

Using the OneHealth tool for planning and costing a national disease control programme

Inter Agency Working Group on Costing¹
April 2013

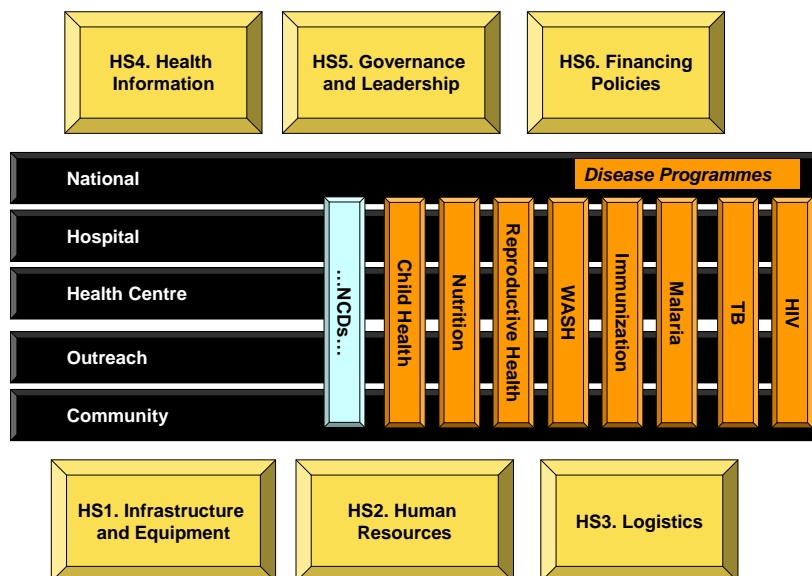
This note provides a brief overview of how the OneHealth tool may be used to inform a programme / disease specific planning process. For more details on how to use the tool, please refer to the general OneHealth User Guide.

A. Overview

OneHealth is built up by modules, including specific modules for programme or disease specific planning. The user can set up and define national disease control programmes to match the country context, and then estimate the cost for a specific programme, including an analysis of the broader health system implications. The format for programme planning is streamlined so that a consistent approach is used across programmes. It is however encouraged that a programme plan looks at the broader health system constraints that may affect the delivery of the key interventions.

Figure 1 illustrates the generic setup of the tool when opened by a user. If the user chooses to perform the planning using the programme-specific planning mode, the model opens with a pre-set list of programmes including: Child health; Reproductive and maternal health; Immunization; Nutrition; Water and Sanitation (WASH); HIV; TB; Malaria, and Non communicable Diseases (NCDs). Future versions of the model may include additional programmes within the default setup.

Figure 1. OneHealth: a tool composed of interlinking modules



¹ This note was prepared by Karin Stenberg on behalf of the Inter Agency Working Group on Costing. For questions please contact stenbergk@who.int.

Activities and costs considered for programme planning

In general, for a specific plan, such as a child health strategy, OneHealth could be used to assess the resources used and the costs of scaling up the following:

- a) **Priority health interventions for a national programme.** In terms of defining the scope of each programme, the user can shift default interventions between programmes, and also merge and/or create new programmes and interventions as needed, depending on the national planning context. For example, two programmes for nutrition and child health can be merged into one national programme if needed, and will then be treated as a joint programme entity within the tool. Moreover, the user can for example shift newborn care interventions from the reproductive health programme setup into the child health module, if this is where the planning for those interventions would "sit" within the national programme planning structure. In terms of costing specific interventions, the tool comes equipped with defaults for standard treatment protocols but the user can adjust these as needed. The user can also create new clinical interventions within the model and cost these.
- b) **Programme activity costs** - this section allows the user to cost activities related to Information, Education and Communication, administration, Monitoring and Evaluation, surveys, in-service training, salaries for national programme management staff, etc., as would be needed for the specific health programme to support the scale-up of direct care interventions. This is also where some of the policy - related activities can be costed, such as activities related to legislation and regulation.
- c) The tool allows for an assessment of the **health system implications** of the planned scale-up and their resource costs, including estimates of the numbers of full-time health workers required.

Results generated for a disease specific programme

Within the OneHealth tool each programme module (e.g., Nutrition or Malaria) produces its own outputs for resource use and costs, in terms of how many clients will be reached per year, the requirements that this poses on the health system in terms of outpatient visits and inpatient days, and the total projected cost by activity, by level of service delivery, type of input, and year.

Results generated for the entire tool

Health impact is estimated through impact models that are directly linked to the targets and strategies identified by the user within the model. Five submodels within the OneHealth tool draw upon the UN epidemiological reference group models, a recognized gold standard. These models are fully incorporated as an integrated part of the OneHealth software:

- The Lives saved Tool (LiST)² estimates impact for a range of child and maternal health interventions, including malaria interventions.
- The AIM and GOALS models project health impact for HIV/AIDS interventions
- The Family Planning (FamPlan) model computes the relationship between family planning and total fertility rate. The output is then communicated to the population projection parts of the tool.
- A newly developed TB model projects impact on TB health targets.

Moreover, work is currently ongoing to support further development of impact models for non-communicable diseases.

These impact tools inform the production of general output tables where the aggregate outputs are considered, for example the total predicted impact on maternal mortality.

The greatest benefits from using OneHealth to inform the planning for a disease specific or priority-programme is the ability to integrate the findings into a broader planning process that looks at the entire health system. The output from OneHealth can be used as a basis for discussing resource allocation and priority setting decisions both *between* and *within* programmes. This will ensure that the disease-specific

² <http://www.jhsph.edu/dept/ih/IIP/list/>

plan is fully integrated into a sector-wide process and is incorporated into regular government processes for financing health programme activities.

B. Process

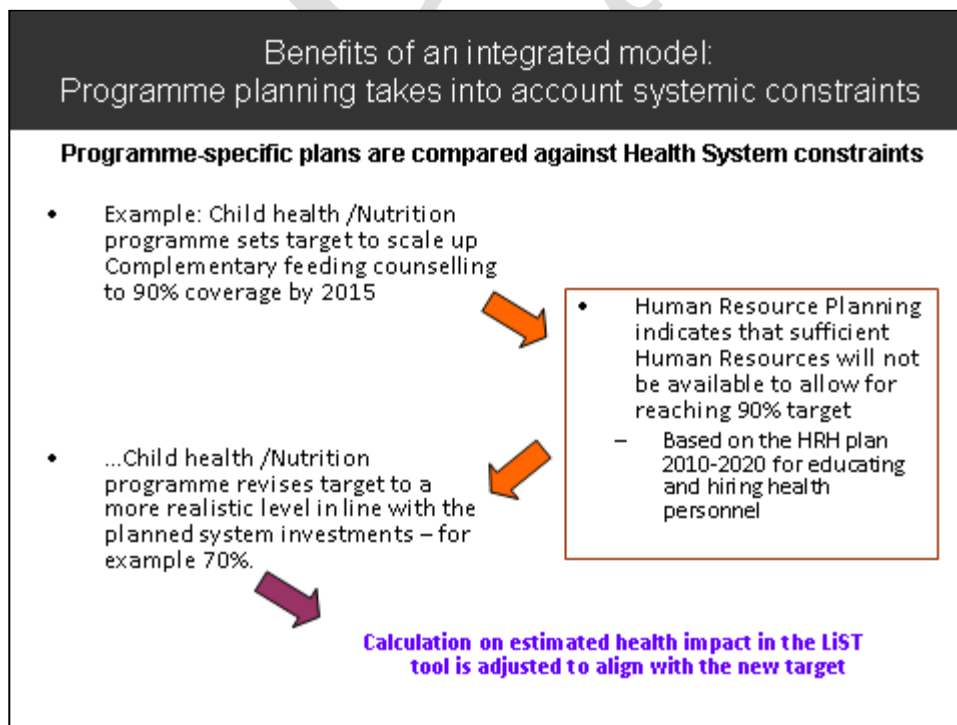
As mentioned above, the greatest benefits from using OneHealth to inform a disease specific programme plan is its ability to integrated results into a broader planning process. There are also disease-specific applications to donors where Health System components should be identified, for example Global Fund and GAVI applications for countries that are eligible to submit proposals for disease components (HIV and AIDS, tuberculosis, malaria as well as for Cross-Cutting Health Systems Strengthening). However the broader plan and the disease-specific plan may not be developed at exactly the same time. There may also be impetus to use the OneHealth for a programme-specific assessment for a specific advocacy purpose.

The process for using OneHealth may differ depending upon the purpose and scope of analysis.

If the application is done as part of a broader planning process (example nutrition):

The strategies for the disease specific programme (nutrition) would be developed in tandem with those for the other areas, and plenary sessions would be held to ensure a common approach in the overall policies and strategies outlined in the planning process. The national nutrition programme managers would indicate the preferred targets for nutrition interventions based on what is considered feasible given current system bottlenecks and the planned improvements in system and programme performance over time. The implications would be communicated to the other modules, including Human resources, Logistics, Health information systems, and Fiscal Space. There may be iterations to the plan, for example if the health system modules indicate that service delivery targets are not realistic given the available health system resources (see Figure 2 below). Given scarce resources, once the financial space analysis has been completed, there may be a need to revisit targets and costs, and to reprioritize and reallocate the budget.

Figure 2. Programme planning takes into account health system constraints



If the application is done as a disease specific planning process (example nutrition):

If there is interest to look at the real health systems implications of the plan, relevant baseline information would first need to be entered into the OneHealth Health Systems Modules for Human resources, infrastructure etc., in order to be able to see the impact of the nutrition plan targets on the health system. As such there would be more of a need to become familiar with, and enter data into, more modules than Nutrition alone. Even so, the aggregate predicted impact on the health system would only be partial, since not all programmes' targets' would be taken into account. The nutrition programme managers would indicate the preferred targets and the implications would be communicated to the other modules, including Human resources, Logistics, Health information systems, and Fiscal Space. However the recommendations for health system improvement would remain without anyone acting upon them, as the planning for the health systems modules and related costing would not have been completed. The setup and completion of a nutrition module contextualized to the national setting would however still be beneficial since this would be ready to inform the next health sector wide plan, in case the OneHealth tool would be used for the sector-wide planning process.

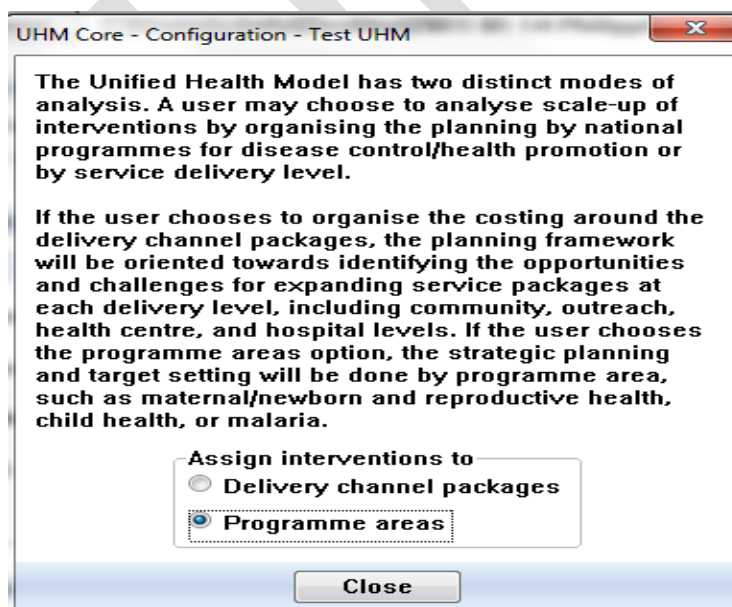
The user should note that the estimated health impact for scaling up nutrition interventions may appear different for a partial programme plan and for a holistic aggregate health sector plan, as risk factors interact and mortality profiles shift as multiple programmes and interventions are scaled up.

Overall, efforts should be made to synchronize planning cycles. A nutrition strategy may set out specific targets that may seem reasonable from the programme-specific point of view, but may later need to be revised and re-costed when the entire set of programmes and health system components are considered jointly, since there may be a need to prioritize interventions within the boundaries of available financing.

C. Practical guidance on using the OneHealth software for a disease-specific programme costing

1. Model configuration

In order to plan for a disease specific programme such as malaria or nutrition, you would need to select the option "Programme areas" when configuring the model.



2. Defining the scope of your program

The current version of OneHealth comes equipped with assumptions for nine default programmes that primarily aim to capture the health MDGs as well as NCDs: Child health; Reproductive and maternal health; Immunization; Nutrition; Water and Sanitation; HIV; TB; Malaria; and NCDs. It should be noted that additional programmes may be added to subsequent versions of the tool, as the software is further developed over time.

Example: The scope of the WASH programme in OneHealth.

In the current version, the following five interventions are "assigned" to the WASH programme as part of the default setup:

Improved water source
Water connection in the home
Improved sanitation - Utilization of latrines or toilets
Hand washing with soap
Hygienic disposal of children's stools

The OneHealth tool has a flexible setup in that the user can shift interventions between programmes, and also merge and/or create new programmes as needed, depending on the national planning context. The user can also create new interventions and cost these.

For more guidance on how to configure the model to fit a disease-specific programme, refer to the OneHealth user manual³.

3. Framework for programme planning

It should be noted that the approach for costing within each programme module follows a classification whereby some costs are classified as **direct patient costs** such as drugs and commodities directly related to each patient seen, whereas other costs are defined as **programme administration costs**, such as activities related to monitoring and evaluation, research, training and general administration. Note that these should be activities specific to the programme.

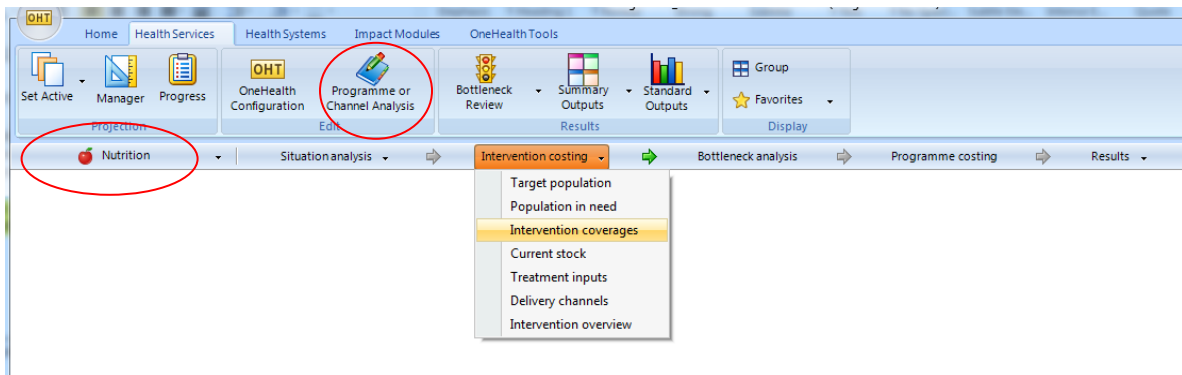
OneHealth also includes the option for the user to undertake a bottleneck analysis for each programme, in order to undertake a problem analysis whereby current weaknesses in service delivery are assessed and strategies are proposed to overcome these.

As shown in the Figure below, the framework used within each programme module for strategic planning is:

1. Situation analysis
2. Intervention costing
3. Bottleneck analysis
4. Programme costing
5. Results

These five items are part of a "ribbon menu" within each programme module as shown below.

³ OneHealth Start-up Manual (Draft 2012 11 19)



The targets for Intervention Coverage should be entered as part of the section called Intervention costing.

4. Process of data entry for a health programme

The envisioned process of entering data for a programme is as follows:

4.1 Assess the current situation:

Download the UN country profiles by clicking on the situation analysis tab.

Enter the impact modules to examine the current cause of death profile and effective interventions (when applicable to your programme, for example child health).

4.2 Define interventions

Define the population in need of each intervention.

Define the delivery channels, both for the current situation and for the future.

Define the ingredients required for each intervention (drugs, supplies, health worker time, etc).

Set coverage targets by year.

Instructions for coverage:

1. Click on the "Intervention Coverages" icon to see the pre-loaded baseline, frontier and target coverages (baseline coverage come from country-specific databases in the tool. The user can overwrite these).
2. The target coverage is used to set targets and determine the cost directly related to the intervention coverage. The frontier coverage is an indicative target that is derived from the bottleneck assessment. Initially the frontier coverages (column 3) are set to be equal to the target coverage. If the user has done a bottleneck analysis the calculated frontier coverages will be automatically transferred to column 3. Refer to the user manual for more details on frontier and target coverage.
3. The population in need, delivery channels and treatment input menu items have defaults loaded. However, you may wish to adjust them to your needs – especially the delivery channel which has a global default and is not country specific. You can adjust the figures in all three costing elements by

clicking on the figure and re-typing a new one. It is strongly advised to make a note of all changes made to the defaults during an application process.

4.3 Bottleneck analysis

The use of bottleneck analysis within the tool is optional. A programme may choose to make use of this function in order to assess what are the specific challenges facing the scale-up of specific "tracer" interventions within the national health programme. Leaving it blank will not impact the target setting, cost and impact calculations. It may however result in fewer explicit linkages being made between different modules, in terms of identifying common factors across programme scale-up and health system requirements.

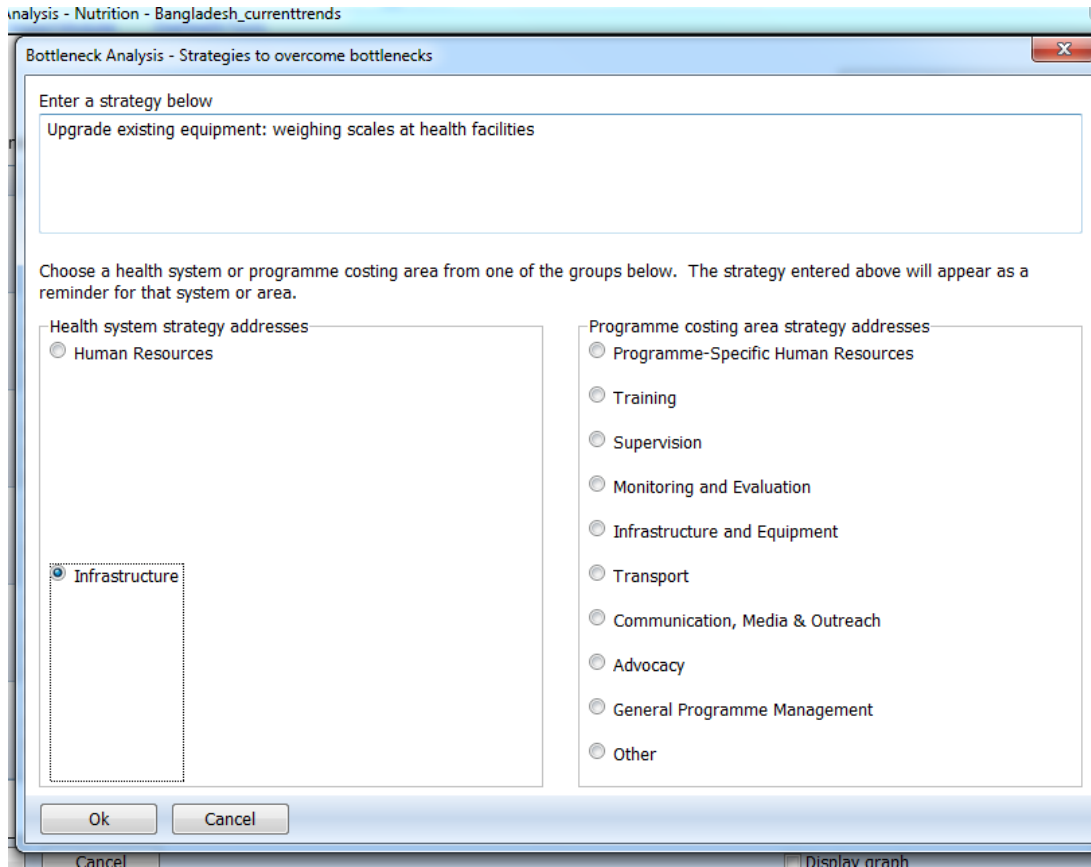
The function of the bottleneck analysis is to identify strategies that would facilitate scaling up priority interventions. This is done by using indicators to indicate system and programme performance for different levels of access. The approach builds on that used in the Marginal Budgeting for Bottlenecks (MBB) model⁴ where the identification of systemic bottlenecks is done using six coverage indicators:

- availability of essential commodities,
- availability of human resources,
- physical accessibility,
- initial utilization,
- timely continuous utilization, and
- effective quality coverage of services.

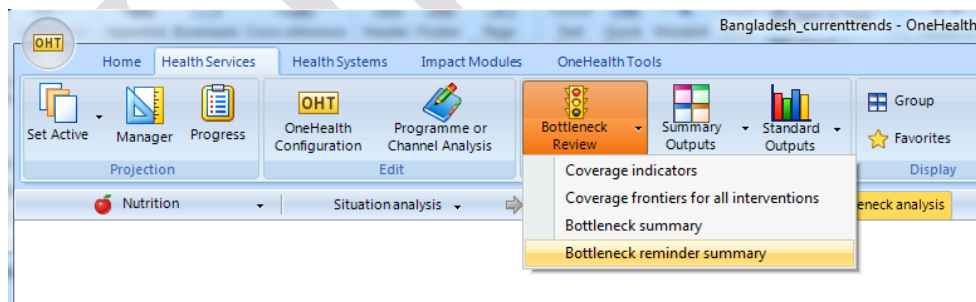
Note that it is the last level - the effective quality coverage of services - that can be directly linked to the final coverage, and thus the health impact modeling.

The programme planners should identify strategies that should be implemented to reduce the bottlenecks. Then, within each target setting and costing table, there is a button for accessing reminders on which bottleneck strategies have been proposed, to ensure that the user can review these and decide whether to cost them or not. Some strategies are costed in the health systems modules (Human Resources, Infrastructure, Logistics, etc.) and other strategies (e.g., training, supervision, etc.) are costing in the separate programmes, packages or channel specific costing areas.

⁴ The MBB tool is developed by UNICEF and the World Bank and is based on Tanahashi (WHO Bulletin 56(2), (1978)).



Experience from countries having used a bottleneck type approach to assess current health system performance indicates that the analysis can be very useful for informing scale-up strategies to overcome existing problems. It should be noted that within OneHealth the bottleneck analysis does not drive any calculations within the tool. The bottleneck analysis helps the user to identify strategies and to ensure that these strategies appear on a common "check list for action points" that is accessible throughout the tool for all users.



4.4 Programme administration costing

Within each module, in addition to intervention costing, there is also a section for **programme costing** which allows the user to cost activities related to Information, Education and Communication, administration, salaries of programme administration staff, etc.

5. Outputs within the tool

Programme-specific outputs

Each programme module produces its own outputs for costs, including estimates of how many clients were reached, how many outpatient visits and inpatient days at each level are generated due to the programme scale-up, the quantity of different drugs and supplies needed, and what is the total projected cost by activity and year.

General outputs

There are also general output tables within OneHealth where the aggregate outputs are considered, for example the total impact on child mortality not just due to e.g., WASH interventions, but also due to other interventions such as immunization, diarrhea management, etc.

Examples of interesting policy issues that can be explored using the tool:

- What are the cost and health system implications of shifting delivery from one delivery strategy (e.g., primarily clinic-based care) to another strategy (e.g., greater reliance on community or outreach services)?
- What are the human resource implications of shifting service delivery to community level versus primarily first level health facility level?
- What are the resource implications of changing the standard treatment guidelines?
- What is the potential reduction in in-service hospital care when preventive services are scaled up?

6. Programme costing, broader health sector costing and including costs incurred by other sectors

OneHealth has been facilitated to support integrated planning. As such it facilitates the integration of programme-specific plans within a broader health sector strategy.

The OneHealth tool has been developed to include activities that are seen as strategically important for health planning. As such it also includes costs that may be funded by other ministries than the Ministry of Health (MoH). The OneHealth tool produces a total cost, by year, broken down by inputs and activities. Within the **budgeting** module, the user can map each type of cost to a specific budget category and a specific financing source within the national system. This means that activities can be presented according to whether they are funded by the MoH or not. This may be important for example for WASH-related activities, and the cost can be presented as a cost that is to be borne by another department or Ministry, whilst it should still be included in the national strategic health plan and related costing.