



Family Planning Service Expansion & Technical Support

Client Contact Estimator Manual

I. Introduction

The Client Contact Estimator (CCE) provides an estimate of the number of client contacts an urban family planning program will have to support in the future. It works with the current CPR and method mix, and calculates future client loads through both automatic and user-directed projections. This provides a snapshot of the load a program faces in the future, and is useful in planning for program capacity, both for estimating contacts given specific data as well as for speculating about future contacts with various CPRs and method mixes. Because it is extremely easy to use and runs on Lotus, it is well suited to field use by planners at all levels. It is expressly designed for urban programs, but can be used for any region.

The spreadsheet takes several inputs (WRA, current CPR, and urban growth rates) and generates two graphs. The first, called AUTOPROJ, is an automatic projection of various client loads. Starting with the current CPR and method mix, and taking population changes into account, this graph projects to 2025 under four method mix scenarios: 0%, 20%, 40%, and 60% users of long-term methods (sterilization, IUD, and Norplant). This generates a range of future capacity requirements that can be compared with current and future program capabilities.

The second graph, PROJECT (for "projection"), gives client contacts to 2025 calculated from the user's estimates of future method mix. This lets the user direct the projection scenario, which allows more relevant comparisons to current program capabilities.

The usefulness of these graphs is of course dependent on the reliability of the input data. For the advanced user, this program can be easily used in tandem with Target, which can generate quite accurate estimates of method mix and CPR.

II. User's Guide

Using the CCE consists of three simple steps: getting started, inputting data, and viewing output. (Note: This manual assumes a certain familiarity with Lotus 123R3.)

Step one: Getting started

- a. Open Lotus123r3.
- b. Retrieve BLANK.WK3
- c. Save the file immediately with a new name, usually the name of the city or region you are investigating. This step maintains the original blank worksheet on disk for future use.

Step two: Inputting data

- a. The top two lines of the spreadsheet ask for identifying information: city, country, your name, date, etc.

Important note: the city and country name must be capitalized, but not all caps. "Rwanda" is acceptable, but "rwanda" and "RWANDA" are not.

- b. The next section requests municipal information. In the column marked "User Input", enter the population of women of reproductive age (WRA), urban growth rates for 1990-2010 and 2010-2025, and CPR for 1990, 2010, and 2025. You may want to execute several runs with different CPR values: keeping it constant, doubling it, etc.

Important note: Enter percentages as ".255", not "25.5".

If your city or country is in the program's database, reference values for WRA population, urban growth rates, and CPR will appear in the righthand column (marked "Reference values"). These values are taken from United Nations and Population Council data¹. If you would like to use these values, simply type them in to the "User Input" column. If not, enter your own values.

(The reference values are calculated from a database located on worksheet B. You can view this database by hitting Ctl-PgUp, and return to worksheet A with Ctl-PgDn.)

- c. The next section asks for method information. First enter the 1990 method mix.

Important note: Enter percentages as ".255", not "25.5".

The next column, "Client visits/user/year", is already completed with standard values. That is, a pill user is assumed to come to a clinic four times in a year for a visit. A sterilization user might come twice in the year she is sterilized: once for the procedure and again for a follow-up visit. These values can vary dramatically among programs, so change these values as you see fit.

At this point, you can view the graph named AUTOPROJ (see Step three- Viewing output, below). This is the simplest use of the Client Capacity Estimator, and is

¹ a) United Nations Department of Economic and Social Information and Policy Analysis, World Urbanization Prospects: The 1992 Revision, New York, 1993, ST/ESA/SER.A/136.

b) Ross, J.A., W.P. Mauldin, and V.C. Miller, Family Planning and Population: A Compendium of International Statistics, The Population Council, New York, 1993.

recommended for first-time users. However, if you have specific predictions for future method mixes, complete the method mix columns for 2010 and 2025 in order to also view the graph PROJECT.

*Important note: If you decide to enter future method mixes, you must enter values for **both** 2010 and 2025. It will not work with values for 2010 alone.*

Step three - Viewing output

- a. The CCE generates several graphs automatically. The main graph is named AUTOPROJ, for "Automatic projection", and can be viewed through the normal Lotus sequence:

/ Graph Name Use View AUTOPROJ.

AUTOPROJ has time on the bottom axis, and client contacts on the left. It gives four different projections under various assumptions about method mix. That is, the uppermost line in AUTOPROJ shows the client contacts necessary to support the CPR you inputted, *if every user of contraception were on a resupply method by 2010*. The bottom line shows the contacts necessary for that same CPR, *if 60% of all users choose a long-term method*. You can clearly see how more long-term methods decrease the number of client contacts necessary in the future.

Although the graph labelling refers to "long-term methods" only, remember that this graph also includes short-term methods. In the scenario in which 60% of users are on long-term methods, this means that 40% are on short-term (or resupply) methods.

Important note: These automatic projections do not include condoms. Under the assumption that a condom user requires 12 contacts per year, these projections

result in astronomical figures. This is fairly misleading, since condom resupply visits normally take very little staff time as compared to other methods. However, the user-defined projection, PROJECT, does include condoms. Use this feature if you would like to count condom visits like other method visits.

- b. If you entered method mixes for 2010 and 2025, then you can also view the graph PROJECT, using the normal Lotus sequence:

/ Graph Name Use View PROJECT

This graph is quite similar to AUTOPROJ, but instead of automatically generating four projections with different method mixes, it uses the one projection you defined with the mixes for 2010 and 2025. This can be used to test out different ideas about specific future method mixes and their impact on client load.

- c. Four more graphs, called 0MIX, 20MIX, 40MIX, and 60MIX, are also generated. These show the changes in method mix under each of the four scenarios used in AUTOPROJ (these scenarios are: 0%, 20%, 40%, and 60% use of long term methods).

For example, let's say that in 1990, 23% of all the contraceptive users in your city were using long term methods. Under the scenario in which 40% will be using long term methods by 2010, the method mix would change gradually over that 20-year period. Suppose you want to know, given this scenario, what percentage of users would be on the pill in 2000. The graph labeled 40MIX will show you.

The last graph, USERMIX, displays the method mix projections from the data you gave for 2010 and 2025. It is named for "User-defined mix".

Note: These graphs present the data visually, but do not give exact numbers. If you would like the numbers themselves, you can refer to the rest of the spreadsheet. It is described in the methodology section, below.

III. Methodology

All the calculations for the CCE are performed directly below the data input section. The AUTOPROJ projections are performed first, then the user-defined projection. Each projection has the same structure: it first calculates some "general parameters" in 5-year increments, followed by method mix, users by method, and client contacts. Each of these elements is described in more detail below.

General parameters

These parameters include the year (to 2025), WRA, CPR, and total users. The WRA is the given 1990 WRA times the urban growth rate, compounded yearly. The CPRs for 1990, 2010, and 2025 are defined by the user -- the other years are arithmetically interpolated to produce a smooth graph². Finally, the total number of users is simply the CPR times WRA.

Method mix

In the user-defined projection, the method mixes for 1990, 2010, and 2025 are given. The CCE simply interpolates the level of use for each method between these three given points. It then calculates from these the percent use of long-term vs. short-term methods.

The automatic projections are a bit more complicated. A simplified example is the best description. Let's say the 1990 method mix is as follows:

² "Arithmetical interpolation" is a simple process of smoothing graphs between given points. If in 1990 the CPR is 20%, and in 2010 it is 30%, then an interpolation would assume that halfway between these points, at the year 2000, half of the CPR increase was probably achieved -- the 2000 CPR is interpolated to be 25%. Similarly, the CPR for 1995, halfway between 1990 and 2000, can be calculated as 22.5%, and so on.

Pill	40%
Condom	20%
Injectable	20%
IUD	5%
Norplant	5%
Sterilization	10%

In this mix, 20% of the users are on long-term methods, and 80% are on resupply. Under one of the automatic projections, this will change to 40% users of long-term methods by 2010.

Considering just the long-term methods for the moment, we see that in 1990 half of the long-term users are sterilization clients. For 2010, we again make half of the long-term users sterilizations clients -- but since the overall long-term use is now 40%, the sterilization use is set at 20%. Similarly, in 1990, a quarter of all long-term users have IUDs. In 2010, a quarter are still assumed to have IUDs, and this translates to 10% of all users. Norplant presents the same case: it constitutes a quarter of long-term users in 1990, so it constitutes the same fraction in 2010. In this way, all the long-term methods are assigned levels of use by keeping constant their proportions within the total long-term method use. A similar process is undertaken for the short-term methods.

For off-years (between 1990 and 2010, and between 2010 and 2025), the proportional use of long-term methods is interpolated. The method mix is then generated with the process described above.

Number of users served

The next section of the projections calculates the number of users served by method. This is simply the total number of users (from the "General parameters"

section) times a method's share of the mix. That is, if there are 16,000 users total and the pill constitutes 50% of the method mix, then there are 8,000 pill users.

For sterilization, Norplant, and IUD, however, not every user is served during the current year. The CCE assumes that 10% of all sterilization clients are seen in the current year, and 33% of all Norplant or IUD clients are seen in the current year. (These numbers are derived from CYP estimates for these methods.)

Client contacts

The next section calculates the number of client contacts by multiplying the number of users served by the number of visits per year by method. The number of users served is calculated above, and the number of visits per year by method is one of the user inputs.

As stated above, the spreadsheet contains the automatic projections first. After the "General parameters" section, the three sets of calculations (method mix, users served, and client contacts) are carried out for the four different scenarios (0%, 20%, 40%, and 60% use of long-term methods). Each of these scenarios is identified with a "0%", etc. in the leftmost column.

The user-defined projection (PROJECT) follows, with the general parameters repeated for ease of reference. The usual set of calculations follow, with no markers on the lefthand side.

The Client Contact Estimator program and manual were written by: