

**APPENDIX E**

**COST MODEL WORKBOOK**



## INTRODUCTION

The cost model explained in this workbook is intended to help you estimate the cost of mental health benefits for children and adolescents in the CHIP program. The workbook walks you through the steps of the cost model and answers questions you might have as you work through the program.

### **\*\*\*REQUIREMENTS\*\*\***

The CHIP Mental Health Services Model was developed in Excel97<sup>®</sup>, so the minimum version required is Excel97<sup>®</sup>. To check which version of Excel is on your machine, open Excel, go to the HELP menu, and click on ABOUT MICROSOFT EXCEL.

### **\*\*\*ACCESSING THE COST MODEL FROM THE WORLD WIDE WEB\*\*\***

THIS REMAINS TO BE DETERMINED

### **\*\*\*DISPLAY SETTING\*\*\***

If your screen is set up with a smaller font and icons, the model may be more difficult to read. To change the setting in Windows for a better view of the model, follow the instructions below:

1. Click on the START button in the left corner of your screen.
2. Point to SETTINGS and then click on CONTROL PANEL.
3. Click on the icon for DISPLAY. In the "Display Properties" window, click on the tab for SETTINGS.
4. In the section at the middle right called "Desktop Area," change the setting to 640 by 480 pixels.
5. Click on APPLY and OK.

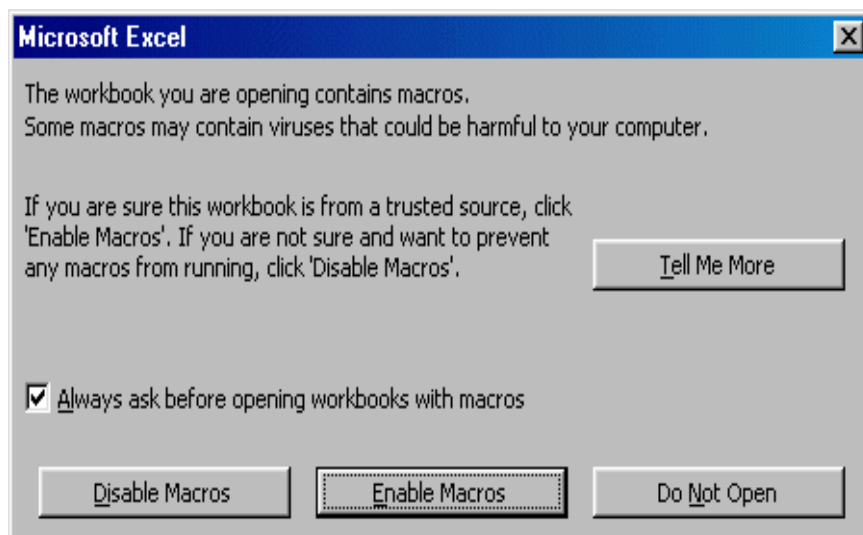
To change the setting back to the original, follow the steps 1 through 4 and select the original pixels setting in the "Desktop Area."

As in other Windows applications:

- C If any text is not visible on your screen, place your mouse on the horizontal or vertical scroll bar and click on your mouse once. To scroll to the right and left or up and down on the screen, continue to click on your mouse.
- C To avoid losing any information while working on the cost model, it is recommended that you save your file frequently. To save your work, click the SAVE command on the FILE menu. (This is preferable to clicking on the Windows : button). If you want to rename the file, click on SAVE AS and type in the new file name. The SAVE command will overwrite with newly entered information. If you want to create a new version you must use SAVE AS and assign a new file name. Please note that the cost model uses approximately 760KB of space, or the majority of a standard diskette, so you should only save multiple versions when these will be reused.
- C If you want to close the program, please click on the END MODEL box on the menu bar. (See details later regarding END MODEL.) You will be prompted with SAVE AS screen. Please avoid closing the file by clicking the : box in the upper right hand corner.

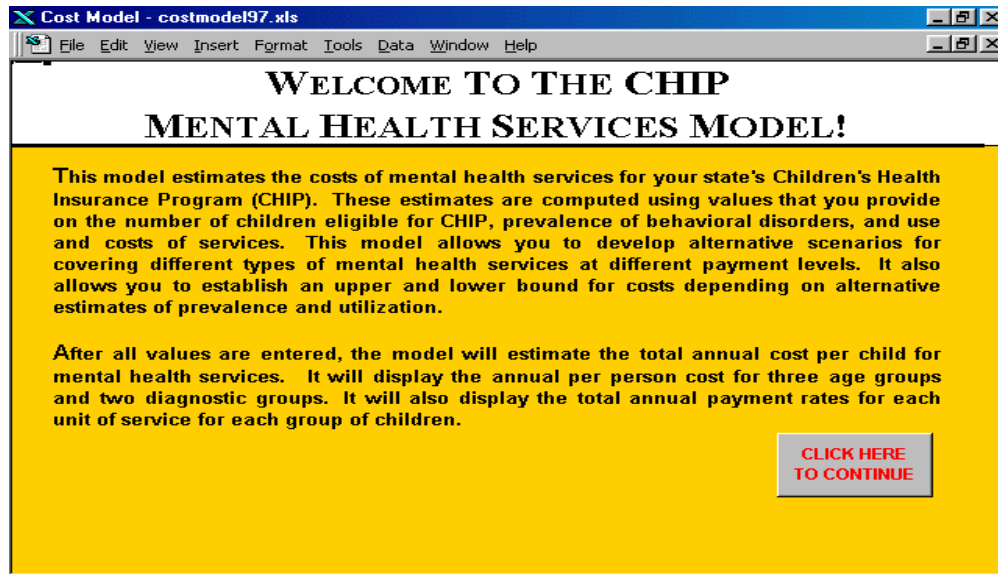
### SCREEN 1

When you open the file, click on the box indicating that you want to Enable Macros. If you are concerned about viruses, run your virus checking software at the time.



## SCREEN 2

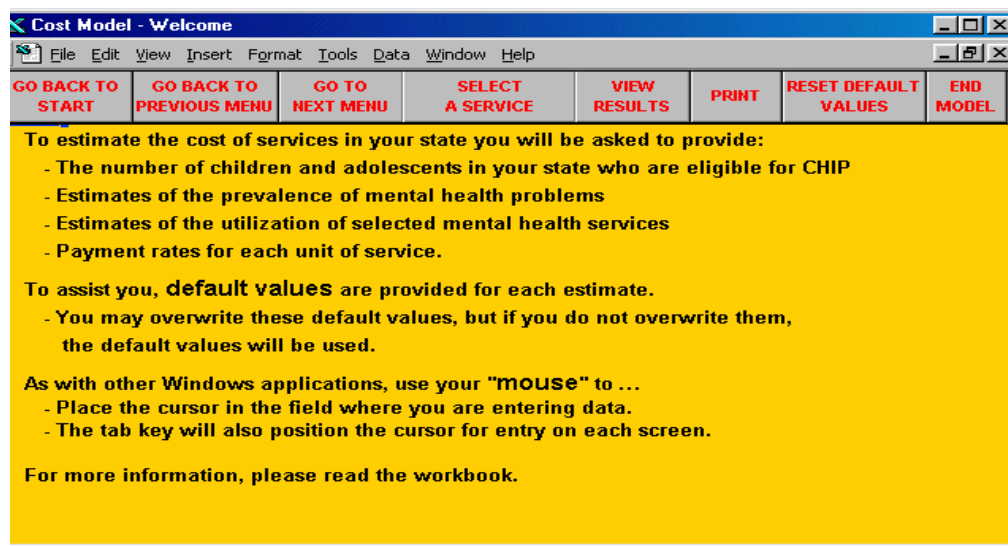
The next screen you see is an introduction that explains the purpose of the cost model and how to use it.



When you finish reading this screen, click once on the box at the bottom right that says **CLICK HERE TO CONTINUE**.

## SCREEN 3

This screen gives additional instructions on how to use the model.



## BUTTON BAR

The large bar at the top of the screen allows you to perform certain functions as follows (this will appear on every screen in the cost model):

- Ⓒ GO BACK TO START: Click on this box to go back to the start of the cost model.
- Ⓒ GO BACK TO PREVIOUS MENU: Click on this box to go back to the previous menu.
- Ⓒ GO TO NEXT MENU: Click on this box to go to the next menu.
- Ⓒ SELECT A SERVICE: This option allows you to select the specific mental health service whose data you wish to modify.
- Ⓒ VIEW RESULTS: At any time you can click on this box and view the results of the cost model. Results can be calculated at any time due to the presence of default values.
- Ⓒ PRINT: Use this to print your results.
- Ⓒ RESET DEFAULT VALUES:
  - Ⓒ If you input your own values for a particular service, and then decide you want to reset the values, click on this box and the values will be reset only for the page you are viewing.
  - Ⓒ If you wish to reset all default values, and wish to start over using the default values, click on GO BACK TO START, pause while the program returns to start, and then click on RESET DEFAULT VALUES.
- Ⓒ END MODEL: Click on this box when you want to exit the cost model.

## USING THE MODEL TO DEVELOP COST ESTIMATES

Click on GO TO NEXT MENU to proceed.

At this time, we will show you how to use the cost model to develop cost estimates.

### SCREEN 4

This screen asks you to provide information regarding the number of CHIP eligibles in three age groups. With your mouse, move the cursor to the box for the age group you want and click once. This will highlight the box and allow you to insert a value.

**Cost Model - Form**

File Edit View Insert Format Tools Data Window Help

GO BACK TO START GO BACK TO PREVIOUS MENU GO TO NEXT MENU SELECT A SERVICE VIEW RESULTS PRINT RESET DEFAULT VALUES END MODEL

**NUMBER OF CHIP-ENROLLED CHILDREN**

Now please enter the estimated number of children enrolled in CHIP in a month:

Estimated number of children aged 0-5 1,000

Estimated number of children aged 6-11 1,000

Estimated number of adolescents aged 12-18 1,000

If enrollment is stable and you have program statistics by age, use the average number of children monthly. Otherwise use forecasts. If you do not enter a number, the program will use an estimate of 1000 CHIP children.

Start Cost Model - Form 12:00 PM

When you insert a value, hit ENTER to proceed.

Repeat for each value you want to change. If you do not change a value, the default value will be used.

Throughout the model, a help box pops up when you place the cursor on the red dot inside each box. The help boxes tell you how to select an estimate, based on known ranges. The boxes disappear when you move the cursor.

Click on GO TO NEXT MENU to proceed.

## SCREEN 5

Screen 5 asks you to provide estimates of the prevalence of serious emotional disturbance (SED) and other mental illness among children and adolescents. Using your cursor, replace the default values in a manner similar to the previous menu.

The screenshot shows a software window titled "Cost Model - Form" with a menu bar (File, Edit, View, Insert, Format, Tools, Data, Window, Help) and a toolbar with buttons: GO BACK TO START, GO BACK TO PREVIOUS MENU, GO TO NEXT MENU, SELECT A SERVICE, VIEW RESULTS, PRINT, RESET DEFAULT VALUES, and END MODEL. The main area has a yellow background and is titled "PREVALENCE OF MENTAL HEALTH PROBLEMS". It asks the user to "Please enter the percentage of:" and lists five categories with input fields:

Category	Default Value
Children 0-5 with Mental Health Problems	6.0%
Children 6-11 with ... Serious Emotional Disturbance (SED)	6.0%
Other Mental Health Problems	9.0%
Adolescents with ... Serious Emotional Disturbance (SED)	9.0%
Other Mental Health Problems	11.0%

A tooltip is displayed over the first input field (6.0%) with the following text: "Studies have shown a range of from 3% to 8% of children with mental health problems. The default value is 6%. Please enter a number that is >=0 and <=100. Do not enter a percent sign, such as 6% (but rather 6 or 6.0)."

Click on GO TO NEXT MENU to proceed.



## SCREENS 6 THROUGH 12

The next seven screens are service specific. They include Inpatient Hospital, Residential, Partial Hospitalization/Day Treatment, Outpatient, Case Management, School Health, and Pharmacy. All of these screens ask you to fill in the rate of service use, the number of units used (i.e., days, visits, prescriptions), and total cost. Information is requested for children ages 0-5 and 6-11, and for adolescents. For children 6-11 and adolescents, you will be asked to provide information for the SED population and for children or adolescents with other mental health problems. *If the rate of service use that you enter is less than one you must have a leading zero prior to the decimal place--e.g. 0.01 not .01.*

	Children 0-5	Children 6-11		Adolescents	
		SED	Other	SED	Other
Rate of annual service use	2.2%	8.4%	4.2%	10.0%	5.0%
Number of units per user (days)	11.0	38.5	19.3	24.0	12.0
Dollars per day	\$701	\$701	\$701	\$701	\$701

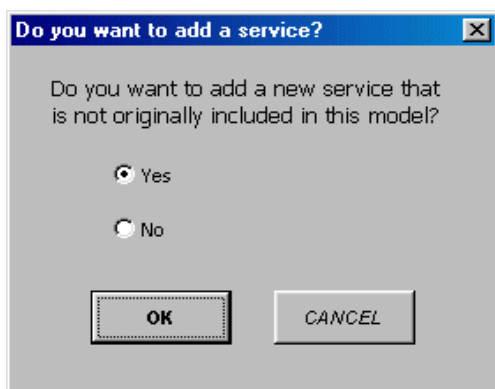
Enter the percentage of adolescents with other mental health problems who use an inpatient hospital stay in a year. Estimates range from 3% to 85%. The default value is 5%. Please enter a number that is >=0 and <= 100. Do not enter a percent sign, such as 5% (but rather 5).

Click on GO TO NEXT MENU to proceed to the next screen or click on “SELECT A SERVICE” if you would like to select a specific service.

- C SELECT A SERVICE: As you move through the model, click on this box to go to or to return to a particular service screen and make changes without scrolling through all the previous pages. When you click on this box, you open a window that lists all the services and other menus in the model. Click on the service or menu you wish to go to and click OK.

## SCREEN 12

When you come to the last service-specific screen, Pharmacy, and select GO TO NEXT MENU, the program will ask if you would like to add any services that were not included in the cost model program. Click on Yes or No, and then hit OK.



- C If you select Yes, you will be provided with a table shell where you can insert an additional mental health service and fill in values for each category. To create a title, double click on Enter Service Name Here and type your service title. Move the cursor to each box, double click on the box, enter the value, and hit ENTER to continue.

The application window has a menu bar with: File, Edit, View, Insert, Format, Tools, Data, Window, Help. The main menu contains: GO BACK TO START, ADD ANOTHER SERVICE, SELECT A SERVICE, VIEW RESULTS, RESET DEFAULT VALUES, PRINT, END MODEL.

The main area is titled "MENTAL HEALTH SERVICE 1" with a sub-label "[Enter service name here]".

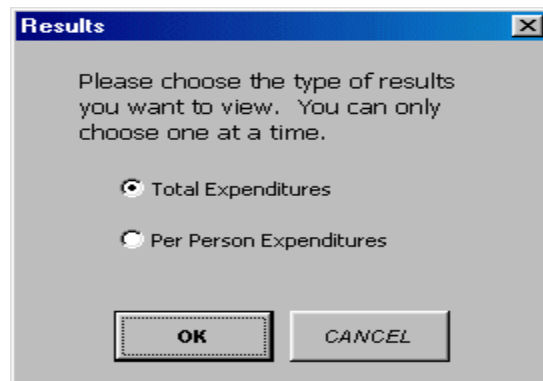
	Children 0-5	Children 6-11		Adolescents	
		SED	Other	SED	Other
Rate of annual service use	0.0%	0.0%	0.0%	0.0%	0.0%
Number of units per user	0.0	0.0	0.0	0.0	0.0
Dollars per day	\$0	\$0	\$0	\$0	\$0

The taskbar shows the Start button, the application name "Cost Model - MHS Ph...", and the system tray with the time "12:03 PM".

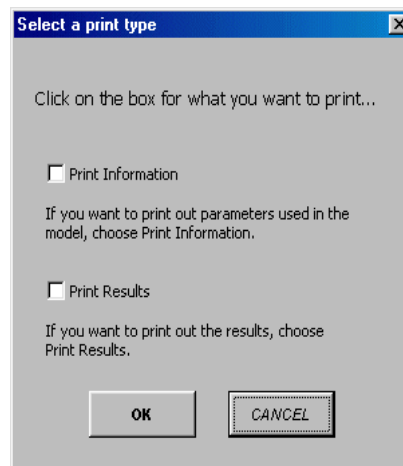
- C When you complete the screen, if you want to add another service, click on ADD ANOTHER SERVICE in the menu bar at the top of the screen and repeat the steps outlined above.
- C If you select No, you will be prompted to choose the type of results (per-person or total expenditures) you want to view. (See below for more detail in viewing results.)

## VIEWING AND PRINTING RESULTS

- C **VIEW RESULTS:** When you finish inserting values for services originally provided and/or adding your own services, click on **VIEW RESULTS** to see per-person or total expenditures. Select the type of results you wish to see and click **OK**. To toggle between the total expenditure and per-person expenditure menus, click on **GO TO NEXT MENU**.



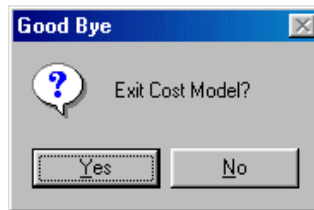
- C **PRINT:** Once you have viewed results, you may want to print them. To print the parameters you have used, click on **Print Information**. To print the results, click on **Print Results**. You may choose one or both, and then hit **OK**.



## EXITING

You have now completed the cost model. At this point, you may want to do one of several things:

- C You may want to save this version of the model with the revised parameters. In this case, when you reopen the model, it will contain all the new parameters you have entered. If so, click on END MODEL. When you are asked if you want to exit the model, click on YES. Then rename and save your document by typing in a new file name and clicking on Save. After saving the document, the Excel program will shut down.



- C You may want to close the model without saving the revised parameters. In this case, when you reopen the model it will contain the default values. If so click on END MODEL. When you are asked if you want to exit the model, click on YES, and then click CANCEL. You will be asked again if you would like to save the changes to the cost model. If you click on NO, the program will close, and your file will not be saved.

## GLOSSARY

- Default Value:** The default values are derived from the ranges of prevalence, utilization, and costs of mental health diagnoses and services in the literature review. These values are used by the model if the user does not input his/her own values.
- Menu Bar:** This bar at the top of the screen shows the option boxes. Clicking on the boxes lets the user go back to the start page; go to the previous menu; go to the next menu; select a specific service page in the model; view the cost model results; or print the page.
- Help Boxes:** A help box pops up when the user places the cursor arrow inside the red dot on the particular box. The help boxes pop up and disappear on their own.
- Rate of Service Use:** This value is the percentage of children or adolescents with a mental health problem, or with SED, who used the particular service.
- Number of Units:** This is the number of days, visits, prescriptions, etc., per child or per adolescent in a year.
- Dollars per Service:** This value is the average expenditure per day, visit, hour, prescription for each service.