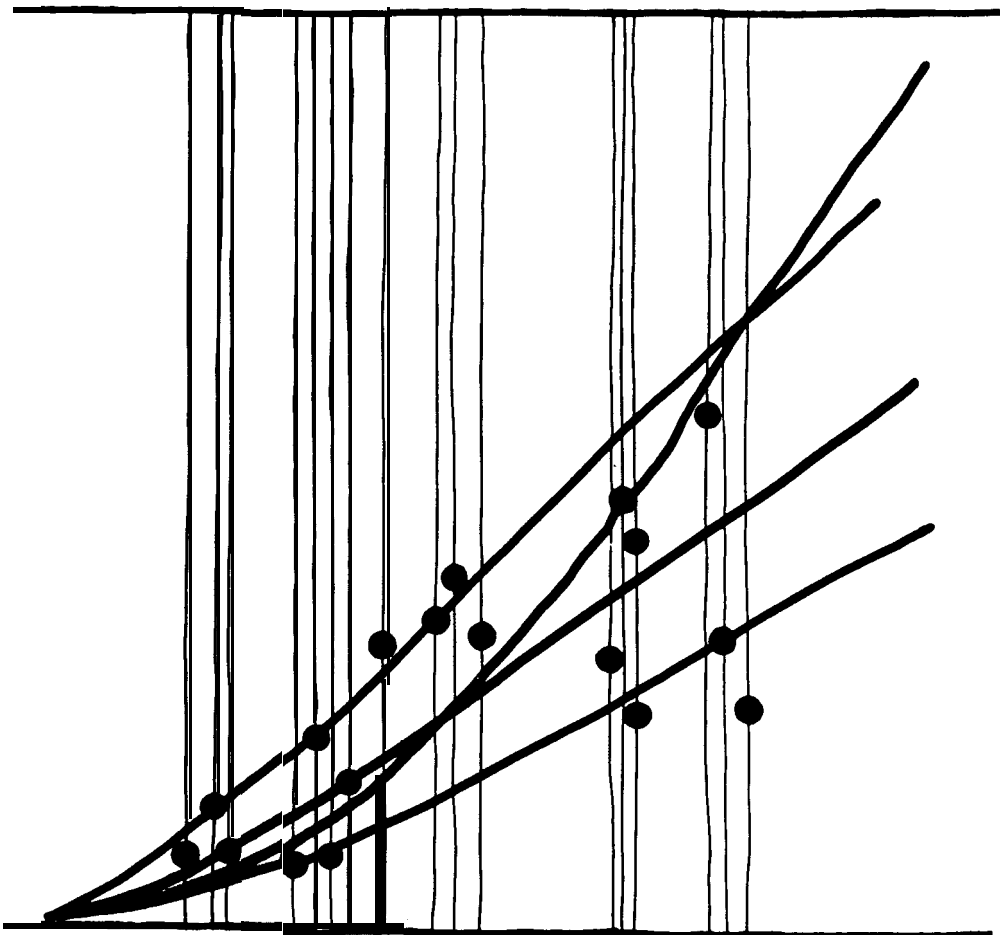


QFIVE- UNITED NATIONS PROGRAM FOR CHILD MORTALITY ESTIMATION

A microcomputer program to accompany the
Step-by-Step Guide to the Estimation of Child Mortality



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INTRODUCTION

These are instructions for the use of QFIVE, a computer program to estimate mortality in childhood. The program has been prepared to accompany the *Step-by-Step Guide to the Estimation of Child Mortality*. QFIVE produces estimates of infant mortality (the probability of dying between birth and exact age 1), child mortality (the probability of dying between exact ages 1 and 5) and under-five mortality (the probability of dying between birth and exact age 5) by applying the two versions of the Brass method described in the *Guide*: the Trussell version, which is based on the Coale-Demeny model life tables, and the Palloni-Heligman version, based on the United Nations model life tables for developing countries.

Anyone familiar with the contents of the *Guide*, even the inexperienced computer user, should find QFIVE simple to use. Its design follows that of *Mortpak-Lite, the United Nations Software Package for Mortality Measurement: Interactive Software for the IBM-PC and Compatibles*.^a The chapters that follow describe the hardware requirements of QFIVE, the use of the program itself and the output it produces. Self-explanatory screens guide the user during each application, making QFIVE a useful self-teaching tool.

Knowledge of the estimation methodology, however, is essential. Appropriate use and interpretation of the estimates yielded by QFIVE demand a good understanding of the methods applied and their limitations. The user is referred to the *Guide* for an in-depth discussion of these topics.

The input required for QFIVE is described in the *Guide* for the different versions of the Brass method. It consists mainly of the number of children ever born and surviving, or dead, classified by age of mother and the number of women classified by age. In order to minimize hand calculations in the preparation of input data, QFIVE accepts as input several data combinations that permit the calculation of the basic information needed to apply the method.

The Population Division of the United Nations Secretariat would welcome any comments on the performance of QFIVE that might help improve future software development activities. For further information concerning QFIVE, please contact the Director, Population Division, United Nations, New York, New York 10017.

^a United Nations publication, Sales No. E.88.XIII.2.

I. HARDWARE REQUIREMENTS AND INSTALLATION

A. HARDWARE REQUIREMENTS

QFIVE 1.0 can run on an IBM-PC-compatible microcomputer equipped with MS-DOS, version 2.1 or later, and a random access memory of 300K or more. Although, strictly speaking, only one floppy-disk drive is needed to run the program, it is easier to use when a hard disk or two floppy-disk drives are available. A math co-processor or graphics adaptor is not necessary.

The output of the program can either be viewed on the screen or be printed. To print the output, a printer with an IBM Graphics or Proprinter set-up is required. The output will be printed in compressed mode, which will be set automatically by **QFIVE**, using standard IBM printer control codes.

B. BACKUP AND INSTALLATION

QFIVE is stored on one diskette, which also contains two sample input files.

Before installation, it is recommended that you write-protect and make a backup copy of your **QFIVE** diskette. Put the original away for safekeeping and work only with your backup. If your system has a hard disk, installation of the **QFIVE** program on the hard disk will automatically create a backup. In systems with two floppy-disk drives and no hard disk, the procedure that follows can be used to make backups. Press ENTER after each DOS command.

STEP 1. Change the prompt line to A>

STEP 2. Insert the DOS diskette in drive A and format a blank diskette in drive B by typing the DOS command

A > FORMAT B:

STEP 3. When the formatting process is completed, copy the **COMMAND** command to the diskette in drive B by typing

A> COPY COMMAND.COM B:

STEP 4. Insert the original (write-protected) **QFIVE** diskette in drive A and the newly formatted diskette in drive B; then copy all files from drive A to drive B by typing the DOS command

A > COPY A:*. * B:

Keep the original **QFIVE** diskette in a safe place. Always work with the copy.

If your system has a hard disk, it is convenient to copy the contents of the **QFIVE** diskette onto the hard disk. To do so, follow the procedure below. Press ENTER after each DOS command .

STEP 1. Change the prompt line to C> by typing C:

STEP 2. Make a new subdirectory called **QFIVE** by typing the DOS command

C > MD QFIVE

(You can use any valid directory name instead of **QFIVE**.)

STEP 3. Enter that subdirectory by typing the DOS command

C > CD QFIVE

STEP 4. Insert the **QFIVE** diskette in drive A, and copy all files from that diskette to the **QFIVE** directory on the hard disk by typing the DOS command

C > COPY A:*. * C:

II. USING QFIVE

This chapter describes the QFIVE interface, explains how to start QFIVE, how to enter data and how to run the program. Chapter III describes the output.

A. GETTING STARTED

To start QFIVE on a hard-disk system, change to the QFIVE subdirectory by typing the DOS command

```
C > CD \QFIVE
```

and pressing **ENTER**.

At the C > prompt, type

```
C > QFIVE
```

and press **ENTER**.

On a one- or two-drive system, put the QFIVE program diskette into drive A, and at the A > prompt-type

```
A > QFIVE
```

and press **ENTER**.

These commands start the operation of QFIVE. The screen displays a welcome, followed by the QFIVE copyright notice. Press any key to get to the main menu. The last line on the main menu screen indicates the existing drive specifications-that is, it specifies the drives where QFIVE expects to find or allocate different files. Those specifications must agree with your program set-up. To change them, select option D and press **ENTER**. For instructions, refer to the section on main menu option D, below.

B. MOVING THROUGH THE SCREENS

QFIVE has a menu-based interface built around a main menu. The main menu offers primary options; each option moves the user through a series of screens on which the user provides certain pieces of information that determine the next screen that will appear.

Screen change is initiated by pressing either the **ENTER** key in response to a question or an F-key (function key). The function keys accepted by QFIVE and their definitions are as follows:

- F1** Presents help screens
- F2** Returns user to main menu
- F3** Moves user to utility menu (to print, view, copy or delete data sets)
- F4** Lists files on a specified drive
- F5** Copies files on a specified drive into the currently active worksheet during edit
- F9** Runs the program directly from the worksheet
- F10** Saves data in the active worksheet and returns to the main menu

Active function keys are indicated at the bottom of the screen. <**ENT**> following the indicated function key means that the **ENTER** key must be pressed after pressing the function key.

C. THE MAINMENU

QFIVE is built around the following main menu:

```
----- QFIVE -----
----- United Nations Program for Child Mortality Estimation -----

                MAIN MENU

(1) Enter or modify input data
(2) Run QFIVE
(3) Print, view, copy or delete a data set
(4) Change drive specifications
(E) Help
(X) Exit QFIVE

Please select option and press ENTER:

Drive specifications      QFIVE : C      INPUT : C      OUTPUT : C
```

The main menu contains six options, each of which will be discussed in turn.

Main menu option 1. Enter or modify input data

Selection of option 1 will move the user to a screen asking for the name of the data set to be edited. If a new data set is being created, the user should assign it a new name according to DOS conventions: up to eight characters before the period and an optional extension of three characters after the period. Names containing more characters will be truncated to eight and three characters respectively.

If an existing data set is being modified, enter its name. Note that pressing **F4** followed by the **ENTER** key will provide a list of all files on the designated input drive.

After the data set name has been entered, the first page of a two-page worksheet will appear, and the user will be asked for the following information:

Label	Up to 72 characters describing the input data. The label will be printed as a header on each page of output.
Month	A number from 1 to 12 indicating the month of enumeration. If the data collection took place over several months, provide the central one.
Year	The year of enumeration.
Sex	A number from 1 to 3 indicating the sex of the children whose mortality is being estimated.
Mean age at maternity	The value of M needed for the application of the Palloni-Heligman version of the Brass method (see step 3(a) in chapter V of the <i>Guide</i>). If the data necessary to calculate M are not available and a value is not given for M , the program will use 27.0 as the default value.
Type of data	A number from 1 to 5 indicating the type of data to be used as input. QFIVE admits several data combinations as input, as explained below.

As described in chapter II of the *Guide*, three pieces of information are necessary to estimate mortality in childhood using the Brass method: (1) the number of children ever born classified by age group of mother, (2) the number of children dead classified by age group of mother and (3) the total number of women classified by age group. Since the sources of such data often do not contain tabulations of the number of children ever born and dead per se, QFIVE accepts as input different data combinations from which the required pieces of information can be derived.

The data combinations admitted, which are also defined on the screen, are as follows:

1. Number of children ever born, number of children surviving and total number of women classified by age group.
2. Number of children ever born, number of children dead and total number of women classified by age group.
3. Number of children surviving, number of children dead and total number of women classified by age group.
4. Average parity by age group of women and the proportion of children dead by age group of women. Average parity is the ratio of the number of children ever born to the number of women. The proportion of children dead is the ratio of the number of children dead to the number of children ever born.
5. Average parity and average number of children surviving by age group of women. Children surviving per woman is the ratio of the number of children surviving to the number of women.

The type of information required for input options 4 and 5 is often the only type available from the secondary sources that do not present the raw data needed for the application of the Brass method. These options should be used only if the raw data are not available, since rounding and other types of errors could have been introduced in the calculations to obtain the average numbers.

The necessary information should be typed in and **ENTER** or a cursor key should be pressed after each item has been completed. Make sure that all items are typed according to the specifications provided on the screen. An example of a properly completed first page is provided below.

```

          Q F I V E   Data Entry   (Page 1 of 2)

| LABEL: BANGLADESH, 1974 RETROSPECTIVE SURVEY

          Month (1 - 12) ..... 3
          Year (4 digits) ..... 1974
          Sex (1=Male, 2=Female, 3=Both) ..... 3
          Mean Age at Maternity (Default 27.0).....27.07
          Type of data (choose 1-5, below) ..... 1

          Data Types

          1 = Number of women, children ever born and children surviving
          2 = Number of women, children ever born and children dead
          3 = Number of women, children surviving and children dead
          4 = Average parity and proportion of children dead
          5 = Average parity and children surviving per woman

          F1 - Help   F2 - Main Menu   F5 - Copy   F9 - Run   F10 - Save (PgUp/PgDn)

```

Once the "Type of data" entry has been provided, the second page of the input worksheet can be obtained by pressing the **PgUp** or **PgDn** key. The headings appearing on the second page will vary according to the "Type of data" selected. Entries can be made in the worksheet by typing each number and pressing **ENTER** once the entry is completed. For purposes of illustration, the screens below show how the second page looks according to the "Type of data" selected.

Type of data = 1

Q F I V E Data Entry (Page 2 Of 2)

Age Group of Women	Number Of Women	Number of Children Ever Born	Number of Children Surviving
15 - 19	3014706	1160919	945554
20 - 24	2653155	4901382	3903998
25 - 29	2607009	9085852	7147897
30 - 34	2015663	9910256	7649060
35 - 39	1771680	10384001	7893833
40 - 44	1479575	9164329	6749306
45 - 49	1135129	6905673	4946129

F1 - Help F2 - Main Menu F5 - Copy F9 - Run F10 - Save (PgUp/PgDn)

Type of data = 2

Q F I V E Data Entry (Page 2 Of 2)

Age Group Of women	Number Of Women	Number of Children Ever Born	Number of Children Dead
15 - 19	3014706	1160919	215365
20 - 24	2653155	4901382	997384
25 - 29	2607009	9085852	1937955
30 - 34	2015663	9910256	2261196
35 - 39	1771680	10384001	2490168
40 - 44	1479575	9164329	2415023
45 - 49	1135129	6905673	1959544

F1 - Help F2 - Main Menu F5 - Copy F9 - Run F10 - Save (PgUp/PgDn)

Type of data = 3

Q F I V E Data Entry (Page 2 of 2)

Age Group Of Women	Number of Women	Number of Children surviving	Number of Children Dead
15 - 19	3014706	945554	215365
20 - 24	2653155	3903998	997384
25 - 29	2607009	7147897	1937955
30 - 34	2015663	7649060	2261196
35 - 39	1771680	7893833	2490168
40 - 44	1479575	6749306	2415023
45 - 49	1135129	4946129	1959544

F1 - Help F2 - Main Menu F5 - Copy F9 - Run F10 - Save (PgUp/PgDn)

Type of data = 4

Q F I V E Data Entry (Page 2 of 2)

Age Group Of Woman	Average Parity	Proportion of Children Dead
15 - 19	0.3851	0.1855
20 - 24	1.8474	0.2035
25 - 29	3.4852	0.2133
30 - 34	4.9166	0.2282
35 - 39	5.8611	0.2398
40 - 44	6.1940	0.2635
45 - 49	6.0836	0.2838

F1 - Help F2 - Main Menu F5 - Copy F9 - Run F10 - Save (PgUp/PgDn)

Type of data = 5

Q F I V E Data Entry (Page 2 Of 2)		
Age Group Of woman	Average Parity	Average No. of Children Surviving
15 - 19	0.3851	0.3136
20 - 24	1.8474	1.4715
25 - 23	3.4852	2.7423
30 - 34	4.9166	3.7952
35 - 39	5.8611	4.4568
40 - 44	6.1940	4.5625
45 - 49	6.0836	4.3578

F1 - Help F2 - Main Menu F5 - Copy F9 - Run F10 - Save (PgUp/PgDn)

Note that the data entries for input options 1, 2 and 3 must be in absolute numbers. Entries must have at most 10 figures. No commas should be used to separate them. Entries for options 4 and 5 can have at most four decimal places, and the decimal point must be indicated explicitly, as, for instance, in 1.8474.

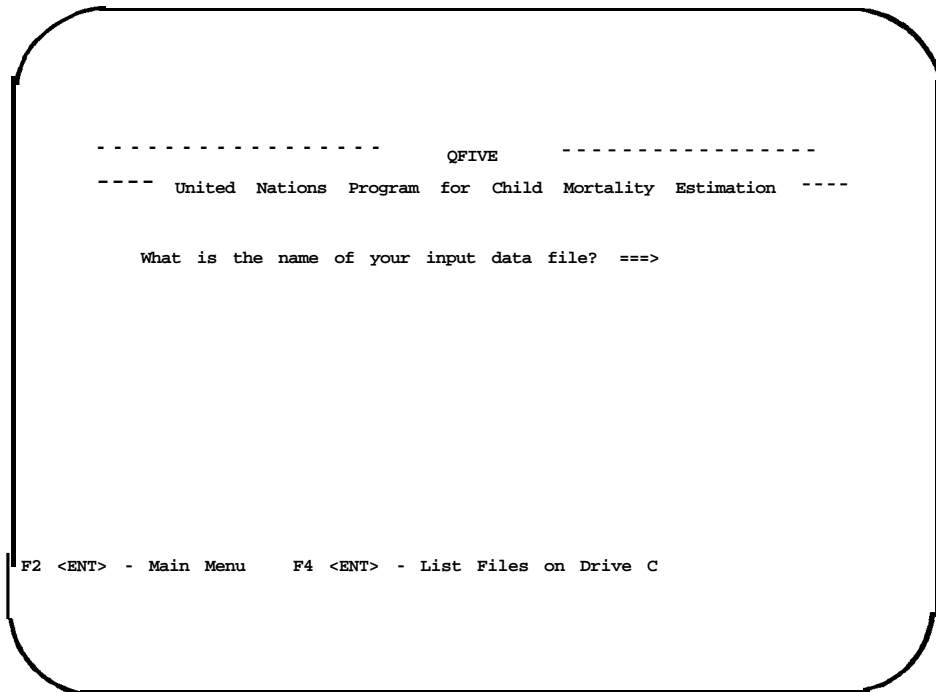
The process of data input is straightforward. Cursor movement is restricted to valid input data fields and is controlled by keyboard keys. Whenever the cursor leaves a field, numeric data are right-justified. Definitions of the keys are as follows:

- | | |
|-----------------------|--|
| ENTER | This key moves the cursor to the next data field. |
| CURSOR (arrow) | These keys move the cursor left, right, up or down one position. |
| BACKSPACE | This key moves the cursor one position to the left and deletes the entered character. |
| RIGHT TAB | This key moves the cursor one field to the right. |
| LEFT TAB | This key (shift tab) moves the cursor one field to the left. |
| HOME | This key moves the cursor to the first position of the first data field on the page. |
| END | This key moves the cursor to the last non-blank character of the field plus one. If the last character is not blank, it moves the cursor to the last character of the field. |
| CTRL-END | Pressing these keys simultaneously erases all data from the current cursor position through the end of the field. |
| INSERT | From the point of the cursor, this key moves all data from within the field one position to the right. |
| DELETE | This key deletes the character at the cursor position. Data in the same field and to the right of the cursor moves left one position. |
| PgUp/PgDn | These keys are used for moving between the two pages of the worksheet. |

The **F5** key, which appears on the screen on both pages of the worksheet, enables the user to copy data from a different file into the active worksheet.

Main menu option 2. Run QFIVE

To run QFIVE, the user can either press **F9** from the input worksheet or select option 2 from the main menu. The choice of option 2 leads to a screen requesting the name of the input file.



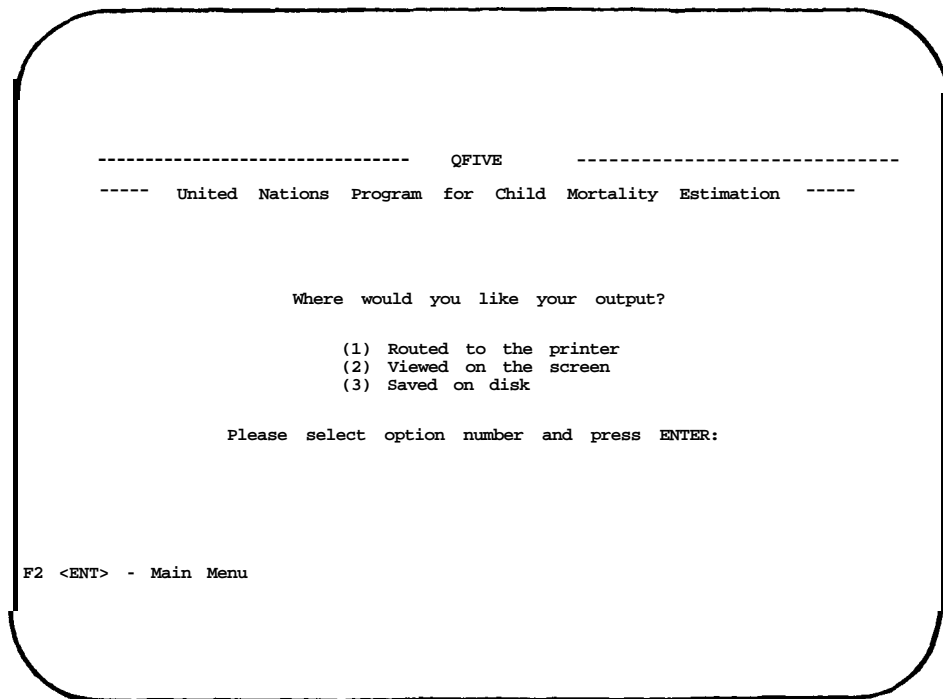
At the query, the user should provide the name of an existing input file. Two function keys are available at the bottom of the screen. The **F2 < ENT>** key sequence returns the user to the main menu; the **F4 <ENT>** key sequence displays a list of all files on the input data drive.

Pressing the **ENTER** key after entering the file name causes the program to run. When processing is complete, the screen shown at the top of page 11 (referred to as a utility menu) appears, allowing the user to route the output.

Option 1 sends the output to the printer. Make sure that the printer is on-line before selecting option 1. Before printing, the question “How many copies would you like?” appears on the screen. Any integer response is acceptable; there is no maximum number of copies. The default is 1. Printing will begin immediately.

Option 2 sends the output to the screen. It is usually a good idea to examine the output on the screen to ensure that it is correct before sending it to the printer or saving it on disk. After viewing the output on the screen, the user can return to the utility menu by pressing **F3 < ENT >** and can then choose option 1 or 3, to print or save the output.

Option 3 saves the output on disk. The user is requested to provide the name of the output file to be saved. It should conform to DOS naming conventions. Typing the output file name and



pressing **ENTER** copies the output file onto the output drive under the designated file name. Once this is completed, the user is returned to the utility menu.

Main menu option 3. Print, view, copy or delete a data set

This option allows the user to carry out common file-handling activities without returning to DOS. Selection of option 3 yields the screen shown at the top of page 12.

Option 1 routes a file to the printer. Selection of option 1 calls forth a series of screens querying the user for characteristics of the file to be printed: whether it is an input or an output data set, the name of the data set and the number of copies desired (second illustration, page 12, and page 13).

Option 2 routes a file to the screen for viewing. As in the case of option 1, several queries about characteristics of the file will appear on the screen. Specifically, the user is asked: "Will you view on the screen an input or output data file?" and "What is the name of the data set you wish to view on the screen?" Often the output file wanted is the last one processed. This can be indicated by typing in **LAST OUTPUT**.

The user should note that this utility will print or display an input file using the format in which the data are stored on disk. To see the input data in worksheet format (i.e., with the appropriate headings), one must use option 1 of the main menu or print the first page of an output file.

----- QFIVE -----
----- United Nations Program for Child Mortality Estimation -----

----- UTILITY MENU -----

- (1) Print
- (2) View on the screen
- (3) Copy
- (4) Delete

Please select option number and press ENTER:

F2 <ENT> - Main Menu

----- QFIVE -----
----- United Nations Program for Child Mortality Estimation -----

Will you print an input or output data file?

- (1) Input data (from drive C)
- (2) Output data (from drive C)

Please select option number and press ENTER:

F2 <ENT> - Main Menu F3 <ENT> - Utility Menu

```
----- QFIVE -----
----- United Nations Program for Child Mortality Estimation -----

What is the name of the data set you wish to print?
To print your last output, type LAST.OUTPUT
For example: CHILD.DAT ==>

F2 <ENT> - Main Menu  F3 <ENT> - Utility Menu  F4 <ENT> List Files on Drive C
```

```
----- QFIVE -----
----- United Nations Program for Child Mortality Estimation -----

How many copies would you like? 1

F2 <ENT> - Main Menu  F3 <ENT> - Utility Menu
```

The following screen displays an output file as viewed on the screen.

```

INPUT DATA FOR BANGLADESH, 1974 RETROSPECTIVE SURVEY
BOTH SEXES
ENUMERATION DATE: MAR 1974

-----
Age Group      Number      Number of      Number of
  of           Of          Children      Children
Women          Women      Ever Born    Surviving
-----
15-19         3014706.   1160919.     945554.
20-24         2653155.   4901382.     3903998.
25-29         2607009.   9085852.     7147897.
30-34         2015663.   9910256.     7649060.
35-39         1771680.   10384001.    7893833.
40-44         1479575.   9164329.     6749306.
45-49         1135129.   6905673.     4946129.

INDIRECT ESTIMATION OF EARLY AGE MORTALITY FOR BANGLADESH, 1974 RETRO
BOTH SEXES
ENUMERATION DATE: MAR 1974
-----

F2 - Main Menu   F3 - Utility Menu   Use cursors to scroll ==> PAGE

```

When viewing a file, the user can return at any time to the main menu by pressing **F2 < ENT >** or to the utility menu by pressing **F3 < ENT >**.

Because of screen size, only part of a file can be seen at one time. The cursor keys are used to scroll the screen in order to view different parts of a file. The cursor functions are:

- RIGHT CURSOR** Exhibits data to the right of the screen.
- LEFT CURSOR** Exhibits data to the left of the screen.
- DOWN CURSOR** Exhibits data below the screen.
- UP CURSOR** Exhibits data above the screen.

The extent of scrolling is determined by the user and is indicated at the bottom right-hand corner of the screen. Scrolling is always preset to “page”. The extent of scrolling can be changed by pressing one of the keys indicated below:

- M** Indicates “maximum”. Depending on the cursor key pressed, data at the right, left, top or bottom margin are brought into view.
- P** Indicates “page”. The displayed data file is moved in the indicated direction a “full page”—that is, up to 23 lines or up to 80 columns, depending on the cursor key activated. Scrolling is always pre-set to **P**.
- 1 through 9** Entering an integer between 1 and 9 sets the scrolling to that number of lines or columns.

Option 3 allows the user to make copies of an input or output file (data set) on the same disk drive. This utility may be used, for example, to make a backup copy of a data set before modifying its contents. Before copying, the user must provide information on file characteristics by answering the queries: “What is the name of the data set you wish to copy?” and “In what data set would you like to save the copy?” If the data set already has a name, the user will be given

the option of choosing another name for the backup copy or using the existing name. If the existing name is used and the data are modified, the original data will be destroyed.

Option 4 allows the user to delete files. The user must indicate whether an input or output data set is being deleted (only if input and output data sets reside on different disk drives) and the name of the data set to be deleted. Before the file is deleted, the user is asked to confirm that the selected file is to be deleted.

Main menu option D. Change drive specifications

Option D specifies the disk drives for the QFIVE program and the input and output files. Drive specifications must be correct for QFIVE to work properly. In a hard-disk drive system, QFIVE should be installed in drive C. The input and output files can be stored in any combination of drive A, B or C. In a two-drive system, QFIVE may be assigned to drive A, and the input and output files to drive B. In a one-drive system, QFIVE and the input and output files have to be assigned to drive A.

When option D is selected, the following screen will appear.

```
----- QFIVE -----  
----- United Nations Program for Child Mortality Estimation -----  
  
DISK DRIVE INSTALLATION PROCEDURE  
  
On what disk drive is QFIVE?  
Drive C is the current selection.  
Select a,b,c,d or blank and press ENTER:  
  
On what disk drive would you like your input data?  
Drive C is the current selection  
Select a,b,c,d or blank and press ENTER:  
  
On what disk drive would you like your output?  
Drive C is the current selection.  
Select a,b,c,d or blank and press ENTER:
```

Pressing **ENTER** without making an entry (a blank response) leaves the existing selection active.

After a selection has been made for all items, the user is asked to confirm the choices made.

```
----- QFIVE -----  
----- United Nations Program for Child Mortality Estimation -----  
  
-----  
SUMMARY  
-----  
  
QFIVE : C  
INPUT : c  
OUTPUT : C  
  
Are these the correct disk drives (yes or no)?
```

A “yes” response sets the indicated drive specifications and returns the user to the main menu. A “no” response returns the user to the previous screen to respecify the necessary drives.

QFIVE updates the information on drive specifications so that the latest configuration will appear on the screen the next time the program is used.

Main menu option H. Help

Option H brings forth a text providing general instructions on using QFIVE. An application specific help screen is also available within the data-entry worksheet.

Main menu option X. Exit QFIVE

Option X ends the QFIVE session, clears memory and returns the user to DOS.

III. DESCRIPTION OF THE OUTPUT

An example of QFIVE's printed output is displayed on pages 18-20. The output can only be described as comprehensive. Three pages are printed for each set of input data. The label, sex of children and enumeration date are printed at the top of each page. The first page gives the input data in worksheet format as they were entered on the screen, while the second and third pages show the estimates obtained.

The second page presents the estimates produced by the application of the Trussell version of the Brass method, while the third presents the equivalent estimates obtained using the Palloni-Heligman version. Both pages consist of an upper panel showing the average number of children ever born (average parity), the average number of children surviving, the reported proportions dead and the estimates of the probability of dying by age x , $q(x)$, yielded by the different versions of the Brass method using all available mortality models. Each $q(x)$ is accompanied by the corresponding $t(i)$, its time reference, expressed in number of years before the date of the survey or census.

The lower panel of each page presents three sets of estimates: $q(1)$, that is, the probability of dying between birth and exact age 1, also known as infant mortality; ${}_4q_1$ the probability of dying between exact ages 1 and 5, termed "child mortality" in the *Guide*; and $q(5)$, the probability of dying between birth and exact age 5, also called "under-five mortality". All those estimates are "common indices" to which the estimates of $q(x)$ shown in the upper panel were translated by using model life tables. As explained in the *Guide*, it is recommended that the user focus on the estimated set of $q(5)$ equivalents. The estimates of $q(1)$ and ${}_4q_1$ are given to make comparisons possible with estimates from other sources where infant mortality is often the only measure of mortality in childhood used. The reference dates are given with one decimal point to make it easier to plot the estimates on a graph.

Note that QFIVE produces estimates for all the life-table models presented in the *Guide*. As explained in chapter IV of the *Guide*, the Trussell version is based on the Coale-Demeny regional model life tables, which have four variants: North, South, East and West. The Palloni-Heligman version, on the other hand, uses the United Nations model life tables for developing countries, whose five variants are Latin American, Chilean, South Asian, Far Eastern and General. The user is therefore faced with at least nine different sets of estimates for each set of input data. As suggested in the *Guide*, the best way of comparing and evaluating those estimates is graphically, by plotting the $q(5)$ estimates, for instance, against their respective reference dates (see figures 12 and 13 in chapter VI of the *Guide*).

Often, the user will not have to consider the whole array of estimates produced by QFIVE. If, for example, the data necessary to estimate the mean age at maternity (M) are not available, the user may wish to ignore the estimates produced by the Palloni-Heligman version, which would depend on an arbitrary default value for that parameter. If, on the other hand, additional evidence suggests that the mortality pattern in a country is very close to that of the Chilean model, the Trussell estimates and those produced by all other United Nations models can be disregarded. For a further discussion on choice of model life table and interpretation of the estimates, see chapter VI of the *Guide*.

Although QFIVE probably provides more information than is strictly necessary for the estimation of child mortality, this feature gives it added flexibility and should make it possible to meet the needs of most users.

Example of the first page of the printed output

INPUT DATA FOR KENYA DHS 1998
BOTH SEXES
ENUMERATION DATE: MAY 1998

----- Age Group of Woman -----	----- Average Parity -----	----- Average No. Children Surviving -----
15-19	.210	.180
20-24	1.280	1.150
25-29	2.700	2.430
30-34	4.030	3.590
35-39	5.320	4.830
40-44	6.370	5.590
45-49	6.940	5.810

MEAN AGE AT MATERNITY WAS NOT GIVEN. THE DEFAULT VALUE OF 27.0 WILL BE USED.

Example of the second page of the printed output

INDIRECT ESTIMATION OF EARLY AGE MORTALITY FOR KENYA DHS 1998
 BOTH SEXES
 ENUMERATION DATE: MAY 1998

AGE OF WOMAN	AVERAGE NO.		PROPORTION DEAD	AGE x	COALE-DEMENEY MODELS (TRUSSELL EQUATIONS)							
	BORN	CHILDREN SURVIVING			NORTH		SOUTH		EAST		WEST	
					q(x)	t(x)	q(x)	t(x)	q(x)	t(x)	q(x)	t(x)
15-19	.210	.180	.143	1	.148	(1.1)	.143	(1.0)	.153	(1.1)	.152	(1.1)
20-24	1.280	1.150	.102	2	.101	(2.3)	.106	(2.3)	.106	(2.4)	.106	(2.4)
25-29	2.700	2.430	.100	3	.095	(4.1)	.101	(4.2)	.100	(4.3)	.100	(4.3)
30-34	4.030	3.590	.109	5	.108	(6.2)	.111	(6.5)	.110	(6.6)	.110	(6.5)
35-39	5.320	4.830	.092	10	.097	(8.6)	.096	(9.1)	.095	(9.3)	.094	(9.1)
40-44	6.370	5.590	.122	15	.127	(11.3)	.125	(11.9)	.124	(12.1)	.124	(11.7)
45-49	6.940	5.810	.163	20	.165	(14.1)	.164	(15.0)	.163	(15.3)	.164	(14.7)

AGE OF WOMAN	NORTH		SOUTH		EAST		WEST	
AGE OF WOMAN	REFERENCE DATE	q	REFERENCE DATE	q	REFERENCE DATE	q	REFERENCE DATE	q
INFANT MORTALITY RATE: q(1)								
15-19	1997.3	.148	1997.3	.143	1997.3	.153	1997.3	.152
20-24	1996.1	.082	1996.1	.088	1996.0	.093	1996.0	.088
25-29	1994.3	.070	1994.2	.080	1994.1	.084	1994.1	.077
30-34	1992.1	.069	1991.9	.083	1991.7	.086	1991.8	.079
35-39	1989.7	.055	1989.3	.071	1989.1	.072	1989.3	.064
40-44	1987.1	.066	1986.5	.084	1986.3	.087	1986.6	.077
45-49	1984.2	.077	1983.4	.098	1983.0	.106	1983.7	.091

AGE OF WOMAN	NORTH		SOUTH		EAST		WEST	
AGE OF WOMAN	REFERENCE DATE	q	REFERENCE DATE	q	REFERENCE DATE	q	REFERENCE DATE	q
PROBABILITY OF DYING BETWEEN AGES 1 AND 5: q ₄₁								
15-19	1997.3	.120	1997.3	.107	1997.3	.062	1997.3	.089
20-24	1996.1	.053	1996.1	.037	1996.0	.029	1996.0	.040
25-29	1994.3	.042	1994.2	.030	1994.1	.024	1994.1	.033
30-34	1992.1	.042	1991.9	.032	1991.7	.026	1991.8	.034
35-39	1989.7	.030	1989.3	.023	1989.1	.018	1989.3	.024
40-44	1987.1	.039	1986.5	.033	1986.3	.026	1986.6	.033
45-49	1984.2	.049	1983.4	.048	1983.0	.036	1983.7	.043

AGE OF WOMAN	NORTH		SOUTH		EAST		WEST	
AGE OF WOMAN	REFERENCE DATE	q	REFERENCE DATE	q	REFERENCE DATE	q	REFERENCE DATE	q
PROBABILITY OF DYING BY AGE 5: q(5)								
15-19	1997.3	.250	1997.3	.235	1997.3	.206	1997.3	.227
20-24	1996.1	.131	1996.1	.121	1996.0	.119	1996.0	.124
25-29	1994.3	.109	1994.2	.107	1994.1	.106	1994.1	.108
30-34	1992.1	.108	1991.9	.111	1991.7	.110	1991.8	.110
35-39	1989.7	.084	1989.3	.092	1989.1	.089	1989.3	.087
40-44	1987.1	.102	1986.5	.114	1986.3	.111	1986.6	.107
45-49	1984.2	.122	1983.4	.141	1983.0	.137	1983.7	.130

NOTE: A q VALUE OF .999 DENOTES VALUE BELOW A LEVEL 1 MODEL LIFE TABLE
 " .000 " ABOVE A LEVEL 25 "

