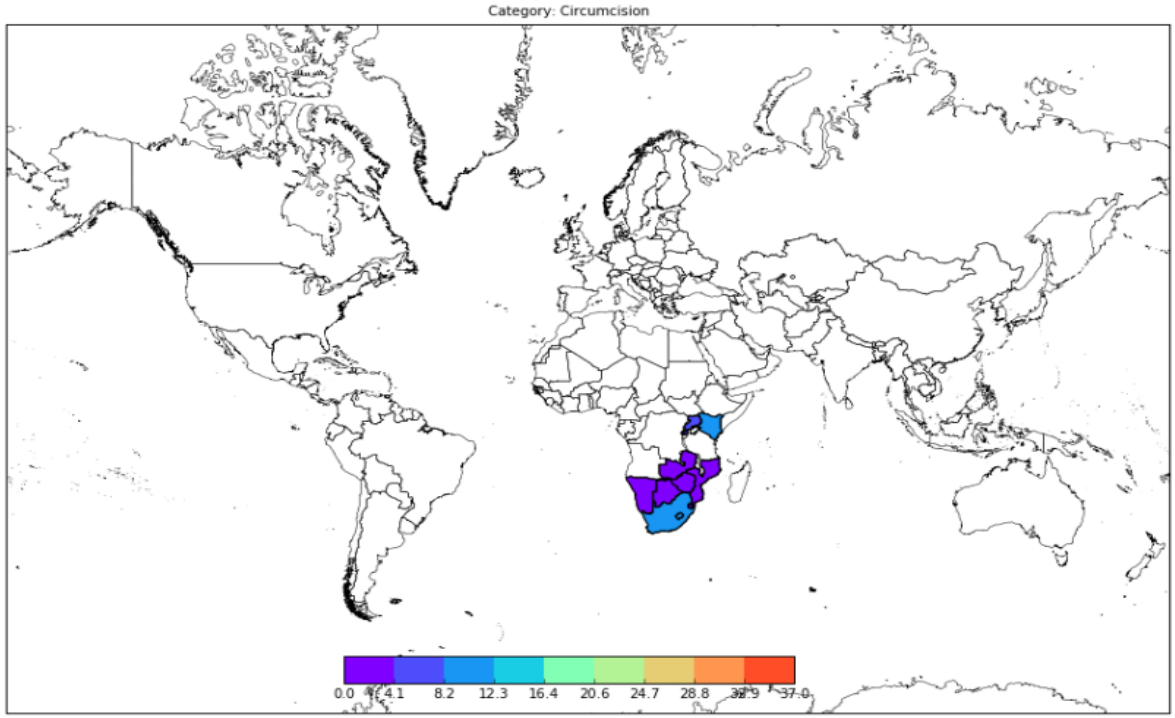
Category: Circumcision



THANK YOU! QUESTIONS?

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