

OneHealth Tool Start-up Manual

A Computer Program for Making
Informed Health Programming Decisions



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February 2016

ONEHEALTH Start up MANUAL (February 2016)

The development of the OneHealth software and manual was supported by the World Health Organization, the Global Workforce Health Alliance, UNFPA, UNICEF, the Health Metrics Network and The Global Fund to fight AIDS, Tuberculosis and Malaria. It was prepared by Shetal Datta and Bill Winfrey of Futures Institute in 2011, and has been updated by Nadia Carvalho of Avenir Health (formerly Futures Institute) in 2015. Overall technical guidance on the development of the OneHealth tool is provided by the United Nations Inter Agency Working Group on Costing. The views expressed in this publication do not necessarily reflect the views of the funding organizations.

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INTRODUCTION

OneHealth is a tool that can be used to inform the development of strategic plans for health sector planning. The software was developed to respond to country requests for a single tool which reflects the best aspects of the existing tools. The OneHealth tool provides a unified framework to strengthen integrated planning. OneHealth is a single mechanism to be used for supporting the planning, costing and budgeting of health sector priorities, including health system strengthening strategies. As such it represents a modular instrument for program-specific and sector-wide applications. The tool illustrates the health system implications of scaling up intervention delivery, shows the capital investment gap and allows a comparison of costs with the estimated financial resources available. In this manner, the tool facilitates scenario generation and informs priority setting processes. The identification of impediments to intervention scale-up emphasizes the need to strengthen systems for sustainable long term planning.

The tool facilitates an assessment of costs related to the areas of maternal, newborn and reproductive health, child health, vaccination, malaria, tuberculosis, HIV/AIDS, nutrition, and water sanitation and hygiene, to inform progress towards the Millennium Development Goals, including assessment of achievable health impact. In addition it contains modules for the areas of human resources, infrastructure, logistics, financial space, programme and channel analysis, intervention coverage and costing, bottleneck analysis, programme costing, summary outputs and budgeting.

Potentially, OneHealth has a multiplicity of users. At the most comprehensive, health planners putting together a multi-year health plan can use the tool to create a costed plan for addressing critical health needs in a country; to compare different scenarios for reaching the identified health sector priority goals. This could be as part of a national strategic health planning exercise or as a part of a proposal to a multi-lateral funding organization. At a simpler level, disease area planners can use the programme planning modules to develop plans addressing their particular needs with reference to health systems as appropriate. Similarly, health systems planners can use the systems modules to make medium and long range plans for Human Resources, Infrastructure, Logistics, etc. as appropriate. The added value of OneHealth is generated when multiple modules are used at the same time, to identify synergies and to ensure that planning processes take into account systemic constraints.

The purpose of this manual is to guide the user through a step-by-step process of downloading and getting started with the OneHealth tool. It is not meant to be comprehensive. After the user is launched into the tool, Help screens that will guide and inform the user as s/he implements the tool.

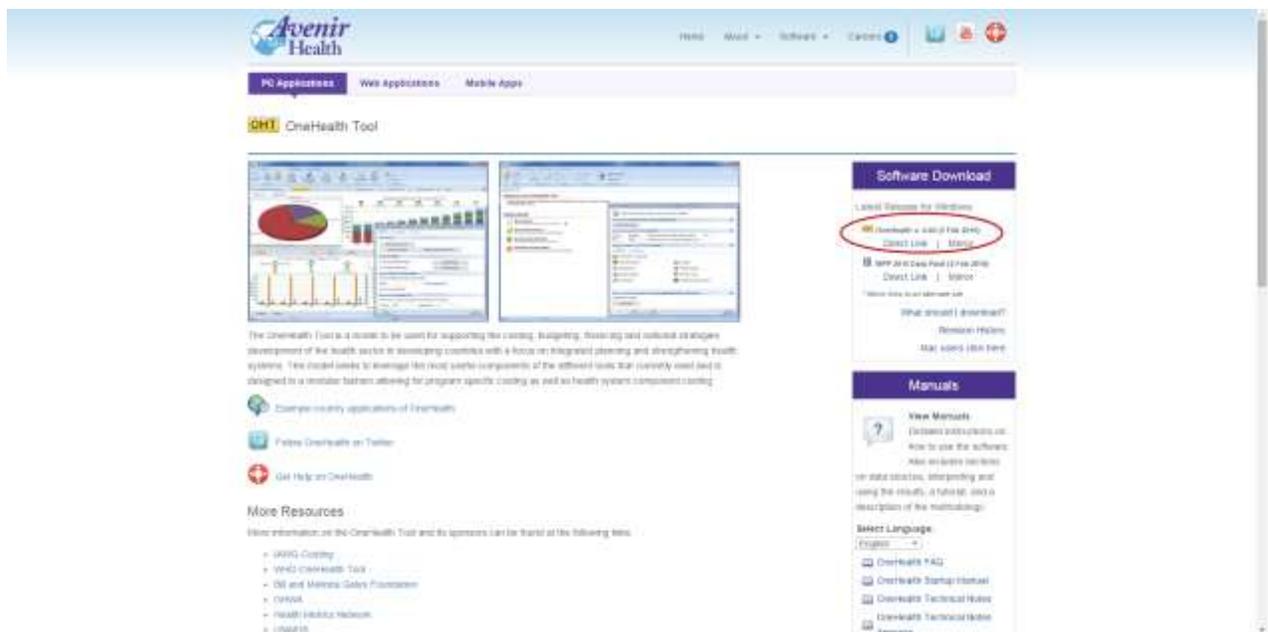
OneHealth is a work in progress that is continuously adapting to meet the needs of countries and health organizations. The user is advised to check back on the Avenir Health website periodically for released newer versions of OneHealth software and the OneHealth Start-up Guide. A technical manual will also be made available through the website. As of November 2, 2011, OneHealth included complete modules for programme-specific analysis and costing, delivery channel analysis and costing, human resources, logistics, infrastructure, governance, health information systems, health financing, financial space and budgeting.

BASIC STEPS IN INSTALLING AND USING ONEHEALTH

This section provides instructions for downloading and installing the OneHealth tool as well as creating a projection. The user is also encouraged to explore other parts of OneHealth and SPECTRUM to become familiar with the full array of features and options.

Step 1: Obtain software

1. Download OneHealth from the internet at <http://www.avenirhealth.org/software-onehealth.php>



2. Click on the link indicated above to download the OneHealth Tool. The OneHealth Tool is approximately 25MB. Begin with the direct link. For those users on a slow connection, or one with frequent interruptions, the Mirror may also be accessed. It is the same file.
3. Save to your desktop or other easy to find file location when prompted.

Step 2: Install OneHealth

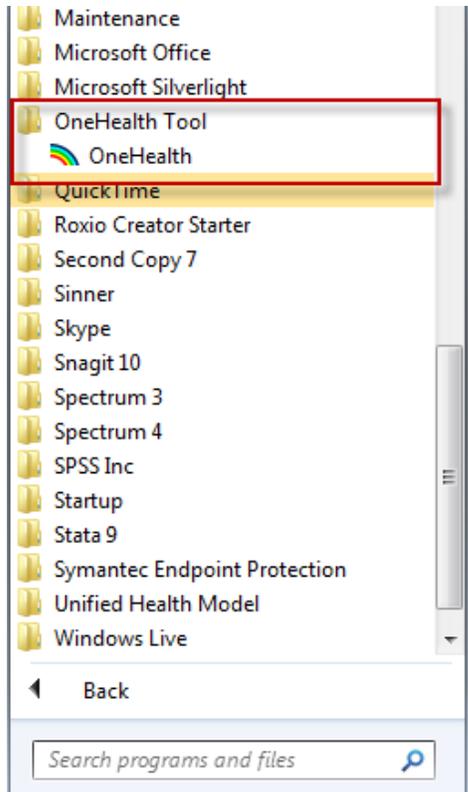
1. Click on the file that you have downloaded to initiate installation. If you have saved the file to your desktop, click on the icon– “OneHealthInstall.EXE”.



2. Click next at all of the prompts and click finish at the end when OneHealth is installed.

Step 3: Launch the OneHealth Tool

1. Click the Start menu from the bottom left hand corner of screen. From the “All programs” menu item, find OneHealth, and click on the OHT icon.

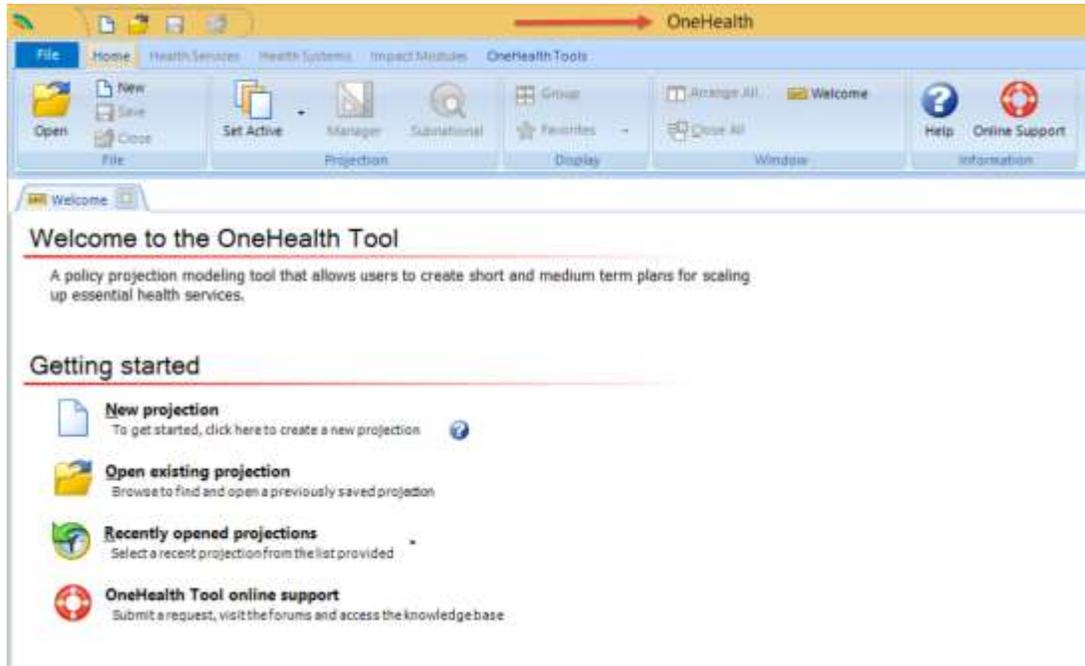


Note to previous users of SPECTRUM: OneHealth is programmed within the SPECTRUM suite of health policy tools. If you have previously used SPECTRUM¹, OneHealth may need to be launched from the SPECTRUM icon of a previously installed version.

¹Among its various tools SPECTRUM includes DemProj, FamPlan, AIM and Goals.

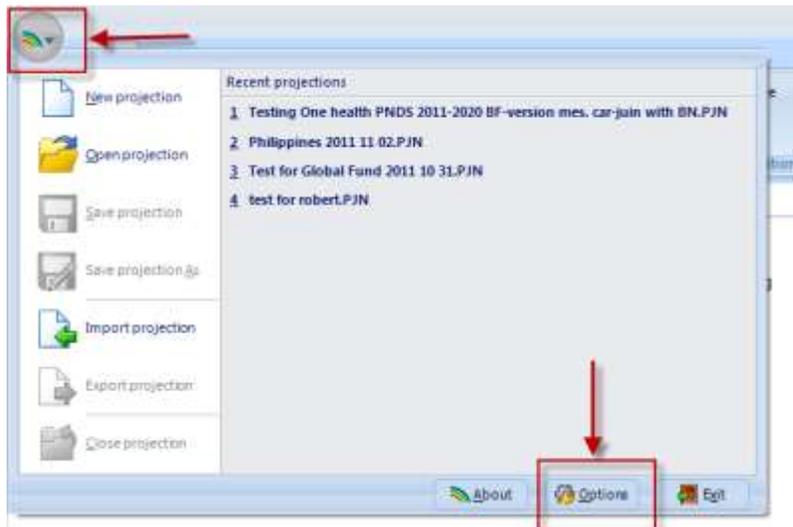
Step 4: Ensure that you are in OneHealth mode

1. If you are a first-time user of OneHealth (or SPECTRUM), you should see the following screen. Note that OneHealth is in the banner at the top. If you see “Spectrum” at the top, follow the directions immediately below.

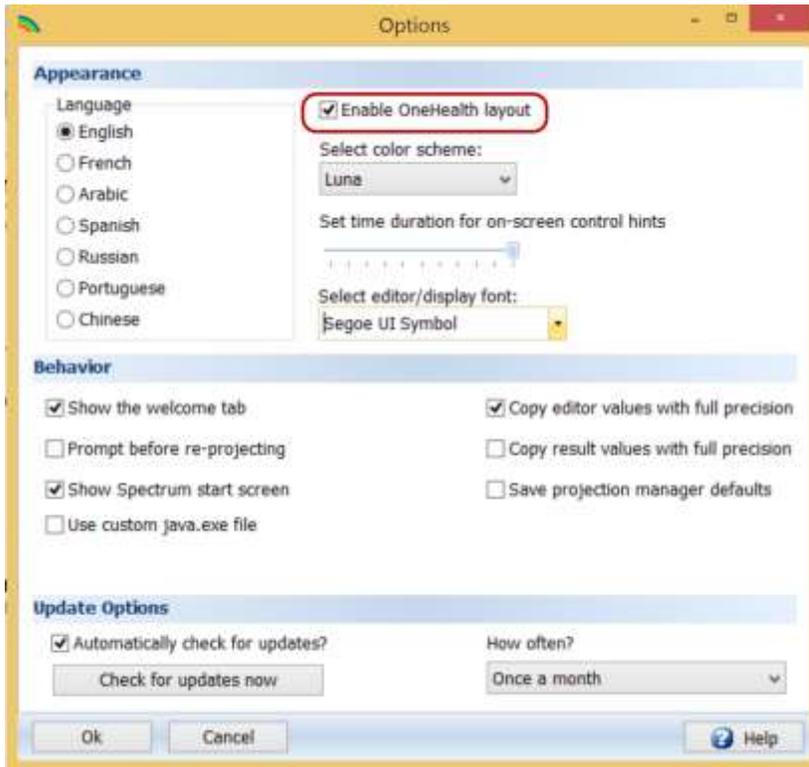


Special Instructions for when “Spectrum” appears in banner at top & for changing language options:

1. Click on the OHT icon in the upper left hand corner.
2. Click on Options in the lower right hand corner of the dialog box.



3. Assure that “Enable OneHealth Layout” is checked.

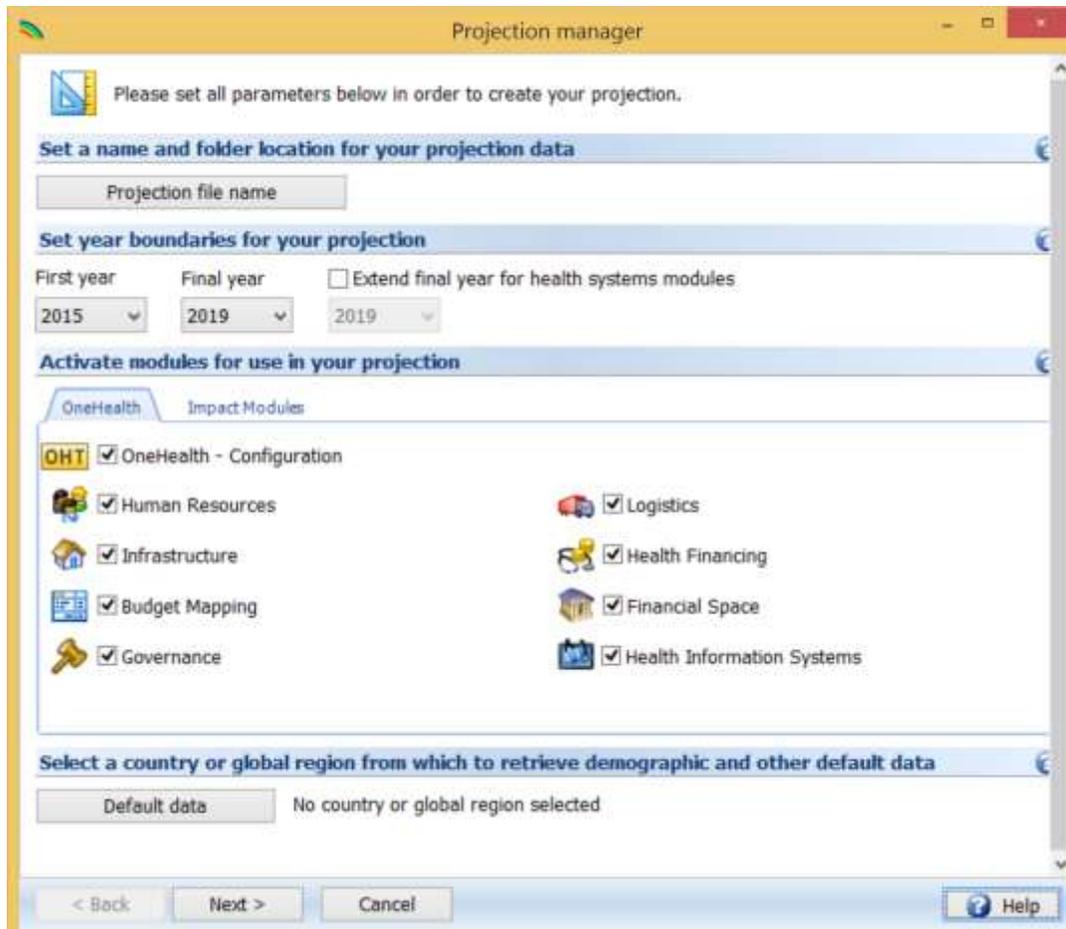


4. Note that you may also change language settings in this dialog box. As of January 15, 2015, partial translations of the tool have been made for French, Spanish, Russian, Portuguese, and Chinese. The other languages indicated may be clicked but translations will be visible only for other features of SPECTRUM.
5. Click OK to return to the Welcome screen. Note that at any time you may re-show the Welcome Screen by clicking on the OHT icon with the word “Welcome” next to it.



Step 5: Create a new projection.

1. Click on the item “New Projection” in the Welcome screen. You should see the following dialog screen.



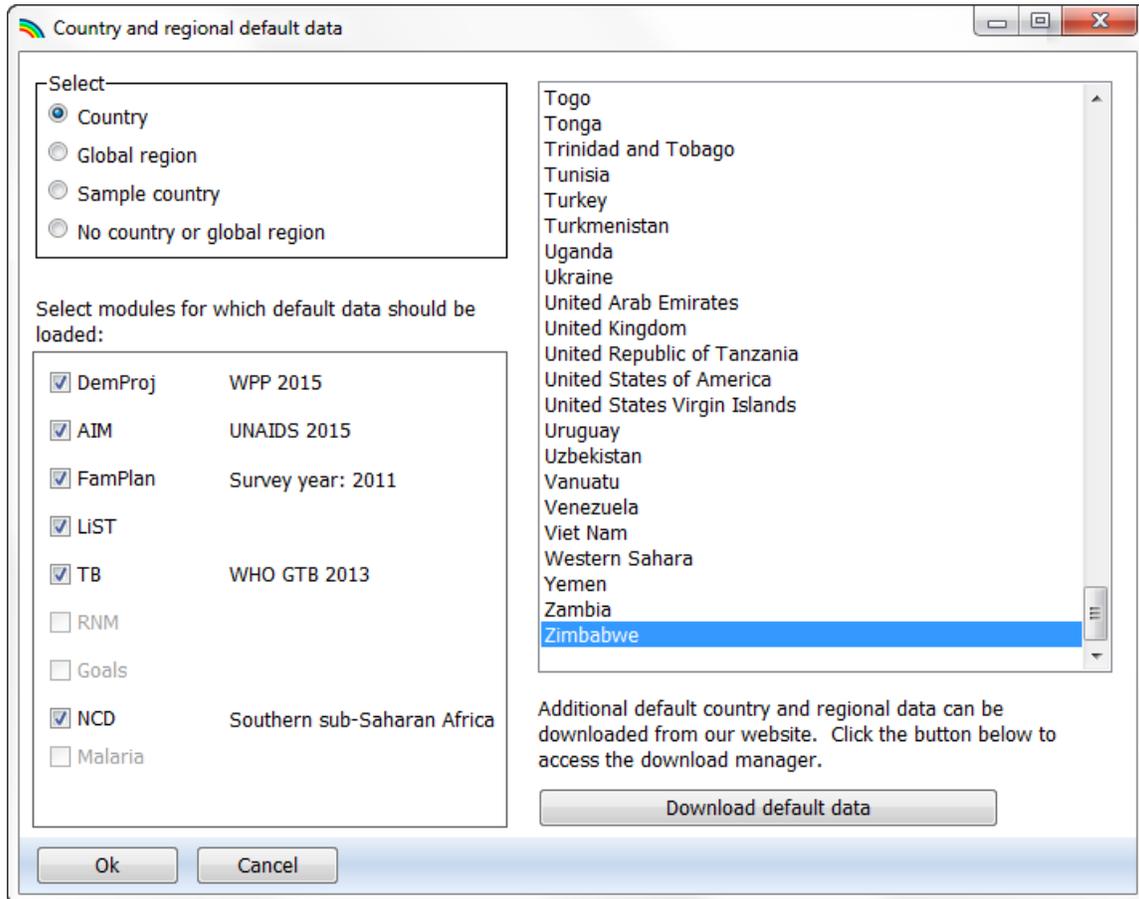
2. Click on “Projection file name” to create a name for your projection. Locate the projection in a folder where you can easily find it.

The basic unit of analysis for OneHealth is the projection. As many as ten projections may be open in a single session of OneHealth. Different projections can be built from a basic projection to analyze the cost and impact implications of different health scale up plans. As a general rule, we recommend that the user first create a “Base” scenario which includes all of the basic set up for the health system and programmes. We then recommend that the user replicate this Base scenario to build different visions of the future.

What is a scenario?

Within OneHealth scenarios are alternative visions of the future or apply alternative costing assumptions. For example, a user may wish to compare the costs associated with decreasing Under 5 mortality by half percent versus the costs of decreasing Under 5 mortality by one third. Alternatively, a user may want compare the costs of alternative strategies, e.g., community focused programme versus clinic focused programme for decreasing under 5 mortality by half. These comparisons are made possible by creating a specific scenario for each alternative.

3. Click on the “? [Help](#)” next to the years to inform your decision about the First Year, Final Year and Timeframe for health system analysis.
4. Leave all modules checked on as shown.
5. Click on [DefaultCountry](#) data. You should see the following dialog screen.



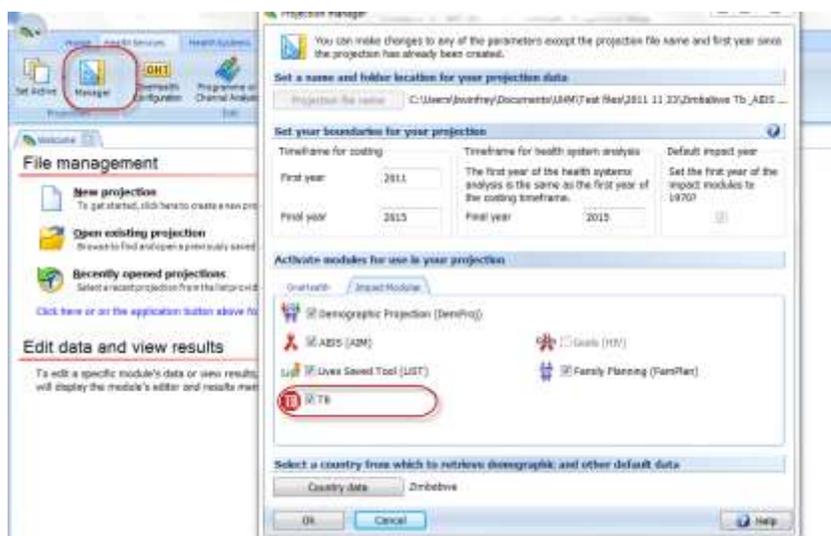
6. Select your country from list in the left hand panel. Leave the TFR and Life expectancy assumptions as the medium projections as shown in this dialog box unless you have consulted with a demographic expert. OneHealth will automatically load demographic modules and specific impact modules for HIV, Family Planning, Maternal and Child Health (Lives Saved Tool) and TB

epidemiological information for the country you have selected in most cases. See appendix for a list of countries with default data.

Note however that in some cases OneHealth will load regional values for child survival data and representative values for family planning if data are not currently available to the tool. The appendix “Countries with Default Data” lists the various countries that include default data. When regional or representative data have been loaded a notice will appear. It is recommended that you review and edit the family planning and mortality data in the FamPlan and LiST modules if you receive this notice.

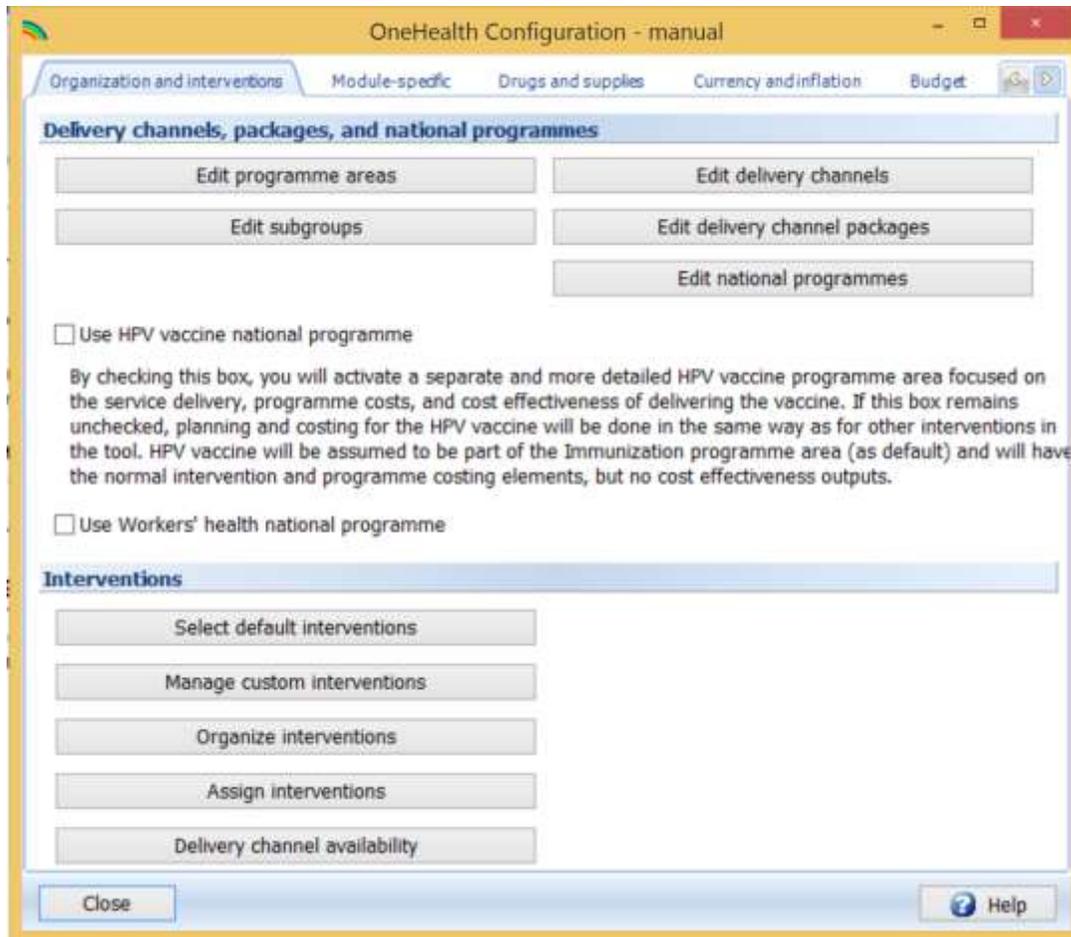
In addition, note that OneHealth includes a “sample” country as default, which includes default data for several modules including TB and NCDs, and can be used for training purposes and to further explore the capabilities of the tool.

For several countries default data do not exist for the TB module. In those cases you will be alerted to turn off the TB module.



For a couple of countries there is no default HIV data. For those countries you may enter data of your own into the AIM module of OneHealth or you may proceed with the assumption that HIV prevalence is zero if it is an accurate assumption.

7. Click OK.
8. At this point you will be asked to make selections about how you would like for your projection to be configured. You will be prompted to choose between programme mode or delivery mode; target setting mode or policy mode for human resources; and costing template mode or optimizer mode for logistics. In each case, accompanying text in the model will guide your decisions. The decision about programme mode or delivery channel mode is irreversible. The decisions about human resources and logistics can be reversed at any time.
9. You should now have arrived at the following dialog box. Your projection is successfully created.



We recommend that you first save your projection and then return to this editor to customize your projection to fit your country's health system.

10. Click on Close, then click on the OHT icon in the upper left corner, and click "Save". Until you click save, nothing is actually stored permanently. You may return to the OneHealth Configuration to customize your projection by clicking on the OneHealth Configuration icon.

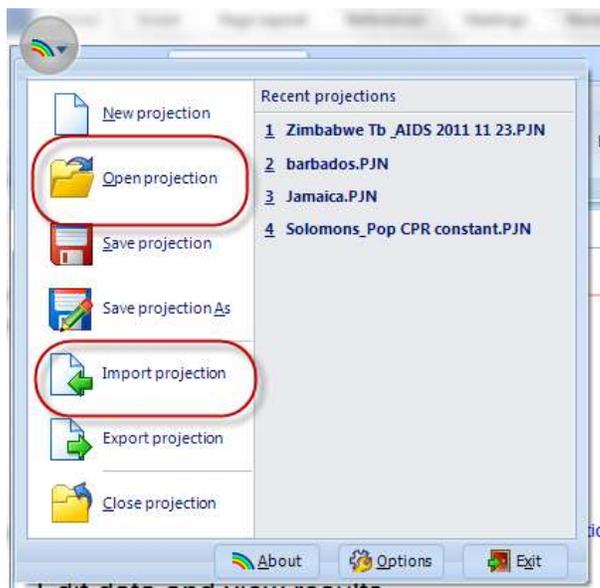


Step 6: Open an existing projection.

If you are returning to OneHealth after having closed the tool, you may open your projection by clicking on "Open existing projection" in the welcome screen or with the file management system accessible via the OHT icon.

If you have received a projection from a colleague follow the following sub-steps.

1. Save the file or files to an easy to find folder on your computer's hard drive. Please take note if you have received a collection of many files with extensions such as *.pjn, *.cs, *.aim, etc. or a single file with the extension *.pjnz.
2. Launch the OneHealth Tool.
3. Go to the OHT icon.
 - a. If you received many files from your colleague as described above, click on "Open projection" and use the file management dialog to find the projection on your hard drive.
 - b. If you received a single "Zip" file, click on "Import projection" and use the file management dialog to find the projection on your hard drive.
 - c. If you received a pjnz zipped file, click on "Open projection" and use the file management dialog to find the projection on your hard drive.
 - d.



OneHealth allows you to open multiple projections. After having opened one projection, you may open as many as ten projections simultaneously. To assure consistency, all projections must have the same basic set up. Most importantly they must have the same planning horizon and include the same modules. Certain other details must also be the same such as planning modality (i.e., programme mode vs. delivery mode). If you attempt to simultaneously open a projection that is not consistent with the currently loaded projection, OneHealth will generate an error message and refuse to open the additional projection.

At this point we leave you to explore the OneHealth Tool and fill it with the data applicable to your country and create scenarios to compare alternative visions for the future.

The remainder of this manual addresses the following issues:

1. Navigating OneHealth

2. Description of the OneHealth Modules
3. Special topics

We recommend that you look carefully at the chapter on Navigation as it contains many hints that can make use of OneHealth much simpler. We recommend that you skim the remainder of the manual to familiarize yourself with the content. You may want to later return to the manual when you need to use particular features.

NAVIGATING ONEHEALTH

This next section will help a new user to become familiar with all of the different functions within OneHealth. A simple screen snapshot will be shown to you with a set of numbers next to the icon, or tab of the model that is being explained. Below the screenshot the user will find the explanation of each number/icon/tab.

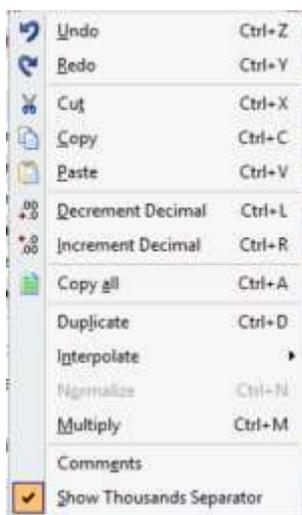
Icon Groups, Icons, Ribbons and Menus

In general, OneHealth has four levels of menus for editing data and using features. At the top are Icon groups including Home, Health Services, Health Systems and Impact Modules. Each of these Icon groups has a set of icons associated with it. These Icons may lead to OneHealth modules, configuration elements or tools. At a third level, each module Icon has a ribbon associated with it. In the example shown below, for the programme area Maternal/Newborn and Reproductive Health, situation analysis, intervention costing, bottleneck analysis, programme costing and results constitute the ribbon. Each element on the ribbon leads to a drop down menu that allow access to data editing screens, background information or results.



The chapter “Description of OneHealth Modules” will include a complete description of all Icons and their associated functions.

Right click functions



Right click functions within OneHealth include both familiar Windows functions and functions particular to OneHealth.

Undo, *Redo*, *Cut*, *Copy* and *Paste* function as they do with other Windows applications.

Decrement Decimal and *Increment Decimal* allow the user to increase or decrease the number of digits showing to the right of the decimal point for any given number in a table.

Copy all allows the user to copy an entire table including row and column headings to Excel. The user highlights a cell in the table, right clicks and then selects copy all. Then the user then goes to an Excel sheet where s/he pastes the contents as s/he would with any other Windows application

Duplicate allows a user to duplicate the contents of a cell either left to right or top to bottom. The user highlights a row or a column, rights clicks and then selects duplicate. If more than one row and more than one column is selected at the same time, cells in the column at the far left are duplicated to the highlighted columns at the right.

Interpolate functions the same as duplicate except that instead of duplicating cells, cells are between the beginning and the end of a highlighted area are interpolated. There are four different patterns of interpolation to choose among: linear, s-shaped, exponential and front loaded.

Normalize is a function that only operates in a few specialized edit tables where the items in a row or a column should sum to 100 percent. If the user selects this option, the items in the row or column will be recalculated to proportionally sum to 100. An example of where this function is live is the method mix table in the family planning module.

The *Comments* function allows the user to document his/her work. Each edit screen has a comments field associated with it. Via the Summary Outputs, there is an option where the user may view, copy or print the entire set of comments associated their OneHealth projection.



Copying from Windows applications into OneHealth

In addition to being able to copy from OneHealth into Windows applications, the reverse can be done as well. The user may copy a column, row or an entire table of numbers from Excel into a OneHealth edit table.

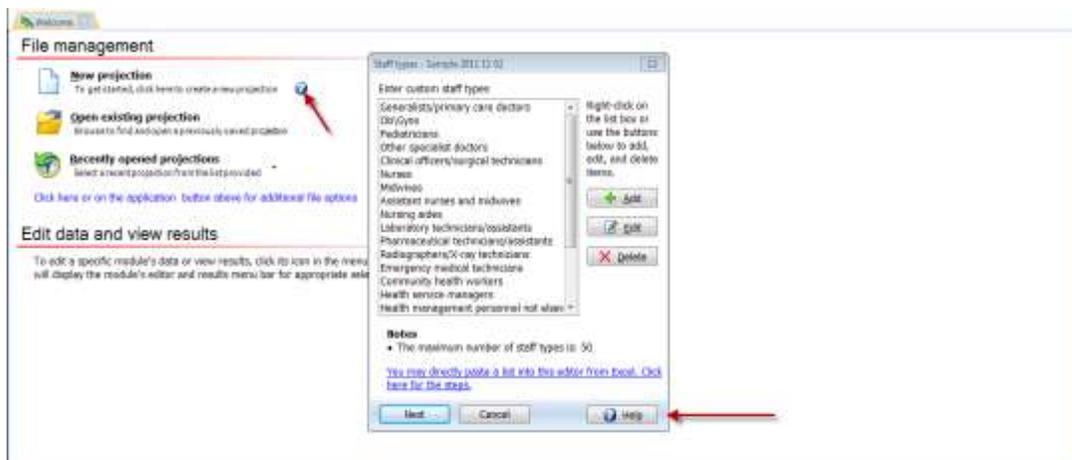
It is also possible to copy columns of labels from Excel into configuration elements of the following modules: Human resources, Infrastructure and Budgeting.

Finally in some modules it is possible to import appropriately configured Excel spreadsheets into OneHealth. Instructions guide within OneHealth guide the user where this is possible. Examples of where this function operates are: User supplied commodities in Logistics; and Equipment lists in the Infrastructure module.

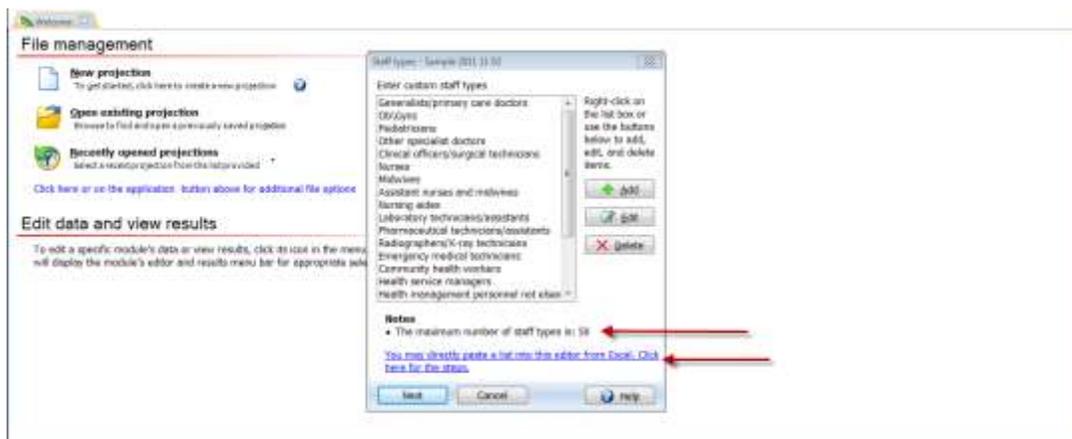
Technical assistance

Technical assistance for features and inputs to OneHealth are spread throughout the tool. These assists come in the following forms:

1. Help screens accessed via “? Help” or simply “?”



2. Highlighted Links to more information
3. Text directly included in the editor



4. Scroll overs with particular information are usually indicated by red triangles in a cell or label (see screen shot below). The user accesses this information by hovering his/her cursor over the cell containing the triangle

	2011	2012	2013	2014	2015
Maternal/newborn and reproductive health					
LAM	All women who want to use contraception - Method mix entered on Coverage sheet				
Vaginal barrier method	All women who want to use contraception - Method mix entered on Coverage sheet				
Vaginal tablets	All women who want to use contraception - Method mix entered on Coverage sheet				
Other contraceptives	All women who want to use contraception - Method mix entered on Coverage sheet				
Safe abortion					
Safe abortion	The number of abortions in the last year divided by the number of women aged 15 to 49 aged as a percent.				
Management of abortion complications					
Post-abortion case management	0.0	0.0	0.0	0.0	0.0
Management of ectopic pregnancy care					
Ectopic case management	0.0	0.0	0.0	0.0	0.0
Pregnancy care - ANC					
Tetanus toxoid (pregnant women)	100.0	100.0	100.0	100.0	100.0
Syphilis detection and treatment (pregnant women)	0.5	0.5	0.5	0.5	0.5
Basic ANC	0.0	0.0	0.0	0.0	0.0
Pregnancy care - Treatment of pregnancy complications					
Hypertensive disease case management	0.0	0.0	0.0	0.0	0.0

MODULES AND FEATURES OF ONEHEALTH

The following describes the various modules and features of OneHealth accessed via the various Icons. These descriptions are offered only for orientation, not as a guide to use. It is expected that the user will investigate these modules via the OneHealth Tool. When s/he has questions, s/he will access the associated help screens, hyper-links and scroll-overs.

Programme costing or delivery channel costing



The programme costing or delivery channel modules allow the user to plan for and cost intervention related costs including commodities and programme costs including training, supervision, communication, etc. These modules include areas where service delivery distribution, populations in need and intervention resource requirements (including labor, inpatient time and drugs/commodities) can be defined. Separately via a programme costing editor the programme related functions may be costed. The programme costing or delivery channel modules include a bottleneck analysis where the user can investigate alternative strategies for removing the impediments to health services scale up.

Intervention coverages



The intervention coverages editor is the hub for defining the magnitude of scale up for every intervention. The scale up patterns defined here are used both for calculating impact and for estimating the resource requirements for costing.

Bottleneck review



The bottleneck analysis mentioned above is one aspect of the tool that allows the user to bring together disparate sets of information and experience to help define a coherent plan. The bottleneck review icon allows the user to graphically contrast and compare the bottleneck analyses made across programme areas or delivery channels. The Bottleneck review icon also allows the user to access a listing of all of the strategies defined within the various programme or delivery channel bottleneck analyses.

Human resources



Except for human resources associated with the management of programme areas or delivery channels, all human resources are planned for and costed within the human resources module. The Human resources modules allows the costing of salaries, benefits and incentives as well as costs associated with pre-service training and non-specific in-service training. The human resources is set up as a two or three step process. First, baseline data are entered in the tool. The user can customize the staff types to match country needs. Then targets are set for staffing based on existing plans, population norms or facility standards. An optional feature allows the user to examine the impact of various human resources policies for achieving the targets set in the second step. As with all the systems modules there is also a section for assessing the associated administrative costs.

Infrastructure



All facilities providing medical interventions as well as most facilities offering support functions are planned for and costing within the infrastructure module. Similar to the human resources module, the user first inputs baseline information including customized facility types as appropriate. Targets are then set for construction or rehabilitation of facilities. The infrastructure module also includes the planning functions for equipment, furniture, vehicles and communication. These elements of infrastructure are fully customizable to match the standards of a particular country. As with all the systems modules there is also a section for assessing the associated administrative costs.

Logistics



The logistics module allows for the planning of warehouses and vehicles needed to move commodities/drugs from central warehouses to the endpoints of a logistics system. The user has two options for planning logistics: planning via costing templates or via an optimizer. The optimizer will create a lowest cost system for moving a defined set of drug/commodities to endpoints. The optimizer requires much default data. Please see the appendix for a list of countries where some default data are available within the OneHealth tool. The costing templates allow the user to cost a scaled-up logistics system building upon the existing system. Both options cost warehouses, vehicles and workers.

The logistics module is also where planning for drugs/commodities that are not included in the intervention costing module is included. As with all the systems modules there is also a section for assessing the associated administrative costs.

Health financing



As of November 2nd 2011, the Health Financing module includes costing templates for assessing the costs of implementing various health financing schemes. These templates are sufficient for costing, but they provide little guidance on what is needed for an effective health financing scheme. As with all the systems modules there is also a section for assessing the associated administrative costs.

Fiscal Space



The Fiscal Space module allows the comparison of three separate scenarios for financial resource availability. For many countries pre-loaded data simplify the calculations.

Health information systems



The health information systems (HIS) module includes costing templates for assessing the costs of implementing a health information system. The templates provide guidance for planning what is needed to cost and implement and effective. As with all the systems modules there is also a section for assessing the associated administrative costs.

Governance



The governance module includes costing templates for assessing the costs of implementing a health information system. These templates are sufficient for costing, but they provide little guidance on what is needed for effective governance. This relies on country input. As with all the systems modules there is also a section for assessing the associated administrative costs.

SPECIAL TOPICS

Creating comparison scenarios

Many users would like to compare alternative plans. The process for creating scenarios is simple. However, a user should apply the process strategically depending on what s/he would like to replicate across scenarios. First we will describe how to create a replicate scenario.

1. Save your current scenario.
2. Click on the OHT icon in the upper left hand corner. Click on “Save Projection As”, supply a new name and click save.
3. If you would like to have both scenarios open concurrently, click on “Open projection” icon and find the original file among the file management menu.
4. If you have two files open now, you must assure that you are editing the scenario you intend. In the screen shot below, there are two circled items. In the lower right hand corner, the circled item is bolded and asterisked (*) indicating that it the scenario available for editing. The second circled item (Set Active) in the upper left corner allows the user to change the scenario that is being edited. If the user clicks on the circled icon, a dialog screen guides the user to select the open scenario s/he would like to edit.



Opening multiple scenarios

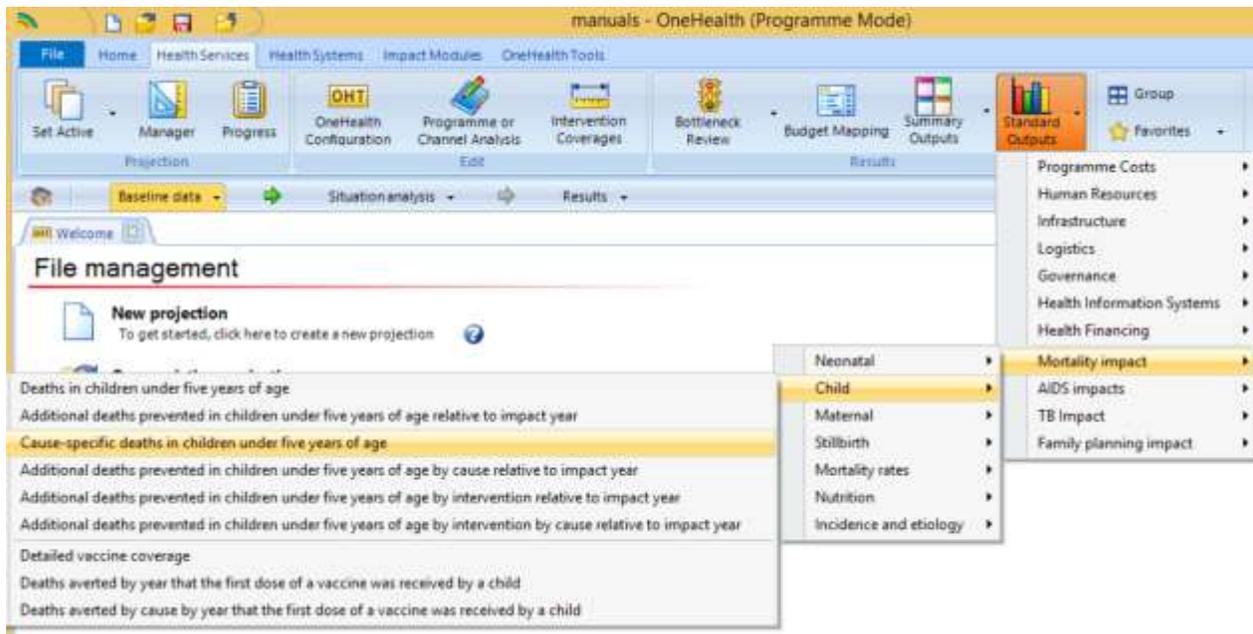
OneHealth allows you to open multiple projections. After having opened one projection, you may open as many as ten projections simultaneously. To assure consistency, all projections must have the same basic set up. Most importantly they must have the same planning horizon and include the same modules. Certain other details must also be the same such as planning modality (i.e., programme mode vs. delivery mode). If you attempt to simultaneously open a projection that is not consistent with the currently loaded projection, OneHealth will generate an error message and refuse to open the additional projection. If you have created comparison scenarios as described above you should not have the problem described immediately above.

Viewing results side by side (Using the “Group” function)

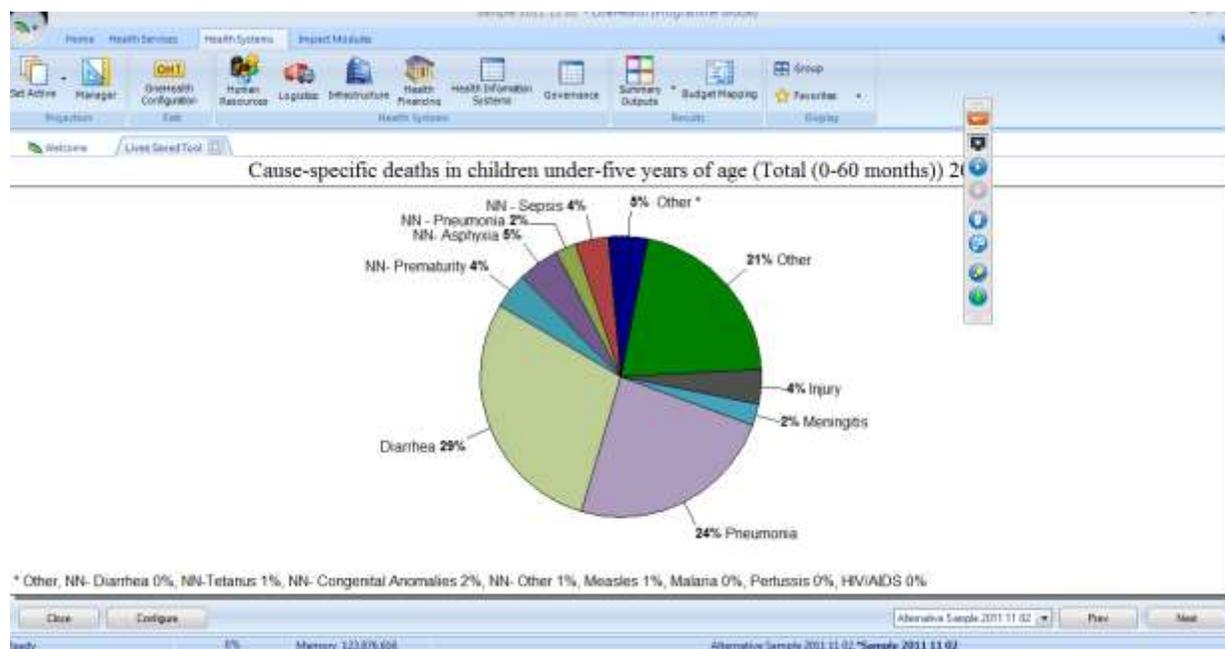
Using the “Group” tool, OneHealth allows you to view results from two or more different projections side by side; or alternatively to view two different kinds of results from the same projection side by side. The

following describes the process for viewing the under five mortality distribution side by side with the maternal mortality distribution.

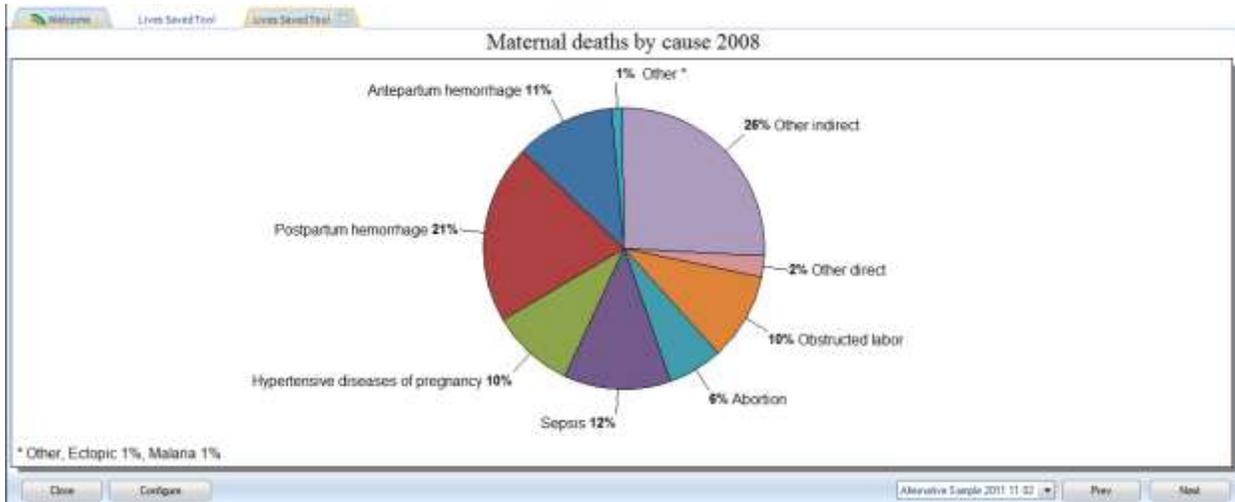
1. Open the “Deaths by Cause” for children from the mortality output (select pie chart from configuration).



You should see the following or something similar.



2. Open a second window with the distribution for maternal deaths by cause, again choose the pie chart configuration. You should now see something like the following.

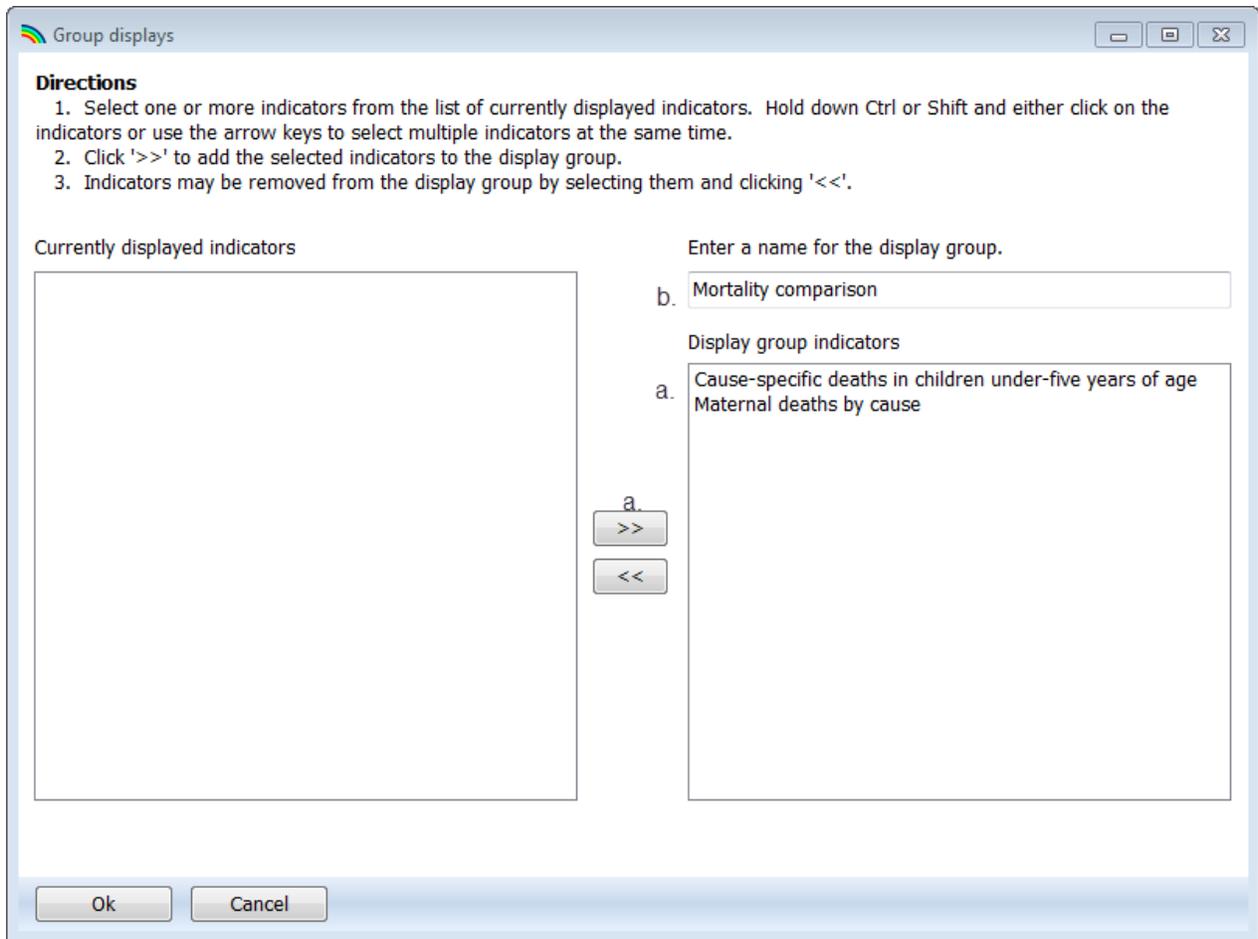


3. Click on the Group icon.

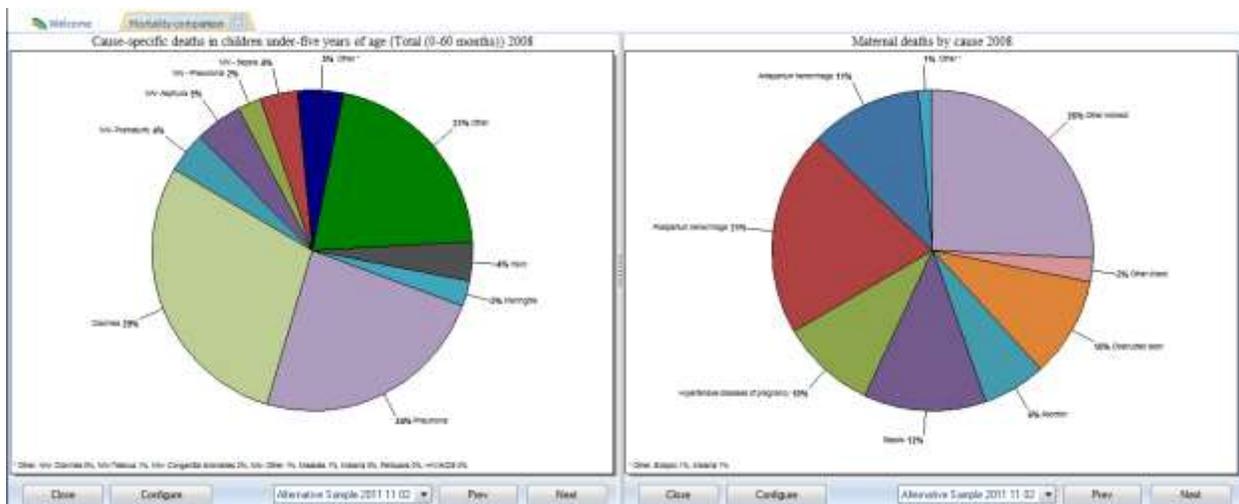


4. Configure the “Group”

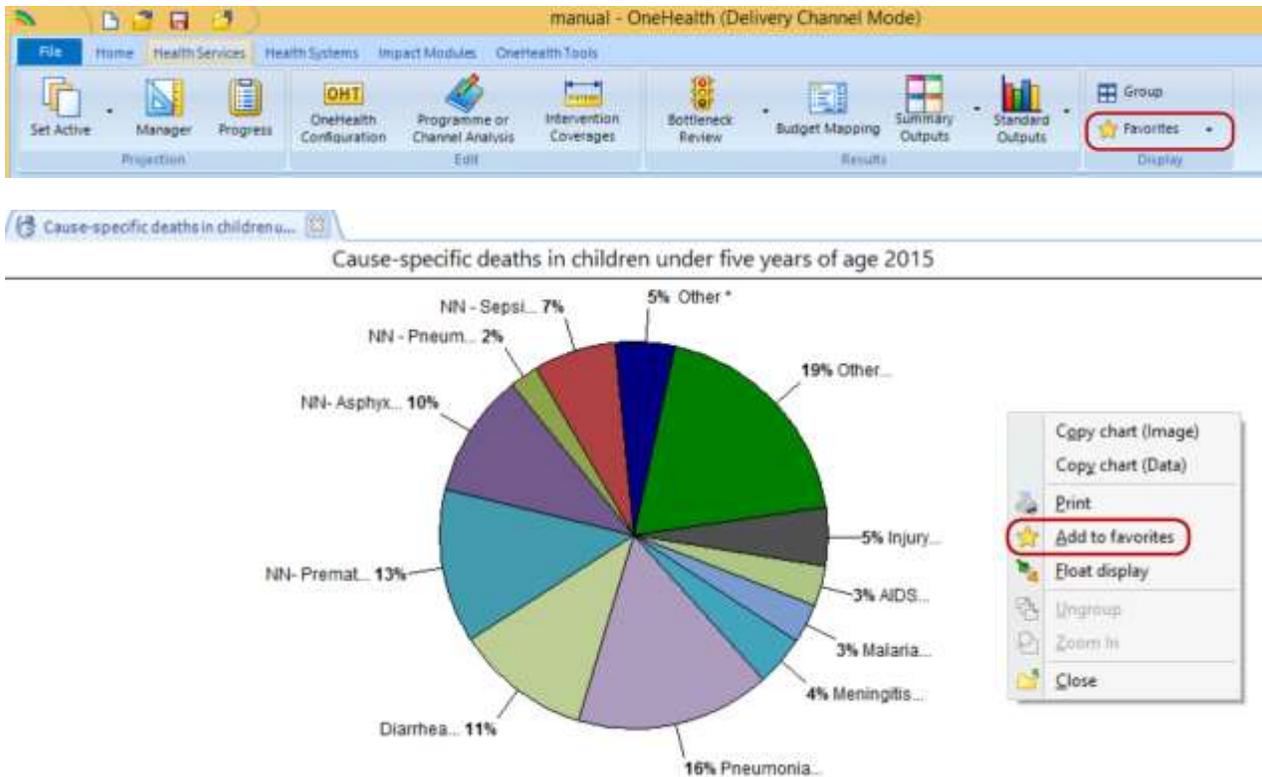
- a. Using the arrows move both outputs from the left window to the right window.
- b. Type a name for the grouped results.
- c. Click OK.



5. You should see something similar to the following.



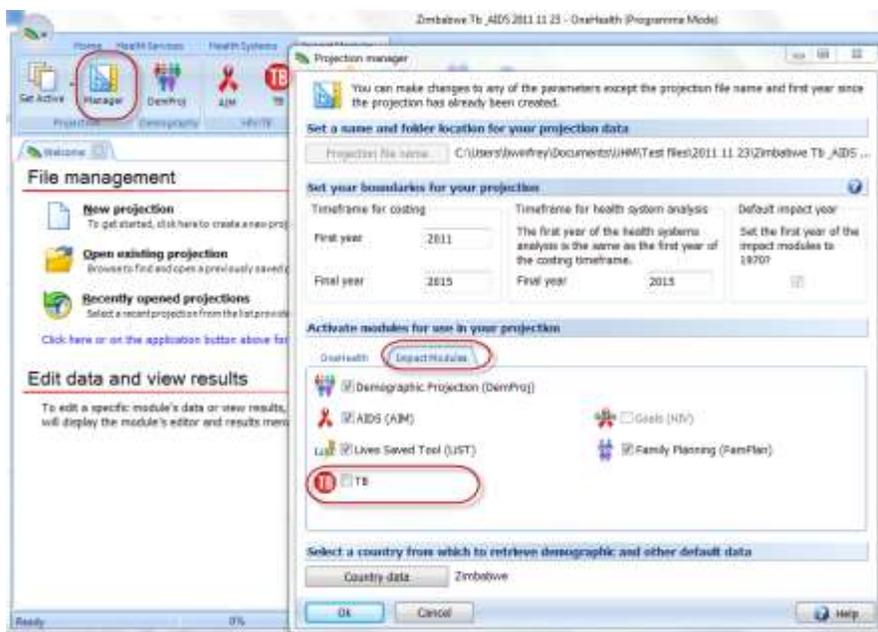
OneHealth has a feature for creating “Favorite” comparisons. If you right click on either of the comparison graphs, one of your possible actions is to add the comparison to your favorites. You may access your favorite comparisons by clicking on the icon item directly below the “Group” Icon.



Creating a sub-national projection

By default, OneHealth is designed to make national level projections. However, subnational projections are possible by using the following steps. Please note that you may need to consult demographic or epidemiological experts for some of the decisions you will need to make in the set up.

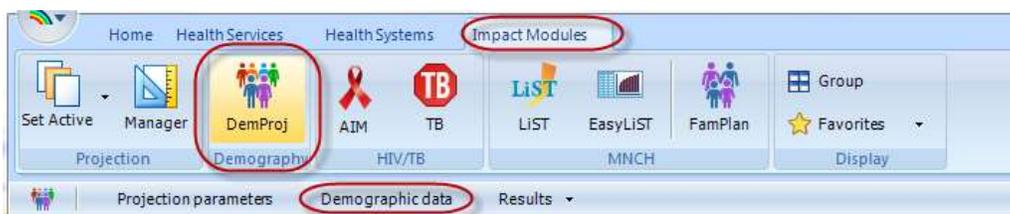
Step 1. **Obligatory.** Create a national projection for the country from which the subnational area or population is drawn. Turn off the TB Module (creation of subnational TB incidence and mortality projections is currently impossible).



Step 2. **Optional.** Save a copy of this national projection if you are going to make several subnational projections. This projection will serve as the base for all projections.

Step 3. **Obligatory.** Adjust the population to match the population of the subnational group in which you are interested.

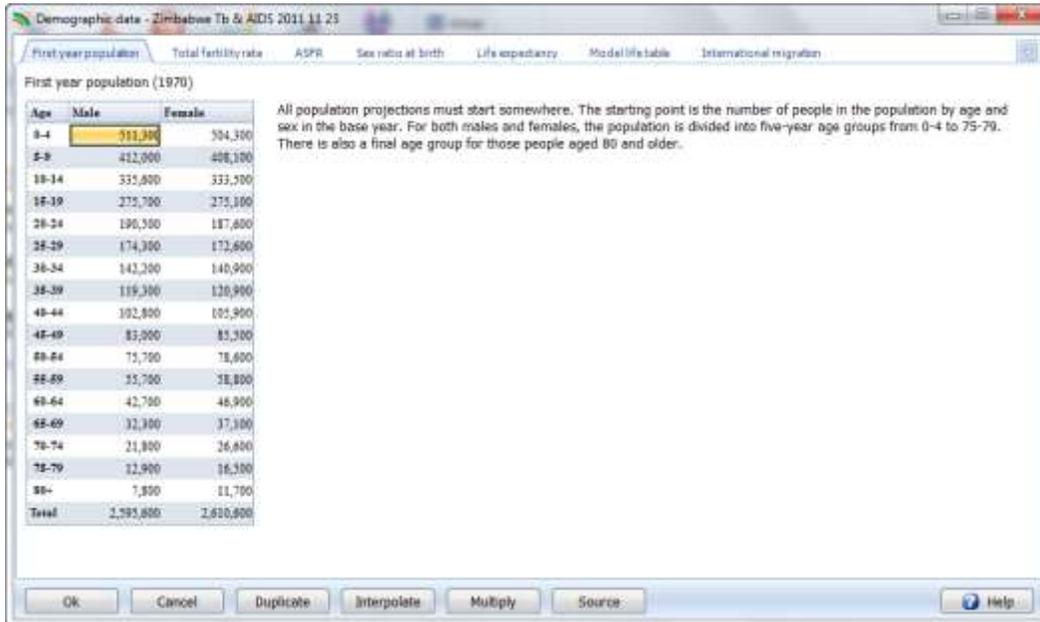
- a. Click on Demproj with the Impact Modules and enter the edit screens for Demographic Data.



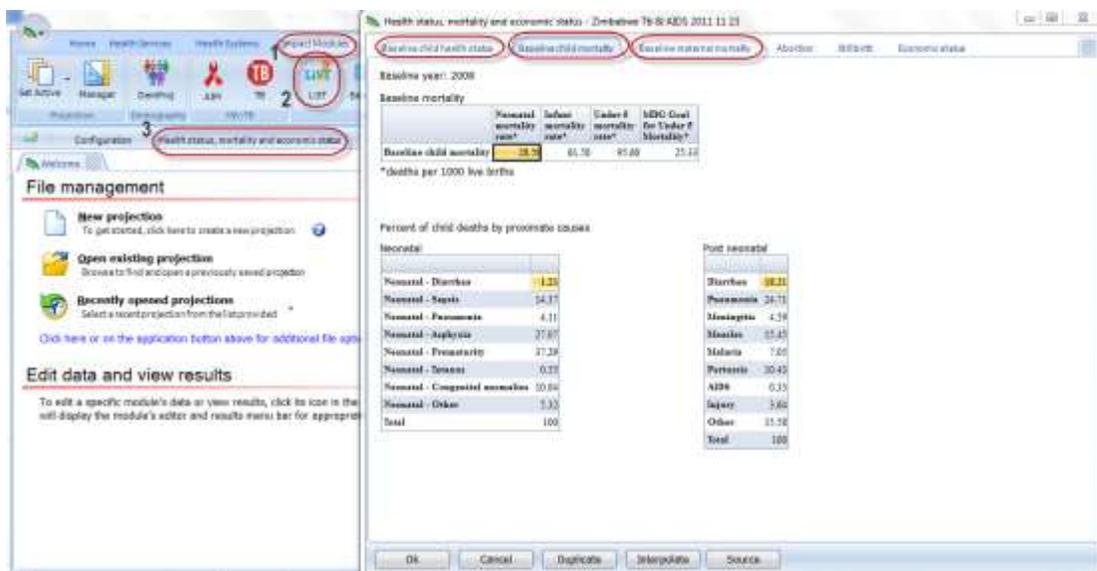
- b. Edit the first year population data to match the population of the subnational group. By adjusting the population you will assure that all population based calculations in OneHealth will be scaled *approximately* correctly. In many cases you will not know the exact population structure of your subnational group. If you know that the subnational group is approximately XX% of the total, you could scale all of the age/sex groups to this proportion². Note that the copy and paste features discussed above are very helpful for this kind of procedure.

² This kind of approximation should not be done if you have better information available. Frequently there are significant differences in the age structure of different areas of countries. For example, poor segments or poor regions will have a significantly younger population structure.

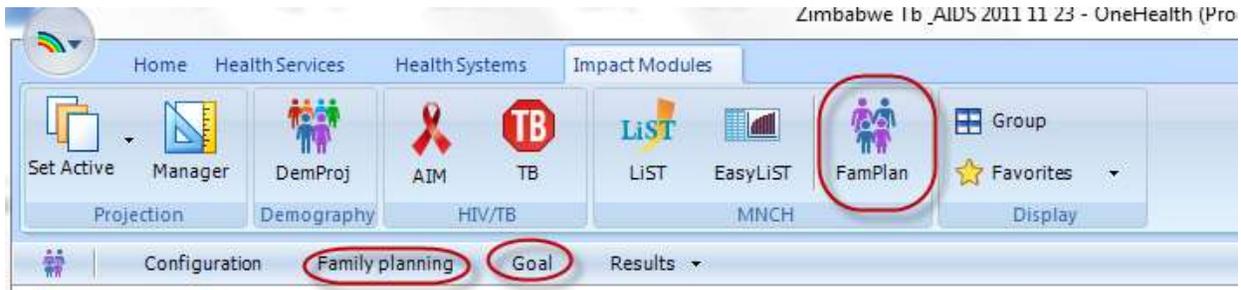
Step 4. **Optional but strongly recommended.** Adjust other demographic parameters to reflect the characteristics of your subnational population. Total Fertility Rate and Life Expectancy are frequently different across different subnational groups – especially where differences in socio-economic development exist. Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) are often excellent sources of information for subnational groups. It is not recommended that you change the model life table unless you have consulted with an expert demographer.



Step 5. **Optional but strongly recommended.** Adjust the baseline “Health status, mortality and economic status” within “LiST”. Child health status, child mortality and maternal mortality can vary significantly across different subpopulations in a country. If these initial values are not set correctly, your estimates of mortality reduction and endline mortality rates will be incorrect. We recommend that you carefully review and change as necessary the baseline information. The Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) are again good resources for the data you would need.



Step 6. **Optional but strongly recommended.** Adjust the Goal and the Family planning parameters within FamPlan.

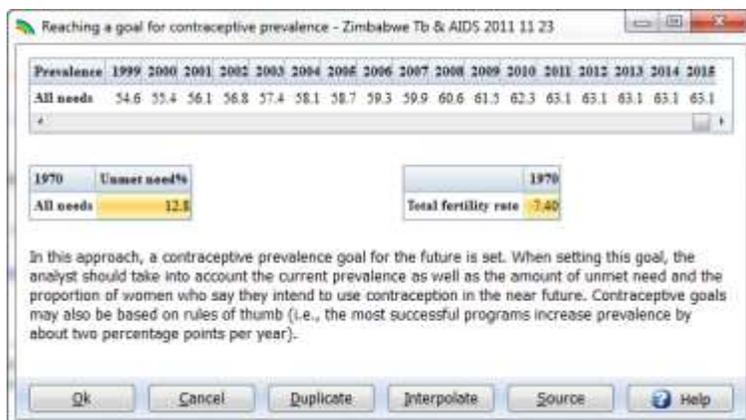


- a. Family planning. Adjust the method mix and the Proximate determinants to best reflect the actual situation for the subnational population. The values of these parameters may play an important role in the calculation of the fertility and future population growth. The DHS and MICS may be a good resource for these inputs.

It is recommended that you ignore the other tabs in this set of editors. Source mix, Costs of services and Fees do not impact OneHealth results. Method attributes and Effectiveness defaults are global defaults and should not be changed unless recommended by a demographer or family planning expert.

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Condom	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Female sterilization	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Injectable	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
IUD	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Male sterilization	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Implant	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Pill	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5
Traditional	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

- b. Goal. Adjust the total fertility rate, contraceptive prevalence and unmet need to match the current and historical levels for the subnational group.



Step 7. **Optional but strongly recommended.** Adjust the program statistics with the AIM module. The AIM module is automatically loaded with historical information about the numbers of adults and children receiving treatment for HIV. These numbers will be for the entire country. You should adjust these numbers down to reflect the reality of the subnational group. Official HIV/AIDS services statistics may be helpful.



If you have access to an HIV specialist it is also recommended that you adjust the incidence. If you do not adjust the incidence, the AIDS deaths averted will not be correctly calculated and there may be a poor estimate of the drugs needed for HIV treatment.

Step 8. **Adjust all of the baseline coverages within the intervention coverages editor.** The defaults are all gauged to the national level. Subnational coverages will vary significantly. The DHS and MICS are useful sources for some of this information.



Lock/Unlock Capability in OneHealth

The OneHealth Tool includes a feature that allows users to save a version of their projection as “locked” projection, which only allows users to edit certain areas of the OneHealth Tool that have not been locked. This feature is especially important for:

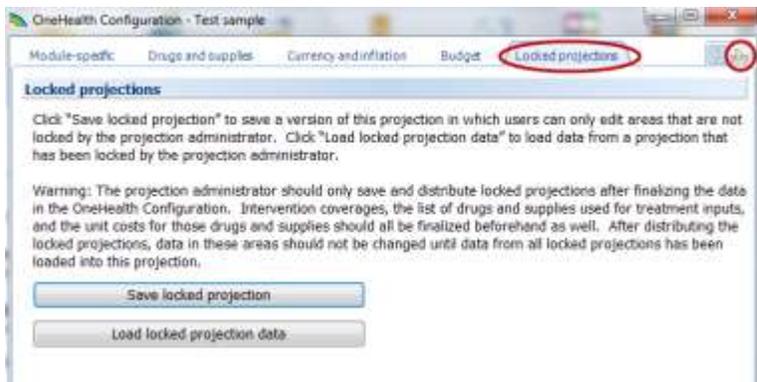
- Cases where OneHealth users might be working on the same projection
- Situations where an existing projection is shared with others to fill in data for a particular program area or health system, without any other data within the Tool inadvertently getting changed.

To lock a projection:

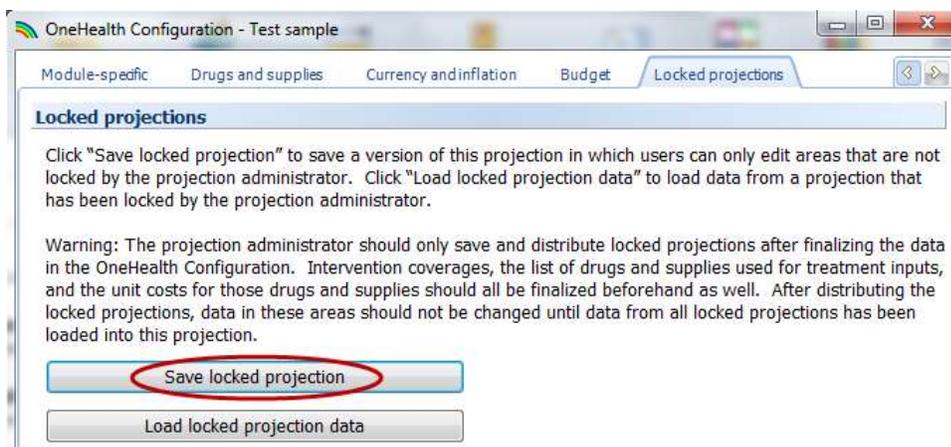
Before creating a locked projection, the data in OneHealth Configuration, as well as data in the following menus should be finalized, as these are items that will be shared across locked projections and cannot be changed in individual locked files.

- Intervention list
- Infrastructure types
- HR types
- Drug and supply list
- Impact models

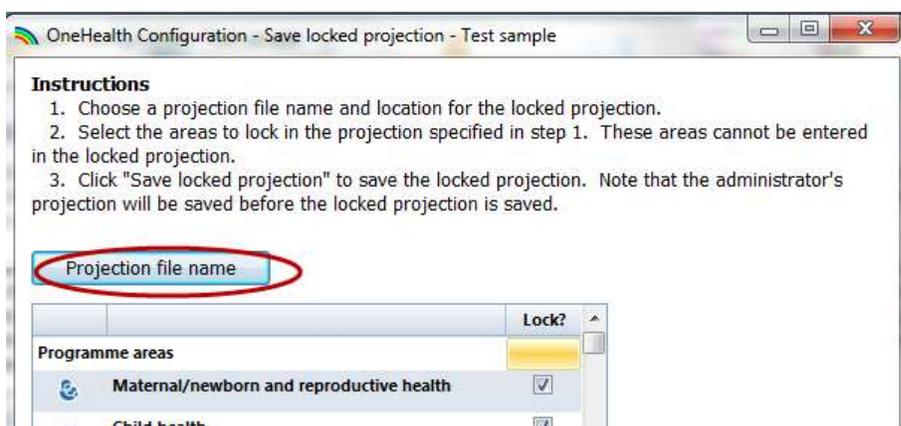
In the OneHealth Configuration menu, click on the arrow in the top right to scroll to the last tab in the dialogue box: Locked projections



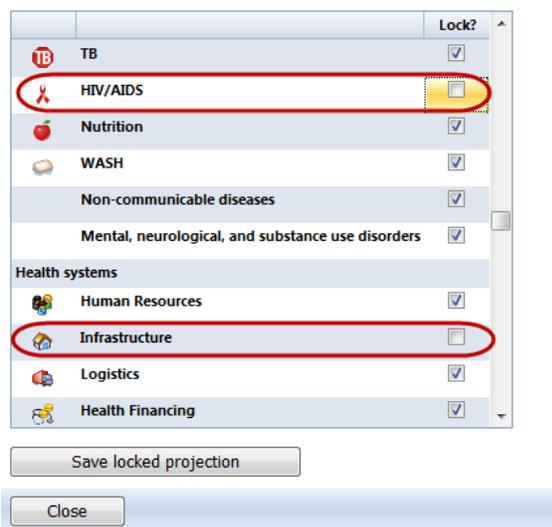
To save a projection as a “Locked projection”, click on the “Save locked projection” box. This will open a dialogue box to help you name your projection and determine which areas and modules in the OneHealth Tool you want to lock:



Click on "Projection file name" to choose a file name and location for your locked projection, then click "Save":

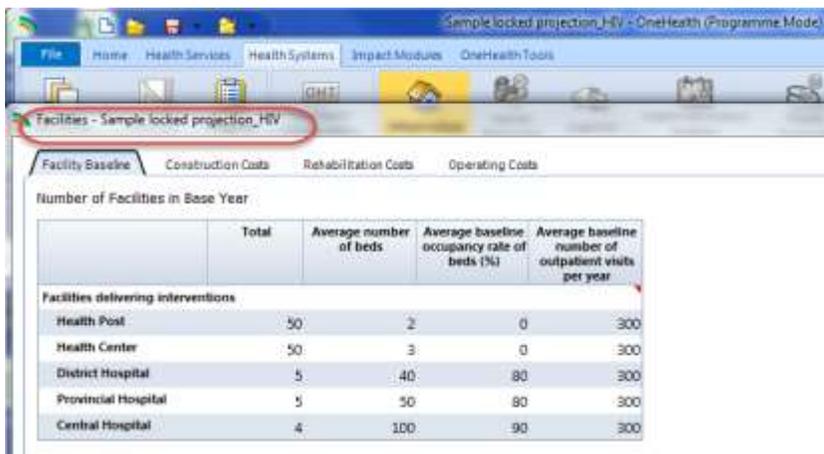


Next you will need to leave checked the programme areas, health systems and tools that you want to lock, and uncheck those areas, systems and tools that you want users to be able to edit. The example below illustrates locking all areas except HIV/AIDS, and all systems except Infrastructure:

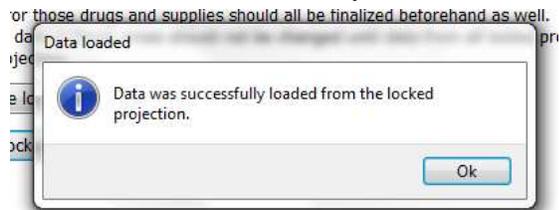


Click “Save locked projection” and then “Close”.

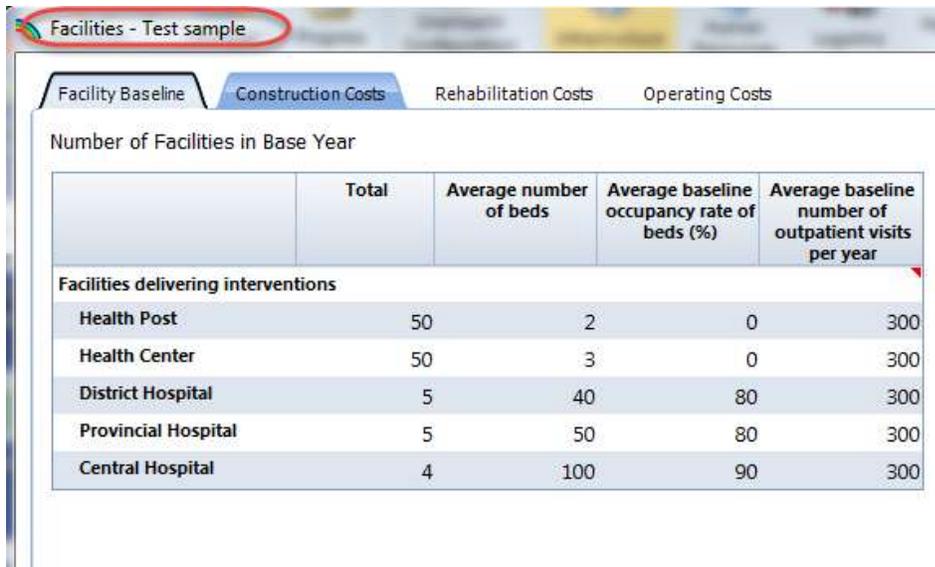
At this point, you can send the locked projection to another OneHealth user to edit. When the user opens the locked projection in OneHealth, they will only be able to edit those areas of the OneHealth Tool that have not been locked (you’ll notice that other areas of the OneHealth Tool are greyed out and uneditable):



To load data that have been added to a locked projection into the master projection, you must be in your master projection. You will be prompted to save your existing projection, and can click “Ok”. Then you will need to open the locked projection. After clicking on the locked projection, you will get a message saying that the data were successfully loaded:



You’ll notice that the master projection now has the data that was recently added into the locked projection:



The screenshot shows the 'Facilities - Test sample' window in the OneHealth Tool. It has four tabs: 'Facility Baseline', 'Construction Costs', 'Rehabilitation Costs', and 'Operating Costs'. The 'Facility Baseline' tab is active, displaying a table titled 'Number of Facilities in Base Year'. The table has five columns: 'Total', 'Average number of beds', 'Average baseline occupancy rate of beds (%)', and 'Average baseline number of outpatient visits per year'. The data is categorized under 'Facilities delivering interventions'.

	Total	Average number of beds	Average baseline occupancy rate of beds (%)	Average baseline number of outpatient visits per year
Facilities delivering interventions				
Health Post	50	2	0	300
Health Center	50	3	0	300
District Hospital	5	40	80	300
Provincial Hospital	5	50	80	300
Central Hospital	4	100	90	300

OneHealth Aggregate Function

The aggregate function in the OneHealth Tool allows users to extract and combine (i.e., sum up) cost data from more than one projection. This function is particularly useful for OneHealth Tool users who might be working with numerous projections in a given country, and who want to add up all of the costs without having to do this manually in Excel.

To use the Aggregate feature, open the OneHealth Tool without any projections currently open.

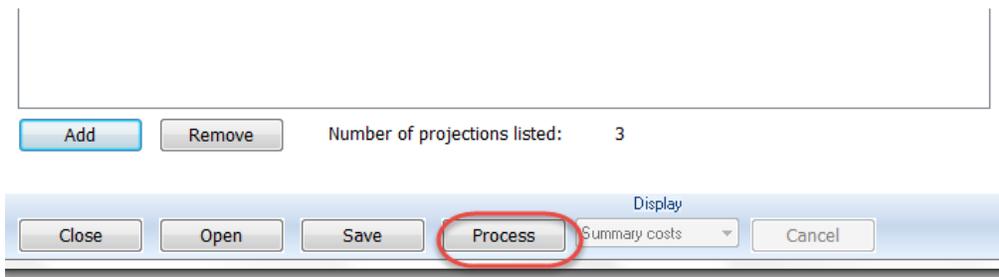
Click on the “Aggregate” icon in the OneHealth Tools menu:



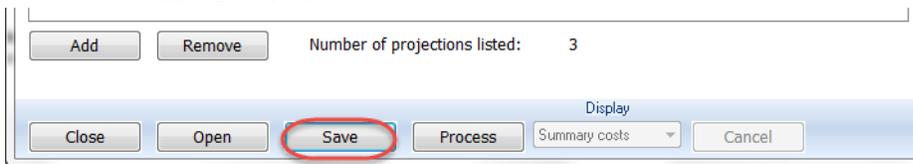
Click on the “Add” button to a projections from which you want to aggregate data:



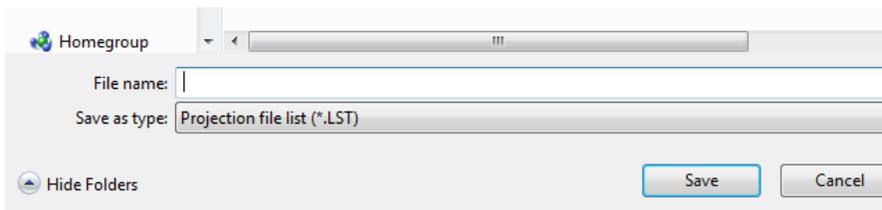
Select all of the projections that you want to aggregate. Then click “Process”. This will take a few minutes, as the tool is extracting all values from each projection into one file.



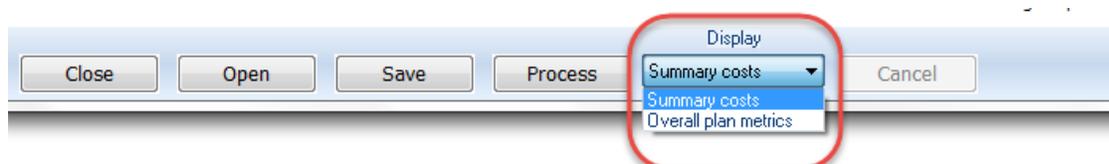
To save this aggregate projection, click on the “Save” button



Choose the location and name of your file; notice that it is .LST file



Click on the “Process” button to aggregate the findings from all of the projections. In the Display area, you can select how you want the results to be displayed



The costs that are displayed are the aggregate or summed up costs from the projections used.

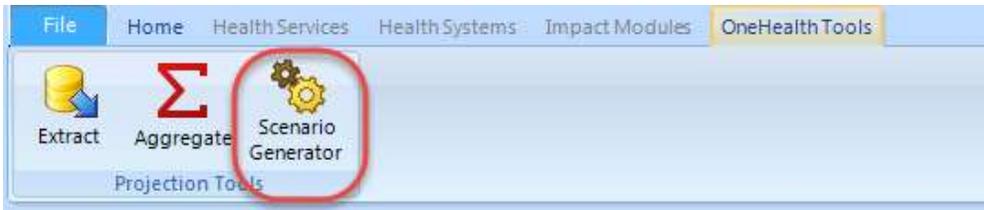
At this time, the aggregate function in OneHealth only allows for ‘Summary costs’ and ‘Overall plan metrics’ to be displayed.

OneHealth Scenarios

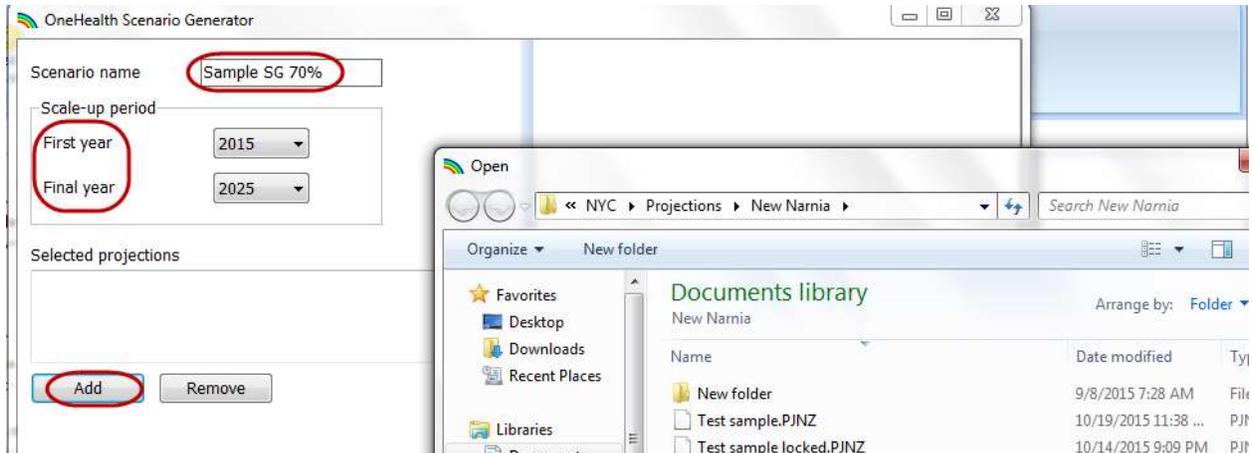
The Scenario Generator function in the OneHealth Tool allows users to vary targeted inputs across several projections, to produce a new set of projection files that can be used for further analysis. The following illustrates how the Scenario Generator can be used by a OneHealth user who wants to compare the impact of varying coverage for VCT, PMTCT and ART (men and women) on HIV morbidity and mortality. The user would first set up their baseline projection (including specifying drugs/supplies, target population and population in need, etc.). Notice the baseline coverage of the following interventions:

	Baseline coverage from impact module (2015)	Target coverage used to assess impact and intervention costs (2025)	Frontier c from Bot Analysis
Youth focused interventions - Out-of-school	0.0	0.0	
Voluntary counseling and testing	15.0	20.0	
Condoms	0.0	0.0	
Male circumcision	0.0	0.0	
PMTCT	42	54.5	
Post-exposure prophylaxis	0.0	0.0	
Care and treatment			
Proportion of adults on ART using Second-Line ART	5.0	5.0	
ART for men	74	71.6	
ART for women	70	65.9	
Cotrimoxazole for children	0	0.1	
Pediatric ART	45	52.2	

To create a new scenario that increase coverage of VCT and PMTCT to 79% by 2025, and ART to 80% by 2025, the user would save and close their projection. Then click on the “Scenario Generator” icon in the “OneHealth Tools” menu:



Name the scenario, ensure that the start and end years match with the timeframe in the original projection, then open the projection that you want to use:

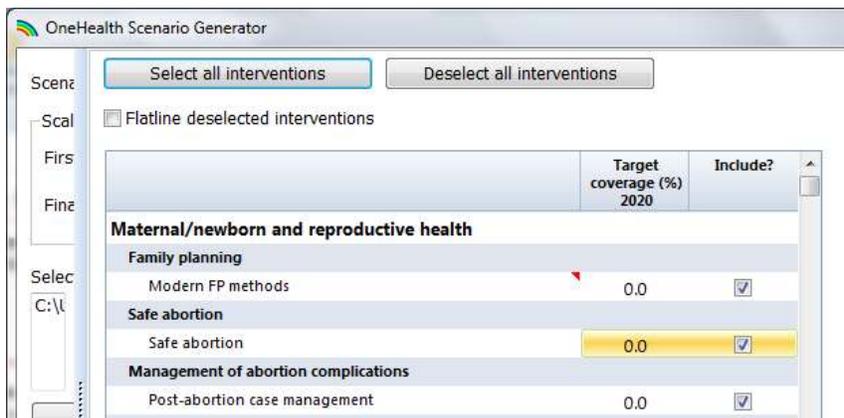


Once the projection loads, the dialogue box will expand to include the interventions in each programme area:



You can adjust this screen by moving the divider highlighted above to the left or right.

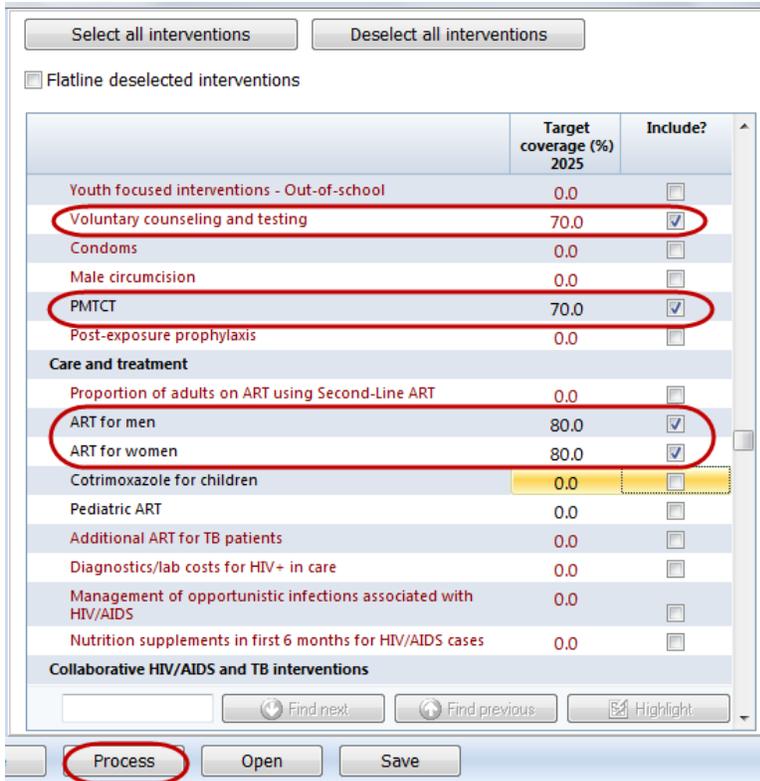
By default all interventions are selected:



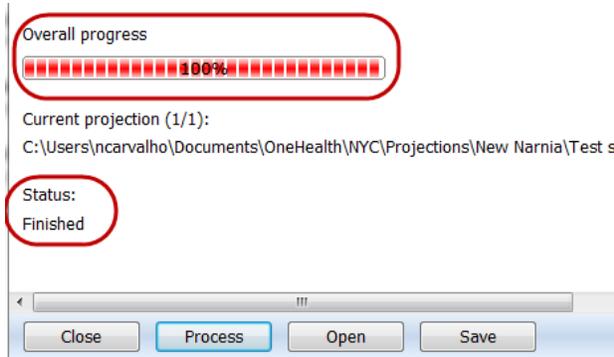
However, if you only want to focus on a few interventions, you can “Deselect all interventions” and then manually scroll through the programme areas to select which interventions to include in the scenario generator. By clicking the box “Flatline deselected interventions”, the coverage of all interventions that are not selected will not change (i.e., will be flatlined) during the time period.



In this example, the target 2025 coverage has been changed to 70% for VCT and PMTCT, while the target coverage for ART (men and women) has been changed to 80%. By clicking on “Process”, a new projection with these new coverages will be created:

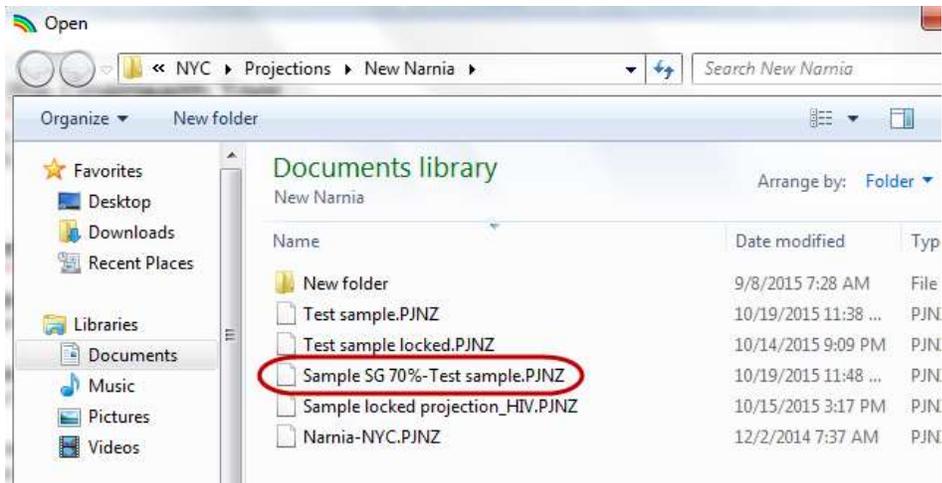


When the projection is ready, you'll notice that in the left of the dialogue box it states that progress is at 100% and status will be marked as complete.



Click "Close"

This new projection that has been created can be found in the same location as the original projection. To open it in the OneHealth Tool, click "Open" and find the new projection to open:



You'll notice in this projection that VCT and PMTCT has been scaled up to 70% in 2025, while ART for men and women has been scaled up to 80% in 2025.

The screenshot shows a table titled 'Intervention Costing - Intervention coverages - Sample SG 70%-Test sample'. The table has columns for 2023, 2024, and 2025, and a 'Fr' column. The data is as follows:

	2023	2024	2025	Fr
IDU: needle exchange	0.0	0.0	0.0	
IDU: drug substitution	0.0	0.0	0.0	
Interventions focused on female sex workers	0.0	0.0	0.0	
Interventions focused on male sex workers	0.0	0.0	0.0	
Interventions focused on men who have sex with men	0.0	0.0	0.0	
Youth focused interventions - Out-of-school	0.0	0.0	0.0	
Voluntary counseling and testing	59.0	64.5	70.0	
Condoms	0.0	0.0	0.0	
Male circumcision	0.0	0.0	0.0	
PMTCT	64.5	67.2	70.0	
Post-exposure prophylaxis	0.0	0.0	0.0	
Care and treatment				
Proportion of adults on ART using Second-Line ART	5.0	5.0	5.0	
ART for men	78.8	79.4	80.0	
ART for women	77.9	79.0	80.0	

Scenario Generator allows users to create as many new projections or scenarios as they want.

Installing and running OneHealth on a Mac/Apple computer

Follow the instructions below to run OneHealth on a Mac operating system.

Option 1: Use Boot Camp to partition your hard drive with Windows

Note: This option uses the Boot Camp software, which helps Mac users (Mac OS X) create a partition on their internal hard drive to use Microsoft Windows. You can only use Boot Camp Assistant on internal hard drives (not external hard drives). For this option, you will need to purchase Windows 7 (Home Premium should be sufficient), you will need the Mac OS X Install DVD that came with your Mac, and you will need a built-in or external CD drive. You will also need to install antivirus protection for your Windows partition.

Step 1. Download Boot Camp Assistant (<http://www.apple.com/support/bootcamp/>). Click on the Boot Camp Assistant in the Applications folder. Follow the directions to partition your drive. Based on experience, it is recommended to use a 50MB partition your drive for Windows.

Step 2. Continue to follow Boot Camp Assistant directions to download Windows. Once the installation is complete and the computer needs to restart, make sure to eject the disk.

Step 3. Once the Windows installation is complete, you will need to install the Apple Windows drivers using the Mac OS X DVD.

Step 4. To use Windows, you will need to restart your computer and hold down the “Option” button, then select “Windows.” Then download OneHealth in Windows.

Final Note: If you want to undo this Boot Camp partition, boot your computer into OS X and re-run Boot Camp. Click the “Restore the startup disk to a single volume” button; this will destroy the Windows partition and will return your hard drive to its original one-partition configuration.

Option 2: Use Parallels Desktop and Windows Operating System

Note: You will need Parallels Desktop software (www.parallels.com or www.apple.com) and a Windows Operating System.

Step 1. Install Parallels software. Follow the instructions to install Windows.

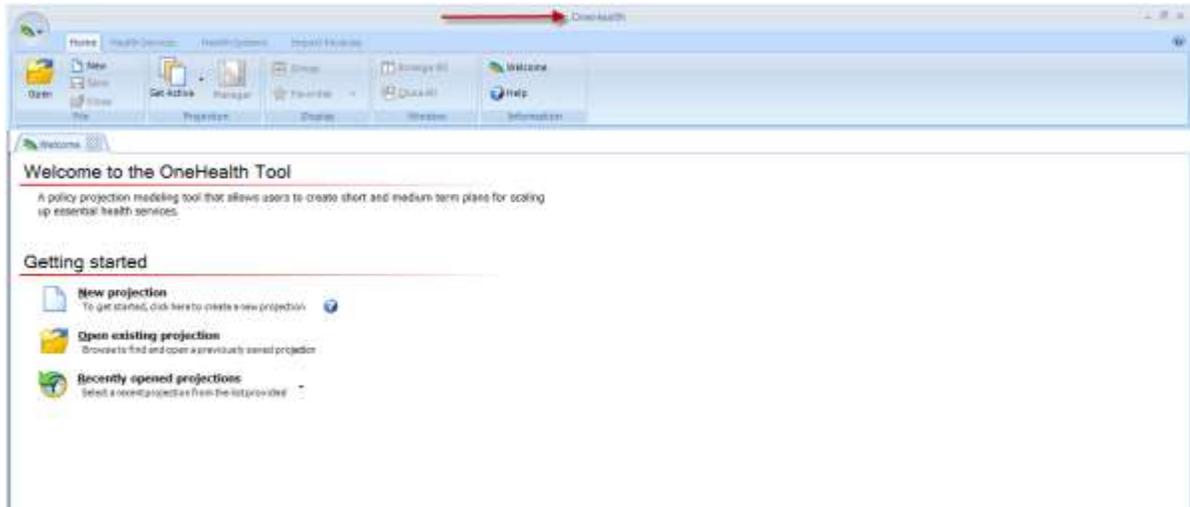
Step 2. Turn off all other programs outside of Parallels (including email). Open Parallels in Full Screen Mode

Step 3. Install OneHealth from the Parallels Desktop.

TROUBLE SHOOTING

OneHealth modules cannot be activated

1. If you are a first-time user of OneHealth (or SPECTRUM), you should see the following screen. Note that OneHealth is in the banner at the top. If you see “Spectrum” at the top, follow the directions immediately below.

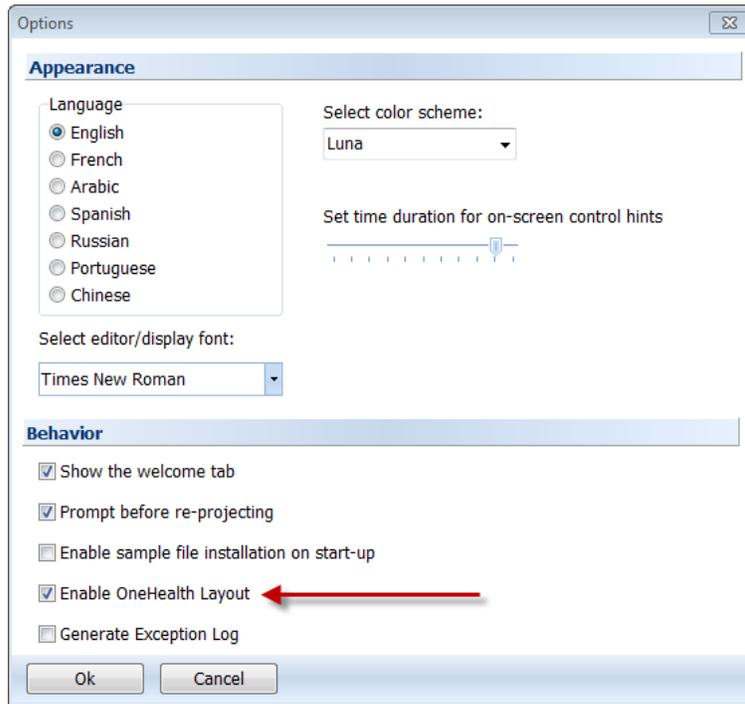


Special Instructions for when “Spectrum” appears in banner at top & for changing language options:

2. Click on the OHT icon in the upper left hand corner.
3. Click on Options in the lower right hand corner of the dialog box.

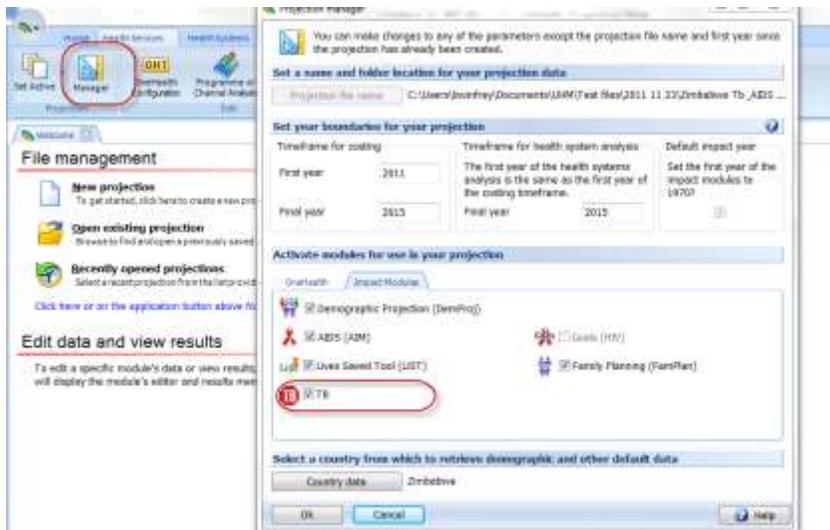


4. Assure that “Enable OneHealth Layout” is checked.



TB deaths averted are not being reported

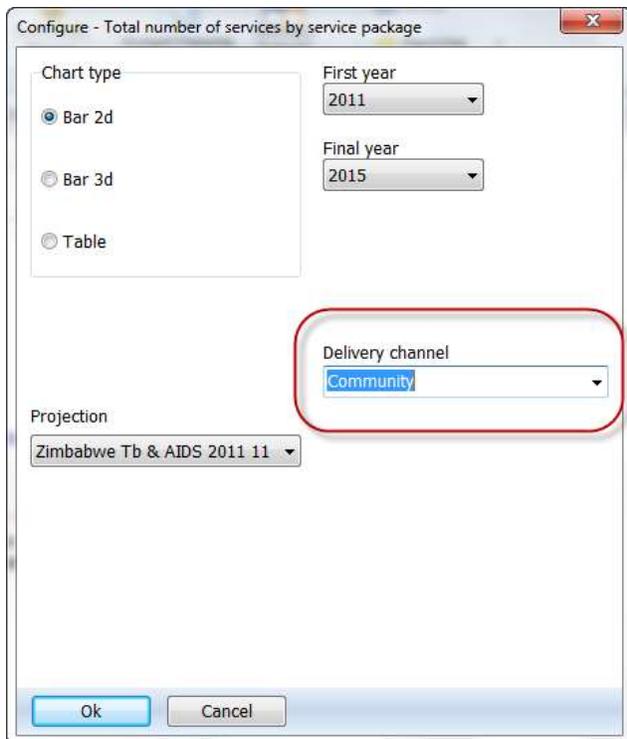
Please assure that the TB module has been activated. However, note that for some countries there are no default data for TB and therefore the calculation of TB deaths in the current version of the tool is not possible. The OneHealth Tool will alert you if data do not exist.



Zero services are reported for an intervention

Possibility 1. The configuration for the output has been set to report the costs for a delivery channel where there are no such services are offered.

Possibility 2. Configuration of output is set to a delivery channel where no services are offered. The solution is to change the configuration to another channel or select all.



Possibility 3. Some element of the calculation does not have data.

The calculation of services depends on information from four different editors:

- a. Intervention coverages
- b. Population in need
- c. Delivery channels



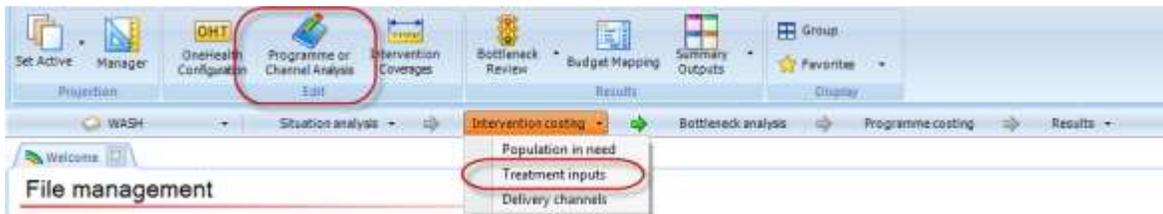
If for any one of these there is a zero for your particular intervention, then the calculation of services will be zero.

Zero costs are reported for an intervention

Possibility 1. The configuration for the output has been set to report the costs for a delivery channel where there are no such services are offered.

Possibility 2. Zero services have been calculated (see above for potential solutions).

Possibility 3. Resource requirements have not been completed for the intervention. Every intervention has a set of associated resource requirements. If these resource requirements have not been specified there will be no costs associated with the intervention.



Average commodity costs per case (US Dollars)

	Community	Outreach	Clinic	Hospital
WASH				
Use of improved water source within 30 minutes	0.00	0.00		
Use of water connection in the home	0.00	0.00		
Improved excreta disposal (latrine/toilet)	0.00	0.00		
Hand washing with soap	0.00	0.00		
Hygienic disposal of children's stools	0.00	0.00		

- Double-click on any cell with a value in it to view or modify detailed ingredient data.
- Changing a unit cost in a pop-up will cause the unit cost to change wherever it is used.

Unusually large costs or unusually large number of services are reported for an intervention

Possibility 1. The population in need is set at a value greater than the reality. Examples of where this can happen are:

- The population in need is set at 100 or some other large value when in fact not all of the target population are eligible or in need of the intervention. For example, not all women giving birth need treatment for pre-eclampsia.
- The intervention is “user defined intervention”. In this case the default target population is the entire population, including both children and adults. If the population in need therefore needs to reflect both the sex/age group who are targeted as well as the incidence of the condition. For example, if you have added a new intervention for children under five suffering from malaria, you would need to adjust the population in need to reflect % of population aged less than five x annual incidence of malaria.

Possibility 2. The intervention coverage exceeds what is the reality at the baseline.

Possibility 3. The cost per intervention is not realistic. Check the quantities and prices of the resource requirements for the intervention.

APPENDIX: COUNTRIES WITH DEFAULT DATA

The following list shows the availability of default data for various modules. Where country specific data exist there is a note of “Country_Data” For FamPlan and LiST averages have been included for many countries where data are not easily available. For FamPlan the averages are based on countries with similar levels of fertility, “Fertility_Average”. For LiST the averages are regional averages, “Region_Average”. In all cases where average are used the user is encouraged to review the data carefully within the tool. Blank cells indicate that data are not available.

OneHealth will not function unless there is data available for FamPlan and LiST. If there is no data for AIM, the tool will operate but the planner must either enter data for the AIM module or understand that the costing and impact of HIV/AIDS activities will be incomplete at best. If there is no data for the TB module the OneHealth tool will function. However, the TB module will not be functional and there is no way to render it functional without contacting the development team for OneHealth.

	FamPlan	LiST	AIM	Logistics Optimizer	TB impact model
Afghanistan	Fertility_Average	Country_Data	Country_Data		
Albania	Fertility_Average	Region_Average	Country_Data		
Algeria	Fertility_Average	Region_Average	Country_Data	Country_Data	Country_Data
Angola	Fertility_Average	Country_Data	Country_Data	Country_Data	Country_Data
Argentina	Fertility_Average	Region_Average	Country_Data		Country_Data
Armenia		Country_Data	Country_Data		Country_Data
Aruba					
Australia			Country_Data		Country_Data
Australia/New Zealand			Country_Data		
Austria			Country_Data		Country_Data
Azerbaijan	Country_Data	Country_Data	Country_Data		
Bahamas	Fertility_Average	Region_Average	Country_Data		Country_Data
Bahrain	Fertility_Average	Region_Average	Country_Data		
Bangladesh	Country_Data	Country_Data	Country_Data		Country_Data
Barbados	Fertility_Average	Region_Average	Country_Data		Country_Data
Belarus	Fertility_Average	Region_Average	Country_Data		Country_Data
Belgium			Country_Data		Country_Data
Belize	Fertility_Average	Country_Data	Country_Data		Country_Data
Benin	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Bhutan	Fertility_Average	Country_Data	Country_Data		
Bolivia	Country_Data	Country_Data	Country_Data		Country_Data
Bosnia and Herzegovina	Fertility_Average	Region_Average	Country_Data		
Botswana	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data

	FamPlan	LiST	AIM	Logistics Optimizer	TB impact model
Brazil	Country_Data	Country_Data	Country_Data		Country_Data
Brunei Darussalam	Fertility_Average	Region_Average			
Bulgaria	Fertility_Average	Region_Average	Country_Data		Country_Data
Burkina Faso	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Burundi	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Cambodia	Country_Data	Country_Data	Country_Data		Country_Data
Cameroon	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Canada			Country_Data		Country_Data
Cape Verde	Fertility_Average	Region_Average	Country_Data	Country_Data	
Central African Republic	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Chad	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Channel Islands					
Chile	Fertility_Average	Region_Average	Country_Data		Country_Data
China	Fertility_Average	Country_Data	Country_Data		Country_Data
China, Hong Kong SAR					
China, Macao SAR					
Colombia	Country_Data	Country_Data	Country_Data		Country_Data
Comoros	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Congo	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Costa Rica	Fertility_Average	Country_Data	Country_Data		Country_Data
Côte d'Ivoire	Country_Data	Country_Data	Country_Data	Country_Data	
Croatia	Fertility_Average	Region_Average	Country_Data		
Cuba	Fertility_Average	Country_Data	Country_Data		Country_Data
Cyprus					
Czech Republic	Fertility_Average	Region_Average	Country_Data		Country_Data
Dem. People's Republic of Korea			Country_Data		
Democratic Republic of the Congo	Fertility_Average	Country_Data	Country_Data	Country_Data	Country_Data
Denmark			Country_Data		Country_Data
Djibouti	Fertility_Average	Country_Data	Country_Data	Country_Data	Country_Data
Dominican Republic	Country_Data	Country_Data	Country_Data		Country_Data
Ecuador	Country_Data	Country_Data	Country_Data		Country_Data
Egypt	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
El Salvador	Country_Data	Country_Data	Country_Data		Country_Data
Equatorial Guinea	Fertility_Average	Country_Data	Country_Data	Country_Data	Country_Data
Eritrea	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Estonia	Fertility_Average	Region_Average	Country_Data		Country_Data
Ethiopia	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data

	FamPlan	LiST	AIM	Logistics Optimizer	TB impact model
Fiji	Fertility_Average	Region_Average	Country_Data		Country_Data
Finland			Country_Data		Country_Data
France			Country_Data		Country_Data
French Guiana	Fertility_Average		Country_Data		
French Polynesia	Fertility_Average				
Gabon	Country_Data	Country_Data			Country_Data
Gambia	Fertility_Average	Country_Data	Country_Data		Country_Data
Georgia	Fertility_Average	Country_Data	Country_Data		Country_Data
Germany			Country_Data		Country_Data
Ghana	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Greece			Country_Data		Country_Data
Grenada					
Guadeloupe	Fertility_Average				
Guam	Fertility_Average				
Guatemala	Country_Data	Country_Data	Country_Data		Country_Data
Guinea	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Guinea-Bissau	Fertility_Average	Country_Data	Country_Data	Country_Data	Country_Data
Guyana	Fertility_Average	Country_Data	Country_Data		Country_Data
Haiti	Country_Data	Country_Data	Country_Data		Country_Data
Honduras	Country_Data	Country_Data	Country_Data		Country_Data
Hungary	Fertility_Average	Region_Average	Country_Data		Country_Data
Iceland			Country_Data		Country_Data
India	Country_Data	Country_Data	Country_Data		Country_Data
Indonesia	Country_Data	Country_Data	Country_Data		Country_Data
Iran (Islamic Republic of)	Fertility_Average	Country_Data	Country_Data		Country_Data
Iraq	Fertility_Average	Country_Data	Country_Data		
Ireland			Country_Data		Country_Data
Israel			Country_Data		Country_Data
Italy			Country_Data		Country_Data
Jamaica	Fertility_Average	Country_Data	Country_Data		Country_Data
Japan			Country_Data		Country_Data
Jordan	Country_Data	Region_Average	Country_Data		
Kazakhstan	Country_Data	Region_Average	Country_Data		Country_Data
Kenya	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Kuwait	Fertility_Average	Region_Average			Country_Data
Kyrgyzstan	Fertility_Average	Region_Average	Country_Data		Country_Data
Lao People's Democratic Republic	Fertility_Average	Country_Data	Country_Data		Country_Data

	FamPlan	LiST	AIM	Logistics Optimizer	TB impact model
Latvia	Fertility_Average	Region_Average	Country_Data		Country_Data
Lebanon	Fertility_Average	Region_Average	Country_Data		Country_Data
Lesotho	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Liberia	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Libyan Arab Jamahiriya	Fertility_Average	Region_Average	Country_Data		
Lithuania	Fertility_Average	Region_Average	Country_Data		Country_Data
Luxembourg			Country_Data		Country_Data
Madagascar	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Malawi	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Malaysia	Fertility_Average	Region_Average	Country_Data		Country_Data
Maldives	Country_Data	Region_Average	Country_Data		Country_Data
Mali	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Malta			Country_Data		Country_Data
Martinique	Fertility_Average				
Mauritania	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Mauritius	Fertility_Average	Region_Average	Country_Data	Country_Data	Country_Data
Mayotte			Country_Data		
Mexico	Fertility_Average	Country_Data	Country_Data		Country_Data
Micronesia (Fed. States of)	Fertility_Average	Region_Average			
Mongolia	Fertility_Average	Country_Data	Country_Data		Country_Data
Montenegro			Country_Data		
Morocco	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Mozambique	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Myanmar	Fertility_Average	Country_Data	Country_Data		Country_Data
Namibia	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Nepal	Country_Data	Country_Data	Country_Data		Country_Data
Netherlands			Country_Data		Country_Data
Netherlands Antilles	Fertility_Average				
New Caledonia	Fertility_Average				
New Zealand			Country_Data		Country_Data
Nicaragua	Country_Data	Country_Data	Country_Data		Country_Data
Niger	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Nigeria	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Norway			Country_Data		Country_Data
Occupied Palestinian Territory	Fertility_Average	Region_Average			
Oman	Fertility_Average	Region_Average	Country_Data		Country_Data
Pakistan	Country_Data	Country_Data	Country_Data		Country_Data

	FamPlan	LiST	AIM	Logistics Optimizer	TB impact model
Panama	Fertility_Average	Country_Data	Country_Data		Country_Data
Papua New Guinea	Fertility_Average	Country_Data	Country_Data		Country_Data
Paraguay	Country_Data	Country_Data	Country_Data		Country_Data
Peru	Country_Data	Country_Data	Country_Data		Country_Data
Philippines	Country_Data	Country_Data	Country_Data		Country_Data
Poland	Fertility_Average	Region_Average	Country_Data		Country_Data
Portugal			Country_Data		Country_Data
Puerto Rico	Fertility_Average				Country_Data
Qatar	Fertility_Average	Region_Average	Country_Data		Country_Data
Republic of Korea	Fertility_Average	Region_Average	Country_Data		Country_Data
Republic of Moldova	Fertility_Average	Country_Data	Country_Data		Country_Data
Réunion	Fertility_Average				
Romania	Fertility_Average	Region_Average	Country_Data		Country_Data
Russian Federation	Fertility_Average	Region_Average	Country_Data		Country_Data
Rwanda	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Saint Lucia	Fertility_Average	Region_Average	Country_Data		
Saint Vincent and the Grenadines	Fertility_Average	Region_Average	Country_Data		
Samoa	Fertility_Average	Region_Average	Country_Data		
Sao Tome and Principe	Fertility_Average	Country_Data		Country_Data	Country_Data
Saudi Arabia	Fertility_Average	Region_Average	Country_Data		
Senegal	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Serbia	Fertility_Average	Region_Average	Country_Data		
Sierra Leone	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Singapore	Fertility_Average	Region_Average	Country_Data		Country_Data
Slovakia	Fertility_Average	Region_Average	Country_Data		
Slovenia	Fertility_Average	Region_Average	Country_Data		
Solomon Islands	Fertility_Average	Country_Data	Country_Data		
Somalia	Fertility_Average	Country_Data	Country_Data	Country_Data	Country_Data
South Africa	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Spain			Country_Data		Country_Data
Sri Lanka	Country_Data	Region_Average	Country_Data		Country_Data
Sudan	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Suriname	Fertility_Average	Country_Data	Country_Data		Country_Data
Swaziland	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Sweden			Country_Data		Country_Data
Switzerland			Country_Data		Country_Data
Syrian Arab Republic	Fertility_Average	Region_Average	Country_Data		

	FamPlan	LiST	AIM	Logistics Optimizer	TB impact model
Tajikistan	Fertility_Average	Country_Data	Country_Data		Country_Data
TFYR Macedonia	Fertility_Average	Region_Average			
Thailand	Country_Data	Region_Average	Country_Data		Country_Data
Timor-Leste	Fertility_Average	Country_Data	Country_Data		
Togo	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Tonga	Fertility_Average	Region_Average	Country_Data		
Trinidad and Tobago	Country_Data	Region_Average	Country_Data		Country_Data
Tunisia	Country_Data	Region_Average	Country_Data	Country_Data	Country_Data
Turkey	Country_Data	Country_Data	Country_Data		
Turkmenistan	Country_Data	Country_Data			
Uganda	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Ukraine	Fertility_Average	Country_Data	Country_Data		Country_Data
United Arab Emirates	Fertility_Average	Region_Average			
United Kingdom			Country_Data		
United Republic of Tanzania	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
United States of America			Country_Data		Country_Data
United States Virgin Islands	Fertility_Average				
Uruguay	Fertility_Average	Region_Average	Country_Data		Country_Data
Uzbekistan	Country_Data	Country_Data	Country_Data		Country_Data
Vanuatu	Fertility_Average	Region_Average	Country_Data		
Venezuela (Bolivarian Republic of)	Fertility_Average	Country_Data	Country_Data		Country_Data
Viet Nam	Country_Data	Country_Data	Country_Data		Country_Data
Western Sahara	Fertility_Average				
Yemen	Country_Data	Country_Data	Country_Data		
Zambia	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data
Zimbabwe	Country_Data	Country_Data	Country_Data	Country_Data	Country_Data



APPENDIX: POPULATION AND COVERAGE CONCEPTS

The determinants for intervention costs are the **number of people** receiving the intervention and the **quantity of resources** required to deliver the intervention per person.

In order to calculate the number of people receiving the services, OneHealth includes data entry fields for the following:

- Population
- Target Population
- Population in Need
- Coverage

All four of the above must have data entered into them in order for the tool to be able to estimate the number of people receiving the intervention by year.

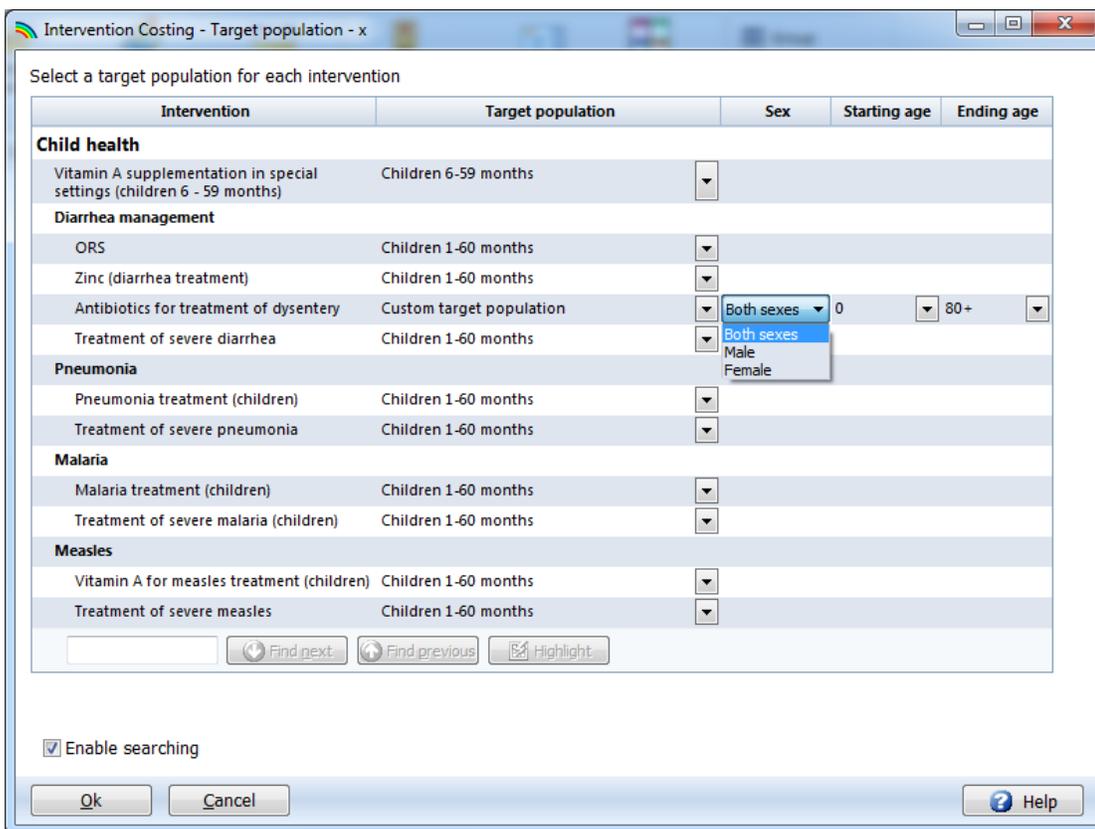
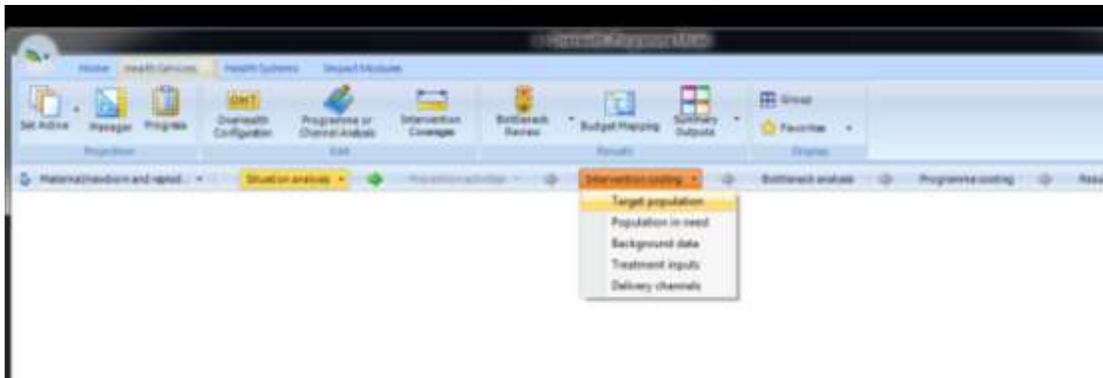
Population: The overall demographic parameters for the population are entered into the Demproj module. There are country-specific defaults here.

Target Population: this is where the sub-population that will receive the intervention is identified. There are global defaults available here for each intervention.

Examples of target population include:

- pregnant women
- adolescents
- children aged < 1 month
- children aged 0-59 months
- children aged 1-59 months
- total population
- Etc.

The user can select from the drop-down list of default populations, or specify the target population of each intervention as shown below:



The custom target population is useful in particular for custom interventions which the user has added to the tool, which were not part of the default list of OneHealth interventions.

Population in need: this section is used to identify what share of the target population requires the intervention, per year. For most preventive care interventions, the share will be 100%. For example, antenatal care will be required for all pregnant women.

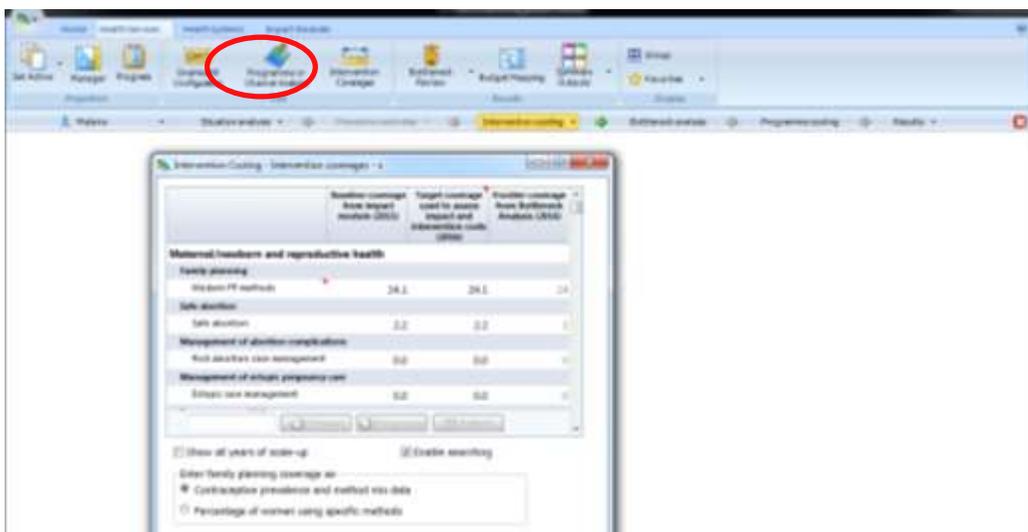
Population in need is determined by incidence and prevalence of conditions, and treatment guidelines.

In some instances the population in need may be > 100%. For example, management of diarrhea with ORS. The target population is children aged 0-59 months. If we put 100% population in need, this means that each child will on average receive the intervention once per year. However in many settings the incidence of diarrhea may be greater than 1.0. For example, if the incidence of diarrhea in children is estimated at 3.5 episodes per year, the Population in need will then be 350%. If 1 % of all diarrhea cases are estimated to be severe, then the population in need for treatment of severe diarrhea is 3.5% (calculated as 350% x 1%).

For another example, take treatment of malaria in pregnant women. Here the target population is pregnant women, and the population in need is the percentage of pregnant women who will need treatment of malaria, per year.

Coverage: The coverage measure refers to how many, out of the population in need, are actually receiving the intervention. This is an indicator commonly measured in household surveys such as Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS). E.g., among children with a fever during the past two weeks, how many were taken to a health provider for treatment?

In the current version of OneHealth, coverage is entered into the Coverage Editor (see below). In future versions of OneHealth, coverage will be incorporated into the intervention costing editors for each specific programme.



There are three columns in the generic coverage editor (though the columns can be expanded to include coverage targets for all years).

- *Baseline coverage* – this is the starting coverage in the base year. Default values appearing here come from the impact modules. If the default value is zero, there may not be any data available as default for the specific intervention. Values entered into this column will drive the calculated estimates.
- *Target coverage used to assess impact and intervention costs* – this is the final target coverage for the end year of your projection. Values entered into this column will drive the calculated estimates for the end year.
- *Frontier coverage from Bottleneck analysis* – values appearing in this column are those derived from the bottleneck analysis for selected interventions. Values in this column do not drive any calculations in the tool – they are only available as a reference point. If users have not done a bottleneck analysis, the value showing here will by default be the same as the baseline coverage. If the user has chosen to do bottleneck analysis, then most likely a target will show that is the suggested value that the user may consider to put as the coverage target for the final year of the projection.

In the example below, the user has not done a bottleneck analysis. Thus the values shown in the right hand column are the same as the baseline coverage.

The screenshot shows a window titled "Intervention Costing - Intervention coverages - x". It contains a table with the following columns: "Baseline coverage from impact module (2011)", "Target coverage used to assess impact and intervention costs (2016)", and "Frontier coverage from Bottleneck Analysis (2016)". The table lists various immunization types with their corresponding coverage values. The "HPV vaccine" row is highlighted in red, indicating it has no calculated impact.

	Baseline coverage from impact module (2011)	Target coverage used to assess impact and intervention costs (2016)	Frontier coverage from Bottleneck Analysis (2016)
Immunization			
Rotavirus vaccine	0.0	0.0	0
Measles vaccine	90.0	95.0	90
Hib vaccine	75.0	95.0	75
Pneumococcal vaccine	0.0	0.0	0
DPT vaccination	90.0	95.0	90
Polio vaccine	90.0	95.0	90
BCG vaccine	90.0	95.0	90
HPV vaccine	0.0	0.0	0

Below the table are several controls: a search box, "Find next", "Find previous", and "Highlight" buttons. There are also checkboxes for "Show all years of scale-up" and "Enable searching". A section for "Enter family planning coverage as" has two radio button options: "Contraceptive prevalence and method mix data" (selected) and "Percentage of women using specific methods". A "Notes" section contains two bullet points: "Intervention coverages are interpolated linearly between the baseline and target year." and "Interventions without calculated impact are marked in red." At the bottom are "Close", "Transfer coverages to impact modules", and "Help" buttons.

Notes:

- When in doubt about what value to enter for the Population in Need, go into the Target Population editor and review what target population has been selected.
- The OneHealth tool includes pop-up texts to guide users on the default definitions for the Population in Need, Target Population, and Coverage. These are shown as red triangles in the upper right hand corner of the cell. Text will appear when the user hovers the cursor above the flagged cell..

Examples for illustration:

Measles Vaccine

How should data be inputted?

- The target population can be put as births or children <1 .
- The population in need is 100% since the recommendation is that all children are immunized.
- The current coverage may be 80-90% depending on the country.

School health programme

A new school health programme will be set up to target children age 9-12 years in rural areas. The ambition is that 60% of schools in rural areas should be covered by 2015. How should data be inputted?

- The target population can be customized to children from age 9 to 12. Indicate whether both sexes are covered or select males / females.
- The population in need is the percentage of children living in rural areas, who are enrolled in school. In this example assume the proportion is 75% population in rural areas and 90% of those are enrolled in school. The population in need is then $75\% \times 90\% = 67.5\%$
- The current coverage is 0% and the target coverage for 2015 is set to 60%.

PMTCT

How should data be inputted?

- The target population should be set to “Women in need of PMTCT”. This is a specific parameter that pulls the relevant data from the HIV impact module.
- The population in need here would be 100% since the target population is already defined as Women in need of PMTCT.
- The current coverage can target coverage is country-specific.