

# CAST



**A CONTRACEPTIVE  
FORECASTING AND  
COST ESTIMATION TOOL**

# S T



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National Center for Chronic Disease Prevention and Health Promotion  
Division of Reproductive Health





# Estimating Future Contraceptive Requirements

Using the

**CASTCOST**

**CONTRACEPTIVE FORECAST AND  
COST ESTIMATE SPREADSHEET**

Susanna Binzen, MPH, Timothy Johnson, DrPH, and Alicia Ruiz, BS

Division of Reproductive Health

Centers for Disease Control and Prevention

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For more information on or assistance with this spreadsheet, please contact:

MEASURE CDC Project  
Division of Reproductive Health  
Centers for Disease Control and Prevention  
4770 Buford Hwy NE, MS K-23  
Atlanta, GA 30341

Telephone: (770) 488-5200  
E-mail: [MEASURECDC@cdc.gov](mailto:MEASURECDC@cdc.gov) or [drhinfo@cdc.gov](mailto:drhinfo@cdc.gov)  
Internet: <http://www.cdc.gov/reproductivehealth/surveys>

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## **1. Description of the CastCost Projection of Contraceptive Needs spreadsheet**

The Contraceptive *Forecast* and *Cost* Estimate (called “CastCost”) Excel spreadsheet is used to estimate the quantity and cost of contraceptives that will be needed in a country for five years. These estimates are based on data from a Reproductive Health Survey or Demographic and Health Survey done in that country.

CastCost can provide estimates of contraceptive needs for the country as a whole, for the public or private sector alone, or for individual service provider organizations. It provides an estimate of how many contraceptives will be needed and what they will cost.

However, the decision of exactly what quantities of contraceptives to procure should be based on logistics (usage) data, and not solely on the estimates from this projection. The estimates from this forecast should only be used to validate the quantities that have been suggested by a logistics-based forecast.

CastCost can also be used to test different scenarios, such as projecting how much it might cost if the use of injectable contraceptives increased substantially in the next five years, or projecting the differences in cost of a particular contraceptive if it is procured from different sources, or to see the financial implications of different method mixes.

## 2. Overview of the Components of the CastCost Spreadsheet

### 2.1. Data entry spreadsheets

The following data need to be entered into the “Data Entry” tab of the spreadsheet\* (sources for these data are discussed in Section 4. Creating a New Projection of Contraceptive Needs):

- **Basic Data:** For the “base” (starting) year of the projection:
  - Number of women of reproductive age (15–44 or 15–49)
  - Number of men of reproductive age (15–59) (optional)
  - Annual rate of population increase
  - Percentage of women of reproductive age who are in union
  
- **Contraceptive Prevalence data:**
  - Percentage of married women of reproductive age who currently use contraceptives, listed by method
  - Percentage of men who currently use condoms (when these data are available)
  - Estimates of contraceptive prevalence (by method) five years from the starting date of the projection
  
- **Source of Contraceptives:**
  - Percentage of married women of reproductive age who obtain their contraceptives from specified sources (e.g., Ministry of Health clinics, pharmacies, family planning association clinics, private doctors), by contraceptive method
  - Percentage of men who obtain condoms from available sources (when these data are available)
  
- **Cost Options:**
  - Cost of each unit of each method of contraception, by source. (*Cost information is already provided for contraceptives obtained from UNFPA and USAID.*)

### 2.2. Report spreadsheets

CastCost produces the following estimates as its outputs:

- **Estimation summary:** For each of the five years covered by the spreadsheet, there is a table that (for each contraceptive method) provides estimates of:
  - The number of users of that method
  - The percentage and number of users getting their supplies of that contraceptive from the selected source (e.g., public sector, pharmacies, total sources)

- The number of units of each contraceptive that will be needed for that year
  - The estimated cost for that contraceptive for that year (user selects the procurement source for each contraceptive method)
- **Policymakers' summary:** This is an abbreviated version of the Estimation Summary, showing just quantities and costs. For each of the five years covered by the spreadsheet, there is a table that, for each contraceptive method, provides estimates of:
    - The number of units of each contraceptive that will be needed for that year
    - The estimated cost for that contraceptive for that year
    - The source of each contraceptive method (e.g., USAID, UNFPA)
    - The total of the estimated costs of contraceptives for that year
- **Estimation by method:** This same information that is in the Estimation Summary is provided, for each of the years covered by the projection, showing just one method per sheet:
    - Oral contraceptives
    - IUDs
    - Injectables
    - Condoms
    - Tubal ligation
    - And other methods if selected
- **Quantities to be ordered:** This page calculates the quantities of each contraceptive that the selected contraceptive provider (e.g., Ministry of Health, pharmacies, family planning association) needs to order for each year of the forecast. This section is intended for staff involved in the logistics system and for ordering contraceptives. The user needs to input the quantity of stock on hand of each contraceptive at the beginning of the forecast period, the quantity in any shipments that are in process at the time of data entry, the quantity of any contraceptive losses, and the desired stock levels for the end of the year.

### 3. Getting Started: Installing the Program

To use CastCost, you must have a PC-compatible computer running Windows 98 or later, and be familiar with the basic operation of Excel files and terminology.

#### 3.1. Before You Get Started

You will need to collect data and make certain decisions before producing an estimate with the CastCost “Contraceptive Forecast and Cost Estimate Spreadsheet.” Instructions and sample forms to guide you in collecting the necessary information are provided ([Appendix A](#)), along with instructions on where to obtain the data, and guidelines on projecting contraceptive prevalence rates five years into the future.

#### 3.2. Installing the CastCost Spreadsheet

CastCost is an EXCEL file and is on a CD but it must be installed on a hard disk before it can be used and requires at least 1.1 Mb of Hard disk space.

To install CastCost, simply open the Excel CastCost file. If you received the program on a CD, insert the CD into the drive and follow these steps to complete the installation—

1. Double-click on the file “CastCost.exe.” You will see a box telling you that the program will copy the CastCost Spreadsheet and User Manual in your computer. Click on the “Install” button. This executable file creates the following directory for you and copies the files you need into it:

C:\CONTRACEPTIVE\_NEEDS\

2. CastCost works with **Macros**. *You must enable the macros to work in order for the spreadsheet to function.*

Please follow these instructions to allow macros to run in MS Excel 2003—

- Open EXCEL (not the CastCost spreadsheet yet, just the EXCEL application)
- On the Tools menu, point to Macro, and then click Security
- Click on Medium
- Click OK

**NOTE:**

*The macro security settings available to you in Excel may seem confusing at first, but the guidelines for working with macros can be summarized like this:*

*Update your virus protection software frequently.*

*Never open a workbook (or other document) that you didn't expect and don't recognize.*

*Never use the **Low** macro security setting.*

*Use the **Medium** macro security setting occasionally if you work with macros frequently and want to choose whether or not to run macros each time you open a workbook.*

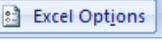
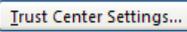
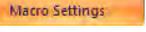
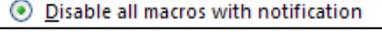
*Use the **High** macro security setting on a regular basis as the recommended setting to prevent any macro from an untrusted source from running on your computer.*

*Use the **Very High** macro security setting to prevent all macros from running on your computer unless they are located in a specific folder.*

*Acquire a digital certificate if you need to send trustworthy workbooks outside your organization.*

*If you need further information about Macros, please click on the Help menu while you are in Excel.*

Please follow these instructions to allow macros to run in MS Excel 2007:

- Open MS EXCEL 2007 (not the CastCost spreadsheet yet, just the EXCEL application).
- Click on the **Office Button**. 
- Click on **Excel Options**. 
- Click on **Trust Center**  and under Microsoft Excel Trust Center, click on Trust Center Settings. 
- Click on  then Under Macro Settings, click on “Disable all macros with notification.” 
- Click **OK** twice.

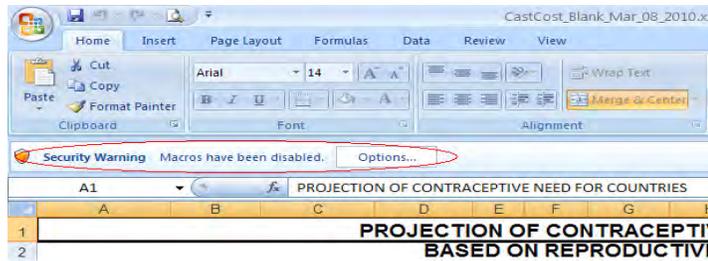
3. Open the CastCost file.

4. If you use MS Excel 2003, you will probably get the following message displayed on your screen:



Click **Enable Macros**, and the spreadsheet will open.

If you use MS Excel 2007, when you open CastCost, go to the Menu page. Near the top of the left hand corner is a message that says “**Security Warning:** Macros have been disabled.”



Click on “Options” and then select “Enable this content” and then “OK.” The security warning will disappear.



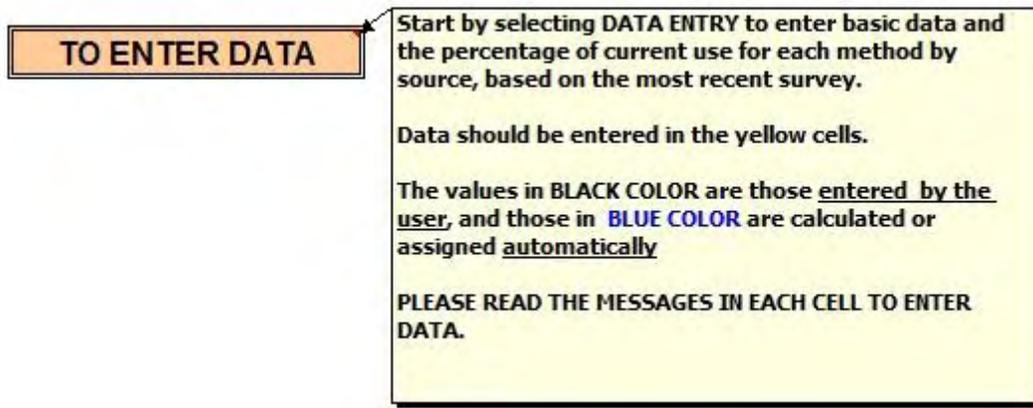
5. To preserve the “blank” version of the spreadsheet as a backup so you can open it every time you want to make a new projection, save the file (using “Save As”) with a new name related to the projection you are about to do.

## 4. Creating a New Projection of Contraceptive Needs

### 4.1. Starting the “Contraceptive Needs Spreadsheet”

Open a blank version of the spreadsheet. Select “Enable Macros” or “Enable this content” (as described in Step 5 earlier). Save the file with a new name related to the projection you’re about to do (for example, “Paraguay Ministry of Health RHS 2008”).

Instructions are embedded in the boxes with red triangles in the corners; an example is shown below for “TO ENTER DATA”. (Wherever a red triangle appears in the corner, there is a pop-up box with instructions).



**TO ENTER DATA**

Start by selecting DATA ENTRY to enter basic data and the percentage of current use for each method by source, based on the most recent survey.

Data should be entered in the yellow cells.

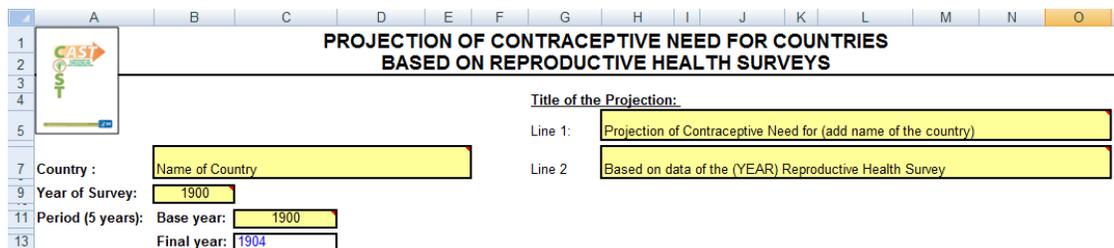
The values in BLACK COLOR are those entered by the user, and those in BLUE COLOR are calculated or assigned automatically

PLEASE READ THE MESSAGES IN EACH CELL TO ENTER DATA.

The yellow boxes, or cells, are where the required data should be entered. In some cases, data are optional (such as data relating to a male survey, but in most cases a male survey is not done); these optional cells are colored green. Begin with the Menu page.

### 4.2. Menu Page

Enter the necessary data into the yellow boxes at the top of the page.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	<b>PROJECTION OF CONTRACEPTIVE NEED FOR COUNTRIES BASED ON REPRODUCTIVE HEALTH SURVEYS</b>														
2	Title of the Projection:														
3	Line 1: Projection of Contraceptive Need for (add name of the country)														
4	Line 2: Based on data of the (YEAR) Reproductive Health Survey														
5															
6															
7	Country :	Name of Country													
8	Year of Survey:	1900													
9															
10	Period (5 years):	Base year:	1900												
11		Final year:	1904												
12															
13															

On the left:

- The name of the country
- The year of the most recent Reproductive Health Survey or Demographic and Health Survey
- The base (beginning) year of the projection (often the same year as the survey)

The program will calculate the final year of the projection (the projection covers five years, including the base year).

On the right, for the title of your projection, enter:

- The sector, organization, or region for which you are doing the projection, or if it is for the country as a whole, just the name of the country
- The year and name of the survey whose data you are using to make the projection

On this Menu page, you will also find links to all the input screens and report screens (results) in this program.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	<b>PROJECTION OF CONTRACEPTIVE NEED FOR COUNTRIES</b>														
2	<b>BASED ON REPRODUCTIVE HEALTH SURVEYS</b>														
3															
4	<u>Title of the Projection:</u>														
5	Line 1: <input type="text" value="Projection of Contraceptive Need for (add name of the country)"/>														
6	Line 2: <input type="text" value="Based on data of the (YEAR) Reproductive Health Survey"/>														
7	Country :	<input type="text" value="Name of Country"/>													
9	Year of Survey:	<input type="text" value="1900"/>													
11	Period (5 years):	Base year:	<input type="text" value="1900"/>												
13		Final year:	<input type="text" value="1904"/>												
14	<a href="#">Users Manual</a>														
16	<b>TO ENTER DATA</b>					<b>RESULTS</b>									
18	<b>DATA INPUTS</b>					<b>ESTIMATION SUMMARY *</b>					<b>NOTE:</b> After entering the information on this page, go to Data Entry page. Please enter your data in the yellow boxes. Items written in <b>BLUE COLOR</b> are calculated or assigned automatically by the spreadsheet.  <b>PLEASE READ THE MESSAGES IN EACH CELL TO ENTER DATA.</b>				
19	Data Entry: <a href="#">Basic Data Form</a>					<b>ORAL CONTRACEPTIVES</b>									
20	<a href="#">Source of Contraceptive Form</a>					IUDs									
21	<a href="#">Update Cost of Methods</a>					<b>INJECTABLES</b>									
22	<a href="#">Update CYP</a>					CONDOMS									
23	<a href="#">Review Basic Data&amp;Prevalence</a>					<b>TUBAL LIGATION *</b>									
24	See:					IMPLANTS									
25	<a href="#">Projected Prevalence</a>					Condoms Female									
26	<a href="#">Projected_Graphs</a>					Other1									
27						Other2									
28						Other3									
29						Other 4									
30						<b>POLICY MAKERS SUMMARY</b>									
31						<b>QUANTITIES TO BE ORDERED *</b>									
32						* Need additional inputs									
33															
34															
35															
36															
37															
38															
39	<a href="#">List of abbreviations:</a>														
40															
41	<b>Forecasting the Contraceptive Needs</b>					<b>This spreadsheet was designed by Susanna Binzen and Tim Johnson of the U.S. Centers for Disease Control and Prevention.</b>					<b>CONTACT INFORMATION</b>				
42	Data collected by the Reproductive Health Surveys, or similar Demographic and Health Surveys, can be used to help estimate the quantities of contraceptives that will be needed for the next five years. The methodology used here can be used to do projections for any family planning service provider listed in the survey and any source of contraceptive supply. However, the decision of what quantities of contraceptives to procure should be based on logistics (quantities of contraceptives dispensed to users) data, using the estimates from this Projection to validate those quantities.					with the considerable technical assistance and expertise of Alicia Ruiz. Funding for the development of this tool was provided by the United States Agency for International Development through Participating Agency Service Agreement HRN-P-00-97-00014.00 and Participating Agency Program Agreement GHA-T-00-08-004.					MEASURE CDC Project Division of Reproductive Health Centers for Disease Control and Prevention 4770 Buford Hwy NE, MS K-23 Atlanta, GA 30341				
43											Telephone: 770 488-5200 Fax: 770 488-6242				
44											Email: MEASURECDC@cdc.gov or ccdinfo@cdc.gov Internet: http://www.cdc.gov/reproductivehealth/surveys				
45															
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47															
48															
49															
50															
51															

Next, to get to the Data Entry form, either click on “Basic Data Form” in the Data Inputs box on the Menu page, or click on the yellow “Data Entry” tab at the bottom left of the screen.

### 4.3. Data Entry Page

#### 4.3.1. Demographic Data

Enter the necessary data into the yellow cells. For **Women of Reproductive Age**, click on the downward arrow and use the pull-down menu to select the age group of either 15–44 or 15–49 (whichever was used by the Reproductive Health Survey).

Please fill out each yellow cell with the respective value required.			
Data Item	Value	Source	
Country or Region:	Name of Country	Data on Population and number women of reproductive age can be found at	
Year of Survey:	1900	US Census Bureau	<a href="http://www.census.gov/ipc/www/idb/">http://www.census.gov/ipc/www/idb/</a>
Beginning (Base) Year:	1900	Population Data also from Population Reference Bureau	<a href="http://www.prb.org">http://www.prb.org</a>
		and, United Nations World Population Prospects	<a href="http://esa.un.org/unpp">http://esa.un.org/unpp</a>
Number of Women of Reproductive Age (15 to 44 or 49)	(15-44) ▼ (15-44)		
	No.:	0	
	Year:	1900	
Number of Men age 15-59	No.	0	(If other source please specify in the shaded cell)
	Year:	1900	
Annual Rate of Population Increase	%:	0.0	
	Year:	1900	
Percentage of Women of Rep. Age in Union	%:	0.0	
	Year:	1900	

Now enter the data that you have previously collected (see [Appendix A](#)) into the yellow boxes, or click on the highlighted links to suggested data sources to obtain that information now. For each data point you enter, enter the year of that information in the **Year** box, and to the right indicate the source where you obtained the data. If you click on the downward arrow, you will see a list of sources to choose from; click on the source you used. If your source is not listed, click on “Other” and then type the name of your source in the yellow box below. For future reference, if there was something unusual about the data or its source, or if you would like to remember how a figure was derived, you may wish to make a note of it in the yellow box (for example, if you averaged the annual rate of population increase with the rate of natural increase).

Note: If you wish to change the **Base Year** for your projection, you must do this on the Menu page.

Only enter information on the **Number of Men age 15–59** if there was a separate male survey. If there was no male survey, leave these boxes blank. (Because this information is optional, these cells are colored green instead of yellow.)

When you have finished entering these data, scroll down to the Contraceptive Prevalence section of the page.

### 4.3.2. Contraceptive Prevalence Data

In the Contraceptive Prevalence section, in the column to the right of the thick black line, titled “Survey Year (Current),” enter the **percent prevalence for each method** for the most recent survey from the data you’ve collected in the table in [Appendix A](#). Most of this information will come from a table on Current Use of Contraception in the Reproductive Health Survey report.

If the survey included a male survey component, enter the data on the **rate of men’s use of condoms**, in the row under Condoms that says “**(From Male Survey) Men’s rate:**” (This information will likely appear in a different table or chapter of the survey report, one that concerns men’s contraceptive use). Condom use as reported by men is usually very different from that reported by women. If you have data on male condom use, please go to [Appendix F](#): Calculating Condom Use with Male Survey Data.

25	Contraceptive Prevalence	Previous Surveys				Survey Year	Final Year		Go to Projected Graphs
26		Go to Statcompiler for earlier survey data : <a href="http://www.statcompiler.com/">http://www.statcompiler.com/</a>					1900	1904	
27		Year:	0	0	0	0	Projected value (entered by user)	Calculated Value	Comments
28		(Earliest)				(Current)	%	%	
29		Source:							
30			%	%	%	%	%	%	
31	<b>Modern Methods</b>								
32	Tubal Ligation (Female Sterilization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
33	Pills (OCs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
34	IUDs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
35	Injectable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
36	Condoms (Male) Women's rate:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
37	(From Male survey) Men's rate:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
38	Condoms (Female)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
39	Implant	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
40	Other1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
41	Other2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
42	Other3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
43	Other4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
44	<b>Total modern methods</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
45	<b>Total prevalence (modern &amp; traditional)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
46	<b>Traditional method (Optional)</b>								
47	Withdrawal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
48	Periodic Abst.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
49	Other 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
50	Other 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
51	<b>Total traditional methods</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
52									

You may also wish to fill in the figures for traditional method use to present a complete picture of the family planning situation. However, since the purpose of this spreadsheet is to calculate the numbers of contraceptive supplies needed, and; traditional methods

don't require any supplies, CastCost will not make any calculations based on these figures.

**Important note:** If you want to **add a contraceptive method** to the spreadsheet (such as diaphragm or vaginal foaming tablets), you must do that on this Contraceptive Prevalence page, by typing the method name into one of the “Other” columns on the left hand side. Then this method will appear in all the other tables and reports. You will also need to go to the “Cost Options & CYP” tab and enter cost information and a CYP factor for that method. (See [Appendix C](#) for a description of CYPs, Couple-Years of Protection.)

Next, **enter the prevalence data from previous surveys**, if any are available (use the “Trends in Contraceptive Prevalence” table in [Appendix A](#) to collect these data). Enter the most recent survey data (before the current survey) in the fourth yellow column, next to the Survey Year column. Enter the data from the next earliest survey (two surveys before the current survey) in the third yellow column. As you continue going back in time, you go to the next column to the left.

As you enter data from previous surveys, it is important to work your way backwards in time going to the left from the Survey Year-column. You may end up with several blank columns on the left; that is okay. If, however, you enter data into the second and third yellow columns (for example) and not the fourth, the spreadsheet will not calculate correctly. As you enter data into the boxes of the left-hand columns, a pop-up box will remind you not to enter data into those columns unless you have data from a certain number of surveys.

**Important Note:** Be sure to put the year of the survey at the top of each column in which you enter data.

When you have finished entering the historical data, the next step is to **fill in the figures for the Final Year of the projection** (five years from the base year), and write explanations for the rationale for these projections in the **Comments** column. Please keep in mind that there is not one “correct” number that should be entered here; you need to make your best guess what the prevalence will be in five years based on past trends in use of that method, knowledge of any new or existing policies that might affect the use of that method, etc. You may also wish to explore different scenarios by entering different projections here.

To help you estimate what the method-specific prevalence will be in five years, you may look at the estimates that the spreadsheet has calculated in the **Calculated Value** column (blue numbers).

You may also click on the red arrow to the right of the Calculated Value column; this will take you to the **Projected Graphs** tab. (You may also get there by clicking on the red Projected Graphs tab at the bottom of the screen.) Here, you will see two graphs for each contraceptive method. The graph on the left shows the historical and current data you have entered reformatted into the “best fitting line” (that is, a line that would best join the

data points you've entered, with data points at 5-year intervals). To its right is a graph that shows the "best fitting line" in pink, with the final data point being the prevalence that the spreadsheet has projected for that contraceptive method for five years in the future. The blue line shows the actual data points from the surveys, with the final data point being the one you have entered in the red "Projected Value" column.

Note: Until you enter data into the red "Projected Value" column, the final point of the blue line will be at zero.

If you click on the blue **Projected Prevalence** tab at the bottom of the screen on the far right, you will see the projected values and how they were calculated.

To return to the **Data Entry** page from the graphs, click on the Data Entry arrow on the top right of the page, or click on the Data Entry tab.

Although the spreadsheet calculates projected values (column with blue figures), CastCost does not use these figures for its estimation. You must still enter the values that will be used in the **Calculated Values** column. You may copy what the spreadsheet has calculated, or you may make your own estimates (or, if you like, test different scenarios). As you make your estimates, you should use your own judgment on how rapidly prevalence rates can change. You may wish to modify your projection with any information you may have on:

- New directions the family planning program or Ministry of Health may plan to take (for example, if they are planning to promote a particular method, use of that method may increase more quickly)
- Any history of shortages of contraceptive supplies that might have affected levels of use of that method in the past (for example, if there were stockouts of a short-term method such as pills, condoms, or injectables, then use of that method may have been artificially low and use may jump up if there is full supply)
- Any other relevant and available information

**Note:** Keep in mind that total contraceptive prevalence (all methods added together) generally cannot rise above 85%, and for modern methods is unlikely to exceed 80%.

You may wish to enter a brief explanation of the reason for your prevalence prediction or the rate of increase you're projecting in the **Comments** column, for future reference or to inform other readers of the spreadsheet.

### 4.3.3. Source of Contraceptives

Next, on the Data Entry page, scroll to the right to see the whole **Source of Contraceptives** data entry screen.

Information on source of contraceptive supplies (where the survey respondents go to obtain their contraceptive supplies) can be found in one of the survey tables, usually in the Contraceptive Use or Fertility Regulation chapter of the survey report.

Using the Source of Contraceptive Methods table in the survey report, enter the list of **sources** in the first column, categorizing them according to whether they are public or private sector, or “other.” Then enter the percentage of users who use that source for each method. Note that the Male Condoms category has been divided in two: data from the female survey and data from the male survey. Female respondents report on where they obtain their condom supplies; this data goes in the “Women’s rate” column. If a male survey was done, fill in the “Men’s rate” column.

**SOURCE OF CONTRACEPTIVE TO ENTER DATA**

Estimation Summary

MENU Next Tab

**SOURCE OF CONTRACEPTIVE SUPPLIES FOR EACH METHOD (Percentage of current users of each method)**

METHOD SOURCE OF CONTRACEPTIVE	Tubal Ligation	Pills (OCs)	IUDs	Injectable	Condoms Male		Condoms Female	Implant	Other1	Other2	Other3	Other4
					Women's rate	Men's rate						
<b>PUBLIC SECTOR</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PUBLIC SECTOR												
<b>TOTAL SOURCES</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>PUBLIC SECTOR</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
b	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
e	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
g	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
i	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
j	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>PRIVATE SECTOR</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
k	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
n	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
o	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>OTHER</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

If you entered an additional contraceptive method in the Contraceptive Prevalence section of the previous Data Entry page in one of the “Other” cells, that method will now appear at the top of a column in this table.

At the top of the first column (Source of Contraceptives) is a drop down box where you may **select the source or sector whose contraceptive projections you would like to see**

**in the reports.** You also have the option of selecting Total sources, which will provide the requirements for the country as a whole.

SOURCE OF CONTRACEPTIVE SUPPLIES FOR EACH METHOD (Percentage of current users of each method)							
METHOD SOURCE OF CONTRACEPTIVE	Tubal Ligation	Pills (OCs)	IUDs	Injectable	Condoms Male		C
					Women's rate	Men's rate	
Other 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other 1							
<b>TOTAL SOURCES</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0

If you are doing an estimate for which you do not have source data, you will need to enter “100” [%] for each column in one data entry line/row (for example, in row a, the first row under Public Sector) and then select that row, or sector, or Total Sources, in the pull down menu. Data have to be entered into this table for CastCost to work.

#### 4.4. Cost Options and CYP

To enter the unit price of various contraceptive methods, go to the **Cost Options & CYP** page/tab. The table presents the various contraceptive methods, with lines available for each source of contraceptive procurement. Current (2008) unit costs have already been entered for contraceptives obtained through UNFPA (the high and low end of their range of prices) or donated by USAID. You may change or update this information; links to UNFPA and USAID contraceptive price web pages are provided below the Cost Options table and in the following paragraph. You may also add cost information on supplies obtained from other sources. **To add a new source** (such as a new donor or manufacturer), click on one of the “Other” boxes in the first column and enter your new source.

SOURCE	METHOD	US\$	Tubal Ligation	Pills (OCs)	IUDs	Injectable	Condoms Male	Condoms Female	Implant	Other1	Other2	Other3	Other4
UNFPA (L)*	Low		0	0.16	0.24	0.78	0.019	0	23	0	0	0	0
UNFPA (H)*	High		0	0.63	0.31	0.84	0.028	0	34	0	0	0	0
USAID**			20	0.22	1.55	0.97	0.0328	0.59	21	0	0	0	0
Other4			0	0	0	0	0	0	0	0	0	0	0
Other5			0	0	0	0	0	0	0	0	0	0	0
Other6			0	0	0	0	0	0	0	0	0	0	0
Other7			0	0	0	0	0	0	0	0	0	0	0
Other8			0	0	0	0	0	0	0	0	0	0	0

To update the price of contraceptives obtained from UNFPA, go to <http://www.unfpa.org/public/cache/offonce/home/procurement/pid/3239>. To update the cost of contraceptives donated by USAID, go to <http://deliver.jsi.com/dhome/mycommodities/productcatalog> Web site of the DELIVER project at John Snow, Inc. For condom prices, select HIV/AIDS; for all other contraceptive methods select Family Planning.

Scroll down from the Cost Options table to find the **CYP Conversion Factors** table.

The spreadsheet uses Couple-Year of Protection (CYP) factors to calculate the quantities of contraceptive units that will be needed. For example, the CYP factor for oral contraceptives (pills) is 15, or 15 cycles per year (13 for a full year’s protection, plus 2 packets factored in for wastage). For condoms, it’s 120 per year. If you have evidence that a different factor is more appropriate for the area you’re working in, you may change it here.

CastCost calculations for the injectable hormonal contraceptive are set for the three-month Depo Provera version. If your program uses the two-month or monthly variety and you’d like to do a projection for one of those instead, then you would change the injectable conversion factor here, from 4 (for three-month injectable administered four times a year) to 6 for the two-month injectable, or 12 for the monthly. If your program provides two types of injectable—for example a 3-month and a monthly variety—then make the second type of injectable a new or “Other” method. Enter it in the Contraceptive Prevalence section of the Data Entry page (for example, as “Injectable 1 month” in one of the Other lines. Then enter its conversion factor in the corresponding line in the CYP table (the contraceptive method name will appear in blue lettering). However, you will face the problem that the survey collects prevalence data for injectables without differentiating between different kinds; you will have to divide the injectable prevalence between the two injectable types based on your own estimate or other data you may have (such as service statistics).

The factor for Tubal Ligation (female sterilization) is a little different than for other methods. The default is set for Latin America and 10 years’ protection per sterilization. You may change the factor two ways: 1) change the factor in the CYP box by selecting the cell with the factor in it and editing that cell, or 2) go to the Tubal Ligation tab (one of the blue tabs at the bottom of the screen) and, at the top left side of the screen, where it says “Region,” click on the down arrow to choose the region (and factor) you prefer.

CYP Conversion Factors (Couple Years of Protection Conversion factors)		
<b>Modern</b>		
Tubal ligation	1. Africa	8.00
	2. Asia	10.00
	3. Latin America	10.00
	4. Near East/N. Africa	8.00
	5. Other1	0.00
	6. Other2	0.00
	7. Other3	0.00
	8. Other4	0.00
	9. Other5	0.00
	10. Other6	0.00
OCs		15.00
IUDs		0.286
Injectable		4.00
Condoms		120.00
Implant		0.286
Condoms female		120.00
Vaginal foaming tablets		120.00
Other1		0.00
Other2		0.00
Other3		0.00
Other4		0.00

For a more complete explanation of Couple-Years of Protection, please go to [Appendix C](#).

## 4.5. Basic Data and Prevalence

This page summarizes the basic demographic data you have entered and the sources you used, as well as showing, and shows population figures and contraceptive prevalence rates used for each of the years of the projection. It is a reference or summary sheet, in case a user would like to see the base data behind the calculations of contraceptive quantity and is for reference only; you do not need to input data or do anything to this page to do your projection.

Projection of Contraceptive Need for (add name of the country) Based on data of the (YEAR) Reproductive Health Survey Name of Country 1900							
POPULATION DATA FOR: <b>Name of Country</b>		1900					
Period:	<b>1900</b>	1904					
<a href="#">MENU</a> <a href="#">Previous</a> <a href="#">Data Entry</a> <a href="#">Next</a>							
DATA ITEM	YEAR	VALUE	UNIT	SOURCE			
Women of Reproductive Age (15-44)	1900	0.00					
Annual Rate of Population Increase	1900	0.00	%				
% of WRA in Union	1900	0.00	%	0			
Number of WRA in Union	1900	0		* 0 % in union			
CPR: All Methods	1900	0.00	%	0			
CPR: Modern Methods	1900	0.00	%	0			
DATA ITEM	1900	1901	1902	1903	1904		
Women of Reproductive Age (15-44)	0	0	0	0	0		
WRA in union (15-44)	0	0	0	0	0		
Men 15-59	0	0	0	0	0		
Prevalence by Method among MWRA (Percent)							
DATA ITEM	1900	1900	1901	1902	1903	1904	Comments
Modern							
Tubal ligation	0.00	0.00	0.00	0.00	0.00	0.00	0
OCs	0.00	0.00	0.00	0.00	0.00	0.00	0
IUDs	0.00	0.00	0.00	0.00	0.00	0.00	0
Injectable	0.00	0.00	0.00	0.00	0.00	0.00	0
Condoms - Male	Women's rate	0.00	0.00	0.00	0.00	0.00	0
	Men's rate	0.00	0.00	0.00	0.00	0.00	0
Implant		0.00	0.00	0.00	0.00	0.00	0
Condoms - Female		0.00	0.00	0.00	0.00	0.00	0
Other1		0.00	0.00	0.00	0.00	0.00	0
Other2		0.00	0.00	0.00	0.00	0.00	0
Other3		0.00	0.00	0.00	0.00	0.00	0
Other4		0.00	0.00	0.00	0.00	0.00	0
All modern	(For MWRA)	0.00	0.00	0.00	0.00	0.00	0
Traditional							
Withdrawal		0.00	0.00	0.00	0.00	0.00	0
Periodic Abstinence		0.00	0.00	0.00	0.00	0.00	0
Other 1		0.00	0.00	0.00	0.00	0.00	0
Other 2		0.00	0.00	0.00	0.00	0.00	0
All Traditional		0.00	0.00	0.00	0.00	0.00	0

## 5. Reports

The blue tabs at the bottom of the screen and the items in the Results box on the Menu page, list the reports that the spreadsheet produces.

### 5.1. Estimation Summary

After entering all the Data Inputs, when you turn to the Estimation Summary page, you will find the completed calculations for each method and for each of the years of the projection, from the base year to five years into the future. The projection has been calculated for the Source (e.g., Total, Public Sector, Ministry of Health, Pharmacies) that you selected on the Source of Contraceptives page. To produce a report for a different source, either go to the Source of Contraceptives page and select a new source in the pull-down menu, or click on the down arrow in the “% and # of users” column and select a different source for the report.

The tables are presented with the base year first and the five-year projection last, and display the:

- Estimated number of users for each contraceptive method
- Percentage and number of users getting their supplies from the source you selected on the Source of Contraceptives page or in the “% and # of users” column of this Estimation Summary page
- Couple-Year of Prevention factor used (to change one of these factors, go to the box at the bottom of the Cost Options and CYP page)
- Estimated number of units needed of each contraceptive in the year in question
- Potential cost of these contraceptive supplies (not including the 5–25% cost of shipping)

To determine the potential **cost** of the necessary contraceptive supplies, use the pull-down menus in the **source** column. You may either choose a single source for every method for all 5 years by using the pull-down menu in the green-edged box, or you may select (or change) a source for each individual method and year by using the pull-down menu on each line. In either case, you must click on the down arrow. Choose from the prices of contraceptives that can be obtained from UNFPA (their methods have a range of prices, so you may select either the low or high end of the range of prices), or the cost to USAID Missions of the contraceptives donated by USAID, or any other sources you may have already entered on the Cost Options & CYP page. You may enter other sources and prices (such as from manufacturers or other donors) by going to the Cost Options page, and entering new sources and their prices. If you wish to enter other contraceptive methods or brands, you must do that on the Contraceptive Prevalence table on the Data Entry page.

METHOD	Estimated # of users in 1900	% and # of users getting supplies from		x CYP Conversion factor	# Units needed for 1900	What it could cost		
		PUBLIC SECTOR				Source	Unit Cost	Total Cost
						UNFPA (L)*		
Tubal ligation	0	55.0	0		0	UNFPA (L)*	0.000	0.00
OC s	0	0.0	0	15.00	0	UNFPA (L)*	0.160	0.00
IUDs	0	0.0	0	0.286	0	UNFPA (L)*	0.240	0.00
Injectable	0	0.0	0	4.00	0	UNFPA (L)*	0.780	0.00
Male Condoms - women	0	0.0	0	120.00	0	UNFPA (L)*	0.019	0.00
Male Condoms -men	0	0.0	0	120.00	0	UNFPA (L)*	0.019	0.00
Implant	0	0.0	0	0.29	0	UNFPA (L)*	23.000	0.00
Condoms female	0	0.0	0	120.00	0	UNFPA (L)*	0.000	0.00
Other1	0	0.0	0	0.00	0	UNFPA (L)*	0.000	0.00
Other2	0	0.0	0	0.000	0	UNFPA (L)*	0.000	0.00
Other3	0	0.0	0	0.000	0	UNFPA (L)*	0.000	0.00
Other4	0	0.0	0	0.000	0	UNFPA (L)*	0.000	0.00
<b>Grand Total *</b>								<b>0.00</b>

**Note:** When you change the source of procurement for one method in one year, it does not automatically change the source in the other years (unless you change it using the arrow in the box with green sides, which changes the sources for all methods in all years). For example, if you select UNFPA (H) as your source for condoms in year 1 (the first table), and you want that for your source in Years 2 and 3 as well, you will need to scroll down to the second and third tables and make the change to UNFPA (H) in the condom rows there as well.

## 5.2. Policy Makers' Summary

The Policy Maker's Summary tab provides a short report that can be printed out or shown to busy policy makers who need to see the "bottom line" but may not need all the details on number of contraceptive users, CYP conversion factors, etc. The information here is taken from the Estimation Summary. The Policy Maker's summary contains (for each of the five years of the projection) the:

- Number of units of each contraceptive method that will be needed
- Estimated cost for each contraceptive method
- Source of each contraceptive
- Total cost of all the contraceptives for that year

A summary table for all five years of the projection is included at the bottom of the annual tables.

Name of Country 1900			
Estimate of Contraceptive Supplies Needed by PUBLIC SECTOR for 1900			
	Number of Units Needed for 1900	Estimated Cost	Source
Oral Contraceptives	0	0.00	USAID**
IUDs	0	0.00	Other4
Injectable	0	0.00	UNFPA (L)*
Condoms	0	0.00	UNFPA (L)*
<b>Total</b>	<b>0</b>	<b>0.00</b>	

### 5.3. Projections by Method

To see a contraceptive projection for one method alone, select one of the individual pages designated with blue tabs:

- Oral contraceptives
- IUDs
- Injectable contraceptives
- Condoms
- Tubal ligation
- Any other methods you have entered

Not all tabs are visible; use the arrow buttons on the bottom left of the screen to scroll to the right to see the rest of the tabs. If you have entered an additional method, the blue tab will still read “Other1” (etc.), but the method name will appear near the top of the report page itself.



These pages contain tables which display, for each year included in the projection:

- Number of Married Women of Reproductive Age
- Contraceptive prevalence projected for that year for that method
- Percentage of users of that method who get their supplies from the source you selected on the Source of Contraceptive page or on the Estimation Summary page
- Estimated number of users of that method that will obtain their supplies from that source for that year
- Couple-Year of Protection factor used for that method (these factors can be changed on the Cost Options & CYP page)
- Quantity of units of that contraceptive that will be needed for that year
- Estimated cost for that quantity of that contraceptive (using the cost option you selected on the Estimation Summary page)

### 5.4. Quantities to be Ordered

This section will help logistics system staff and those responsible for ordering or procuring contraceptive supplies calculate the quantities to be ordered for the base year and for several years into the future. (If you do not see the red “Quantities to be Ordered” tab, use the arrow buttons on the lower left of the screen to scroll to the right and see the rest of the tabs.)

The spreadsheet automatically supplies the estimated contraceptive consumption figures (in blue) based on the survey data, but the user must enter the other information. These calculations will be more accurate if dispensed-to-user data (i.e., the number of contraceptive units that were dispensed to contraceptive users that year) are used in place of the survey-based estimated consumption figures. If you have actual dispensed-to-user data, enter those figures in the “Actual Consumption” column.

Programs often order and supply more than one brand or formulation of a contraceptive method. Unfortunately, this tool cannot be that specific, as the Reproductive Health Surveys and Demographic and Health Surveys collect information only by method, and not by specific brand or formulation. Therefore, this program can help to determine how many cycles of pills (for example) the program needs overall, but not how many of each brand.

As these calculations are based on survey data and not consumption data, they are less accurate and should not be used for ordering supplies, but rather for validating consumption-based forecasts. If you have actual consumption/dispensed-to-user data, the calculations will be more accurate.

**Beginning-of-year stock:** This figure should include stock quantities at all levels of the supply system at the beginning of the time period of the forecast (or at the beginning of the year, or estimated for the beginning of the year). A physical inventory conducted at all levels of the system would provide these figures. Otherwise, the stock balances have to be estimated, using data from the contraceptive logistics management information system.

**Shipments received/on order:** The number of contraceptive units in any shipment that are expected or known to be in process but are not included in the Beginning-of-year stock, or shipments that have arrived since the Beginning-of-year stock count and are available for distribution, should be entered here. Any products being held in customs at the beginning of the year should also be included here. If supplies are being transferred in, enter that number here as well.

**Actual consumption:** If you have dispensed-to-user data (for any or all methods), enter the data in this column.

**Estimated consumption:** These figures are supplied by the spreadsheet based on its calculations.

**Losses/adjustments:** The Beginning-of-year stock should include only those products that are useable and likely to remain useable for the duration of the year. Any products that have been damaged, are about to expire, are transferred out of the program (such as loaned to another program), and any adjustments for data errors should be entered here.

**Desired end-of-year stock:** This number includes the safety stock and lead time stock. If the program uses the Maximum/Minimum inventory control system and is a mature, well-established program, then the Desired stock would be the sum of all the

Maximum and Minimum Months of Supply at each level of the system, divided by two. In a less reliable system, the figure should be the sum of all the Maximum stock levels. In either case, the resulting number of months of supply should be multiplied by the Average Monthly Consumption quantity for that method.

The Desired end-of-year stock for one year becomes the Beginning-of-year stock for the next year. It can be overwritten by the actual stock level when that figure becomes available.

**Net supply requirement (calculated with Actual consumption):** If you entered dispensed-to-user data in the Actual consumption column, then use the calculations in this column to see how much needs to be ordered, rather than in the Net supply requirement column.

**Net supply requirement:** The spreadsheet will automatically calculate the figures in this column, unless you have entered dispensed-to-user data in the Actual Consumption column. If the figures are negative, then this is an estimate of the quantity the program needs to procure for that year. If the numbers are positive, then the program has an oversupply of that contraceptive product and no procurement is necessary. Instead, the program may wish to take steps to make sure the products are used before they expire.

For more detailed information on making procurement calculations, see Chapter 11, Requirements Estimation of the JSI/DELIVER book *The Contraceptive Forecasting Handbook for Family Planning and HIV/AIDS Prevention Programs* at [http://deliver.jsi.com/dlvr\\_content/resources/allpubs/guidelines/ContForeHand.pdf](http://deliver.jsi.com/dlvr_content/resources/allpubs/guidelines/ContForeHand.pdf).

## Appendix A: Collecting the Necessary Data for the Projection

Before entering data into the spreadsheet, you will need to collect the following information (you may use one of the tables on the following pages to record these data, if you wish, or print out and use the table as it appears on the Data Entry Form tab of the spreadsheet):

**Number of Women of Reproductive Age:** Go to the *Census Bureau's International Data Base* site at <http://www.census.gov/ipc/www/idb/>. Click on "Data Access" in the yellow bordered box. Click on the yellow "Age Groups" tab. Skip over the "Region" box. In the "Country" box, select the appropriate country. In the "Age Group" box, select "Other Age Groups." In the "Select Year(s)" box, select the appropriate year (the current year will be highlighted). Then click "Submit." In the table that is produced, the fourth row shows the population for those 15–44, and the fifth row shows those 15–49. Print out or note down the number of women aged 15–44 (or 15-49).

Alternatively, you can obtain this information from the *United Nations World Population Prospects Data Base* (<http://esa.un.org/unpp>). Among the yellow boxes on the left, select Panel 2: Detailed Data. In the "Select Variables" box, scroll down and select "Women aged 15–49," then select Country and Start Year, and Display.

If the survey included a male survey component, you should also enter the number of men. To obtain the data for **men** aged 15–59, click on the yellow "Region" tab. In the "Table" box, click on the down arrow to see the full menu of choices, and select "Midyear Population by Age and Sex." Scroll down past the "Region" box to the "Country(ies)" box and select the appropriate country. Next, scroll down to the "Year(s)" box and select the base year for your projection (the default is the current year). Scroll to the bottom of the screen and click on the "Submit" button. You will now see a table that gives you the male and female population for each 5-year age group. You will need to add up the number of men aged 15–59. This can be done by selecting the appropriate rows (you will have to copy the whole row, not just the figures for males) and copying them into an Excel file. Next select the cell at the bottom of the column of male population numbers (the cell directly under the last number), click on the Auto sum button on the toolbar (the icon is a sigma, or  $\Sigma$ ), and hit Enter. (In Excel 2007, select the Formulas ribbon, and the auto sum function is in the upper left.) The total will appear in your selected box.

To get the **annual rate of population increase**, again go to: <http://www.census.gov/ipc/www/idb>, click on Data Access, then Region, and on the pull-down menu in the "Table" box, select "Crude Birth and Death, Net Migration, & Growth Rates, Births, Deaths, & Migrants." Scroll down past the "Region" box to the "Country(ies)" box and select the appropriate country. Next, scroll down to the "Year(s)" box and select the base year for your projection (the default is the current year). Scroll to the bottom of the screen and click on the "Submit" button. Note the Rate of Natural Increase for the most recent year. Also note the Growth Rate (percent). If the two figures

are different, it is probably due to migration, and you may wish to use an average of the two. You may also wish to check with the Population Reference Bureau (World Population Data Sheet, or the PRB Datafinder at <http://www.prb.org/datafind/datafinder.htm>, requesting the Rate of natural increase).

To determine the **percentage of Women of Reproductive Age who are in union**, go to the Reproductive Health Survey or Demographic and Health Survey report. Tables describing the characteristics of the women surveyed will provide the percentage of women who are married and in informal unions. This information can also often be obtained from the MEASURE DHS STATcompiler at <http://www.statcompiler.com/> (Go to Build a Table, and under “Other Proximate Determinants of Fertility,” select “Current Marital Status,” and then “Married” and “Living together.”)

For **Contraceptive Prevalence Rate (CPR), All Methods**, go to the Reproductive Health Survey report. Under the Family Planning chapter, there should be a table showing current use of contraception. Note down the *current* use (not ever use) of **each modern method**, as well as the total prevalence for **all modern methods**, and the prevalence for **all methods** (modern and traditional). (You may make a note of the prevalence of use of traditional methods if you wish, but as they do not involve contraceptive supplies, their data do not have to be entered into this spreadsheet.) This information can also be found on the STATcompiler.

## Data Collection Page

PROJECTION OF CONTRACEPTIVE NEED FOR COUNTRIES									
Name of Country 1900									
Please fill out each yellow cell with the respective value required.									
Data Item	Value				Source				
Country or Region:	Name of Country				Data on Population and number women of reproductive age can be found at				
Year of Survey:	1900				US Census Bureau <a href="http://www.census.gov/ipc/www/idb/">http://www.census.gov/ipc/www/idb/</a>				
Beginning (Base) Year:	1900				Population Data also from Population Reference Bureau <a href="http://www.prb.org">http://www.prb.org</a>				
and, United Nations World Population Prospects <a href="http://esa.un.org/unpp">http://esa.un.org/unpp</a>									
Number of Women of Reproductive Age (15 to 44 or 49)	(15-44) ▼	(15-44)							
	No.:	0							
	Year:	1900							
Number of Men age 15-59	No.:	0							
	Year:	1900							
(If other source please specify in the shaded cell)									
Annual Rate of Population Increase	%:	0.0							
	Year:	1900							
Percentage of Women of Rep. Age in Union	%:	0.0	Demographic and Health Survey (DHS) ▼						
	Year:	1900	Demographic and Health Survey (DHS)						
Contraceptive Prevalence	Previous Surveys				Survey Year	Final Year		Go to Projected Graphs	
	Go to Statcompiler for earlier survey data : <a href="http://www.statcompiler.com/">http://www.statcompiler.com/</a>				1900	1904			
Year:	0	0	0	0	(Current)	Projected value (entered by user)	Calculated Value		
Source:	(Earliest)						Comments		
Modern Methods	%	%	%	%	%	%	%		
Tubal Ligation (Female Sterilization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Pills (OCs)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
IUDs	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Injectable	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Condoms (Male) Women's rate:	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
(From Male survey) Men's rate:	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Condoms (Female)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Implant	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other2	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other3	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other4	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
<b>Total modern methods</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		
<b>Total prevalence (modern &amp; traditional)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		
Traditional method (Optional)									
Withdrawal	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Periodic Abst.	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
<b>Total traditional methods</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>		

\*Use of male condoms as reported by female survey respondents

Or:

**Data Collection Form**

Data Item	Value	Source
Beginning (Base) Year:		
Country:		
Number of Women of Reproductive Age <input type="checkbox"/> 15–44 <input type="checkbox"/> 15–49	Year: _____	<input type="checkbox"/> U.S. Census Bureau <input type="checkbox"/> UN World Population Prospects Data Base <input type="checkbox"/> Local source
Number of Men age 15–59	Year: _____	<input type="checkbox"/> U.S. Census Bureau <input type="checkbox"/> UN World Population Prospects Data Base <input type="checkbox"/> Local source
Annual Rate of Population Increase	Year: _____	<input type="checkbox"/> U.S. Census Bureau <input type="checkbox"/> Population Reference Bureau World Population Data Sheet <input type="checkbox"/> UN World Population Prospects Data Base <input type="checkbox"/> Local source
Percentage of Women of Rep. Age in Union	Year: _____	<input type="checkbox"/> Reproductive Health Survey (RHS) <input type="checkbox"/> Demographic and Health Survey (DHS)
Contraceptive Prevalence		RHS or DHS ( <i>Current</i> use of contraception)
Tubal Ligation		
Pills		
IUD		
Injectable		
Condom*		
Implant		
Other		
Other		
Other		
<i>Total modern methods</i>		
Total prevalence (modern & traditional)		RHS or DHS
Male condom use, reported by males		Male survey

\*Use of male condoms as reported by female survey respondents

On the **Data Entry** page, in the **Contraceptive Prevalence** section, enter prevalence data for each method from the current survey and from all available previous surveys. This will allow you to see trends in use for each method and to estimate prevalence five years into the future. Note that the earlier surveys are on the left and the more recent on the right. Data from past surveys can often be found in the StatCompiler tool managed by MEASURE DHS at <http://www.statcompiler.com>.

### Trends in Contraceptive Prevalence:

Method	Earliest survey: _____	Survey: _____	Survey: _____	Survey before most recent: _____	Most recent survey: _____
Tubal ligation					
Pills (OCs)					
IUD					
Injectable					
Condoms*					
Implant					
Other					
Other					
Other					
<b>Total modern</b>					

\*Use of male condoms as reported on the women’s survey questionnaire; appears as “Women’s rate” on Prevalence page

Look for trends in use of each method – is use holding steady? Increasing? Declining? By how much between each survey? (You may click on the “Go to projected graphs” arrow, or select the Projected Graphs tab, to see the trend data plotted on a chart.)

As you make your estimates, you should use your own judgment on how rapidly prevalence rates can change. You may wish to modify your projection with any information you may have on:

- New directions the family planning program or Ministry of Health may plan to take (for example, if they are planning to promote a particular method, use of that method may increase more quickly)
- Any history of shortages of contraceptive supplies that might have affected levels of use of that method in the past (for example, if there were stockouts of a short-term method such as pills, condoms, or injectables, then use of that method may have been artificially low and use may jump up if there is full supply)
- Any other relevant and available information

Keep in mind that total contraceptive prevalence (all methods added together, modern and traditional) generally cannot rise above 85%. Modern method use rarely exceeds 80%.

You can also test different future scenarios by entering different prevalence figures in the “Projected Value” [red letters] column to see the implications for contraceptive quantities and cost.

<b>Method</b>	<b>Five years from survey:</b>	<b>Comments/Rationale behind projections</b>
<b>Pills</b>		
<b>IUD</b>		
<b>Injectable</b>		
<b>Condoms*</b>		
<b>Implant</b>		
<b>Other</b>		
<b>Tubal ligation</b>		
<b>Vasectomy</b>		
<b>Total modern</b>		

You will also need to collect data on the **Source of contraceptive supplies**—that is, where contraceptive users go to obtain their supplies or services. This information comes from the survey, usually from a table named “Source of Contraceptives.” It can also be obtained from the MEASURE DHS StatCompiler (<http://www.statcompiler.com>), although the list of sources may be less detailed.

The information is entered into the Data Entry page, in the Source table on the right hand side that looks like this:

**SOURCE OF CONTRACEPTIVE**

TO ENTER DATA

Estimation Summary

MENU

Next Tab

**SOURCE OF CONTRACEPTIVE SUPPLIES FOR EACH METHOD (Percentage of current users of each method)**

METHOD	Tubal Ligation	Pills (OCs)	IUDs	Injectable	Condoms Male		Condoms Female	Implant	Other1	Other2	Other3	Other4
					Women's rate	Men's rate						
<b>SOURCE OF CONTRACEPTIVE</b>												
<b>PUBLIC SECTOR</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PUBLIC SECTOR												
<b>TOTAL SOURCES</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>PUBLIC SECTOR</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
b	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
e	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
f	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
g	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
i	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
j	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>PRIVATE SECTOR</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
k	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
l	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
n	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
o	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>OTHER</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Appendix B: Sample Data for Spreadsheet

Here are some sample data in case you would like to test the spreadsheet. The data are from the Paraguay 2008 Reproductive Health Survey.

Data Item	Value	Source
Beginning (Base) Year:		
Country:		
Number of Women of Reproductive Age <input checked="" type="checkbox"/> 15–44 <input type="checkbox"/> 15–49	1,488,903 Year: 2008	<input checked="" type="checkbox"/> U.S. Census Bureau <input type="checkbox"/> UN World Population Prospects Data Base <input type="checkbox"/> Local source
Number of Men age 15–59	Year: _____	<input type="checkbox"/> U.S. Census Bureau <input type="checkbox"/> UN World Population Prospects Data Base <input type="checkbox"/> Local source
Annual Rate of Population Increase	2.4% Year: 2008	<input checked="" type="checkbox"/> U.S. Census Bureau <input type="checkbox"/> Population Reference Bureau World Population Data Sheet <input type="checkbox"/> UN World Population Prospects Data Base <input type="checkbox"/> Local source
Percentage of Women of Rep. Age in Union	53.9% Year: 2008	<input checked="" type="checkbox"/> Reproductive Health Survey (RHS) <input type="checkbox"/> Demographic and Health Survey (DHS)
Contraceptive Prevalence		RHS or DHS ( <i>Current</i> use of contraception)
Tubal Ligation	9.9	
Pills	20.0	
IUD	12.8	
Injectable	20.0	
Condom*	14.2	
Implant		
Other		
Other		
Other		
<i>Total modern methods</i>	76.9	
Total prevalence (modern & traditional)		RHS or DHS
Male condom use, reported by males		Male survey

\*Use of male condoms as reported by female survey respondents

### Trends in Contraceptive Prevalence:

Method	Earliest survey: <u>1995</u>	Survey <u>1998</u>	Survey before most recent: <u>2004</u>	Most recent survey: <u>2008</u>
Tubal ligation	6.8	8.0	11.5	9.9
Pills (OCs)	13.5	13.1	15.0	18.0
IUD	7.6	11.1	11.5	12.3
Injectable	6.2	7.5	10.4	16.5
Condoms*	6.5	7.3	11.9	13.2
Implant				
Other				
<b>Total modern</b>				

\*Use of male condoms as reported on the women's survey questionnaire; appears as "Women's rate" on Prevalence page

### Projections for Contraceptive Prevalence in 2012:

Method	Five years from survey: 2012	Comments/Rationale behind projections
Pills		
IUD		
Injectable		
Condoms*		
Implant		
Other		
Tubal ligation		
Vasectomy		
<b>Total modern</b>		

**For the Source of Contraceptive Table on the Basic Data Page:**

SOURCE OF CONTRACEPTIVE								
SOURCE OF CONTRACEPTIVE	Tubal Ligation	OC s	IUDs	Injectable	Condoms Male		Implant	Vaginal Methods
					Women's rate	Men's rate		
<b>PUBLIC SECTOR</b>								
MSP y BS	32.8	30.7	57.4	14.3	8	0	0	0
Hosp. Militar	1.2	0	1	0.6	0.1	0	0	0
Hosp. de C.	2.4	0	1.3	0	0	0	0	0
Cruz Roja	3.7	0.1	1.9	0.2	0	0	0	0
Hos./Clinic	10.5	0.3	1.8	1	0	0	0	0
Hosp. Matern.	1	0	1	0.5	0.3	0	0	0
<b>PRIVATE SECTOR</b>								
Farmacia	0	61.1	0	75.7	85.5	0	0	0
Sanatorio	27.8	0.5	16.1	0.8	0.2	0	0	0
Clinicas o M	8.2	1.2	12.2	2.4	0.2	0	0	0
Otro y No sabe	2.7	3.4	5.5	2.2	1.2	0	0	0
Missing	0.3	2.7	1.8	2.3	4.5	0	0	0
Brasil/Argentina	9.4	0	0	0	0	0	0	0
<b>OTHER</b>								
Other1	0	0	0	0	0	0	0	0

MSP y BS = Ministerio de Salud Publico y BS

Hosp. Militar = Hospital Militar y Policial

Hospit. De C = Hospital de Clinicas/Maternidad Nacional

Hosp/Clinic = Hospital/Clinicas de IPS

Hosp. Matern = Hospital Materno Infantil

Sanatorio = Sanatorio/Hospital Privado

Clinicas o M = Clinicas or Medico Privado

Missing – Missing from table

## Appendix C: Couple-Years of Protection

The Couple-Years of Protection (CYP) concept was first developed in Pakistan in the mid-1960's, to help in making comparisons of levels of total contraceptive coverage in different geographic areas (provinces and districts), where the mix of methods among these areas varied widely. This concept was later developed into a simple program tool for assessing the amount of "protection" against unwanted pregnancy that is provided to users in family planning programs by a quantity of contraceptives.

The basic idea is that each unit of each contraceptive method provides a certain amount, or duration, of protection, but that this duration varies by method. Furthermore, a quantity of contraceptives dispensed to family planning users will (theoretically) provide a specific quantity of Couple-Years of (contraceptive) Protection. The converse of this concept, which is our main focus in forecasting, is that if we wish to serve a certain number of clients, and have a reasonably accurate idea of what methods they'll use (such as based on survey data), we can calculate the quantities of each contraceptive method that will be required.

Some simple examples illustrate the concept, and its application to a program. Consider first a cycle of contraceptive pills. This provides a couple with 28 days, or 4 weeks, of contraceptive protection if used properly. To provide a year of protection would require 13 cycles, since 4 weeks is one-thirteenth of a 52-week year. This is true whether one woman uses all 13 cycles, or 13 women use one cycle each, or two women use respectively 6 and 7 cycles—all would count as one CYP. For a program to estimate how many CYPs it has provided by dispensing pill cycles, it can simply divide the number of cycles by 13. For example, if Clinic A dispenses 390 cycles of pills in a year, this equals 30 "couple-years of protection", regardless of how many women actually received these pills. In practice, one typically finds that there is some loss or other non-use of pills, and allowing for this "wastage" raises the appropriate factor to 14 or 15 cycles per actual year of protection. Using the "standard" adjusted estimate of 15 cycles per CYP (as shown in the table of factors) would reduce the CYPs from the 390 cycles to 26 CYPs ( $390 \div 15 = 26$  CYPs).

Similar reasoning applies to injectables. If we are using Depo-Provera, for example, which provides 3 months of protection; this means that it takes 4 injection doses to provide one CYP. In our clinic example, if 100 injections have been given in a year, this number divided by 4 yields the total of 25 CYPs provided by this method.

For condoms and vaginal foaming tablets, the factor is based primarily on the average number of uses of the method by a woman (or couple) in a year, but this needs to be adjusted for substantial levels of incorrect use and wastage. Different programs will have different factors, but we will use the "default" value of 120 per year, which includes the correction for wastage and improper use. In our example above, if the clinic dispenses 3,000 condoms in the year, it is credited with  $3,000/120 = 25$  CYPs for condoms.

For these "supply-based" methods, each unit of supply, or unit that is "dispensed to user", provides only a fraction of one CYP. For example, one cycle of pills is 1/15<sup>th</sup> of a CYP, and one injection of Depo Provera is 1/4<sup>th</sup> of a CYP.

While the concept remains the same for "clinical" methods (mainly IUDs and sterilization, but also hormonal implants such as Norplant), the way we visualize the calculation is a little different, because on average one of these contraceptive units provides more than one year of protection. Take the IUD. For some women it may provide only a few months of protection before it is expelled or removed, while for others it may provide more than five years. If studies have shown that for the average woman, the IUD provides 3.5 years of protection, this is equal to 3.5 Couple Years of Protection per IUD. Ten IUDs provided by our clinic will yield  $10 \times 3.5 = 35$  years of protection.

Therefore, for these long-lasting clinical methods, we *multiply* the number of contraceptive units dispensed to users (by the number of years of protection conferred) rather than *divide* (by the number of units needed to provide a year's worth of protection) in order to calculate CYPs. Note, most of this protection will be provided in subsequent years. However, in an ongoing program, some of our clients will be receiving IUD protection in this year from insertions in prior years, so this remains valid as a simple indicator of protection provided by this method. Norplant has a similar level of protection as the IUD, but let us consider the even longer duration of protection provided by sterilization. In this case, protection is provided from the time of sterilization until the woman would naturally cease to be at risk of pregnancy. In computing CYPs for sterilization, there is usually some discounting of the total years, because in reality the risk of pregnancy declines sharply toward the end of the theoretical reproductive span. If we assume ten years, then in our example two sterilizations would give us 20 CYPs. Again, most of this protection would be conferred in later years, but in this year the population served by our clinic would include a number of women sterilized in previous years, so that this would still give a reasonable aggregate of CYPs "achieved" by this clinic.

In the above example, this clinic can claim credit for a total of 131 CYPs, of which 55 are from clinical methods (35 IUDs and 20 sterilizations), and the remaining 76 from pills (26), injectables (25), and condom (25) distributions. However, while this illustrates a common application of the CYP concept, this is not the focus of the present exercise, which is to convert numbers of estimated users of different methods into forecasts of the number of contraceptive units a program will need in order to serve them.

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In the Contraceptive Projection spreadsheet, we use the CYP factors to convert the number of people who are likely to use a method into the number of contraceptive units that they will need for a year. Thus, if the survey figures indicate that 1,000 women will be using oral contraceptives, the spreadsheet will indicate that 15,000 cycles of pills will be needed.

With the long-acting methods, however, the computations get more complicated; we multiply the number of users by the reciprocal of the CYP factor (for example, the IUD's 3.5 years becomes 1/3.5 or 0.286). To compare the contraceptive requirement calculation for a long-acting method such as the IUD or Norplant with the illustration we used for pill cycles, consider as an example that the survey or clinic service statistics show there are 500 users of IUDs. To maintain this level, the question is how many IUDs will need to be inserted per year? Since there are 500 users, and an IUD will on average provide 3.5 years of protection, we can say that 500 divided by 3.5 will be the approximate number of IUDs that can be expected to be expelled or removed, and will need to be replaced, to keep the numbers of users constant. 500 divided by 3.5 is 143 new insertions required. (Note that dividing 500 by 3.5 is equivalent to multiplying 500 by 0.286, since 1/3.5 equals 0.286.) Therefore, this spreadsheet calculates the number of IUDs and hormonal implants needed, based on average duration of use, to maintain the prevalence you enter. (The spreadsheet also does this calculation for sterilization, although no individual supplies are required for this method).

At present, there is no established CYP factor for Emergency Contraception, as it is not a method per se (but rather to be used for emergency purposes, after instances of unprotected sex) and not enough is yet known about how it is actually used (i.e., are there people who use it regularly, or for several instances before selecting a regular method, or only once or twice in their lives).

Note, in our CYP Conversion Factors sheet, we have given values that are based fairly closely on a compilation of world and regional experiences. However, if your program has well-documented evidence to justify using somewhat different factors, you have the option of substituting those values for the program "default" factors.

### Summary of Couple-Year of Protection Information

Method	Protection Provided	Average Protection Provided	Quantity needed for 1 year of protection	Quantity if factoring in wastage	To convert quantities dispensed into CYPs	To convert # users into quantities needed
Orals	28 days		13	15	÷ 15	× 15
<b>Injectable</b>						
3-month	3-4 months	4	4	4	÷ 4	× 4
2-month	2-3 months	4	6	6	÷ 6	× 6
1-month	1 month	1	13	13-14	÷ 13	× 13
IUD	5 years	3.5 years	1*	1*	× 3.5	÷ 0.286
Condoms	1 act of int.	1/120 <sup>th</sup> yr	120	150	÷ 120	× 120
<b>Implant</b>						
5-year	5-6 years	3.5 years			× 3.5	÷ 0.286
2-year	2 years	2			× 2**	÷ .5
Sterilization	Varies	8-10 years		Not applic.	× 8-10	÷ 8-10

\* On average, actually 0.236, but one cannot have a fractional number of insertions.

\*\*As this is a relatively new method, not enough data have been collected to develop a definitive factor.

## Appendix D: Trouble-Shooting

If you open Excel, and then open the Contraceptive Projection Spreadsheet and get a message that:



This means your Macro Security Level is set too high. You need to close CastCost and go to the Tools menu. Point to Macro, and then click Security. Click on **Medium**. Click OK. Then open the Spreadsheet again, and you should get the message about enabling Macros. Click on Enable Macros.

### Incomplete Graphs

**There are no lines on my graphs for the historical data, only the current and projected years.**

On the Data Entry page, make sure you have entered the year of the surveys at the top of the columns of historical prevalence data. If no years have been entered, the default data points remain on the x axis.

Note: You **must** enter data into the red “Projected Values” column for the graphs to work; it will not use its own calculated projected values (blue column) for the graphs.

**I have entered historical survey data from past surveys, as well as the current survey, but nothing appears in the Calculated Value column for the spreadsheet-generated projected prevalence, and the graphs show only the blue (data entered) points and lines and no pink (calculated by spreadsheet) lines.**

Go to the Data Entry page, and check how you have entered the historical data. It is very likely that you have less than four years of historical data, but have entered the data in the columns furthest to the left, and the third and fourth columns are empty. The way the spreadsheet is set up, you need to work from the Current Survey column to the left, going back in time. Thus, if you have data from only one earlier survey, you should enter it in the fourth column, immediately to the left of the Current Survey column. If you have data from two past surveys, you should enter them in the third and fourth columns, with the older data in the third column. If you have data from three past surveys, use the second, third, and fourth columns, with the earliest data in the second column, etc.

## **Contraceptive Method Not Listed**

**Our program provides spermicides, and data on spermicide use were gathered by the survey, but that method is not on the spreadsheet.**

To enter a new method, go first to the Data Entry page and scroll down to the Contraceptive Prevalence section. There are several rows beneath the Implant row that are shaded and labeled Other 1, 2, 3, etc. Select one of these cells, and type in the contraceptive method you would like to add. You will now find that this method appears in all the other tables: Data Entry/Source of Contraceptive; Cost Options & CYP; Estimation Summary; Prevalence by Method (on the Basic Data & Prevalence tab); and there is an individual report for that method (although the blue tab at the bottom will still read Other 1, 2, etc., the method name will appear on the report).

**We provide two different kinds of pills (or injectables, IUDs, etc.) in our program/country, but the spreadsheet only has room for one.**

You can always add a second kind of pill, injectable, IUD, etc. by entering it into one of the “Other” lines on the Data Entry page under Contraceptive Prevalence, and it will then appear in all the other tables.

However, most surveys do not report on specific brands in their method categories, so please note that if that second kind of pill etc. is not also on the survey questionnaire, you will not have the necessary data on the prevalence of its use and where users obtain it (source). You would have to estimate those percentages, which would make your whole estimate less accurate.

## **Lack of Source Data**

**I’m doing a very quick-and-dirty projection for a whole country, and I don’t have the data on where users get their contraceptive supplies (source data). The CastCost Estimation Summary report is telling me the number of users of the methods, but not the quantities or the cost.**

Go to the Source of Contraceptive section of the Data Entry page, and enter “100” (for 100%) in each column along one row (for example, line a, the first line under Public Sector). Then select that row in the pull down menu, or select Total Sources. The report will then show you the quantities needed and the cost for 100% of users (the same as it would for Total Sources if you had source data).

**I would like to include several methods with very low prevalence in my projection (such as implants and spermicides), but the survey report does not include them in the Source of Contraception table. How can I obtain this information?**

Surveys collect source information for all contraceptive methods, but may not publish them if the usage is very low. To obtain the data, contact the organization that conducted (or provided technical assistance to) the survey (usually CDC for RHS or ORC/Macro for DHS) and request the data.

If the method is so little used, however, it may not be worth the effort of contacting the survey assistance organization. If you choose not to get the source data, then in the Source table on the Data Entry page, enter “100” [%] on one of the lines (in whichever is the likeliest sector, Public or Private) and that way you’ll still get quantity and cost information when you generate the estimate for Total Sources or for that sector.

Note: If prevalence of a method is very low, it may not be accurately picked up by a survey. It may be a method favored by a small sub-population (such as commercial sex workers), and therefore figures for the population as a whole – including source figures – may be misleading. If this is the case, you may wish to consider using other data sources or criteria for determining appropriate quantities.

### **Methods Grouped Together**

**I am doing a projection for all the methods available in the country, but the survey report has grouped together the prevalence for spermicides, diaphragms, and implants into one number. How do I do the projection?**

On occasion, survey reports or the DHS Statcompiler will combine the prevalence rates for several little-used methods into one rate. Methods cannot be combined in CastCost because they all have different CYP factors, so calculating the needed quantities – which is done using CYP factors – would be impossible. Therefore, if you want to do an estimate for those methods, you will have to obtain the disaggregated data (i.e., separate prevalence rates for each method). If the data come from a Reproductive Health Survey, then e-mail [drhinfo@cdc.gov](mailto:drhinfo@cdc.gov) to request the data you need. If they come from a Demographic and Health Survey, e-mail your request to [info@measuredhs.com](mailto:info@measuredhs.com).

Please see note above about low-prevalence methods.

**Note: Remember, when you add methods to CastCost (in the “Other” boxes), you also need to go to the “Cost Options & CYP” tab and add their cost (price) information and their CYP factors.**

### **Can’t Get Reports for Different Sources**

**CastCost is set up for me to get a report for the country as a whole (“Total Sources”), but now I want a report for just the Ministry of Health sources. When I select that on the Source of Contraceptive table, nothing changes.**

If you are using Windows 2007, then the problem is with the security setting of the Macros. Go to the Menu page, and near the upper left corner is a message that says “**Security Warning** Macros have been disabled.” Click on “Options” and then select “Enable this content” and then “OK.” The security warning will disappear.

## **Appendix E: Testing Different Scenarios**

### **How do we find out how much will it cost if we switch to a different source/manufacturer of condoms (or pills, injectables, etc.) in Years 4 and 5?**

Go to the Cost Options & CYP page. In the first column, Source, enter this new source or manufacturer in one of the “Other” lines. Then enter the unit cost in the appropriate method column and cell.

If you want to see how this will affect the total budget, go to the Estimation Summary sheet and, in the reports for years 4 and 5, click on the arrow in the Source column and select the source you have just entered into Cost Options. The spreadsheet will automatically recalculate the cost using those new figures.

Then you can go to the individual report for Condoms, where you will find the estimates for condoms alone, and the table will show the costs from the new source. Note: You cannot change the source and price from this report; source can only be selected/changed on the Estimation Summary page.

### **How do we find out the cost and procurement implications if a greater proportion of our family planning clients used longer-acting or permanent methods five years from now?**

#### **How do we change the method mix?**

### **Our country needs to increase its contraceptive prevalence from 40 to 50%. How many contraceptives will we need, and what will the cost be?**

The CastCost spreadsheet does not look at the method mix per se, but rather looks at the prevalence of each method (without adding them up to 100% of “all users”). To see the implications of a different method mix, including switching to longer-acting methods, or of increasing prevalence overall, you would go to the Data Entry page, to the Contraceptive Prevalence section on the lower left, and enter prevalences for each method, either in the current (Survey Year) column or in the Final Year/Projected Value (red letters) column. As you enter the new prevalences, the spreadsheet will tally up total prevalence; it is up to you to determine the method mix that will comprise the desired percentage (in this case, 50%). Do keep in mind that total prevalence will never be 100%; in fact, is not likely to rise above 85%, and modern method use will rarely exceed 80%.

To see the cost and quantity implications of the new prevalences you have entered, go to the Estimation Summary page and look at the first table (if you entered new prevalences into the current/Survey year column) or the last table at the bottom (if you entered them into the Final Year/Projected Value column). You may also click on the red “Go to Projected Graphs” arrow for a graphic representation of the scenarios you are testing.

**Can we use this spreadsheet to do projections for AIDS condoms or other commodities?**

As long as you have a reasonably good idea of the size of the population for which you're doing the projection and an annual rate of use of the commodity, you could use this spreadsheet for those purposes. You would add the commodity in one of the "Other" lines in the Data Entry/Contraceptive Prevalence table, add its data to the Source and Cost tables, and add its annual rate of use to the CYP table.

Note: All contraceptive prevalence (except male condom, men's rate) will be applied to the number in the cell for number of women of reproductive age in union. If you are using the spreadsheet for special populations where your projection base is not survey data, you should probably make a note of this special population in a grey cell on the data entry page, and change "Percentage of Women of Reproductive Age" to 100%. The projection, then, would be just for this special population, and if you have more than one special population, you would have to do a separate projection for each.

**If you encounter any problems or would like to test any scenarios that are not mentioned in these appendices**, please contact us. We would be happy to try to solve the problem or determine how the spreadsheet can be manipulated to produce the scenario you desire. We would also be interested in hearing about any solutions or other uses for the spreadsheet that you have developed, as well as any suggestions you have for corrections or improvements to the CastCost spreadsheet. Please contact us at:

MEASURE CDC Project  
Division of Reproductive Health  
Centers for Disease Control and Prevention  
4770 Buford Hwy NE, MS K-23  
Atlanta, GA 30341

Telephone: 770 488-5200  
Email: [MEASURECDC@cdc.gov](mailto:MEASURECDC@cdc.gov) or [drhinfo@cdc.gov](mailto:drhinfo@cdc.gov)

## Appendix F: Calculating Condom Use with Male Survey Data

Condom use, or prevalence, reported by men is generally considerably higher than that reported by women. If the Reproductive Health Survey (or Demographic and Health Survey) included a male survey, or if reliable male condom use rates are available from other sources, then you would probably get a more accurate picture of condom use, and condom supply needs, by using the male data *instead* of the female data.

If you have male survey data available, follow these steps as you use the CastCost spreadsheet:

1. On the Data Entry page, when entering the basic demographic data, enter the Number of Men age 15–59 (see [Appendix A](#) for instructions on how to obtain this figure).
2. On the Data Entry page, in the Contraceptive Prevalence section, enter the prevalence of condom use among males in the **Condoms (from Male survey) Men’s Rate** row in the Survey Year (current) column.
3. If you have any historical (past) data on men’s condom use from earlier surveys, please enter that in this same row in the appropriate column(s).
4. Enter your projection for men’s condom use in 5 years in the blue Calculated Value column.
5. Do **not** enter prevalence data in the **Condoms male: Women’s Rate** row. If you enter data here, CastCost will include both the condoms calculated for women and the condoms calculated for men in the Estimation Summary page, and the estimated cost will include both. In theory at least, the condoms reported by women are also being reported by their male partners, so this would lead to double counting. As the males report a higher rate of use, it is best to just use the male’s reported prevalence.
6. On the Data Entry page, in the Source table on the right hand side, enter the relevant source data in the **Condoms Male/Men’s Rate** column. (If you do not enter any source data, CastCost will not calculate the estimate.)
7. On the Estimation Summary page, check that condoms are being calculated only for the men and not also for the women. If there are figures in the Estimated # of Users column in the Male Condoms/Women row, then return to Data Entry/Contraceptive Prevalence and delete the current prevalence for **Condoms male: Women’s Rate**.
8. You may also go to the Condoms page (blue tab) to see a summary of condom requirements for the full five years. Again, check that the “Women in Union” section of the page does not have figures under “Number of Users” and that only the “Men” table is filled out, as the Men’s calculations should supersede the Women’s.

## Appendix G: Making Projections for Sub-National Populations

There are a number of situations in which program planners may need to calculate quantities of currently needed or projected contraceptive supplies, but the usual national-level and historical data from surveys are not available. These types of situations include:

- Refugee, internally displaced, or other conflict-affected groups
- Post-natural disaster situations and camps
- A region or other sub-national section of a country
- Demonstration projects

In these cases, CastCost can still help the user to make a projection, although the accuracy decreases with less (or less accurate) data.

The user will need to begin by collecting the available necessary information, and then substituting “best estimates” for any missing information.

The user will follow the same steps for a sub-national estimate as for an estimate using national survey and other data, by entering into the CastCost spreadsheet:

- Number of women of reproductive age in the population
- Proportion of women of reproductive age who are married or in some other sort of union (and therefore at risk of pregnancy)
- Annual growth rate of this population
- Contraceptive prevalence for each method for the start of the projection period, and any historical prevalence data (if available), as well as estimated prevalence for the end of the projection period

When data are lacking, the user will have to enter estimates which require a bit of “user judgment.” Whenever these “best estimates” are entered instead of actual data, the user should note this in the comment section. Later, if actual data become available, they should be entered into the spreadsheet in place of the “best estimate.”

Obviously, the less confidence one has in the basic input data, and in the assumptions about the trends in future use of the individual methods, the less confidence one has in the overall accuracy of the projection, and the more the user might need to revise the estimate as data become available.

In the case of refugee or other crisis situations, when managers want to know the quantities that are needed right away, CastCost can be used to get an immediate estimate of contraceptive need at the present time or in the near future simply by looking at the first (current year) table of the Estimation Summary, without worrying too much about future trends and projections.

When doing projections for a region of the country, or other sub-national group, one may have good data on the number of women of reproductive age, and even of growth rate, but may only have national-level data on proportion of women in union and of contraceptive prevalence for the different methods. Then the user should use judgment as to how different the marital and contraceptive practices of that region are from the country as a whole, and make “best estimates.”

