Costing and Budgeting Tools at the Decentralized Level: State of the Art

Rudolph Chandler
Improving Financial Access to Health Services for the Poor
Calabar, Nigeria, November 2011
Costing and Tools: Demystification

- **Costing**
  - Price x quantity
  - Adding: coverage or target
    - Proportion of the population to be served

- **Tools**
  - Software/computer-based program
    - Pulls together P x Q x Coverage/Target
    - Microsoft Excel or customized software

... to produce costing/budgeting information
Importance of Cost Information

- Costs versus funding (available budget)
- Adequacy between costs and capitation rates
- Sustainability and coverage
USAID-funded health policy projects:

- Cost of maternal, newborn, and child health (MNCH) in Nigeria
- GAP Tool for family planning
- National Health Insurance Scheme (NHIS) costing

- Jigawa State: MNCH costing
- Possible others
Today

- No precise listing of all tools available
- Introduction to computer-based programs peer reviewed tools:
  - Focus on MNCH and integrated (health systems) tools
  - Rapid review of “vertical program” tools
Costing and Budgeting Tools

- Originally designed for national costing and budgeting
- Adaptable for use by states and local government administrations (LGAs): reflecting population size
- Common product: costing health services and/or programs
- Different: purposes and outputs
In collaboration with NORAD, UNFPA, UNICEF, UNAIDS, UNDP, WHO, World Bank, USAID (through the Health Systems 20/20 and BASICS Projects)

Review of 13 costing tools with the following information:
- Tool description
- Links to the tool
- Links to user manuals and technical documentation
- Contact information for developers/focal points

http://www.who.int/pmnch/topics/economics/costing_tools
PMNCH Tool Description

- Purpose of the tool
- Millennium Development Goals (MDGs) addressed:
  - # 4 (Child Health), # 5 (Maternal Health), # 6 (HIV/AIDS, Malaria, and Other Diseases)
- Health systems levels
- Scope of interventions (and if addressing program and system costs)
- Costing strategy and methods
- Types of outputs and reports generated (tables and/or graphics)
- Type of software: spreadsheet and custom software
# Tools in the PMNCH Website

<table>
<thead>
<tr>
<th>Name of Tool</th>
<th>Purpose</th>
<th>Scope of Intervention</th>
<th>Modeling impact</th>
<th>Level of Aggregation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Revenue Analysis Tool</td>
<td>Planning, costing and budgeting individual interventions and integrated services</td>
<td>Integrated PHC services</td>
<td>Predicts utilization of services</td>
<td>Facility, Network of facilities, district, national</td>
</tr>
<tr>
<td>Integrated Healthcare Technology Package</td>
<td>Planning for the optimal resource mix and costing resource requirements</td>
<td>Any defined set, package or program</td>
<td>Cost per input, procedure ... etc as well as non cost outputs</td>
<td>Facility, Network of facilities, district, national</td>
</tr>
<tr>
<td>Integrated Health Model</td>
<td>Estimation of total resources - human, infrastructure and financial - for integrated health services to reach MDGs</td>
<td>HSS, CMS, and programs</td>
<td>No estimates of impacts on health outcomes</td>
<td>National and Sub National Level</td>
</tr>
</tbody>
</table>
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<tr>
<td>Reproductive Health Costing Tool</td>
<td>Estimating resource requirements and costs of providing an essential package of reproductive/maternal health interventions</td>
<td>Maternal and RH, HSS</td>
<td>Population dynamics (e.g., the impact family planning has on the demand for maternal and child health services)</td>
<td>State, provincial and national</td>
</tr>
<tr>
<td>One Health (Spectrum)</td>
<td>Single framework for planning, costing, impact analysis, budgeting and financing for all major diseases and health systems</td>
<td>Health systems</td>
<td>Yes</td>
<td>National and sub national</td>
</tr>
<tr>
<td>Marginal Budgeting for Bottlenecks</td>
<td>Forecasting cost and impact of investments needed to increase high impact interventions AND preparing health budgets</td>
<td>MNCH, malaria and HIV/AIDS</td>
<td>Yes</td>
<td>District, sub national and national</td>
</tr>
</tbody>
</table>
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</tr>
</thead>
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<tr>
<td><strong>Spectrum Suite</strong></td>
<td>Estimation of financial resources to achieve program targets</td>
<td>Prevention (inc. PMTCT), Care and Treatment, Mitigation</td>
<td>Prevalence, Incidence, Infections and deaths averted</td>
<td>State, provincial and national</td>
</tr>
<tr>
<td><strong>Malaria Costing Tool</strong></td>
<td>Estimate financial costs associated with scale up of malaria interventions</td>
<td>Preventive &amp; curative</td>
<td>None</td>
<td>National</td>
</tr>
<tr>
<td><strong>Planning and Budgeting for TB</strong></td>
<td>To assist in the planning and cost of activities to control TB in a country</td>
<td>All TB interventions</td>
<td>None</td>
<td>National (sub national)</td>
</tr>
<tr>
<td><strong>Child Health Cost Estimation Tool</strong></td>
<td>Strategic tool for medium term planning of financial resources</td>
<td>Preventive &amp; curative child health interventions</td>
<td>Life saving impact</td>
<td>National and Sub National Levels</td>
</tr>
<tr>
<td><strong>Costing and Financing Tool for Childhood Immunization</strong></td>
<td>Strategic tool for planning immunization services</td>
<td>Immunization</td>
<td>None</td>
<td>National and Sub National Levels</td>
</tr>
</tbody>
</table>
Example of Outputs: Goals Tool—crop to smaller group of items

Total cost by intervention

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General population</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community mobilization</td>
<td>6,606,931</td>
<td>9,620,392</td>
<td>12,765,398</td>
<td>16,043,890</td>
<td>19,458,304</td>
</tr>
<tr>
<td>Mass media</td>
<td>5,421,074</td>
<td>8,060,329</td>
<td>10,815,128</td>
<td>13,687,162</td>
<td>16,678,546</td>
</tr>
<tr>
<td>VCT</td>
<td>21,430,166</td>
<td>23,920,976</td>
<td>26,505,942</td>
<td>29,187,180</td>
<td>31,967,212</td>
</tr>
<tr>
<td>Condoms</td>
<td>28,180,694</td>
<td>30,245,142</td>
<td>32,294,234</td>
<td>34,328,256</td>
<td>36,348,044</td>
</tr>
<tr>
<td>AIDS education</td>
<td>2,707,968</td>
<td>2,879,844</td>
<td>3,056,101</td>
<td>3,236,745</td>
<td>3,423,249</td>
</tr>
<tr>
<td>Out-of-school youth</td>
<td>1,819,755</td>
<td>2,616,544</td>
<td>3,433,945</td>
<td>4,272,504</td>
<td>5,134,873</td>
</tr>
<tr>
<td>Workplace programs</td>
<td>4,116,627</td>
<td>6,084,248</td>
<td>8,137,942</td>
<td>10,278,967</td>
<td>12,508,909</td>
</tr>
</tbody>
</table>
Example of Outputs: CORE Plus—Nigeria NHIS/NPHCDA application

<table>
<thead>
<tr>
<th>Basic Statistics</th>
<th>Scenario A = actual services and actual costs</th>
<th>Scenario B = actual services and normative costs</th>
<th>Scenario C = needed services and normative costs</th>
<th>Scenario D = projected services and normative costs</th>
<th>Scenario E = projected services and minimum number of staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catchment population</td>
<td>16,750</td>
<td>16,750</td>
<td>16,750</td>
<td>16,750</td>
<td>16,750</td>
</tr>
<tr>
<td>Community Health Catchment Population (if applicable)</td>
<td>16,750</td>
<td>16,750</td>
<td>16,750</td>
<td>16,750</td>
<td>16,750</td>
</tr>
<tr>
<td>Total types of services in full package</td>
<td>39</td>
<td>39</td>
<td>39</td>
<td>39</td>
<td>39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costs: Total and Per Capita</th>
<th>Scenario A = actual services and actual costs</th>
<th>Scenario B = actual services and normative costs</th>
<th>Scenario C = needed services and normative costs</th>
<th>Scenario D = projected services and normative costs</th>
<th>Scenario E = projected services and minimum number of staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cost of all services</td>
<td>1,296,000</td>
<td>1,587,704</td>
<td>2,289,261</td>
<td>1,986,279</td>
<td>1,924,905</td>
</tr>
<tr>
<td>Total Cost at Primary (Ambulatory)</td>
<td>1,174,194</td>
<td>1,435,620</td>
<td>2,045,048</td>
<td>1,765,067</td>
<td>1,717,106</td>
</tr>
<tr>
<td>Total Cost at Secondary (Hospitalization)</td>
<td>30,133</td>
<td>45,455</td>
<td>153,248</td>
<td>139,615</td>
<td>126,532</td>
</tr>
<tr>
<td>Total Cost at Community</td>
<td>91,673</td>
<td>106,629</td>
<td>90,965</td>
<td>81,597</td>
<td>81,267</td>
</tr>
<tr>
<td>Cost per service</td>
<td>47</td>
<td>58</td>
<td>59</td>
<td>61</td>
<td>56</td>
</tr>
<tr>
<td>Cost per capita</td>
<td>77.37</td>
<td>94.79</td>
<td>136.67</td>
<td>118.58</td>
<td>114.92</td>
</tr>
</tbody>
</table>
Cost by intervention, package of services, facility, resource type

Example of Applications: CORE Plus

Reports and Publications:


Source: http://erc.msh.org/toolkit/Tool.cfm?lang=1&TID=113
Many tool outputs
- Need to be migrated to national planning and budgeting processes

Multi-disciplinary expertise needed for defining
- Unit and shared costs
- Coverage and target issues
- Clinical and program inputs
- Assumptions
Challenges and Limitations

- Planning and time are necessary for costing and budgeting activities
  - Planning the activity
    - Contacting local authorities and stakeholders
    - Contacting and working with the sites
  - Collecting data and data entry
  - Controlling quality
  - Fostering decisionmaking
  - Mapping costing into budgeting process (national, state, and LGA levels)
- **Depends on needs**
  - MDGs/vertical program/services/facility/broader systems
  - Scope of interventions
  - Health impacts and outcomes: Quite a number of tools (MBB, Goals, etc.)
  - OneHealth will become the UN system (incl. World Bank) Health Systems tool

- **General recommendations**
  - Integrating numerous interventions
  - Creating linkages to health systems
  - Generating reports and/or graphs
  - Microsoft Excel format
    - Customized software trade off: impacts and outputs
Specific Recommendations

- Taking stock: tools available and costing studies conducted in Nigeria
- Discuss specific states’ costing studies:
  - Benefits and limitations
  - Applicability to other states
- Make determination of the most practical tool(s) to apply to the most states
PMNCH Interactive Costing Tool Guide

Welcome to the Costing Tool Guide

First Name: ___________________________  Email: ___________________________
Last Name: ___________________________  Organization: ________________________

The goal of this Costing Tool Guide is to help you select an appropriate costing and resource planning tool for estimating the costs of specific health actions that may inform your planning, programming, and budgeting processes. The Guide is based on a technical assessment of costing tools related to the health Millennium Development Goals (MDGs), which was conducted as part of a broader review of costing tools that included consultations with users and developers of tools.

The Guide will lead you through a series of questions to help you narrow down the choice of available costing and resource planning tools. Some tools focus on one particular MDG while others are more cross-cutting. The Guide will help you understand what tools are available and provide resources for you to get more detailed information and guidance related to the tools.

Below you will find video tutorials that walk you through different scenarios of how to decide which tool is most appropriate for a particular situation. The videos will show you how to use the Guide and why you might decide to select a particular costing and resource planning tool over other options.

- Created by Health Systems 20/20—Abt Associates Inc.
- Helps understand available tools
- Helps select particular costing and resource planning tool (via video)
### Costing and budgeting tools

- Are readily available and have been used extensively
- Can be adapted for state and LGA levels
- Are mostly designed in an Excel spreadsheet format
- Use the ingredients/bottom-up approach
Websites and Addresses

Partnership for Maternal, Newborn, and Child Health

http://www.who.int/pmnch/topics/economics/costing_tools/

Interactive Costing Tool Guide

http://apps.who.int/pmnch/topics/costingtool/
Thank You!

www.healthpolicyproject.com