

Spectrum Quick Start Tutorial:

The Lives Saved Tool

A Computer Program for Making
Child Survival Projections



Spectrum System of
Policy Models



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September 2008

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INTRODUCTION

Spectrum is a policy modeling system. It contains modules for a number of reproductive health areas. For the purposes of making a national child survival estimate, three spectrum modules are used: 1) DemProj, for the demographic projection; 2) AIM, for the incorporation of the impact of HIV/AIDS on the demographic projection; and 3) the Lives Saved Tool (LiST), for the projection of child survival with increasing coverage of child health interventions. This manual describes the basics for making a national estimate of coverage and projection of deaths averted. This tutorial just provides the minimum information needed to use Spectrum. Additional details are available in the manuals for these models:

- Stover, John. **DemProj. A Computer Program for Making Population Projections.** Washington DC: USAID/ Health Policy Initiative, February 2008.
- DeCormier Plosky, Willyanne; Winfrey, Bill and Stover, John. **Lives Saved Tool: A Computer Program for Making Child Survival Projections.** July 2008.

The LiST tool is based on the work of the Bellagio Child Survival Study Group, the Child Health Epidemiology Reference Group (CHERG), and the International Child Development Steering Group. Their work has sought to further specify the global burden of disease and developmental impediments for children under-5 years of age both by region and by cause, and to identify and assess those interventions that will be the most effective in increasing child survival and developmental potential. This work has been published in the 2003 Lancet series on child survival¹⁻⁴, the 2005 Lancet series on neonatal survival⁵⁻⁸, the

¹ Black R, Morris S, and Bryce J. "[Child Survival 1] Where and Why are 10 Million Children Dying Every Year?" *Lancet* 2003; 361: 2226-2234;

² Jones G, Steketee R, Black R, et al. "[Child Survival 2] How Many Child Deaths Can We Prevent This Year?" *Lancet* 2003; 362: 65-71.

³ Bryce J, el Arifeen S, Pariyo G, et al. "[Child Survival 3] Reducing Mortality: Can Public Health Deliver?" *Lancet* 2003; 362: 159-164.

⁴ Victoria C, Wagstaff A, Armstrong Schellenberg J, et al. "[Child Survival 4] Applying an Equity Lens to Child Survival and Mortality: More of the Same is Not Enough." *Lancet* 2003; 362: 233-241.

⁵ Lawn J, Cousens S, and Zupan J. "[Neonatal Survival 1] 4 Million Neonatal Deaths: Where, When, and Why?" *Lancet* 2005; 365: 891-900.

⁶ Darmstadt G, Bhutta Z, Cousens S, et al. "[Neonatal Survival 2] Evidence-Based Cost-Effective interventions: How Many Newborn Babies Can We Save?" *Lancet* 2005; 365: 977-988.

⁷ Knippenberg R, Lawn J, Sarmstadt G, et al. "[Neonatal Survival 3] Systematic Scaling up of Neonatal Care in Countries." *Lancet* 2005; 365: 1087-1098.

⁸ Martines J, Paul V, Bhutta Z, et al. "[Neonatal Survival 4] A Call for Action." *Lancet* 2005; 365: 1189-1197.

2007 Lancet series on child development⁹⁻¹¹, and the 2008 Lancet series on infant and young child nutrition¹²⁻¹⁶.

The LiST tool is a work in progress that is continuously adapting to meet the needs of countries and health organizations. It has been recently revised to include interface with the AIDS Impact Model and further reference to nutrition indicators and interventions. The ability to cost out choices for scale-up of different child health interventions, and a component on maternal health and family planning are also planned for the near-future.

WHAT YOU WILL LEARN

At the end of this training, you will be able to:

- Create a demographic projection using data from the United Nations Population Division.
- Create a child survival projection using data about child health status and coverage rates for child health interventions.
- Display various child survival indicators, such as: child deaths and child deaths by cause, child deaths and child deaths prevented by cause or type of intervention, the under-five mortality rate, and the neo-natal mortality rate.

⁹ Grantham-McGregor S, Bun Cheung Y, Cueto S, et al. "[Child Development in Developing Countries 1] Development Potential in the First 5 Years for Children in Developing Countries." *Lancet* 2007; 369: 60-70.

¹⁰ Walker S, Wachs D, Meeks Gardner J, et al. "[Child Development in Developing Countries 2] Child Development Risk Factors for Adverse Outcomes in Developing Countries." *Lancet* 2007; 369: 145-157.

¹¹ Engle P, Black M, Behrman J, et al. "[Child Development in Developing Countries 3] Strategies to Avoid the Loss of Development Potential in More Than 200 Million Children in the Developing World." *Lancet* 2007; 369: 229-242.

¹² Black R, Allen L, Bhutta Z, et al. "[Maternal and Child Undernutrition 1] Maternal and Child Undernutrition: Global and Regional Exposures and Health Consequences." *Lancet* 2008; 371: 243:260.

¹³ Victoria C, Adair L, Fall C, et al. "[Maternal and Child Undernutrition 2] Maternal and Child Undernutrition: Consequences for Adult Health." *Lancet* 2008; 371: 340-357.

¹⁴ Bhutta Z, Ahmed T, Black R, et al. "Maternal and Child Undernutrition 3] What Works? Interventions for Child Undernutrition and Survival." *Lancet* 2008; 371: 417-440.

¹⁵ Bryce J, Coitinho D, Darnton-Hill I, et al. "[Maternal and Child Undernutrition 4] Maternal and Child Undernutrition: Effective Action at National Level." *Lancet* 2008; 371: 510-526.

¹⁶ Morris S, Cogill B, Uauy R, et al. "[Maternal and Child Undernutrition 5] Effective International Action Against Malnutrition: Why Has it Proven So Difficult and What Can Be Done to Accelerate Progress?" *Lancet* 2008; 371: 608-621.

BASIC STEPS IN USING SPECTRUM

Step 1: Installing Spectrum

The Spectrum program is distributed on CD-ROM or through the Internet at <http://www.FuturesInstitute.org>. It must be installed on a hard disk before it can be used. Spectrum will operate on any computer running Windows 98 or later version. It requires about 30MB of hard disk space.

To install the Spectrum program, follow the directions below.¹⁷

Installing from a CD-ROM. Insert the CD-ROM into your CD-ROM drive. The installation program should start automatically. If it does not, Select “Start” from the task bar, then select “Run” from the pop-up menu. In the dialogue box that appears, click on Browse, and find the file SpecInstall.exe. Then press “Ok.”

Installing from the internet. Start your internet browser and go to www.FuturesInstitute.org. Click on the box that says “Spectrum Download.” You will be brought to the USAID Health Policy Initiative page. Next, click on the “Quick Link” box where it says Spectrum Download (single executable file). From the dialogue box that appears next, select “Save.” (If that dialogue box did not appear, you must click the word “here” where it says “if your download does not begin please click here”). Select a location for the file. Once the file has been downloaded, click on that file and the follow the instructions.

Step 2: Changing the Language in Spectrum

The first time you run Spectrum after installing it, all the displays will be in English. You can change to another language by selecting “Options” and “Environment” from the Spectrum menu. Then select the language you want to use and click the “ok” button. At present, Spanish is the only language in addition to English that is currently available.

¹⁷ To remove the Spectrum program from your hard disk, run the unwise.exe program located in the Spectrum directory.

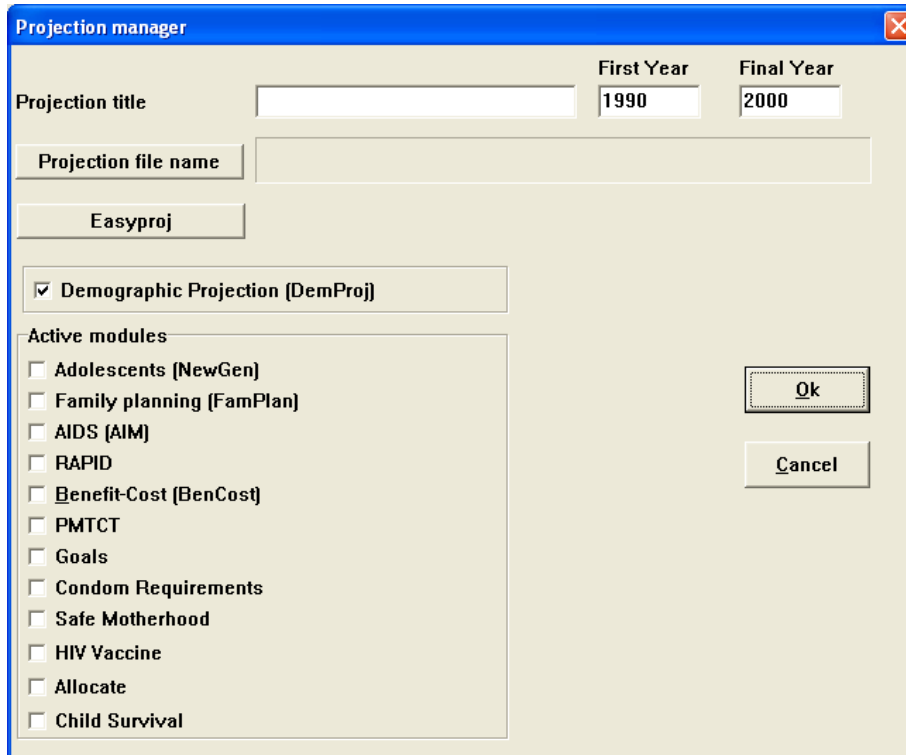
Step 3: Starting the Spectrum Program

1. To start Spectrum:
2. Click the “Start” button on the task bar.
3. Select “Programs” from the pop-up menu.
4. Select “Spectrum” from the program menu. Alternatively, you can use Windows Explorer to locate the directory “c:\spectrum” and double click on the file named “spectrum.exe.”
5. If you get an error saying that the gdiplus.dll file is missing you may have to download this file from Microsoft. It is included with Microsoft Office and recent versions of Windows, but may not be on computers with Windows 2000 or 98.

Step 4: Opening a Demographic Projection with Planned Use for the Lives Saved Tool

The Lives Saved Tool in Spectrum requires a demographic projection prepared with DemProj. A completely new demographic projection may be created (as described in Step 4), or the LiST Tool may be added to an existing demographic projection (as described in Step 5). To create a new demographic projection, begin by:

1. Selecting “File” and “New projection” from the Spectrum menu.
2. You will see the Projection manager dialogue box. It will look similar to the display shown below:



The following information is displayed:

Projection title: This title will be printed at the top of all printed output and will be used to identify the projection if more than one projection is loaded at a time. You can change the title to reflect the projection you are about to prepare.

Projection file name: This is the name that will be used to store all data files associated with this projection. You cannot change the file name here. You can change it if you select “File” and “Save projection as” to save the projection to a new name.

First year: This is the first year of the projection.

Final year: This is the final year of the projection.

Active modules: The check boxes let you select other modules that will be used with the population projection.

3. In the Projection manager dialogue box, fill in the projection title, the first year of the projection and the last year of the projection. If intending to use AIM, it is a good idea to set the first year of the projection to one or two years before the start of the HIV/AIDS epidemic. For the purposes of the LiST Tool, the end date may be set to 2015, so as to monitor progress in meeting the MDGs, or to a later date for evaluating specific targets set by the country.

4. Check the box next to “Child Survival” to include the Lives Saved Tool. The box next to “AIM” will then be checked automatically..
5. Click the “File name” button and enter a file name for this projection. Then click “Save.”
6. Click the “EasyProj” button and select your country from the country list. EasyProj is a special feature that allows you to use data prepared by the United Nations Population Division and published in *World Population Prospects*. If you click on the EasyProj button, the program will prompt you to select a country and ask whether you want to use the UN low, medium, or high projection assumptions. Once you click “Ok,” the program will load the base year population, the total fertility rate, and the male and female life expectancy from the United Nations estimates and projections.

* **Please note**, you must enter in the first and last year of the projection BEFORE clicking on EasyProj, or the program will not allow the Lives Saved Tool to be run properly.

7. Click “OK” to return to the dialogue box and click “OK” once more to complete the set-up process.
8. Select “File” and “Save projection” from the Spectrum menu to save this projection.
9. You can then go to “Edit” and click on “Child Survival” to begin working in the Lives Saved Tool..

* **Please note**, in a newly initiated Spectrum projection that includes DemProj, AIM, and LiST, it is not possible to display Demographic output from DemProj until inputs are completed for the AIM and Lives Saved modules. This is because if DemProj is used in conjunction with AIM and LiST, it draws on the input from those modules to more accurately project demographic outcome. You may choose not to enter in data for AIM. Please note that this will cause a serious underestimate of mortality in countries with high HIV prevalence. Regardless, the AIM module must be open to the default values (where adult HIV prevalence is zero) for DemProj to run.

Step 5: Adding the LiST (and AIM) Module to a Previously Prepared Demographic Projection

The first step in adding the LiST (and AIM) modules to a previously prepared demographic projection that did not originally include them as active modules is to open the demographic projection. To do this,

1. Select “File” from the menu bar.
2. From the pull-down menu that appears, select “Open projection.”

3. Select the projection file from the “Open” dialogue box and press “Ok.” All pre-existing projections that can be loaded will be listed here.
4. Once the demographic projection is open, you need to change the configuration to indicate that the AIM and LiST modules will be used as well. To do this, select “Edit” from the menu bar and “Projection” from the pull-down menu.
5. You will see the Projection manager dialogue box. Check the box next to “LiST (Child Survival)” to include the LiST module, and check the box next to “AIDS (AIM)” to include the AIM module.
6. Click “OK” to complete the set-up process.
7. Select “File” and “Save projection” from the Spectrum menu to save this projection.
8. You can then go to “Edit” and click on “LiST (Child Survival)” or “AIM” to begin working in the module of your choice.

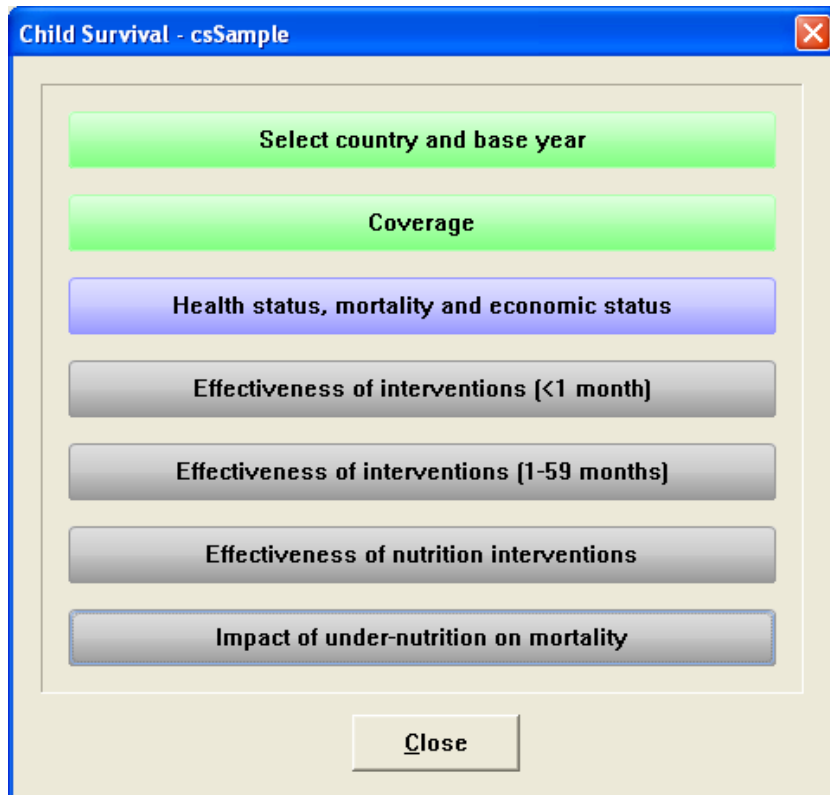
Step 6: Save the Projection

For future reference, it is always a good idea to save the projection whenever you make a change to any assumptions. Save the projection by selecting “File and “Save” or “Save as” from the Spectrum menu.

To save the projection with a different name, choose “File” from the menu bar and “Save projection as” from the pull-down menu. You will then have a chance to specify a new file name for the projection. Normally when you save the projection with a new name, you should also change the projection title. This step will avoid confusion if you have two or more projections loaded at the same time.

Step 7: Select Country and Base Year for the LiST Module

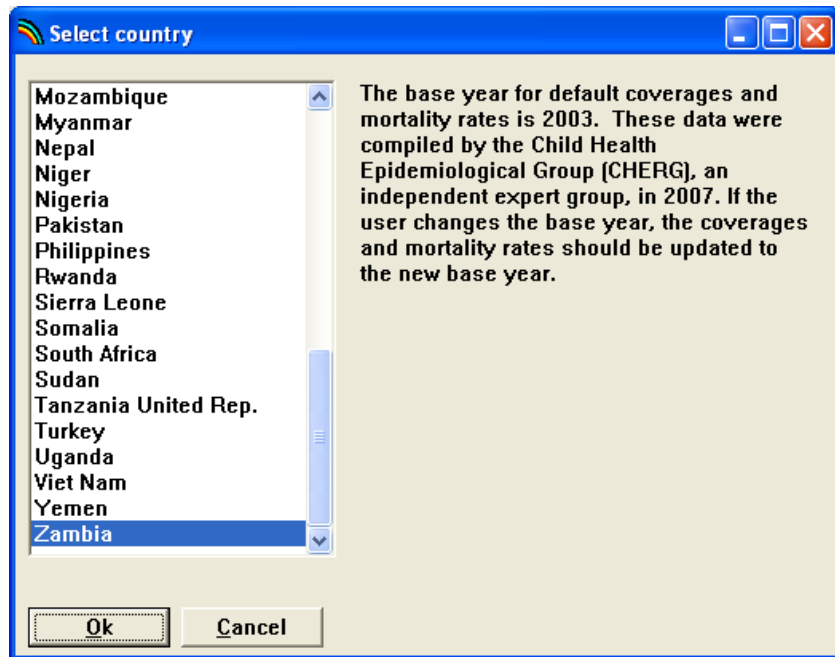
1. Choose “Edit” from the menu bar.
2. Choose “LiST (Child Survival)” from the pull-down menu. This step will display the Child Survival dialogue box, as shown below.



3. Choose “Select country and base year” from the “LiST (Child Survival)” dialogue box. This step will display a box like the one shown below.



4. Please click on the button labeled “Select country”. You will then see the following box:



5. Please select the country that corresponds to the demographic data that you entered into DemProj, and press "Ok". You will return to the "Select country and Base Year" dialogue box.

6. Then, select the base year of coverage for the Lives Saved Tool. At publication, the default data is collected to correspond closely to the year 2003¹⁸. Therefore, if you choose 2003 as the base year for your projection, you will have appropriate default data *provided* by the model for coverage and mortality rates that you can use or change. If you choose a base year other than 2003, you will need to adjust *all* values for coverage and mortality rates from your own data sources to correspond to the chosen base year.
7. Select the base year for evaluating the impact of interventions by selecting a year from the drop-down menu. Although the program will be compiling a projection based on demographic and AIDS data from the start year you specified for the projection, and also based the coverage rates you specified through the base year for the Lives Saved Tool, selecting a base year for evaluating the impact of interventions will allow you to narrow the output of the projection so that the impact from the current year (or year of your choice) can be readily viewed.
8. Finally, click on the box for “Disaggregate coverage by age cohorts” if you would like to enter disaggregated coverage rates, and/or disaggregated intervention effectivenesses. Please note that the default values for these disaggregated coverages and effectivenesses are the same as the aggregated values. The user must supply their own values for

“Base Years” Utilized by the Lives Saved Tool

- **First Year of the Projection:** This is the year entered when first creating the new demographic projection, in the “Projection manager” dialogue box of SPECTRUM. It is the starting point from which DemProj begins to project future population. If intending to use AIM, it is a good idea to set the first year of the projection to one or two years before the start of the HIV/AIDS epidemic.
- **Base Year of Coverage:** This is the initial year of coverage values as well as the base year for mortality and health statuses. It is the starting point from which the Lives Saved Tool projects future child survival. Future child survival estimates are projected from the base year data on health status, mortality, economic status, and coverage of child health interventions in combination with default scientific data the effectiveness child health interventions. The default data in the model uses 2003 as the base year for health status, mortality, economic status, and intervention coverage, for which default values will be provided. Alternatively, users may choose another base year and provide the appropriate values from their own data sources.
- **Base Year for Evaluating the Impact of Interventions:** Most users will want to evaluate the impact of interventions relative to either the current year or a year in the near future. The “base year” for evaluating the impact of interventions is the year against which intervention impacts are compared and is the first year for which the Lives Saved Tool will show output results for deaths prevented.

¹⁸ Occasionally default data do not exist for a particular input for a country. In these cases, the default value is set at zero and the cell in the program is shaded yellow. When a user encounters such a case, she should adjust the value as she deems appropriate. If the baseline coverage value is not adjusted, the program will still run, but the results may overestimate the impact of the intervention and underestimate the impact of other interventions on the same cause of death.

the disaggregations. In most cases this level of detail will not be necessary, and the default values for health status, mortality, “Effectiveness of nutrition interventions”, and “Impact of under-nutrition on mortality” will be shown by age cohort whether or not the “Disaggregate coverage by age cohorts box is clicked.

9. Once you have selected a country, base year of coverage, a base year for evaluating impact of interventions, and decided upon disaggregating coverage by age cohorts, click “Ok” to return to the “LiST (Child Survival)” dialogue box.

Step 8: Begin Entering Data with the Coverage Section

To enter the child survival data necessary for the projection,

1. Choose “Edit” from the menu bar.
2. Choose “LiST (Child Survival)” from the pull-down menu.
3. Select “Coverage” from the “LiST (Child Survival)” dialogue box to be directed to the following screen:

The screenshot shows a software window titled "Coverage - csSample" with a menu bar containing "Edit". The main area is a table with columns for years 2000 through 2008. The table is organized into sections: Periconceptual period, Antenatal period, and Child birth care. Each section contains several rows of interventions with numerical values for each year. Below the table, there are two explanatory footnotes, a "Total [0-60 months]" field, a checked checkbox for "Calculate antenatal care and facility based delivery components", and a row of buttons: "Ok", "Cancel", "Duplicate", "Interpolate", and "Source".

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Periconceptual period									
Family planning*									
Folic acid supplementation or fortification	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Antenatal period									
Antenatal care	93.00	93.00	93.00	93.00	93.00	93.00	93.00	93.00	93.00
Syphilis detection and treatment	74.40	74.40	74.40	74.40	74.40	74.40	74.40	74.40	74.40
Bacteriuria Treatment	65.10	65.10	65.10	65.10	65.10	65.10	65.10	65.10	65.10
IPT malaria	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tetanus toxoid	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
Balanced energy supplementation (maternal)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multiple micronutrient supplementation (maternal)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Child birth care									
Facility based birth	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00
Antenatal corticosteroids	8.60	8.60	8.60	8.60	8.60	8.60	8.60	8.60	8.60
Antibiotics for pPRoM	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50
Clean delivery including labour monitoring & emergency obstetric care	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50
Newborn resuscitation	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00
Clean delivery only	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00
PMTCT**									

*Coverage and effectiveness of Family Planning interventions are specified in the FamPlan module.
 **Coverage and effectiveness of these interventions are specified in the AIM module.

Total [0-60 months]

Calculate antenatal care and facility based delivery components

Ok Cancel Duplicate Interpolate Source

This editor is the principal screen for the Lives Saved Tool, in which the user may (and should!) manipulate the values shown.

1. Review the default values listed for each child health intervention and for each age group (which, as previously noted, will appear only if you chose 2003 as the base year of coverage). You will see a tab at the bottom of the screen showing that the coverage is for 0-60 months if you did not choose “Disaggregate by age cohort”, or tabs with the age cohorts if you did.
2. The default values listed begin with the 2003 base year of coverage. You may enter in data for 2003 (or the alternate base year you chose) and more recent years if you have it and feel it is more accurate than what is listed.
3. Enter in the coverage targets for future years past the base year. By changing the target, you will be able to project the impact upon child survival in your country. Most often, users set a target for the final year of the projection (2015 in this case) and interpolate between the base year and the target year.
4. Click on the box “Calculate antenatal care and facility based delivery components” if you would like the program to assume calculation of coverage for the components that comprise antenatal care and facility based birth interventions. In this case the user will only enter coverage for the antenatal care and facility based birth interventions, as opposed to the coverage for each specific component that comprises them.
5. To use the “Duplicate” function, highlight (select) the range (column, row, or cells to be affected). The first cell in the range should be the value you want to copy. Extend the range to the last year to be changed by using the mouse (hold down the left button and drag the range) or the keyboard (hold down the shift key and use the arrow keys). Click on the “Duplicate” key to copy the value at the beginning of the range to all the other cells in the range.
6. To use the “Interpolate” function, enter the beginning and ending values in the appropriate cells. Highlight the entire range from beginning to end. Click on the “Interpolate” key to have the values interpolated and entered into each of the empty cells.
7. Please remember to click the “source” button to enter a record of the data sources and assumptions as you make the projections.
8. When you have completed entering in the coverage rates and chosen if you would like the program to calculate antenatal care and facility based delivery components, click “Ok” to be redirected back to the “LiST (Child Survival)” dialogue box.

Step 9: Review the Default Values

After you have entered your coverage data, please review the default values contained in each of the following five variable groupings:

- A. Health status, mortality, and economic status
- B. Effectiveness of interventions (<1 month)
- C. Effectiveness of interventions (1-59 months)
- D. Effectiveness of nutrition interventions
- E. Impact of under-nutrition on mortality

The “Health status, mortality, and economic status” variable grouping gives what could be termed the “baseline status” of a child born in the country you are analyzing. It “sets the stage” with the relative hand a child has been dealt, given national figures for pre-natal growth, nutritional status at birth, breastfeeding proportion, baseline mortality rates and the proximate causes for death, and economic status. The “Effectiveness of interventions (<1 month) and (1-59 months)” variable groupings then amplify the “baseline status” by showing the effectiveness of possible neonatal and child health interventions and the affected fraction of the neonatal or child population being treated. The “Effectiveness of nutrition interventions” variable grouping then shows the effectiveness of nutrition interventions, although not directly upon mortality, but rather upon the variables of IURG/low birth weight, stunting, diarrhea, and breastfeeding rates. The “Impact of under-nutrition on mortality” variable grouping thus translates the impact of those variables upon mortality in children.

To access each of the variable groupings for review of default values, click on the appropriate blue or grey bar in the “LiST (Child survival) dialogue box. Below is an example of what you will see with the “Effectiveness of interventions (1-59 months) variable grouping:

Effectiveness of interventions (1-59 months) - csSample

Edit

Diarrhea | Pneumonia | Measles | Malaria

1 - 59 months		
	Effectiveness	Affected fraction
Postnatal (preventive)		
Use of improved water source within 30 minutes	0.120	1.000
Use of water connection in the home	0.630	1.000
Improved excreta disposal (latrine, toilet)	0.290	1.000
Hand washing with soap	0.410	1.000
Hygienic disposal of children's stools	0.150	1.000
Vitamin A for prevention- one dose	0.160	
Vitamin A for prevention- two doses	0.320	
Zinc for prevention	0.210	
Vaccines		
Rotavirus vaccine	0.950	0.270
Postnatal (curative)		
ORS	0.750	0.950
Antibiotics for dysentery	0.980	0.050
Zinc for treatment	0.200	

Display Default Restore Defaults Show all items

Ok Cancel Duplicate Interpolate Source

Once within a variable grouping, click on each tab at the top of the screen to review the default values for that variable (health status, baseline mortality, economic status; neonatal condition; child health condition; nutritional condition; or impact of nutritional condition on mortality).

For the “Effectiveness of interventions (>1 month) and (1-59 months)” you may view:

- The interventions only in reference to the related condition (on tabs at the top of the screen), which is the default presentation; or
- All types of interventions on one page by checking the box “Show all items”.

You may make any changes you feel necessary. However, **please** note that the default values come from rigorous research compiled for the Lancet series on Child Survival, and should not usually be changed in regard to a specific country context.

If you disagree with the default values for effectiveness or affected fraction and would like to enter values that you have prepared, click anywhere inside the editor [screen] to make it active and enter the data. Because the default values are based on careful scientific study and are unlikely to need alteration, the cell for any default value that you change will be highlighted in red to show that the value was changed from the default value.

1. Please remember to click the “Source” button to enter a record of the data sources and assumptions as you make the projections.
2. Click the “Display Default” button if you would like to view the value for a cell that was entered in comparison to the default value.
3. If, at any time decide that you would prefer to revert the default values over the data that you have entered, click the “Restore Defaults” button, and the default values for all indicators in the editor will be restored.
4. The “Cancel” button allows you to exit the editor without making any changes to the data. This action will exit all of the “Efficacy” editors and restore all inputs to their values before you opened the “Efficacy” editors. Any changes you made during the current editing session will be lost.

When you have finished reviewing the data, click the “Ok” button to return to the “LiST (Child Survival)” dialogue box.

Saving the Input Data

Once you have entered the projection inputs, it is a good idea to save the data onto your hard disk. To review, select “File” from the menu bar and “Save projection” from the pull-down menu. The data will be saved using the file name you specified earlier.

Step 10: Display the Output

To see the results of the projection, select “Display” from the menu bar. From the pull-down menu select “LiST (Child Survival).” You will then see another menu showing the indicators available:

- Child Deaths
- Child Deaths Prevented
- Child Deaths By Cause
- Child Deaths Prevented by Cause
- Additional child deaths prevented by intervention relative to impact year
- Neonatal Mortality Rate

- Infant Mortality Rate
- Under 5 Mortality Rate
- Percent Stunted
- Average height/length
- Breastfeeding prevalence
- Diarrhea incidence
- Intrauterine growth restriction

Select one of the indicators. Then you will see the display dialogue box. It will look similar to the one shown below.

Configure - Child Deaths By Cause

Chart Type

Table

Pie Chart

Display Interval

Single year

Five Year

Ten Year

Select age cohort to display

Total (0-60 months) ▼

Scale table values

Table Plus Chart

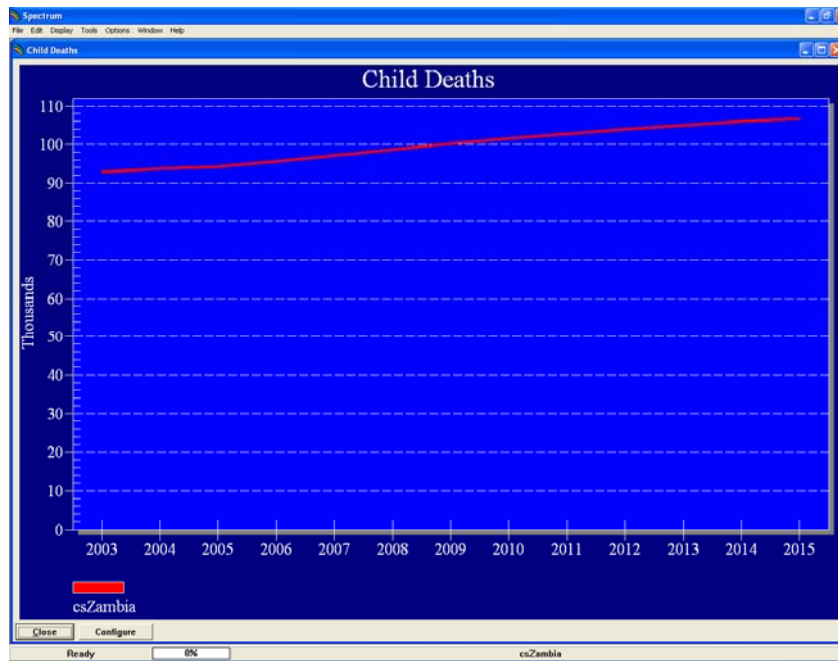
Final Year

2015 ▼

Ok Cancel

The exact choices available will depend on the indicator you have selected. The display will normally be in single years but you can change it to display every five or ten years if desired. The chart type is also set through this dialogue box. Click on the button next to the type of display you want. Normally the display will show all the years in the projection. However, if you want to see only part of the projection, you can change the final year by selecting a new final display year from the “Final year” list box. You may also select the age cohort to display for some indicators, by using the drop-down menu for “Select age cohort to display”.

Once you are satisfied with the type of display, click the “Ok” button and the display will appear. It will look similar to the display shown below.



All the projections that are currently in use will be displayed on the same graph.

You can change the configuration of the display by clicking the “Configure” button. You can also change the type of display by placing the mouse pointer anywhere inside the chart and clicking with the right mouse button.

To close the display, click on the “Close” button. You do not have to close the display immediately. You can choose to display another indicator and it will appear on top of the first display. The first display will be covered but it will still be there. You can return to any previous display that you have not closed by choosing “Window” from the menu bar and selecting the name of the display from the pull-down menu. From the “Window” selection you can also choose to tile or cascade all the existing display windows.

Graphs and Bar Charts

Spectrum will display a variety of graphs and bar charts, including:

- Line charts
- Two- and three-dimensional bar charts (column charts)
- Two- and three-dimensional horizontal bar charts
- Two- and three-dimensional overlap bar charts (bars for multiple projections are shown on top of one another).

- Select the “table plus chart” box, if you would like to see the table values displayed across the bottom of the chart.
- ❖ Please note: For the indicator “Under-Five Mortality Rate”, a green arrow will appear on the chart at the year 2015, representing the MDG target for child mortality. Therefore, it is easy for viewers to see if the target will be met with the projected changes to coverage for the selected child health interventions.

To print the active chart, select “File” from the menu bar and “Print” from the pull-down menu.

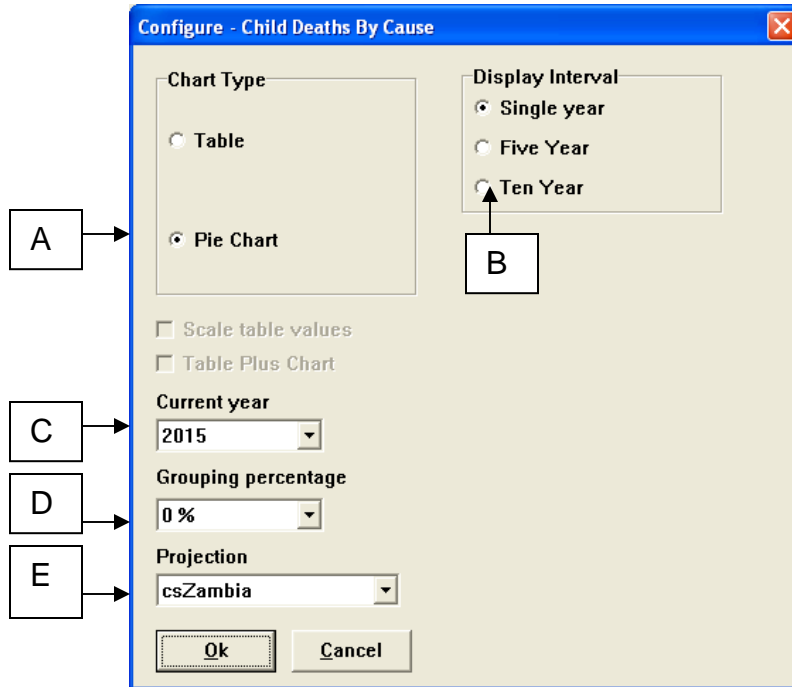
Tables

Spectrum will also display data in the form of tables. In tables, each projection that is in use will be displayed in a separate column. You can scroll through the table to see all the years by using the PgUp and PgDn keys or by using the mouse.

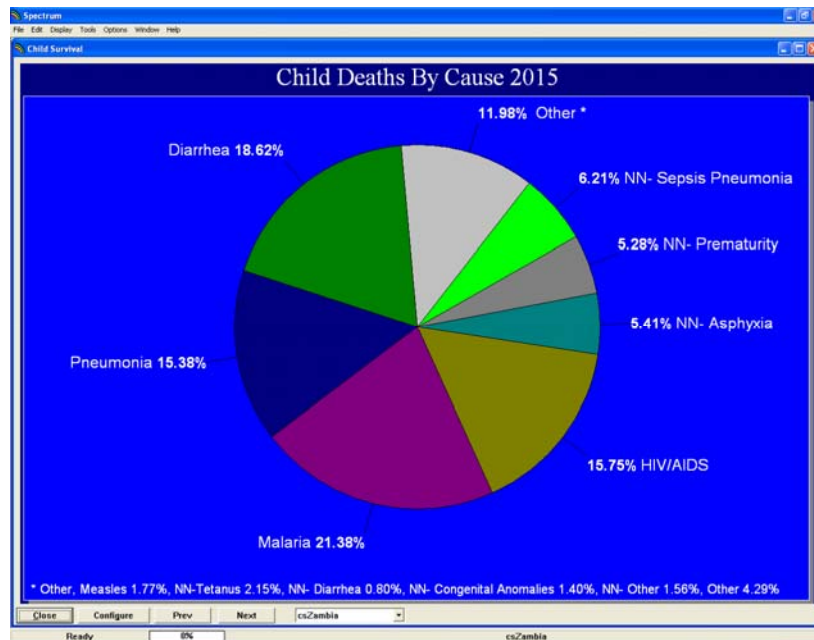
To print a table, select “File” from the menu bar and “Print” from the pull-down menu.

Pie Charts

For the indicators that are stratified by cause (of death or death prevented) or type of intervention, a pie chart may be displayed. In this case, the display dialogue box will look like the following:



- A. Select the radio button for “Pie Chart.”
- B. Choose the display interval by clicking the radio button next to your choice. As with other display formats, the display will normally be in single years but you can change it to display every five or ten years if desired.
- C. Choose the year that you would like to see displayed. Once you are in the pie chart display, you may click the “Prev” or “Next” button to display the pie chart for the previous or next year.
- D. Choose the grouping percentage. The percentage listed is that below which no values will be displayed. This is used to simplify the pie chart display. For example, if your original pie display with the grouping percentage set at zero shows only a few causes of death accounting for 95% of deaths and numerous causes accounting for 5% of deaths, you could set the grouping percentage at 5%. The numerous causes totaling 5% would thus be shown only as “other”, and the pie chart will be easier to read. [This should not be confused with the ‘Other’ which refers to other causes of mortality.]
- E. Choose the projection that you would like to see displayed.
- F. Then click “Ok.” You will see a display like the following:

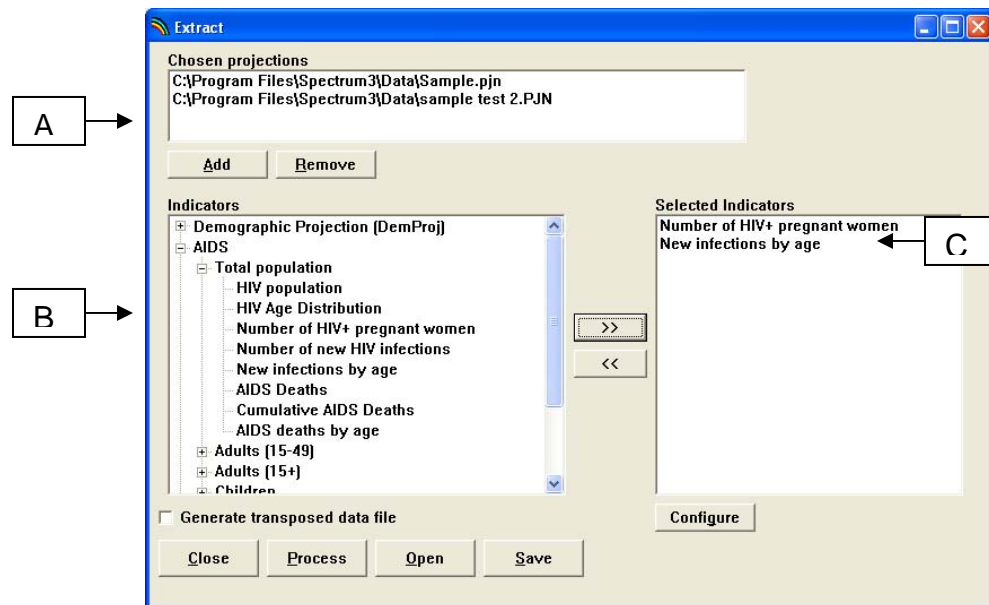


Step 11: Tools: Extract

The tools in LiST allow for further use of the data generated while creating projections. The tools options are not yet operational for LiST. However, from the example of the “extract” tool described below you will be able to see what will soon be possible.

- The extract feature enables you to extract the projected data from a previous projection (or multiple previous projections) on one or more indicators. The extracted data is then saved to a CSV file, and can be imported into excel for further analysis.

After entering Spectrum, go to “Tools” and click on “Extract” from the drop-down menu. An “Extract” window will open, in which the white “choice” boxes will be empty. Below is an example of what the “Extract” window looks like once filled in, followed by instructions on how to do so:



- For the “Chosen Projections” box, click “add” to browse and add a previously saved projection. Highlight a projection from the “Chosen Projections” box and click “remove” to remove it.
- Once a projection is added to the “Chosen Projections” box, the indicators for that projection will appear in the “Indicators” box. Click on the “+” to open a category and see the indicators housed within it.
- To pull an indicator into the box of “Selected Indicators” that you wish to work with, highlight the indicator in the “Indicators” box and press the “>>” button. To remove an indicator from the “Selected Indicators” box, highlight it and click “<<.” To further refine your selected indicator

by sex or region (urban/rural), highlight the indicator in the “Selected Indicators” box and click “Configure.”

To process the extraction, click the “Process” button. Enter the file name you wish to save the extraction as, and click “Ok.” It will then be saved as a CSV file, ready for use in Excel.

If you do not wish to process the extraction immediately, but would like to save the “Extract” window in which you have pulled out the mix of projections and indicators that you would like to use in the future, click the “Save” button. Enter the file name you wish to save the “Extract” window as, and click “Ok.” It will then be saved as an .ex file.

If you have a previous “Extract” window saved as an .ex file, you may open it by clicking the “Open” button.