PC-MICAR DATA ENTRY

1996 Version

User's Manual

1/11/96

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INTRODUCTION

What This Manual Is

This is the *PC-MICAR User Manual*. PC-MICAR is a cause-of-death data entry system designed for editing and processing of medical information reported on a death certificate in the United States. **PC-MICAR requires a trained MICAR coder to use!**

PC-MICAR is one part of the National Center for Health Statistic's Mortality Medical Data System. NCHS began developing the system in 1967 to automate the entry, classification, and retrieval of cause-of-death information reported on death certificates. Mortality medical data is processed through four basic programs: PC-MICAR, MICAR[1], ACME[2], and TRANSAX[3].

- **PC-MICAR** PC system for MICAR data entry, including reporting procedures, full-screen data entry and editing. PC-MICAR is designed to assist MICAR data entry operators in encoding medical cause-of-death data into numeric entity reference numbers (ERNs) in accordance with the rules expressed in Part 2g of the Vital Statistics Instruction Manual (VSIM) series. PC-MICAR output is used by later programs to classify causes of death to their International Classification of Disease (ICD) codes. PC-MICAR only runs on personal computers.

- **MICAR** Automates the multiple cause coding rules (see Parts 2b and 2e of the VSIM series) and assigns ICD codes to each entity.

- **ACME** Applies World Health Organization (WHO) rules to the ICD codes determined by MICAR and selects an underlying cause of death (see Part 2a and 2c of the VSIM series). ACME is available on both the mainframe and the personal computer. On the PC, ACME and TRANSAX are distributed as a single product.

Mortality Medical Indexing, Classification, and Retrieval

Automated Classification of Medical Entities

TRANSlation of AXis

• **TRANSAX** Facilitates the tabulation and use of multiple cause-of-death data. Through the application of the ICD linkage and modification rules, TRANSAX translates the axis of classification from an entity to a record base. TRANSAX is available on both the mainframe and the personal computer.

The only other manual specifically associated with this one is the *PC-MICAR System Manager's Manual*. The *System Manager's Manual* contains information on the installation and maintenance of the PC-MICAR software, as well as some utilities that may need to be used.

Who This Manual Is For

This manual is intended for data entry personnel. It contains instructions on using PC-MICAR to enter cause-of-death information and to process that information. Only those sections of PC-MICAR that deal with data entry and processing operations are addressed in this manual. It is organized on the assumption that the user has little or no familiarity with PC-MICAR. Therefore, the subjects in this manual are arranged so the user receives all of the instructions necessary to perform a given task at once.

Changes in 1996

The 1996 version of PC-MICAR data entry software includes numerous changes from the 1995 and other previous versions. Many of the changes are easily apparent, and others might go almost unnoticed. This section outlines the differences, so that you can quickly familiarize yourself with them. For a graphical overview of the changes, a demonstration of many of them has been provided on the installation diskettes. Refer to the installation instructions in the *PC-MICAR System Manager's Manual* for information on installing and running the PC-MICAR Data Entry 1996 demo.

The File System

The most fundamental difference in the 1996 version lies in how it handles files. In the past, each file would contain a single batch of work, and each file could be either open or closed. The open file was the one you were currently using. Closed files were stored in a compressed format in the <BATCHES> directory. In 1996, the file format is changed. Your batches are stored in a <DATA> subdirectory that you can specify through the program. This directory can be on a network drive (See Network Compatibility, below). Any file that exists in your data directory can be opened at any time. Thus, closing a

batch does not include compressing it or moving it to another location. It merely closes that file and allows you to open another one, or create a new one.

Files are also stored in a different database format. The new database files use a Foxpro-compatible X-base database. Data files from previous versions of PC-MICAR cannot be used by the new system, but can be converted by exporting the MICAR100 input file (the mainframe file) from the 1995 version and importing it into PC-MICAR 1996 using the Import MICAR 100 File option from the File menu. However, because of changes in the 1996 external cause prompts, it is not advised to process data entered through a prior system.

In addition, the entire MICAR data structure for all PC-based MICAR software (Super-MICAR, PC-MICAR Data Entry, MICAR100/200, and PC-ACME/TRANSAX) has been universalized. The data file that PC-MICAR creates contains provisions for storing the data from all MICAR programs. Thus, you no longer need to generate a MICAR100 (mainframe) input file unless you are uploading to a mainframe for MICAR processing. The PC versions of MICAR100 can read the same data file format that PC-MICAR uses, as can PC-ACME/TRANSAX. While this causes the PC-MICAR database to be larger, the space used by this system is made up in less need for ASCII files to transfer data between systems. For more information on data sharing between the PC-based MICAR systems, see the section The Unified Database in the *PC-MICAR System Manager's Manual*.

Network Compatibility

The new file system includes provisions for accessing data on network file servers. With this ability, you can keep your files on a local area network, where they can be available to multiple users at all times. As a part of this compatibility, each file is also multi-user accessible. With this ability, multiple users can enter data into the same file simultaneously. It is still recommended, however, that batches be kept small in order to facilitate storing, shipping, and finding the proper files and records. By combining network-compatible files, multi-user access, and multiple file availability, it is possible in the new system to segment data in new ways. For example, it is possible to have one file for each month, and enter all deaths for that month into a single file on a network drive.

The Menu System

The most apparent change in PC-MICAR 1996 is the change from the menu list that was used in earlier versions to the drop-down menu interface that is in the 1996 version. The drop-down menus are easier to use, easier to navigate, and place all the options of

PC-MICAR at the user's fingertips. The PC-MICAR 1996 Demo is primarily geared to showing the menu system and how to access its functions. For more information on the menu system, go through the demo, or read the section "Using the Menus" in this manual.

The Universal External Cause Prompts

PC-MICAR 1996 is the first system to collect and use the ICD9/ICD10 Universal Prompts for External Causes. These are equivalent to the external cause prompts used in earlier versions of PC-MICAR, but have been revised to make it possible to collect data for both the 9th and 10th revisions of the International Classification of Disease. MICAR data entry coders should familiarize themselves with the new prompts. These prompts are provided in a PDF format with the installation disks, and will also be printed in the 1996 revision of the MICAR Instruction Manual Part 2g. There is a practice package included with the installation disks, called Prompt10, to help coders become familiar with the changes. Instructions for installing and running the Prompt10 package are in the *PC-MICAR System Manager's Manual.*

The Spelling Checker

In previous versions of PC-MICAR, terms that did not match the dictionary were brought to the user's attention for correction. These were done on a causal basis. That is, if the cause was not found in the dictionary, a warning was given and the user could select from a list of potential causes. In PC-MICAR 1996, the dictionary match program looks for errors on a word-by-word basis. That is, each misspelled word in the term is matched individually, and the list of suggested corrections is a list of properly-spelled words. If all the words are spelled correctly and the term does not match, this also generates a warning message.

Reporting Area

The Reporting Area field that appeared on the batch information screen has been removed. This data is no longer collected.

Coder Status

At the request of several states, the valid values for this field have been expanded to allow entry of single-digit numbers 0 through 9.

Place of Injury

The options for this field have been expanded to accommodate new categories required by the Tenth Revision of the ICD. To assist in learning and selecting the new codes, a pop-up menu has been provided, which can be accessed by entering a question mark in the place of injury field. For a complete list of the places, refer to the 1996 version of the 2g manual or **APPENDIX F**, pg. 56.

Activity Code

A new field, Activity Code, has been added. This new field collects information about the decedent's activity at the time of death. A pop-up menu of options is available by entering a question mark in the field. For a complete list of the activity codes, refer to the 1996 version of the 2g manual.

Backup/Remove Option

This new option backs up the open file to a floppy disk, then, if the backup is successful, deletes the file from your hard drive.

Backup and MICAR100 Export Paths

In PC-MICAR 1996, it is possible to set up a subdirectory on the computer's hard drive or on a network drive in which to store data backups and exported MICAR100 input files. These options facilitate putting important data on network drives where it can be easily protected by the local network administrator. These paths should be set by the system manager. By default, these files are stored in the <DATA> directory.

OVERVIEW

Basic Steps

PC-MICAR is designed to allow both data entry and data processing through the menu system. When collecting and processing data through PC-MICAR, certain steps should be followed in order to guarantee the best results with the least wasted time. What follows is a general outline of the MINIMUM data entry and processing steps for PC-MICAR. PC-MICAR contains several utilities and reports that are helpful in validating data and keeping track of data entry and processing. Utilities are described in the next section, with indications of where they would be most useful.

Note that the relevant sections of this manual are listed next to each step.

1. Start PC-MICAR (**Starting PC-MICAR**, pg. 13).

2. Open a certificate file (**Opening an Existing File**, pg. 17). This step opens a file so that data can be entered and processed. You can either open an existing file or create a new file. With very few exceptions, every function that PC-MICAR can perform requires that a file be opened before the function can be preformed.

3. Edit the certificate file header information as needed (**Creating a New Certificate File**, pg. 14). The header information contains constant data that is the same for every record in the certificate file, such as the data year and the state code.

4. Add certificates to the database (**ENTERING AND SAVING CERTIFICATE DATA**, pg. 21). This is the main data entry process. PC-MICAR's editing functions may prove useful in this step (see **EDITING FUNCTIONS**, pg. 28).

5. Process the certificate file (**PROCESSING ALL CERTIFICATES**, pg. 36). When a file is processed, PC-MICAR assigns entity reference numbers (ERNs) to the medical causes of death that were listed in the certificate file.

6. Generate MICAR100 file (**GENERATING A MICAR100 FILE**, pg. 38). This file is used by other MICAR software to continue the process of encoding cause-of-death data.

7. Create a backup for shipment to NCHS (**Creating Backups for NCHS**, pg. 40). This function creates a file that can be shipped to NCHS. The file contains the MICAR100 file generated in the previous step.

8.   Close the certificate file (**CLOSING A FILE**, pg. 42).

9.   If there are other certificate files to process, repeat steps 2 through 7.

10. If there are no more files to process, exit PC-MICAR and return to DOS
     (**EXITING PC-MICAR**, pg. 47).

Extra Utilities

Below are listed additional Functions that PC-MICAR can perform. Most of these utilities
can be used at any time with PC-MICAR. Most will require that a certificate file be open.
See the individual description of each utility for more details. Please note that there are
more utilities described in the *PC-MICAR System Manager's Manual.*

1.   Browse through and edit the certificates in a file (**Browsing Through the
     Certificates**, pg. 30). This function allows the user to edit information in the
     certificate database, which may be necessary at any time.

2.   Find a specific certificate number/record in a file (**Finding a Record**, pg. 31). This
     function is available only when browsing through the certificates and allows the
     user to display a particular record by specifying its certificate number.

5.   Delete a certificate while editing (**Deleting Certificates While Editing a Certificate
     File**, pg. 34). This function allows the user to remove a record from the certificate
     file.

6.   Delete several certificates at once (**Deleting Several Certificates at Once**, pg. 35).
     This function allows the user to remove a block of several records from the
     certificate file. Use this option if an error has occurred and several certificates have
     been entered into the wrong file.

7.   Generate a sequence check (**Generating a Sequence Check**, pg. 43). This function
     generates a report that checks the sequence of the certificate numbers in the file. It
     is useful in determining if all of the records that should be in the file have been
     entered, if unwanted records have been entered, or if records have been entered
     with an incorrect certificate number. This function can be used at any time, but is
     most useful between data entry and processing to determine if the file is complete.

9.   Print all or selected certificates for review. See **Printing All the Certificates** (pg.
     44) and/or **Printing a Single Certificate** (pg. 45).

10. Perform a daily backup. (**Backing Up All the Files**, pg. 39). This function creates a backup copy of the open certificate file either on your system's hard drive or on a floppy. Backing up data is the only protection available against losing data due to a failed computer system. It is a good idea to back up the certificate file at the end of every day.

There are more Menu Options and Functions available in PC-MICAR than will be used by data entry personnel. These other Menu Options and Functions will be used by the system manager. The instructions for them are contained in the *PC-MICAR System Manager's Manual*.

THE MENU SYSTEM

Quick List of Menu Options

TABLE 1: PC-MICAR Menu Options	
Key Combination	**Menu Option Accessed**
{ALT-F}	**File** Menu Option
{ALT-E}	**Edit** Menu Option
{ALT-P}	**Process** Menu Option
{ALT-R}	**Reports** Menu Option
{ALT-B}	**Backup** Menu Option
{ALT-H}	**Help** Menu Option

```
┌─────────────────────────────────────────────────────────────┐
│                   TABLE 2: Function Listing                   │
├─────────────────────────────────────────────────────────────┤
│ File                                                          │
│     {ALT-F2}      Create New File                             │
│     {F2}          Open Existing File                          │
│     {ALT-F4}      Close File                                  │
│                   Repair File Index                           │
│                   Merge Another File                          │
│                   Import MICAR100 File                        │
│     {ALT-F6}      Set Data File Path                          │
│     {SHIFT-F6}    Set Table File Path                         │
│                   Set Backup File Path                        │
│                   Set MICAR 100 File Path                     │
│                   DOS Subsession                              │
│     {ALT-X}       Exit PC-MICAR                               │
│                                                               │
│ Edit                                                          │
│                   Edit/Browse Header Info                     │
│     {F3}          Add Certificates                            │
│     {F4}          Edit/Browse Certificates                    │
│     {F8}          Delete Records                              │
│     {F5}          Find a Record                               │
│     {F7}          Print a Record                              │
│     {F10}         Turn Dictionary On/Off                      │
│     {ALT-U}       Undo Changes                                │
│                                                               │
│ Process                                                       │
│                   Process All Records                         │
│                   Generate MICAR100 File                      │
│                                                               │
│ Reports                                                       │
│                   Sequence Check                              │
│                   Print All Certificates                      │
│                                                               │
│ Backup                                                        │
│     {ALT-F7}      Backup All Files                            │
│                   Backup for NCHS                             │
│     {ALT-F8}      Restore from Backup                         │
│                   Backup and Remove                           │
│                                                               │
│ Help                                                          │
│     {F1}          View Help File                              │
│     {ALT-F1}      About PC-MICAR                              │
└─────────────────────────────────────────────────────────────┘
```

Using the PC-MICAR Menu System

PC-MICAR Functions are available through a drop-down menu system. The menu system allows the user to select Functions to perform and to move from task to task quickly and easily. Unlike the menu lists available through other types of software, PC-MICAR uses a menu system that allows an option to be selected from the menu even when another function is active. This allows users to select functions more quickly, without having to exit their way 'back up the tree' before they can select another function.

```
                        PC-MICAR 1996: TEST1.DBF
     File       Edit        Process    Reports    Backup              Help
                      ┌──────────────────────────────────┐
                      │ Edit Header Info                  │
                      │ Add Certificates           F3     │
                      │ Browse Certificates        F4     │
                      │ Delete Records             F8     │
                      │ Find a Record              F5     │
                      │ Print a Record             F7     │
                      │ Turn Dictionary On/Off     F10    │
                      │ Undo Changes             ALT-U    │
                      └──────────────────────────────────┘


                        F1-Help                              2 58pm
```
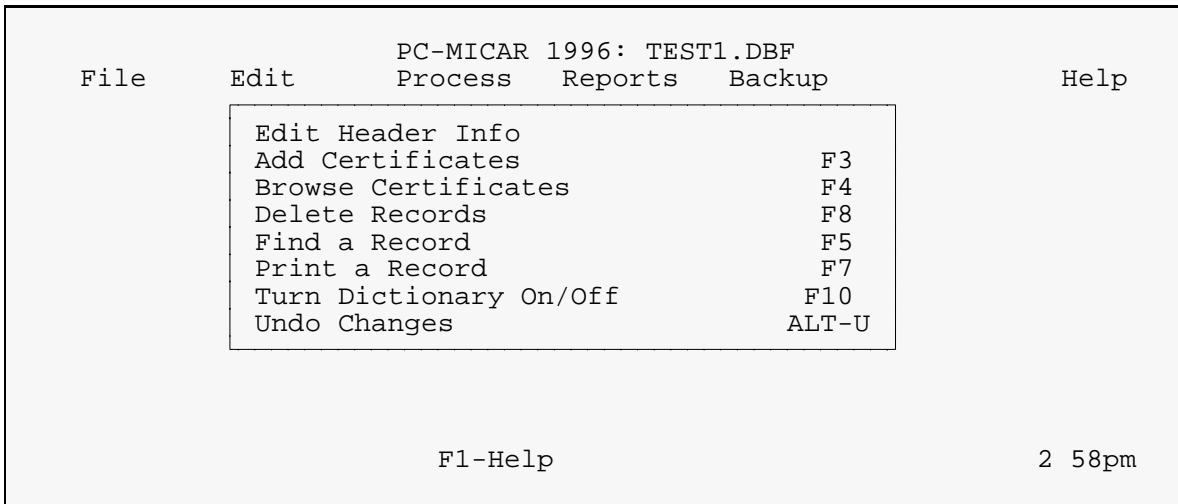
Figure 1: The **Edit** Menu Option and its Functions.

There are two ways to access the menu:

ALT-*X*:   Simultaneously pressing the {ALT} key and the highlighted letter key of a
            main menu item will display the drop-down menu for that item. (The ALT
            keys for each menu option are listed in Table 1.) Then use the up and
            down arrow keys to highlight an item on the menu. Press {ENTER} to
            select the option. Use the left and right arrow keys to open submenus for
            other main menu options. Pressing {ESC} from a dropped-down menu
            closes the menu. Pressing {ESC} from the main menu will exit PC-
            MICAR.

HotKey: Many of the Functions in the menus have an associated hotkey. The hotkey
            assignments are shown on the drop-down menus and are listed in Table 2.
            Pressing a hotkey will immediately access the associated function. (For
            example, pressing {F2} will select the Open Existing File Function.)

Hotkeys are the fastest, easiest way to move around PC-MICAR. As users become familiar with PC-MICAR, they will find the hotkeys easier to use.

To select a Function from a drop-down menu, either use the up and down arrow keys to highlight an option or press the option's selection letter. The selection letter is displayed in red (on color monitors) or highlighted (on monochrome monitors). Pressing the selection letter will move the highlight bar to the selected option.

Figure 1 gives an example of the **Edit** Menu Option and its Functions.

Not all Functions are available at all times. In order to prevent users from selecting Functions that should not be accessed during a particular process, the menu system will make certain Functions available (active) or unavailable (inactive). On color monitors, the active options are shown in black while inactive options are shown in gray. On monochrome monitors, inactive options do not have a highlighted selection letter. When an option is inactive, it cannot be selected (the highlight bar will skip over that item and its hotkey will not function).

GETTING STARTED

Starting PC-MICAR

To start PC-MICAR from DOS, use the following steps:

1. Make sure that DOS is currently in the <PCMICAR> directory.

    A. To check to see if the current directory is the <PCMICAR> directory, type CD and press {ENTER}. The current directory name will appear on the screen.

    B. To change the current directory to the <PCMICAR> directory, type CD \PCMICAR and press {ENTER}.

2. To start PC-MICAR, type PCMICAR and press {ENTER}.

3. The main menu screen (**Figure 2**) will be displayed. Refer to the section **Using the PC-MICAR Menu System** (pg. 11) for more details on the main screen and the Menu Bar.

```
                        PC-MICAR 1996: TEST1.DBF
     File      Edit      Process   Reports   Backup              Help











                        F1-Help                               2 58pm
```
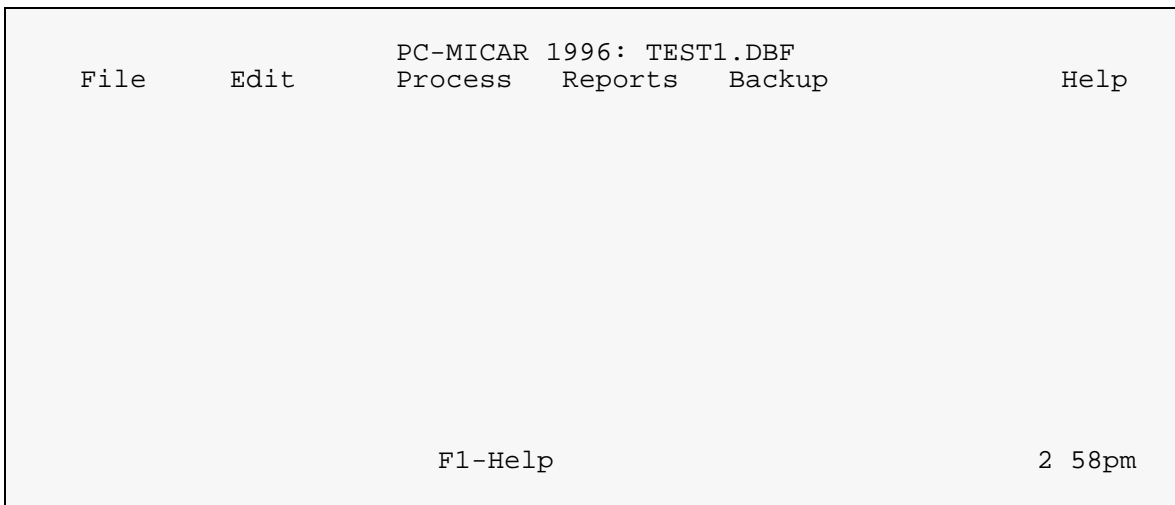
Figure 2: The PC-MICAR Main Screen.

When the main screen appears, PC-MICAR is ready to begin. To start work, see **Creating a New Certificate File** (pg. 14), or **Opening an Existing File** (pg. 17). PC-MICAR will "remember" the last file that was opened, so unless the user specifically closes a file (see

CLOSING A FILE, pg. 42) the last opened file will be open and ready each time PC-MICAR is started.

About the Main Screen

The main screen of PC-MICAR has several useful features:

1. At the top of the main screen will be the title (PC-MICAR). This line will also show the file name of any open certificate file (see **Opening an Existing File**, pg. 17).

2. The second line of the screen holds the menu bar. The menu bar has several words on it, called Menu Options. Each Menu Option has several Functions that can be used. See **Using the PC-MICAR Menu System** (pg. 11) for more details.

3. At the bottom of the screen is a bar displaying some useful information:

    A. In the center, a note appears about the {F1} key. The {F1} key will display PC-MICAR's online Help feature. This will give brief instructions about whatever part of PC-MICAR is currently being used.

    B. In the lower right corner is a clock showing the current time.

Creating a New Certificate File

There are two ways to open a certificate file for use with PC-MICAR. The first way is by **Creating a New Certificate File** (see below). The second way is by **Opening an Existing File** (pg. 17). Before data can be entered into a certificate file, a file must be created and opened. To create a new certificate file, follow these steps:

1. From the main screen, press {ALT-F} to select the **File** Menu Option.

2. Use the up and down arrow keys to highlight the Create New File Function and press {ENTER}.

3. If a file is currently open, a message window will be displayed.

    A. To close the currently open file and open a new one, press {Y} and go on to step 4.

B. To abort opening a new file and keep using the currently open file, press {N}. The main screen will be re-displayed. Continue using PC-MICAR normally.

```
                            PC-MICAR 1996:
     File        Edit        Process    Reports    Backup              Help




                       ┌──────────────────────────────────┐
                       │        Specify File Name          │
                       ├──────────────────────────────────┤
                       │ Enter New File Name:              │
                       │                                   │
                       │                                   │
                       └──────────────────────────────────┘




                         F1-Help                                    2 58pm
```

Figure 3: A request for a new certificate filename.

4. A window will be displayed (see **Figure 3**) requesting a filename. Type in the desired 7 character filename WITHOUT the extension and press {ENTER}. If a file with the entered filename already exists in the <PCMICAR\DATA> directory, a message window will be displayed. Press {ENTER} and re-enter the filename.

    Example: NC96001 {ENTER}

    See the *PC-MICAR System Manager's Manual* for information on suggested file name conventions. Ask the System Manager for the file name conventions that should be used.

5. A second window will then be displayed (see **Figure 4**) asking to confirm the creation of the new file.

    A. To create a new file, type {Y}. The header information screen (step 5) will be displayed.

    B. To abort creation of the new file and return to the main screen, type {N}.

6. When the file is created, the Specify Header Information screen (**Figure 5**) will be displayed. The header information will be the same for each record in the file. Fill in the appropriate header information as follows:

```
                              PC-MICAR 1996:
       File      Edit      Process   Reports   Backup           Help




            Create new file C:\PCMICAR\DATA\NC93001?
                    Yes    ■        No    ■




                         F1-Help                           2 58pm
```
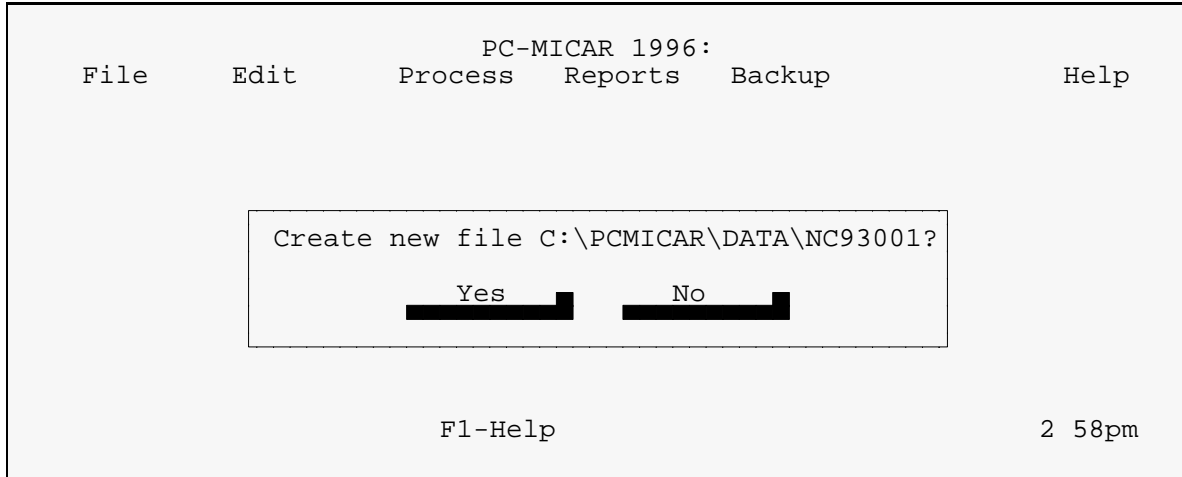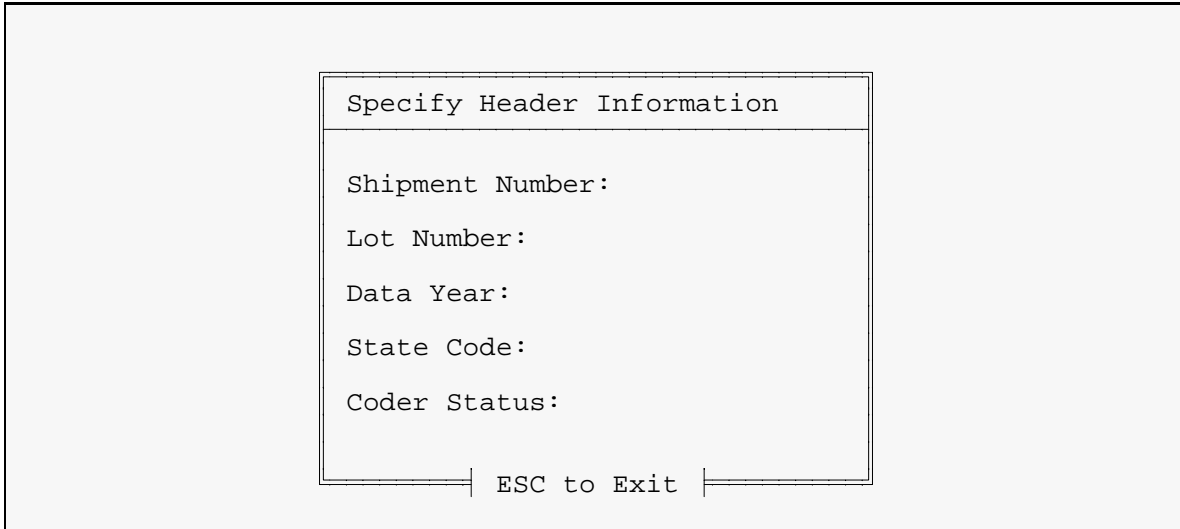
Figure 4: Confirm creation of a new certificate file.

Shipment	-	A two-character identifier for the file.
Lot #	-	A number from 000-999. Some states will use "book number."
Data Year	-	The last digit for the year of the death certificate (Example: 1991 = 1, 1997 = 7).
State Code	-	A number identifying the state from which the death certificate originates. (These states codes are listed in **APPENDIX A**, pg. 48). If a two letter abbreviation for a state is entered, the program will automatically insert the correct NCHS state code. If the program does not recognize the abbreviation, it will display an error message and then a pick list of states. Entering a question mark {?} in this field will cause a pick list of states to be displayed.
Coder Status	-	A number from 0-9 used to identify the status of the coder.

Example: Codes for a batch of certificates being processed for data year 1987, from the State of Alaska, with lot number 303, shipment 02, and coder status 1 would have the following entries: **Shipment** 02, **Lot #** 303, **Data Year** 7, **State Code** 02, **Coder Status** 1.

7.   When the coder status has been entered, the header information will be saved and

```
┌──────────────────────────────────────────────────────────────────┐
│                                                                    │
│              ┌───────────────────────────────────────┐            │
│              │    Specify Header Information          │            │
│              ├───────────────────────────────────────┤            │
│              │                                        │            │
│              │  Shipment Number:                      │            │
│              │                                        │            │
│              │  Lot Number:                           │            │
│              │                                        │            │
│              │  Data Year:                            │            │
│              │                                        │            │
│              │  State Code:                           │            │
│              │                                        │            │
│              │  Coder Status:                         │            │
│              │                                        │            │
│              │                                        │            │
│              └═══════════╡ ESC to Exit ╞══════════════┘            │
│                                                                    │
└──────────────────────────────────────────────────────────────────┘
```

Figure 5: The Specify Header Information screen.

      the main screen will be re-displayed with the new filename at the top.

8.   To exit the Specify Header Information screen without saving, press {ESC}. The main screen will be re-displayed.

Opening an Existing File

The steps below tell how to open an existing certificate file for use with PC-MICAR.

1.   From the main screen, press {ALT-F} to select the **File** Menu Option.

2.   Use the up and down arrow keys to highlight the Open Existing File Function and press {ENTER}.

3.   If a file is currently open, a message window will be displayed.

     A. To close the currently open file and open a new one, press {Y} and go on to step 4.

     B. To abort opening a new file and keep using the currently open file, press {N}. The main screen will be re-displayed. Continue using PC-MICAR normally.

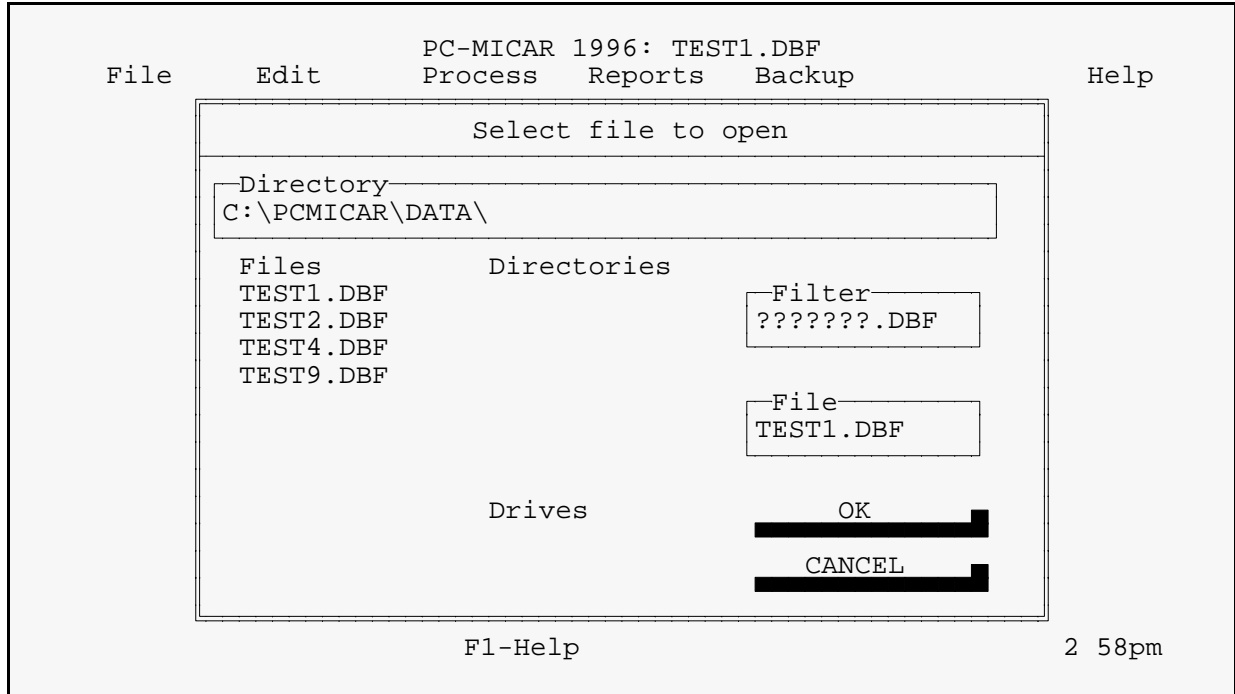4.   A file selection window (see **Figure 6**) will be displayed.

```
                      PC-MICAR 1996: TEST1.DBF
       File      Edit       Process   Reports   Backup          Help

            ┌──────────────── Select file to open ────────────────┐
            │                                                       │
            │  ┌Directory─────────────────────────────────────┐   │
            │  │C:\PCMICAR\DATA\                                │   │
            │  └───────────────────────────────────────────────┘   │
            │                                                       │
            │    Files          Directories                        │
            │    TEST1.DBF                      ┌Filter────────┐   │
            │    TEST2.DBF                      │???????.DBF    │   │
            │    TEST4.DBF                      └──────────────┘   │
            │    TEST9.DBF                                          │
            │                                   ┌File──────────┐   │
            │                                   │TEST1.DBF      │   │
            │                                   └──────────────┘   │
            │                                                       │
            │                   Drives              ┌──────────┐   │
            │                                       │   OK     │▄  │
            │                                       └──────────┘   │
            │                                       ┌──────────┐   │
            │                                       │ CANCEL   │▄  │
            │                                       └──────────┘   │
            │                                                       │
            └───────────────────────────────────────────────────────┘

                       F1-Help                            2 58pm
```

Figure 6: The File Selection Window.

5.   Use the up and down arrow keys to highlight the desired file in the Pick List of
     Files. Press {ENTER}.

6.   The main screen will be re-displayed with the name of the open file at the top.

THE DICTIONARY

PC-MICAR comes with an Online Dictionary. The dictionary matches ERNs to user-entered causes of death. The Dictionary is very syntax specific. This means that for each term in the Cause, the Dictionary will search for a match. For example, if "ABCESS" (a misspelling of "ABSCESS") is entered, the Dictionary will not be able to find an exact match and the first 6 letters ("ABCESS" in our example) will be displayed in the ERN field.

If all of the words in the cause are spelled correctly, but the specific arrangement of the term is not in the dictionary, a warning message will be displayed.

If a word is misspelled, the user will be given the opportunity to Accept the word as it is spelled, Retype the word, or Spellcheck and search for the closest match in the dictionary.

Activating the Online Dictionary

NOTE: The Online Dictionary can only be accessed when adding or editing certificates (see **Adding Certificates**, pg. 21, and **EDITING FUNCTIONS**, pg. 28).

Use the instructions below if the Online Dictionary is turned off (the words "Dictionary OFF" appear at the bottom of the certificate information screen).

1. Press {ALT-E} to access the **Edit** Menu Option.

2. Use the up and down arrows to highlight the Dictionary ON/OFF Function. Press {ENTER}.

3. **IMPORTANT:** To indicate that the Online Dictionary is active, "Dictionary On" will be displayed on the bottom line of the certificate information screen. If the dictionary is turned off, "Dictionary Off" will be displayed on the bottom liner of the same screen.

Deactivating the Online Dictionary

NOTE: The Online Dictionary can only be accessed when adding or editing certificates (see **Adding Certificates**, pg. 21, and **EDITING FUNCTIONS**, pg. 28).

Use the instructions below if the Online Dictionary is turned on ("Dictionary On" is displayed at the bottom of the certificate information screen) and needs to be turned off.

1. Press {ALT-E} to access the **Edit** Menu Option.

2. Use the up and down arrows to highlight the Online Dictionary. Press {ENTER}.

3. The Online Dictionary is now turned off. "Dictionary Off" will be displayed in the bottom line of the certificate information screen.

NOTE: The {F-10} Hot Key can be used at any time to toggle dictionary on or off.

ENTERING AND SAVING CERTIFICATE DATA

There are several Functions that can be used to enter and save data in PC-MICAR. It is recommended that a sequence check (see **Generating a Sequence Check**, pg. 43) be performed after all of the certificate data has been entered.

Adding Certificates

In order to add certificates, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 14, or **Opening an Existing File** pg. 17).

Adding certificates to a file is the primary data entry function. Use the instructions below to add certificates to an open file.

1. From the main screen, press {ALT-E} to select the **Edit** Menu Option.

2. Use the up and down arrow keys to highlight the Add Certificates Function and press {ENTER}.

3. A message window will be displayed showing how many certificates may be entered on the computer. This is determined by the amount of free space on the hard drive. Press {ENTER}.

4. The Certificate Information Screen (see **Figure 7**) will be displayed.

5. **Table 3** lists the special keys and their functions for adding certificates.

Table 3: Function Keys For Adding Certificates	
{ALT-F9}	Saves the current certificate and exits the editing screen.
{ALT-U}	Undo the last command. See **Undoing Changes**, pg. 32.
{CTRL-ENTER}	Saves the certificate information on disk and advances to the next certificate.
{ESC}	Exits this menu Function and returns to the CERTIFICATE EDITING submenu.

Table 3: Function Keys For Adding Certificates	
{SHIFT-TAB}	Moves the cursor to the previous field.
{TAB}	Moves the cursor to the next field.

6. Enter the following certificate information in the corresponding fields on the
     screen. NCHS rules on special cases that affect the data entered have been
     provided as notes after each field description. Remember, the {TAB} and {SHIFT-
     TAB} keys can be used to move from field to field.

     Certificate #   The certificate number. This can usually be found in the upper
right hand corner of the standard U. S. Certificate of Death.

     Sex   The sex of the decedent. 1 - Male, 2 - Female, or 9 -
Unknown. Letters (M, F, or U) will be converted to their
corresponding numbers.

     Date of Death   The date of the decedent's death as reported on the death
certificate. Give it in the following format: MM/DD (where
MM = the month (01-12, 99) and DD = the day of the month
(01-31, 99)). PC-MICAR will keep track of the year using the
header information (see **Editing Header Information**, pg. 28).
Dates after the current (today's) date will not be accepted.

     Age   The decedent's age at the time of death. (For the code structure,
refer to the Part 2g VSIM manual.) Values that will be accepted
are: 001-699 and 901-999.

     State   Users cannot enter data in this field. The state is entered in the
header information (see **Editing Header Information**, pg. 28).

     P#   Part Number. Indicates whether the data entered on this line
comes from Part I or Part II of the death certificate. Acceptable
values are 1 (which is what will appear in the field unless the
user changes this), 2, and 0. Entering a zero {0} in this field
will skip the remaining causes and move the cursor to the
Manner of Death Field.

     L#   Line number. Corresponds to the lines in Part I on the
certificate (A, B, C, D), or the lines in Part II (01, 02, 03, etc).

Values can range from A-I for Part I and 1-20 for Part II. All line numbers must be sequential.

```
                        PC-MICAR 1996: TEST1.DBF
    File        Edit       Process      Reports     Backup          Help

  Certificate: 000014  Sex:     Date of Death:      Age:   State:
 P#L# C# ERN    CAUSE                                                   Dur










 Manner:            Injury Date:       At Work?: Injury Place:

 P#L# C# ERN    CAUSE                                                   Dur



 Date of Surgery:                      State-Specific Data:
```

Figure 7: The Certificate Information Screen.

C#	Cause number. This is a number generated by PC-MICAR. It cannot be changed during data entry. If more than one item was entered on a line on the death certificate, this number indicates which cause number (from the certificate line) is being entered.
ERN	The Entity Reference Number. If the Dictionary is OFF (see **THE DICTIONARY**, pg. 19), the first six letters of the CAUSE field will be placed here. If the Dictionary is ON, an ERN will be supplied by PC-MICAR (if no ERN match is found, the first 6 letters of the term will be used instead). This field cannot be changed during data entry.

Cause   The cause of death listed on the certificate. These must be in
                       standard MICAR nomenclature or an entity reference number
                       (ERN). To access the external cause prompts, enter a '>' here
                       (see **Entering External Cause Prompts**, pg. 27).

Dur   Duration. The duration of the listed condition. (For the code
                       structure, refer to the Part 2g manual.)

Manner   Manner of Death listed on the certificate. Entering an asterisk
                       (*) in the Manner of Death will immediately move the cursor to
                       the Surgery Date field. This will leave Manner of Death blank.
                       If a question mark (?) is entered, a pick list of valid Manner of
                       Death codes will appear:

                              1: Accident
                              2: Suicide
                              3: Homicide
                              4: Deferred
                              4: Pending Investigation
                              4: Unclassified
                              5: Undetermined
                              6: Self-Inflicted
                              7: Natural
                              Not Specified

Injury Date   The date of any injury as listed on the certificate. This date
                       cannot be after the date of death and will appear as
                       MM/DD/YY, where MM is the two digit month, DD is the two
                       digit day, and YY is the last two digits of the year.

At Work?   Did the injury occur at work? Enter a "1" for YES or leave
                       blank for NO.

Injury Place   Location at which the injury occurred. See **APPENDIX F** (pg.
                       56) for a list of valid place of injury codes.

Activity Code   Activity the decedent was undertaking when death occurred.
                       Entering a question mark (?) will cause the following pick list
                       to appear:

                                  0: While Engaged in Sports Activity
1: While Engaged in Leisure Activity
2: While Working for Income
3: While Engaged in Other Types of Work
4: While Resting, Sleeping, Eating (Vital Activities)
8: While Engaged in Other Specified Activities
9: During Unspecified Activity
Blank

Injury Causes   This is the second set of lines (P#, L#, C#, Injury cause line) in the bottom quarter of the screen. The columns hold the same information as those described above. The information entered here is reported in the injury description block on the death certificate.

                            Entering a '0' in the P# will move the cursor to Date of Surgery.

Injury Date   A field that holds the month/day/year of the injury.

State-Specific Info   State offices can enter state-specific information in this field.

7.   Following is a list of symbols, and their meanings, that are commonly used on the Cause of Death sections of a death certificate. This list is also included in **APPENDIX E - SPECIAL SYMBOLS** (pg. 55) at the end of this manual.

        #   "Fracture." Substitute for the word "fracture." Example: For "Leg #," type "LEG FRACTURE".

        ↓   "Decreased." Substitute for the word "decreased." Example: For "↓ blood pressure," type "DECREASED BLOOD PRESSURE".

        ↑   "Increased." Substitute for the word "increased." Example: For "↑ hemorrhaging," type "INCREASED HEMORRHAGING".

        ℓ   "Hour." Substitute for the word "Hour." Example: For "1 ℓ," type "1 HOUR".

1°   "Primary." Substitute for the word "primary." Example: For "1° colon cancer," type "PRIMARY COLON CANCER".

2°   "Secondary to." Substitute for the words "secondary to." Example: For "Pneumonia 2° cardiorespiratory infection," type "PNEUMONIA SECONDARY TO CARDIORESPIRATORY INFECTION".

$\bar{c}$ "With." Substitute for the word "with." Example: For "Heat stroke $\bar{c}$ myocardial infarction," type "HEAT STROKE WITH MYOCARDIAL INFARCTION".

$\bar{p}$ "After." Substitute for the word "after." Example: For "Spontaneous bleeding $\bar{p}$ tracheal tube removal," type "SPONTANEOUS BLEEDING AFTER TRACHEAL TUBE REMOVAL".

$\bar{s}$ "Without." Substitute for the word "without." Example: For "Went three weeks $\bar{s}$ taking medication," type "WENT THREE WEEKS WITHOUT TAKING MEDICATION".

w/   "With." Substitute for the word "with." Example: For "Heat stroke w/ myocardial infarction," type "HEAT STROKE WITH MYOCARDIAL INFARCTION".

8. When the end of the last field has been reached, press {ENTER} or {PgDown}. The certificate will be saved and a blank screen for a new record will be displayed.

9. The Enter Certificate Information screen will be re-displayed with all but one of the fields blank (the certificate number field will contain data). A new certificate number will be automatically generated by the program. (The user can change this certificate number if desired.) Go to step 5 above to enter another certificate.

10. To exit the Add Certificate Function, press the {ESC} key when a new certificate screen is displayed. **NOTE:** Pressing {ESC} from a screen that contains data WILL NOT save that data. Press {ALT-F9} to save the current certificate and exit the Add Certificates function.

11. The main screen will be redisplayed.

Entering External Cause Prompts

Entering a greater-than sign (>) in any of the **Cause** fields on the Certificate Information Screen will cause a series of menus containing the external cause prompts to be displayed. To enter an external cause, simply type in the one to two letter/number code next to the external cause. Repeat this process as each new menu appears. When the complete external cause code has been entered, the Certificate Information Screen will be re-displayed with the external cause code in the **Cause** field.

PC-MICAR uses the ICD9/ICD10 Universal Prompts for collecting external causes. These new prompts are significantly changed from previous years. The practice exercise included with the installation disks will help coders become familiar with the changes.

EDITING FUNCTIONS

PC-MICAR has several Functions that can be used to edit a certificate file and the data it contains. The most commonly used Function for this will be the Edit/Browse Certificate Function (see **Browsing Through the Certificates** on pg. 30). Other Functions that will be used to edit certificate data are: the Edit/Browse Header Information Function and the Find a Record Function. The Exit PC-MICAR, Delete Records, and Show Processed Output can also be used and are described in other parts of this manual.

Editing Header Information

Before header information can be edited, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 14, or **Opening an Existing File** pg. 17).
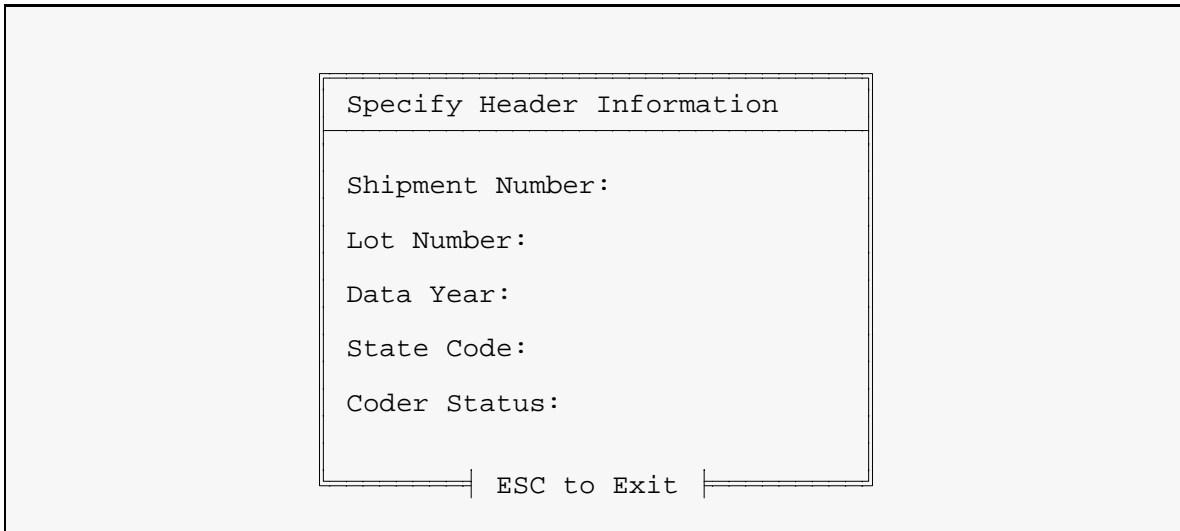
The steps below are used to edit the certificate file's header information. This Function can be used only when a certificate file is open.

1. From the main screen, press {ALT-E} to select the **Edit** Menu Option.

2. Use the up and down arrow keys to highlight the Edit/Browse Header Info Function and press {ENTER}.

3. The Specify Header Information screen (**Figure 8**) will be displayed. Fill in the appropriate header information as follows:

Shipment	-	A two-character identifier for the file.
Lot #	-	A number from 000-999. Some states will use "book number."
Data Year	-	The last digit for the year of the death certificate (Example: 1991 = 1, 1997 = 7).
State Code	-	A number identifying the state from which the death certificate originates. (These states codes are listed in

APPENDIX A - NCHS STATE CODES, pg. 48). If a two letter abbreviation for a state is entered, the program will automatically insert the correct NCHS state code. If the program does not recognize the abbreviation, it will display an error message and then a pick list of states. Entering a question mark {?} in this field will cause a pick list of states to be displayed.

```
┌─────────────────────────────────────────────────────┐
│  ┌───────────────────────────────────────────────┐  │
│  │  Specify Header Information                    │  │
│  ├───────────────────────────────────────────────┤  │
│  │                                               │  │
│  │  Shipment Number:                             │  │
│  │                                               │  │
│  │  Lot Number:                                  │  │
│  │                                               │  │
│  │  Data Year:                                   │  │
│  │                                               │  │
│  │  State Code:                                  │  │
│  │                                               │  │
│  │  Coder Status:                                │  │
│  │                                               │  │
│  └──────────────┤ ESC to Exit ├─────────────────┘  │
└─────────────────────────────────────────────────────┘
```

Figure 8: The Specify Header Information screen.

Coder Status   -   A number from 0-9 used to identify the status of the coder.

Example: Codes for a batch of certificates being processed for data year 1987, from the State of Alaska, with lot number 303, shipment 02, and coder status 1 would have the following entries: **Shipment** 02, **Lot #** 303, **Data Year** 7, **State Code** 02, **Coder Status** 1.

4.   To save the header information, press {CTRL-ENTER}. The main screen will be re-displayed.

5.   To exit the Specify Header Information screen without saving, press {ESC}. The main screen will be re-displayed.

Browsing Through the Certificates

Before the browse Function can be used, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 14, or **Opening an Existing File** pg. 17).

This Function allows the user to manually browse through a certificate file. Other **Edit** Functions can be used with the Edit/Browse Function.

1.   From the main screen, press {ALT-E} to select the **Edit** Menu Option.

2.   Use the up and down arrow keys to highlight the Edit/Browse Certificates Function and press {ENTER}.

3.   The Certificate Information Screen (see **Figure 7**) will be displayed. Descriptions of this screen and its fields can be found in the section **Adding Certificates** (pg. 21) earlier in this manual.

4.   The {PgUp} and {PgDn} keys will cause the preceding or next certificate to be displayed.

5.   Any of the following Functions may be used while in Edit/Browse:

File	-	Exit PC-MICAR.
Edit	-	Delete Records, Find a Record, Print a Record, Turn Dictionary On/Off, Undo Changes.
Help	-	Help, About

6.   To edit the data for a certificate, simply type in the changes in the appropriate field. Editing keys are listed in **Table 6**.

7.   When all of the changes have been made, save the certificate data by pressing {CTRL-ENTER}.

8.   When finished viewing the certificates, press the {ESC} key. The main screen will be re-displayed.

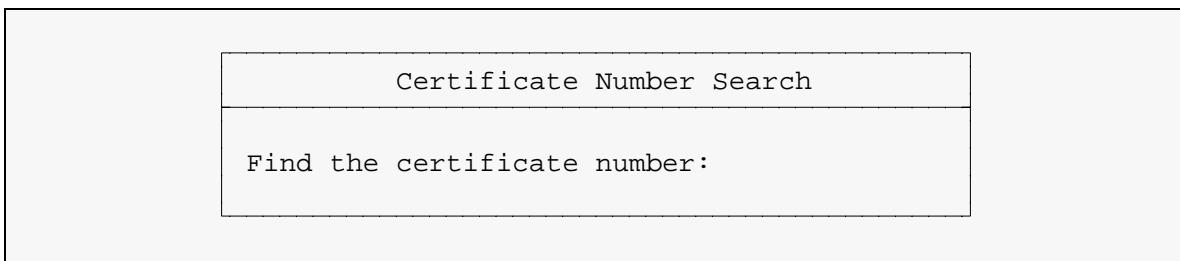| Table 6: Function Keys For Editing Certificates	
{F5}	Find a specific certificate. See **Finding a Record**, pg. 31.
{F7}	Print Current Certificate. Prints the currently displayed certificate on the printer.
{F8}	Deletes the currently displayed certificate from the database.
{ALT-1}	Displays causes 1-10.
{ALT-2}	Displays causes 11-20.
{ALT-F9}	Saves the currently displayed certificate and exits the editing screen.
{ALT-U}	Undo changes to the certificate. See **Undoing Changes**, pg. 32.
{CTRL-ENTER}	Saves the certificate information on disk.
{ESC}	Ends editing and returns to the main screen.
{SHIFT-TAB}	Moves the cursor to the previous field.
{TAB}	Moves the cursor to the next field.

Finding a Record

Before the Find a Record Function can be used, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 14, or **Opening an Existing File** pg. 17).

The file must have certificates in it to be searched.

The Find a Record Function allows the user to find a particular certificate quickly. This is especially useful when editing certificate data.

1.   While the Certificate Information screen is displayed (by using the Edit/Browse
     Certificates Function), press {ALT-E} to select the **Edit** Menu Option.

2.   Use the up and down arrow keys to highlight the Find a Record Function. Press
     {ENTER}.

3.   A window (see **Figure 9**) will be displayed.

4.   Type in the certificate number of the desired certificate and press {ENTER}.

     A. If the certificate number is in the currently open file, that certificate's data will
         be displayed.

     B. If the certificate number is not in the currently open file, a message will be
         displayed. Press {ENTER}.

```
                   Certificate Number Search

     Find the certificate number:
```

Figure 9: Enter the number to find.

5.   The Certificate Information Screen will be re-displayed.

Undoing Changes

Sometimes a change will mistakenly be made to a certificate. These changes can be
undone if the certificate has not been saved yet. (This means that the user hasn't pressed
{CTRL-ENTER}. The Undo Changes Function in the **Edit** submenu will replace the
displayed certificate with the original data from the certificate file.

1.   While the Certificate Information screen is displayed (by using the Edit/Browse
     Certificates Function), press {ALT-E} to select the **Edit** Menu Option.

2.   Use the up and down arrow keys to highlight the Undo Changes Function. Press
     {ENTER}.

3.   The Certificate Information Screen will be re-displayed with the most recently
       saved data.

DELETING RECORDS

PC-MICAR also offers the ability to delete certificates, either individually or in groups, from the database. A word of warning: Once a certificate is deleted, IT IS GONE from PC-MICAR's database. The only way to recover deleted certificates is to restore from an existing backup of the file. This assumes that a backup exists. See the section **Creating Backups For NCHS** (pg. 40) or any of the backup routines in the *PC-MICAR System Manager's Manual* for information on backing up and restoring files.

Given below are two ways to delete certificates from PC-MICAR's database. The first method deletes one certificate at a time. The second can delete any number of certificates in a database file, up to the highest certificate number entered. Note that {F8} can be used in conjunction with the Edit/Browse Function (see **Browsing Through the Certificates**, pg. 30).

Deleting Certificates While Editing a Certificate File

The steps below can be used when the Certificate Information Screen (see **Figure 7**) is displayed. The steps below allow the user to delete the currently displayed certificate from the certificate file.

1. Access the Certificate Information Screen for the desired certificate. The instructions for doing this can be found in the **Browsing Through the Certificates** (pg. 30) section of this manual.

2. Press {ALT-E} to select the **Edit** Menu Option.

3. Use the up and down arrow keys to highlight the Delete Records Function. Press {ENTER}.

4. A window will be displayed asking to confirm deleting the displayed certificate data.

    A. To delete the certificate from the certificate file, press {Y}. The next certificate in the file will then be displayed.

    B. To abort the deletion, press {N}. The certificate will be re-displayed.

5. The Certificate Information Screen (**Figure 7**) will be displayed.

Deleting Several Certificates at Once

If the Delete Records Function is used when the Certificate Information screen (see **Figure 7**) is not displayed, the user can delete a group of certificates at once. Note that this is a sequential deletion - the certificates to be deleted must appear one after another.

1. From the main screen, press {ALT-E} to select the **Edit** Menu Option.

2. Use the up and down arrow keys to highlight the Delete Records Function. Press {ENTER}.

3. A window will be displayed requesting a range of certificate numbers to delete.

4. Type in the certificate number of the first certificate to be deleted (Beginning Certificate Number). Then use the {TAB} key to move the cursor to the Ending Certificate Number.

5. Type in the certificate number of the last (ending) certificate to be deleted and press {ENTER}. If the beginning and ending certificate numbers are the same, only that one certificate will be deleted.

6. Another message will be displayed requesting confirmation to delete the specified records.

    A. To delete the records, type {Y}. A progress bar (**Figure 10**) will be displayed showing what percentage of the certificates have been deleted.

    B. To abort the deletion, type {N}.

8. A third message will be displayed asking if the user wishes to delete more records.

    A. To delete another group of certificates, type {Y} and repeat the steps above.

    B. To exit and re-display the main screen, type {N}.

PROCESSING ALL CERTIFICATES

NOTE: If the dictionary is on, processing is not required since the dictionary will assign ERNs as data is entered. These terms are considered to have already been processed and will not be re-processed when this function is used. It is still recommended that the certificate file be processed, since the dictionary may have been turned off during data entry.

Before records can be processed, the following actions must have already been performed:
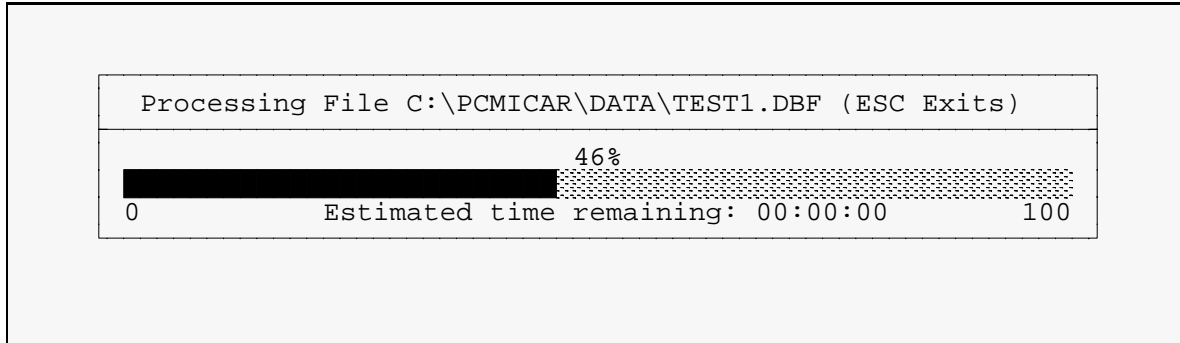
Opening a file (**Creating a New Certificate File** pg. 14, or **Opening an Existing File** pg. 17).

Please note that the file must have certificates in it to process.

Processing is the method PC-MICAR uses to convert the cause of death information into NCHS's Entity Reference Numbers (ERN), and is equivalent to the batch process used in previous versions of PC-MICAR to match terms to the dictionary. The Process All Records Function can process approximately 10,000 certificates per hour on an average computer. The user does not need to do anything while the processing is occurring.

1.   From the main screen, press {ALT-P} to select the **Process** Menu Option.

2.   Use the up and down arrow keys to highlight the Process All Records Function and press {ENTER}.

3.   A message window will be displayed saying that the tables are being loaded.

4.   When the tables are loaded, a progress bar (see **Figure 10**) will be displayed on the screen showing what percentage of the data file has been processed.

5.   The certificate number for the certificate currently being processed is displayed in the lower left corner of the screen.

6.   Occasionally, PC-MICAR will take a long time to process a certificate. In these cases, the word "Thinking" will be displayed in the lower left corner of the screen, beside the certificate number. A 'spinning wheel' beside the word indicates that PC-MICAR is still processing the record.

7.   No other activity is needed during processing.

```
┌──────────────────────────────────────────────────────────────────┐
│  Processing File C:\PCMICAR\DATA\TEST1.DBF  (ESC Exits)          │
├──────────────────────────────────────────────────────────────────┤
│                              46%                                  │
│  ████████████████████████████░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░░  │
│  0            Estimated time remaining: 00:00:00            100   │
└──────────────────────────────────────────────────────────────────┘
```

Figure 10: A bar graph showing the progress of file processing.

8.   When the processing is complete, a Processing Results report will be displayed.
      NOTE: Terms entered while the dictionary is turned on are considered to have
      already been processed and will not be displayed in this report. See the note box at
      the beginning of this section for more details.

      A. To print out a copy of the report and a list of dictionary matching errors, press
         {Y}.

      B. To abort the printing and return to the main screen, press {N}.

The Processing Results report and error listing report are saved to your <DATA> directory,
whether or not you print it. It is named *filename*.MER.

GENERATING A MICAR100 FILE

Before generating a MICAR100 file, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 14, or **Opening an Existing File** pg. 17).

Please note that the file must have certificates in it to process.

The file must have been processed already (**PROCESSING A CERTIFICATE FILE**, pg. 36), or matched to the dictionary during data entry.

If the certificate data entered in the data file is going to be transferred to a local mainframe for further processing, a MICAR100 file will need to be generated. The MICAR100 file contains all of the processed entity reference numbers and their identifying information. This file can be used as input to mainframe MICAR100, the next application in the MICAR process. This file is equivalent to the .MF file produced in previous versions of PC-MICAR. If the data is to be processed through PC-MICAR100 and 200 software, this step is unnecessary. To generate the MICAR100 file, follow these steps.

1.   From the main screen, press {ALT-P} to select the **Processing** Menu Option.

2.   Use the up and down arrow keys to highlight the Generate MICAR100 File Function. Press {ENTER}.

3.   A progress bar (**Figure 10**) will be displayed showing what percentage of the certificates have been exported to a MICAR100 file.

4.   When the MICAR100 file is complete, the main screen will be re-displayed.

The MICAR100 input file is created in the <DATA> directory. It is named *filename*.1IN.

CREATING BACKUPS

The Backup and Remove, and the Restore from Backup Functions are detailed in the *PC-MICAR System Manager's Manual.*
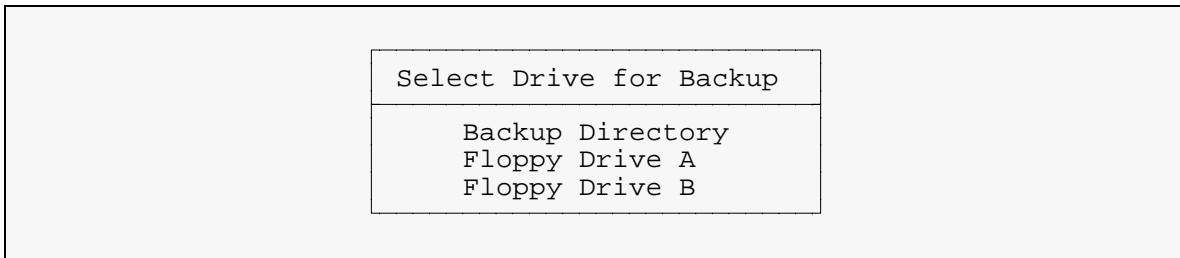
Backing Up All the Files

Before backups can be created, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 14, or **Opening an Existing File** pg. 17).

Please note that the file must have certificates in it in order to create the backup.

It is strongly recommended that a backup of all the files be made at the end of the day. This will help prevent data loss from corrupted files or other problems. The Backup All Files Function creates a single backup file, called [filename].PBK, that contains all of the files associated with a batch of certificates. To make a backup of all the files, do the following:

1.   From the main screen, press {ALT-B} to select the **Backup** Menu Option.

2.   Use the up and down arrow keys to highlight the Backup All Files Function. Press {ENTER}.

```
          Select Drive for Backup

             Backup Directory
             Floppy Drive A
             Floppy Drive B
```

Figure 11: Choose a drive to put the backup file on.

3.   A window (see **Figure 11**) will be displayed requesting a drive to put the backup file on.

A. To put the backup in the <BACKUP> directory on the computer's hard drive,

---

use the {TAB} key to highlight Backup Directory and press {ENTER}.

B. To put the backup on floppy drive A, put a disk in drive A and use the {TAB} key to highlight Floppy Drive A. Press {ENTER}.

C. To put the backup on floppy drive B, put a disk in drive B and use the {TAB} key to highlight Floppy Drive B. Press {ENTER}.

4. After a valid drive has been selected, a message window will be displayed while the backup is being made.

5. When the backup is complete, the main screen will be re-displayed.

Creating Backups for NCHS

Before backups can be created, the following actions must have already been performed:

Opening a file (**Creating a New Certificate File** pg. 14, or **Opening an Existing File** pg. 17).

Please note that the file must have certificates in it in order to create the backup.

After all editing and processing has been finished, backups of the certificate data should be made. The backups should be sent to NCHS for further processing. This Function will create a ssyylll.PCM file (ss = state code, yy = year, lll = lot number) containing a MICAR100 file.

1. From the main screen, press {ALT-B} to select the **Backup** Menu Option.

2. Use the up and down arrow keys to highlight the Backup for NCHS Function. Press {ENTER}.

3. A window (see **Figure 11**) will be displayed requesting a drive to put the backup file on.

A. To put the backup in the <BACKUP> directory on the computer's hard drive, use the {TAB} key to highlight Backup Directory and press {ENTER}.

B. To put the backup on floppy drive A, put a disk in drive A and use the {TAB} key to highlight Floppy Drive A. Press {ENTER}.

C. To put the backup on floppy drive B, put a disk in drive B and use the {TAB} key to highlight Floppy Drive B. Press {ENTER}.

4.   After a valid drive has been selected, a message window will be displayed while the backup is being made.

5.   When the backup is complete, the main screen will be re-displayed.

CLOSING A FILE

A certificate file will normally be closed when the user is ready to start on a new batch of certificates (which involves creating a new certificate file, as described in **Creating a New Certificate File**, pg. 14). At other times, PC-MICAR will require that the certificate file be closed to perform some of the menu functions. In any case, closing a PC-MICAR file is very easy:

1. From the main screen, press {ALT-F} to select the **File** Menu Option.

2. Use the up and down arrow keys to highlight the Close File Function and press {ENTER}.

3. The currently open file will be closed. The filename will disappear from the top of the screen. PC-MICAR is now ready to open another file for processing.
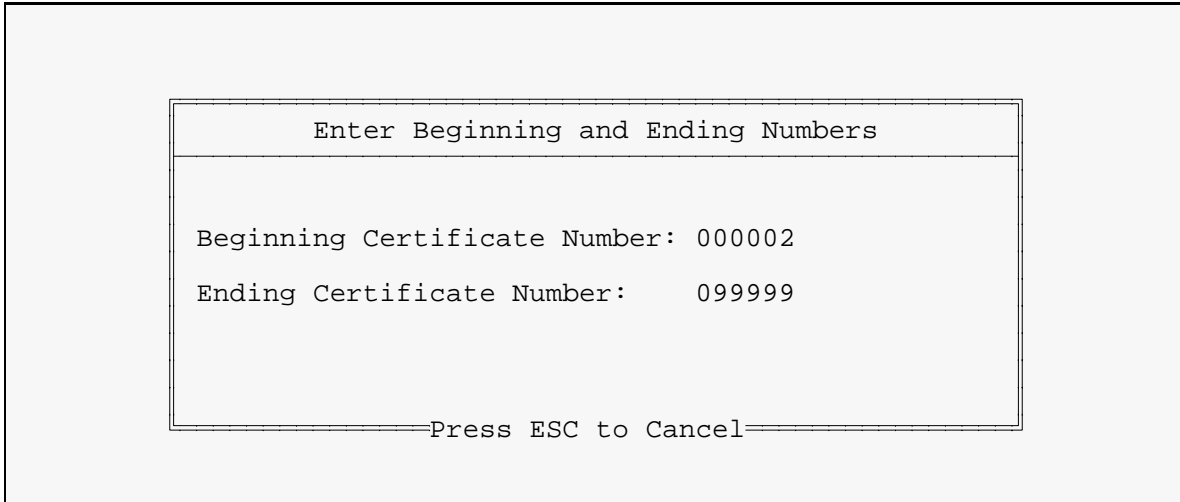
GENERATING REPORTS

The Functions given below can be used to generate PC-MICAR Reports. The Sequence Check tells the user if there are any missing certificate numbers.

Generating a Sequence Check

The Sequence Check Function creates a file (named filename.SSQ) containing a report on missing, extra, duplicate, and out of sequence certificates by certificate number in the database file. The Sequence Check can be used only when a file is currently open. To use the sequence check, do the following:

1. From the main screen, press {ALT-R} to select the **Reports** Menu Option.

2. Use the up and down arrow keys to highlight the Sequence Check Function. Press {ENTER}.

3. A window will be displayed requesting a beginning certificate number and an ending certificate number (see **Figure 12**). Normally, PC-MICAR will have already filled in the appropriate numbers. If these need to be changed, or the fields are empty, do the following:

    A. Use the {TAB} key to place the cursor in the desired field.

    B. Type in either the beginning certificate number (the starting certificate number for the sequence check) or the ending certificate number (the ending certificate number for the sequence check), and press <ENTER>.

4. A progress bar (see **Figure 10**) will be displayed showing the progress of the sequence check.

5. When the sequence check is completed, a message window will be displayed. Press any key to continue.

6. The output of the sequence check (filename.SSQ) will then be displayed. Use the up and down arrow keys to scroll through the output (or {PgUp} and {PgDn}). Press the {ESC} key to close the output window.

7. Next, the computer will beep and a print request window (see **Figure 13**) will
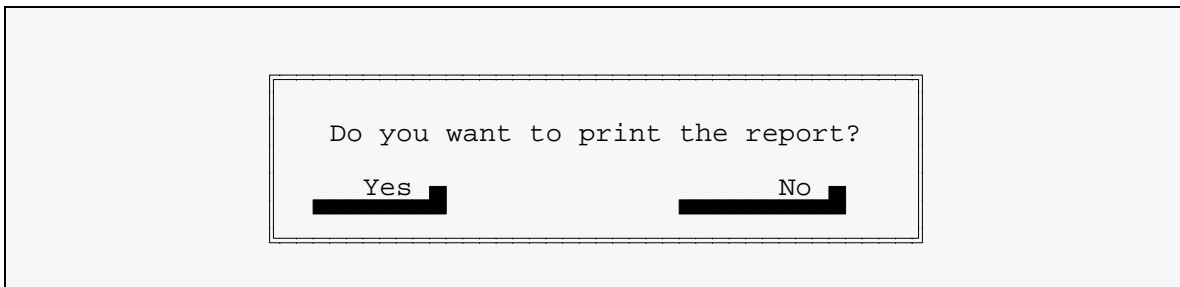
```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│         ┌───────────────────────────────────────────────────┐         │
│         │         Enter Beginning and Ending Numbers         │         │
│         ├───────────────────────────────────────────────────┤         │
│         │                                                   │         │
│         │                                                   │         │
│         │  Beginning Certificate Number: 000002             │         │
│         │                                                   │         │
│         │  Ending Certificate Number:    099999             │         │
│         │                                                   │         │
│         │                                                   │         │
│         │                                                   │         │
│         └════════════════════Press ESC to Cancel════════════┘         │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

Figure 12: The Sequence Check screen.

appear.


```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│            ┌─────────────────────────────────────────────┐            │
│            │                                             │            │
│            │     Do you want to print the report?        │            │
│            │    ▁▁▁▁▁▁▁▁          ▁▁▁▁▁▁▁▁               │            │
│            │      Yes ▀            No ▀                  │            │
│            │                                             │            │
│            └─────────────────────────────────────────────┘            │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

Figure 13: A Print Request window.

> A. To print out a copy of the sequence check report, type {Y}. A printing in
>   progress window will appear. When the printing is finished, the main screen
>   will be re-displayed.
>
> B. To abort the printing and re-display the main screen, type {N}.

Printing All the Certificates

PC-MICAR allows the user to print out all of the certificates within a file. These hardcopy
printouts can be used to check for errors as well as any other purposes determined by the
Supervisor.

1.   From the main screen, press {ALT-R} to select the **Reports** Menu Option.

2.   Use the up and down arrow keys to highlight the Print All Certificates Function
      and press {ENTER}.

3.   A window will be displayed saying, "Pring Certificate(s)?".

      A.   To print the certificates, press {Y}.

      B.   To abort the printing and return to the main screen, press {N}.

4.   A message window will be displayed saying, "Printing in progress. Please wait."
      The certificates will be printed.

5.   When printing is finished, the main screen will be re-displayed.

Printing a Single Certificate

PC-MICAR also allows single certificates to be printed. The process for doing this is
described below:

1.   From the main screen, press {ALT-E} to select the **Edit** Menu Option.

2.   Use the up and down arrow keys to highlight the Edit/Browse Certificates Function
      and press {ENTER}.

3.   A Certificate Information Screen (see **Figure 7**) will be displayed. Use the
      instructions under **Finding a Record** (pg. 31) to find the specific certificate to print
      out.

4.   With the desired certificate displayed, press {ALT-E} to select the **Edit** Menu
      Option. Alternatively, press {F7} and go directly to step 6.

5.   Use the up and down arrow keys to highlight the Print a Record Function and
      press {ENTER}.

6.   A window will be displayed saying, "Pring Certificate(s)?".

      A.   To print the certificates, press {Y}.

    B.   To abort the printing and return to the main screen, press {N}.

7.   A message window will be displayed saying, "Printing in progress. Please wait."
The certificates will be printed.

8.   When printing is finished, the main screen will be re-displayed.

EXITING PC-MICAR

There are two ways to exit PC-MICAR. The first, and easiest, is by pressing {CTRL-X} and following step 3 below. The second method is also described below.

1. From the main screen, press {ALT-F} to select the **File** Menu Option.

2. Use the up and down arrow keys to highlight the Exit PC-MICAR Function and press {ENTER}.

3. A message window will be displayed.

    A. To exit PC-MICAR, press {Y}. PC-MICAR will end and the DOS prompt will be displayed.

    B. To abort the exit, press {N}. The main screen will be re-displayed.

APPENDIX A - NCHS STATE CODES

Code	State	Abbrev.	Code	State	Abbrev.
01	Alabama	AL	28	Nebraska	NE
02	Alaska	AK	29	Nevada	NV
03	Arizona	AZ	30	New Hampshire	NH
04	Arkansas	AR	31	New Jersey	NJ
05	California	CA	32	New Mexico	NM
06	Colorado	CO	33	New York	NY
07	Connecticut	CT	34	North Carolina	NC
08	Delaware	DE	35	North Dakota	ND
09	Dist. Columbia	DC	36	Ohio	OH
10	Florida	FL	37	Oklahoma	OK
11	Georgia	GA	38	Oregon	OR
12	Hawaii	HI	39	Pennsylvania	PA
13	Idaho	ID	40	Rhode Island	RI
14	Illinois	IL	41	South Carolina	SC
15	Indiana	IN	42	South Dakota	SD
16	Iowa	IA	43	Tennessee	TN
17	Kansas	KS	44	Texas	TX
18	Kentucky	KY	45	Utah	UT
19	Louisiana	LA	46	Vermont	VT
20	Maine	ME	47	Virginia	VA
21	Maryland	MD	48	Washington	WA
22	Massachusetts	MA	49	West Virginia	WV
23	Michigan	MI	50	Wisconsin	WI
24	Minnesota	MN	51	Wyoming	WY
25	Mississippi	MS	52	Puerto Rico	PR
26	Missouri	MO	53	Virgin Islands	VI
27	Montana	MT	54	Guam	GU
			55	New York City	YC*

* Code 55 is used for occurrence data only. When coding residence data on the demographic file, code 33 (New York State) must be used.

APPENDIX B - MENU LISTINGS

PC-MICAR Menu Options	
Key Combination	**Menu Option Accessed**
{ALT-F}	**File** Menu Option
{ALT-E}	**Edit** Menu Option
{ALT-P}	**Process** Menu Option
{ALT-R}	**Reports** Menu Option
{ALT-B}	**Backup** Menu Option
{ALT-H}	**Help** Menu Option

```
┌──────────────────────────────────────────────────────┐
│                    Function Listing                    │
├──────────────────────────────────────────────────────┤
│ File                                                   │
│    {ALT-F2}     Create New File                        │
│    {F2}         Open Existing File                     │
│    {ALT-F4}     Close File                             │
│                 Repair File Index                      │
│                 Merge Another File                     │
│                 Import MICAR100 File                   │
│    {ALT-F6}     Set Data File Path                     │
│    {SHIFT-F6}   Set Table File Path                    │
│                 Set Backup Path                        │
│                 Set MICAR 100 Path                     │
│                 DOS Prompt                             │
│    {ALT-X}      Exit PC-MICAR                          │
│                                                        │
│ Edit                                                   │
│                 Edit/Browse Header Info                │
│    {F3}         Add Certificates                       │
│    {F4}         Edit/Browse Certificates              │
│    {F8}         Delete Records                         │
│    {F5}         Find a Record                          │
│    {F7}         Print a Record                         │
│    {F10}        Turn Dictionary On/Off                 │
│    {ALT-U}      Undo Changes                           │
│                                                        │
│ Process                                                │
│                 Process All Records                    │
│                 Generate MICAR100 File                 │
│                                                        │
│ Reports                                                │
│                 Sequence Check                         │
│                 Print All Certificates                 │
│                                                        │
│ Backup                                                 │
│    {ALT-F7}     Backup All Files                       │
│                 Backup for NCHS                        │
│    {ALT-F8}     Restore from Backup                    │
│                 Backup and Remove                      │
└──────────────────────────────────────────────────────┘
```

Help
   {F1}   View Help File
   {ALT-F1}   About PC-MICAR

APPENDIX C - DICTIONARY OF TERMS USED

Since not everyone will be familiar with the terms used in these instructions, here is a brief glossary of some of the words.

Certificate File   -   A file containing certificate data. This term is used interchangeably with Database File.

Data Directory   -   A subdirectory on the computer where PC-MICAR certificate files are stored. By default, the data directory is a subdirectory of the <PCMICAR> directory called <DATA>. The default value can be changed through PC-MICAR.

Database File   -   A file containing certificate data. This term is used interchangeably with Certificate File.

Directory   -   A specific grouping of files on a disk. Also referred to as a subdirectory. The directory that will be used most with PC-MICAR will be the <PCMICAR> directory.

DOS   -   A Disk Operating System. The System Manager will handle most operations that deal with DOS. The only time the data entry personnel will use DOS will be in the **STARTING PC-MICAR** section of this manual.

Export   -   To take data from the PC-MICAR certificate database and place it in a formatted file that is readable by other programs.

Extension   -   A 3-letter identifier at the end of a filename that identifies what type of file it is. For example: .EXE is an executable file, .DBF is a database file, and so forth.

Filename   -   The name of a file on a disk. Example: PCMICAR.EXE is made up of the filename PCMICAR and extension .EXE.

Hotkey   -   A key or pair of keys that can be pressed to access a menu function directly, without going through the menu system. For example, pressing the F2 key will access the Open a File menu option.

Import   -   To read data from a formatted file and place it in a PC-MICAR certificate database.

Menu   -   A list from which an action can be selected for PC-MICAR to
                             perform. PC-MICAR has both a main menu and submenus. The
                             main menu appears as a bar across the top of the screen, just below
                             the program name. From the main menu, a submenu can be
                             displayed listing actions to be performed. See the section **Using the
                             PC-MICAR Menu System** (pg. 11) for more details on how to use
                             the menu.

Pick List   -   A list of items that can be selected (picked) by using the up and
                             down arrow keys to highlight the desired item and then pressing
                             {ENTER}.

Subdirectory   -   See Directory above.

Submenu   -   A group of related actions arranged into a list from which an action
                             can be selected. Submenus are available through the main menu.
                             See the section **Using the PC-MICAR Menu System** (pg. 11) for
                             more information on the menu system.

Table   -   A subdirectory on the computer where PC-MICAR processing
Directory   files are stored. By default, the table directory is a subdirectory of
                             the <PCMICAR> directory called <TABLES>. The default value
                             can be changed through PC-MICAR.

APPENDIX D - CONVENTIONS USED IN THIS MANUAL

As a rule, any commands that need to be entered while the user is in PC-MICAR will be given in the following format:

1. All of the actual typing and keys that need to be pressed will be given in all-caps (Example: type DIR and press {ENTER} to get a list of files in a directory).

2. Any information that the user needs to provide, such as filenames, will be requested in brackets (Example: type [filename.ext] means that the user needs to type in the filename and its extension, like so: type WY91001.DBF, without the brackets.)

3. When the word "press" appears in front of a word in all-caps, the user needs to press and release a particular key (Example: press {ESC} means press and release the ESC key). Also, the names of all keys will be given in braces {}.

4. Whenever two keys are named with a hyphen (-) connecting them, both keys are to be pressed at the same time to perform the listed function (Example: {CTRL-ENTER} = press and hold the {CTRL} and {ENTER} keys at the same time).

5. At times, references will be made to other Menu Options or Functions of PC-MICAR. The following standards will be used in these cases:

    A. Any selection from the Main Menu (the menu that runs across the top of the PC-MICAR screen, just below the title) will be called a Menu Option (Example: the **File** Menu Option).

    B. Any selection from a submenu will be called a menu Function or just Function (Example: the Edit/Browse Certificates Function).

6. All directory names will be marked by greater than and less than symbols (Example: The directory containing the PC-MICAR programs is the <PCMICAR> directory).

APPENDIX E - SPECIAL SYMBOLS

Following is a list of symbols and their meanings commonly used on the Cause of Death sections of a death certificate. This list is for use with **Adding Certificates**, pg. 21.

#	"Fracture." Substitute for the word "fracture." Example: For "Leg #," type "LEG FRACTURE".
↓	"Decreased." Substitute for the word "decreased." Example: For "↓ blood pressure," type "DECREASED BLOOD PRESSURE".
↑	"Increased." Substitute for the word "increased." Example: For "↑ hemorrhaging," type "INCREASED HEMORRHAGING".
°	"Hour." Substitute for the word "Hour." Example: For "1 o/I," type "1 HOUR".
°°	"Secondary to." Substitute for the words "secondary to." Example: For "Pneumonia 00/II Gunshot wound," type "PNEUMONIA SECONDARY TO GUNSHOT WOUND".
1°	"Primary." Substitute for the word "primary." Example: For "1° colon cancer," type "PRIMARY COLON CANCER".
2°	"Secondary to." Substitute for the words "secondary to." Example: For "Pneumonia 2° cardiorespiratory infection," type "PNEUMONIA SECONDARY TO CARDIORESPIRATORY INFECTION".
c̄	"With." Substitute for the word "with." Example: For "Heat stroke c̄ myocardial infarction," type "HEAT STROKE WITH MYOCARDIAL INFARCTION".
p̄	"After." Substitute for the word "after." Example: For "Spontaneous bleeding p̄ tracheal tube removal," type "SPONTANEOUS BLEEDING AFTER TRACHEAL TUBE REMOVAL".
s̄	"Without." Substitute for the word "without." Example: For "Three weeks s̄ taking medication," type "THREE WEEKS WITHOUT TAKING MEDICATION".
w/	"With." Substitute for the word "with." Example: For "Heat stroke w/ myocardial infarction," type "HEAT STROKE WITH MYOCARDIAL INFARCTION".

APPENDIX F - PLACE OF INJURY CODES

A. Home

Excludes: Abandoned or derelict house (P)
Home under construction, but not yet occupied (G)
Institutional Place of Residence (C)

About home
Apartment
Boarding house
Cabin
Farm house
Hogan
Home for the sick
Home premises
Home sidewalk
Home swimming pool
Hospice
House (residential)
Noninstitutional place of residence

Penthouse
Private driveway to home
Private Garage
Private Garden to home
Private Walk to home
Private Wall to home
Residence
Swimming pool in private home or garden
Trailer camp or court
Yard to home
Yard NOS

B. Farm

Excludes: Farm House and Home Premises of Farm (A)

Barn NOS
Barnyard
Corncrib
Cornfield
Dairy (farm) NOS
Farm buildings
Farm pond or creek
Farmland under cultivation

Field, numbered or specialized
Gravel pit on farm
Orange grove
Pasture
Range NOS
Silo
State farm
Ranch NOS

C. Residential Institution

Almshouse	Old people's home
Children's home	Orphanage
Dormitory	Prison camp
Fraternity house	Prison
Institution (any type)	Reform school
Jail	State school
Nurse's home	Sorority house
Nursing home	

D. Military Residence

Army Camp	Military reservation

E. Hospital

Hospital

F. School, Other Institution, Administrative Area

Excludes: Building Under Construction (G)
Residential Institution (C)
Sports and Athletic Areas (N)

Armory	Mission
Assembly hall	Movie house
Campus	Music Hall
Child center	Night club
Clubhouse	Opera house
Church	Police precinct
Cinema	Police station or cell
College	Post office
Country club (grounds)	Private club
Court house	Public Hall
Dance hall	Salvation army
Day nursery	School (grounds) (yard)
Drive in theatre	School (private) (public) (state)
Fire house	Theatre
Gallery	Turkish bath
Health resort	University
Institute of Higher Learning	YMCA
Kindergarten	YWCA
Library	Youth center

G. Industrial and Construction Areas

Building under construction
Coalyard
Construction job
Dairy processing plant
Dockyard
Dry dock
Electric tower
Factory (building) (premises)
Foundary
Grain elevator
Highway under construction
Industrial yard
Loading platform - factory
Logging operation area
Mill pond
Oil field
Oil rig and other offshore installations

Oil well
Plant, industrial
Power-station (coal) (nuclear) (oil)
Produce building
Railroad track or trestle
Railway yard
Sawmill
Sewage disposal plant
Shipyard
Shop
Substation (power)
Subway track
Tannery
Wharf
Workshop

H. Garage/Warehouse

Excludes: Garage in Private Home (A)

Body shop
Garage NOS
Garage - place of work

Loading platform - store
Warehouse

I. Trade and Service Area

Excludes: Garage in Private Home (A)

Airport
Bank
Bar
Cafe
Casino
Electric company
Filling station
Funeral Home
Garage away from highway except home
Garage building (for car storage)
Gas station
Hotel

Motel
Market (grocery or other commodity
Office (building)
Radio/Television broadcasting station
Restaurant
Salvage Lot, Named
Shop, commercial
Shopping center (Shopping mall)
Station (bus) (railway)
Store
Subway (stairs)
Tourist court
Tourist home

J. Mine/Quarry
Coal pit   Sand pit
Gravel pit   Tunnel under construction

K. Street/Highway
Alley   Pavement
Bridge NOS   Roadside
Freeway   Road
Interstate   Sidewalk NOS
Motorway   Named Street/Highway/Interstate

L. Public Recreation Area
Beach - NOS (Private) (Named)   Named lake
Beach resort   Park (any) (Amusement) (Public)
Boy's camp   Playground NOS
Holiday camp   Resort NOS
Lake resort   Seashore resort
Mountain cabin   Vacation resort
Mountain resort

M. Institutional Recreation Area
Playground, school

N. Sports and Athletics Area
             Excludes: Swimming Pool or Tennis Court in private home or garden (A)

Baseball field   Ice palace
Basketball court   Racecourse
Cricket ground   Riding school
Dude ranch   Rifle range - NOS
Fives court   Skating rink
Football field   Sports palace
Golf course   Sports ground
Gymnasium   Stadium
Hockey field   Swimming pool (public) (private)
Hunting cabin   Tennis court

O. Other Building
Building NOS

P. Other Specified Place

Abandoned gravel pit	Mountain
Abandoned public building or home	Named city
Air force firing range	Named town
Bar pit or ditch	Nursery NOS
Beach NOS	open field
Camp	Parking lot
Camping grounds	Parking place
Canal	Pier
Caravan site NOS	Pipeline (oil)
Cemetery	Place of business NOS
City dump	Pond or pool (natural)
Damsite	powerline pole
Derelict house	Prairie
Desert	Private property
Ditch	Public place NOS
Dock NOS	Public property
Excavation site	Railway line
Fairgrounds	Reservoir (Water)
Field NOS	River
Forest	Sea
Fort	Seashore NOS
Harbour	Sewer
Hill	Specified address
Irrigation canal or ditch	Stream
Junkyard	Swamp
Lake NOS	Woods
Manhole	Zoo
Marsh	

Q. Unspecified Place

Bed	Near any place
Commode	On job
Country	Parked car
Downstairs	Sofa
Fireplace	Table
Jobsite	Tree

INDEX