



# **VITALS/MEASUREMENTS USER MANUAL**

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Department of Veterans Affairs  
VISTA System Design & Development



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Table of Contents

<b>Date</b>	<b>Revision</b>	<b>Description</b>	<b>Author</b>
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# Table of Contents

<b>1. Introduction</b> .....	<b>1-1</b>
<b>Functionality</b> .....	<b>1-1</b>
<b>Information on GUI software</b> .....	<b>1-2</b>
<b>2. Implementation and Maintenance</b> .....	<b>2-1</b>
<b>Description</b> .....	<b>2-1</b>
<b>Virgin Installation of Software</b> .....	<b>2-1</b>
<b>Non-Virgin Installation of Software</b> .....	<b>2-2</b>
<b>Implementation Considerations</b> .....	<b>2-3</b>
<b>Resource Requirements</b> .....	<b>2-4</b>
<b>Adding Vitals to the Tools Menu in CPRS</b> .....	<b>2-4</b>
<b>3. Site Files</b> .....	<b>3-1</b>
<b>Getting Started</b> .....	<b>3-2</b>
<b>Adding Vitals Qualifiers</b> .....	<b>3-3</b>
<b>Associating Vitals Qualifiers with a Category</b> .....	<b>3-4</b>
<b>Editing Abnormal Values</b> .....	<b>3-5</b>
<b>Editing System Parameters</b> .....	<b>3-6</b>
<b>Creating/Editing a Template</b> .....	<b>3-8</b>
<b>Printing Qualifiers Table</b> .....	<b>3-14</b>
<b>4. Package Operation</b> .....	<b>4-1</b>
<b>5. Entering Vitals Data</b> .....	<b>5-1</b>
<b>Opening Screen</b> .....	<b>5-1</b>
Buttons .....	5-2
<b>Entering Vitals Data</b> .....	<b>5-3</b>
Entering Data for a Single Patient .....	5-4
Entering Data for Multiple Patients .....	5-10
<b>Creating a User Template</b> .....	<b>5-16</b>
<b>Viewing Allergies</b> .....	<b>5-22</b>
<b>Marking Vitals as Entered in Error</b> .....	<b>5-23</b>
<b>Editing User Options</b> .....	<b>5-25</b>
<b>6. Reports</b> .....	<b>6-1</b>
<b>Viewing a Graphic Report</b> .....	<b>6-1</b>
<b>Printing a Report</b> .....	<b>6-3</b>
<b>7. Appendix A - Access Key Listing</b> .....	<b>7-1</b>
<b>8. Appendix B - Customizing the Client Installation</b> .....	<b>8-1</b>
<b>9. Glossary</b> .....	<b>9-1</b>
<b>10. Index</b> .....	<b>10-1</b>

## Table of Contents

# 1. Introduction

The Vitals/Measurements application is designed to store in the patient's electronic medical record all vital signs and various measurements associated with a patient's hospital stay or outpatient clinic visit. Data entered can be accessed by several *VISTA* (Veterans Health Information Systems and Technology Architecture) applications (e.g., CPRS, Health Summary) that interface with the Vitals/Measurements application.

## Functionality

- Provides a GUI (Graphical User Interface) to make collecting and viewing of data easier. Additional information on GUI software is contained at the end of this chapter.
- Supports documentation of a patient's vital signs (e.g., temperature, pulse, and respiration).
- Tracks a patient's height, weight, central venous pressure (CVP), circumference/girth and oxygen saturation via oximetry with supplemental oxygen information.
- Supports documentation of detailed or positional blood pressures for a patient (i.e., bilateral blood pressures taken in a sitting, standing and lying position).
- Associates qualifiers (alpha characters appended to the measurement's numeric value) to provide a more detailed description of the patient's vitals/measurements.
- Contains detailed help windows to assist users in associating appropriate qualifiers with the patient vitals/measurements.
- Permits users to add site-specific qualifiers.
- Displays temperature, height, weight, and circumference/girth in both metric equivalents and U.S. customary units.
- Displays patient's cumulative measurements on the Vitals Signs Record and the Cumulative Vitals Report.
- Displays latest information on all of the patient's vitals/measurements in both metric equivalents and U.S. customary units (when appropriate) along with the date/time the information was obtained.

- Prints an expanded vitals graphic report which includes the patient's intake and output when present in the patient's database (refer to the Intake and Output application).
- Allows facilities to establish hospital-wide high and low values for each vital sign or measurement.
- Identifies abnormal patient values on vitals/measurements reports (those values outside the high and low range).
- Displays graphic reports on workstation monitors.
- Prints the following patient measurements in a linear graphic format when using a Kyocera F-800A or HP compatible (programmable) printer:
  - Temperature and pulse
  - Blood pressure
  - Weight
  - Pulse oximetry and respiration
  - Pain

If reports are printed on a dot matrix printer, plotted data values are not connected by a line.

- Supports the archiving and purging of patient measurements, that are no longer required on the production account, through FileMan.
- Provides APIs that pass patient vitals/measurements information (numeric values only) within a specific date range to the Health Summary application.
- Allows the user to record a reason (e.g., Patient on Pass) for the omission of a patient's vitals/measurements.

## Information on GUI software

### **Intranet WWW Documentation**

Documentation for this product (including user manual, technical manual and package security guide, release notes, and installation guide) is available on the intranet (World Wide Web) at the following address:

<http://vista.med.va.gov/clinicalspecialties/vitals/>

### **GUI and Windows**

GUI stands for Graphical User Interface, most frequently seen as the Windows screen. If you have already used programs with these screens, then the Vitals GUI screen will seem familiar to you. The Vitals GUI is only implemented on the Microsoft Windows platform at this time.

If you have little or no familiarity with Windows, you can browse through the Windows help file for information about the basics of using Windows. Also, see the next few paragraphs for brief descriptions of some GUI features.

To access the Windows Help File, click the Start button in the taskbar and click Help. Use this help file as a reference whenever you have general questions about Windows.

The following is an example of what control elements could be found in a GUI screen (Fig. 1-1):

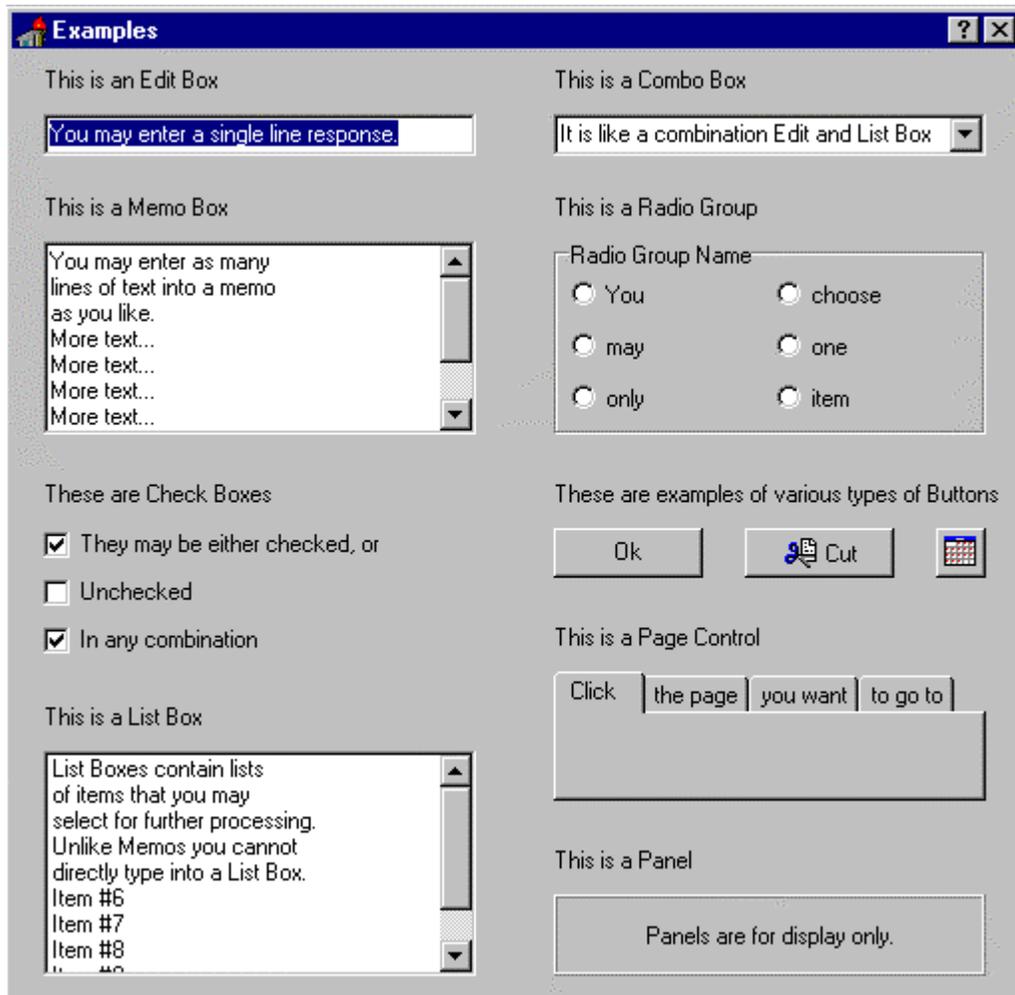


Fig. 1-1

## Windows

An “application window” is the area on your computer screen used by a program. If you have more than one program running at the same time, you can go from one program to another by clicking in each application window. The currently active window contains a colored bar (usually blue) at the top of the window. An inactive window contains a gray bar at the top of the window. You can also move, close, or minimize the application window to

make room for another window. (See Help in Windows for further instructions on these functions.)

Inactive window

Active window

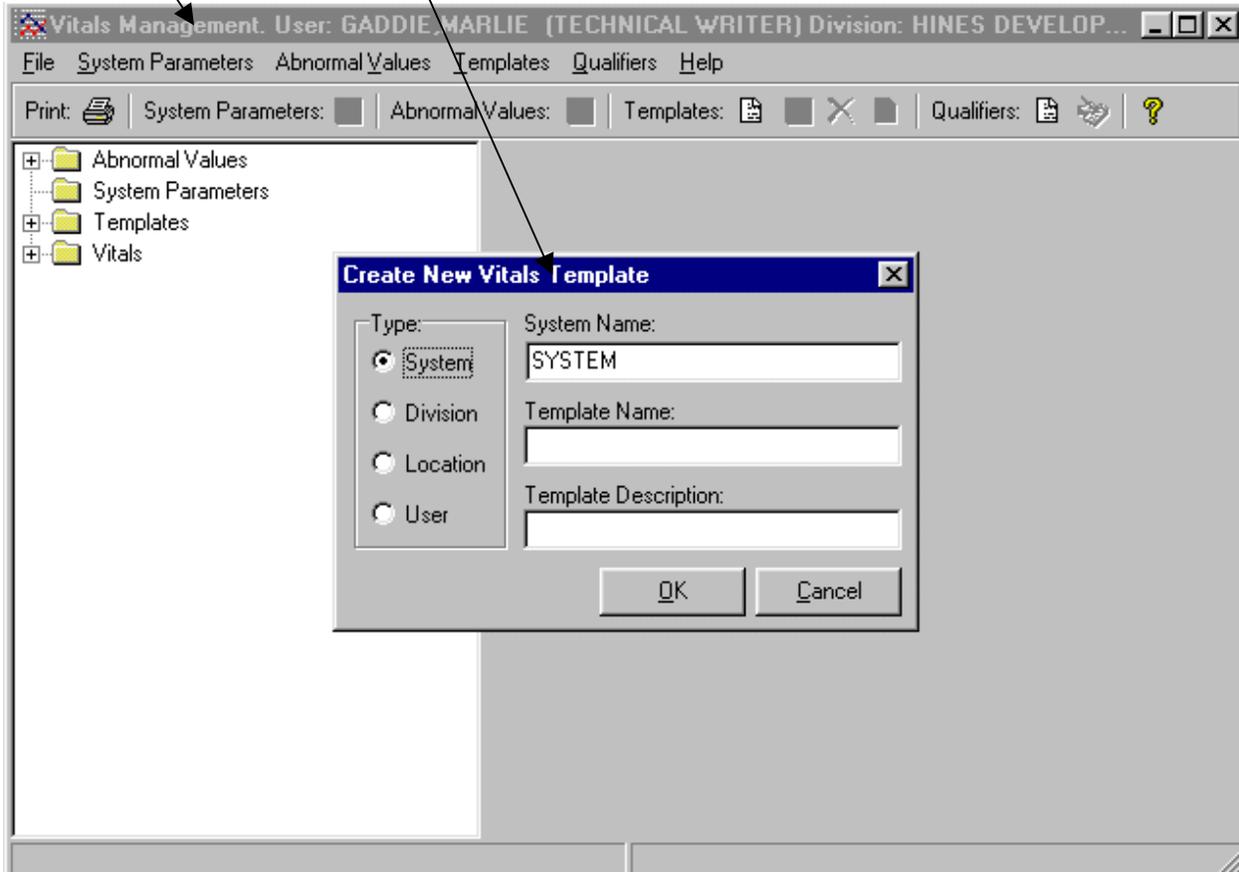


Fig. 1-2

### Pop-up Windows

These are “mini” windows that pop up within a window to provide or request information. Usually they require some action before they will go away. Clicking on buttons with the words <Cancel>, <Exit>, or something similar closes these windows.

### Menus

Menus are shown in the gray bar near the top of the window. Some examples of menus are: File, Edit, Reports, and Help — typical menus for most Windows applications. When you click on one of these, a list of options is displayed.

### Help

Online help and documentation are available in several formats: hints, context-sensitive help, menu help, and Internet Web documentation.

**Hints**

Place the cursor over a specific button, and a pop-up box will appear containing a short description of that button.

**Context-Sensitive Help**

Use the “F1” key at any time to obtain help on the current screen.

**Menu Help**

Select the Help Menu at the top of the screen. A Table of Contents opens. Choose one of the contents, or type in a topic you want help on. A screen appears containing help about that subject.

**Access Keys**

Use access keys to quickly get to an option through the pull-down menus by holding down the Alt key and pressing the underlined letter of the desired pull-down menu, then (still holding down the Alt key) press the underlined letter of the desired option. Some other screen components (e.g., buttons such as OK) can also be reached by holding down the Alt key and pressing the underlined letter for that screen component. Some buttons and icons can be invoked by holding down the Ctrl key and pressing a letter key. A few can be invoked by pressing a function key (e.g., F5).

**Tool Bars**

Tool bars are shown in the gray bar below the Menu bar. The tool bar contains icons (with or without text) that invoke functionality when clicked on using the mouse. For example, the printer icon opens a dialog box allowing the user to select a printer.

**Trees**

Trees are lists that the user can expand or collapse in order to navigate to needed information. The plus sign (+) to the left of a tree item indicates that tree item contains additional entries. Clicking on the plus sign will expand the tree list to display those additional entries. A minus sign (-) will appear to the left of the tree list instead of a plus sign after that item is clicked. Clicking on the minus sign will collapse the list to hide the items again.



## 2. Implementation and Maintenance

### Description

This chapter provides guidelines for implementing the Vitals/Measurements application. It is important to complete all of the steps contained in this chapter before assigning menu options to clinical staff.

### Virgin Installation of Software

The following steps should be followed when the Vitals/Measurements software is installed in an environment where no previous installation of the Vitals/Measurements application has taken place.

#### 1. Setting up the software environment.

Information Resource Management Services (IRMS) staff should install the software using the Installation Guide in a test environment prior to installing the software in the production (VAH) account. The following *VISTA* packages should reside in the environment where the Vitals/Measurements application is to be installed:

- a. VA FileMan V. 22 or greater,
- b. Kernel V. 8.0 or greater,
- c. Kernel Toolkit V. 7.3 or greater,
- d. Kernel RPC Broker V. 1.1 or greater,
- e. PIMS V. 5.3 or greater,
- f. Intake and Output V. 4.0,
- g. Health Summary V. 2.7 or greater,
- h. Nursing V. 4.0 or greater.

Data entered into the test environment CANNOT be transferred into the production environment. It is recommended that a limited amount of data be entered into the test directory in order for the user to become familiar with the application and to establish an acceptable training database.

#### 2. Name spacing and file listing.

Vitals/Measurements is found in the GMV namespace. All routines, templates and options begin with GMV. File numbers are in the range of 120.5 to 120.57 and are stored in the ^GMR and ^GMRD globals.

#### 3. Editing site configurable files.

Site configurable files can be edited through the Vitals Manager module.

#### 4. Queuing TaskMan jobs.

No queued TaskMan jobs are associated with this application.

#### 5. Accessing modules.

The Vitals application, i.e., the Vitals and Vitals Manager modules are accessed separately through the GUI executable icons on the user's desktop. The Vitals module is assigned to the clinical staff so they can use the Vitals module to enter patient data. The Vitals Manager module is assigned to the Clinical Application Coordinator, package coordinator, and Information Resource Management Service (IRMS) staff so they can use the Vitals Manager module to manage the Vitals templates, abnormal values, categories, and qualifiers.

#### 6. Assigning modules.

The Vitals Manager module should be assigned to Clinical Application Coordinator, package coordinator, and Information Resource Management Service (IRMS) staff. The Vitals module should be assigned to clinical staff.

#### 7. Security keys.

There is one security key in this application, it is GMV MANAGER. This new key allows a user to view/create/edit all other user's templates in the Vitals Manager module, without this key the user can only view/create/edit his/her own user templates. This key also allows a user to use (run) other user's templates in the Vitals application, and controls access to the Vitals Manager module. This key should be assigned to the package coordinator.

#### 8. Printer issues.

All reports must be queued to *VISTA* (device file) printers. Users may print graphic reports on a dot matrix printer, but plotted data is not connected by lines. Linear graphic reports can be printed using the Kyocera F-800A laser printers; HP LaserJet III, LaserJet 4, LaserJet 5; and HP compatible printers.

#### 9. On-line Help.

Throughout the application, on-line help is available when questions arise. The user can click on the Help button or menu at the top of the screen to see a table of contents and index containing help on how to enter data, print reports, etc..

### **Non-Virgin Installation of Software**

Follow steps 1 through 9 above when installing the software in an environment where a previous version of the application has been installed.

## Implementation Considerations

Some sites prefer to delay implementation of the software until they have a point of care data entry system, but this software can be implemented without a point of care system. Vital sign entry can be accomplished by ancillary service personnel, (e.g., PIMS, Dietetics, Pharmacy). Interested users of this software are encouraged to form a committee to work cooperatively on the implementation and training of the package. Setting up test wards is a good way to begin a cooperative implementation effort. The Vitals/Measurements module is appropriate for all personnel who obtain and record patient vitals/ measurements. Conceivably this module could be used by nursing, dietetics, medicine, and other disciplines as appropriate.

You may want to involve the Clinical Executive Committee in the review of the Vital Site Parameter file. This facilitates station wide agreement on what the abnormal values will be. It also encourages physician use of the software.

## Resource Requirements

The minimal hardware requirements for the software are two data input devices (usually PC workstations running Windows 9x or NT (Ver. 4 or later)) and one printer per location. 12 megabytes of available memory is needed to run the program. The following statistics regarding the disk storage requirements of the software were compiled by an average test site.

Server:

<u>Globals</u>	<u>Type of Data</u>	<u>Size</u>
DDs	Data Dictionaries	40 k
GMR	Patient data for the Text Generator, Vitals/Measurements, Intake and Output, Adverse Reaction Tracking and Consult/ Request Tracking Modules	25-75 k/ patient
GMRD	Static data for the Text Generator, Vitals/Measurements and Intake and Output Modules	10 k depending on the global efficiency

Client:

<u>Type of Data</u>	<u>Size</u>
Application (user)	1356.5 k
Application (manager)	811.5 k
Help Files (user)	460 k
Help Files (manager)	175.678 k

## Adding Vitals to the Tools Menu in CPRS

A site may use the Tools menu to give users access to other client software from within CPRS. The parameter, ORWT TOOLS MENU, is used to set up the list of software that appears on the menu. This parameter may be set up for the site, then overridden as appropriate at the division, service, and user levels.

Each item entered on the menu should have the form, NAME=COMMAND. NAME is the name you want the user to see on the menu. An ampersand may be used in front of a letter to allow keyboard access to the menu item. The COMMAND may be a line that can be executed by Windows. It may also be any file for which Windows has a file association.

Example: Create a User tools menu that contains Vitals and Vitals Manager.

```
Select General Parameter Tools Option:  ep  Edit Parameter Values
          --- Edit Parameter Values ---
Select PARAMETER DEFINITION NAME:  orwt TOOLS MENU      CPRS GUI Tools Menu
ORWT TOOLS MENU may be set for the following:
  1  User          USR      [choose from NEW PERSON]
  2  Location      LOC      [choose from HOSPITAL LOCATION]
  2.5 Service      SRV      [choose from SERVICE/SECTION]
  3  Division      DIV      [REGION 5]
  4  System        SYS      [OEC.ISC-SLC.VA.GOV]
Enter selection:  1  User      NEW PERSON
Select NEW PERSON NAME:  DOE,JOHN          JD

----- Setting ORWT TOOLS MENU for User: DOE,JOHN -----
Select Sequence:  1
Are you adding 1 as a new Sequence? Yes//  YES
Sequence: 1//    1
Name=Command:  Vitals=<directory_name>"\Vitals.exe" /p=%PORT /s=%SRV /cprs /dfn=%DFN
Select Sequence:  2
Are you adding 2 as a new Sequence? Yes//  YES
Sequence: 2//    2
Name=Command:  Vitals Manager=<directory_name>"\VitalsManager.exe" /p=%PORT /s=%SRV /cprs
/dfn=%DFN
Select Sequence:
```

Note the quotation marks in the Vitals and Vitals Manager examples. A path that contains space characters (like C:\Program Files\...) must be surrounded by quotation marks. Entries on the command line may also contain parameters.

It is possible to pass context-sensitive parameters. These are parameters that are entered as placeholders, and then converted to the appropriate values at runtime. These placeholder parameters are:

- %SRV = Server name for the current broker connection.
- %PORT = Port number for the current broker connection.
- %MREF = M code giving the global reference where the patient DFN is stored.
- %DFN = The actual DFN of the currently selected patient.
- %DUZ = Internal entry number of the current user.

So, if you have another application that needs to know, for example, the identity of the current user and currently selected patient, you could list %DUZ and %DFN as parameters in the command that executes that program.

When the user clicks "Vitals" from the Tools menu, Vitals will be called and the actual server, port, and global reference will be substituted as command line parameters.



## 3. Site Files

Vitals Manager lets the user create new qualifiers, associate qualifiers with a category, edit abnormal values for a vital type, create/edit templates, and print a listing of qualifiers and their associated categories and vital types. The Vitals Manager module is used to populate the site files contained in the Vitals/Measurements package.

**This chapter shows you how to:**

1. [Start Vitals Manager module](#)
2. [Add vitals qualifiers](#)
3. [Associating vitals qualifiers with a category](#)
4. [Edit abnormal values](#)
5. [Create/edit a template](#)
6. [Print qualifiers table](#)

**Note: All the options discussed in this chapter are contained in the Vitals Manager module.**

## Getting Started

The Vitals/Measurements package consists of two modules, Manager and User. The Manager module is used to maintain the files and settings used to operate the software. The User module is used to collect, store and display patient data.

When you double click on the Vitals Manager icon, enter your access and verify codes at the *VISTA* sign-on window, and click on the OK button, the first screen that you will see will be the following (Fig. 3-1):

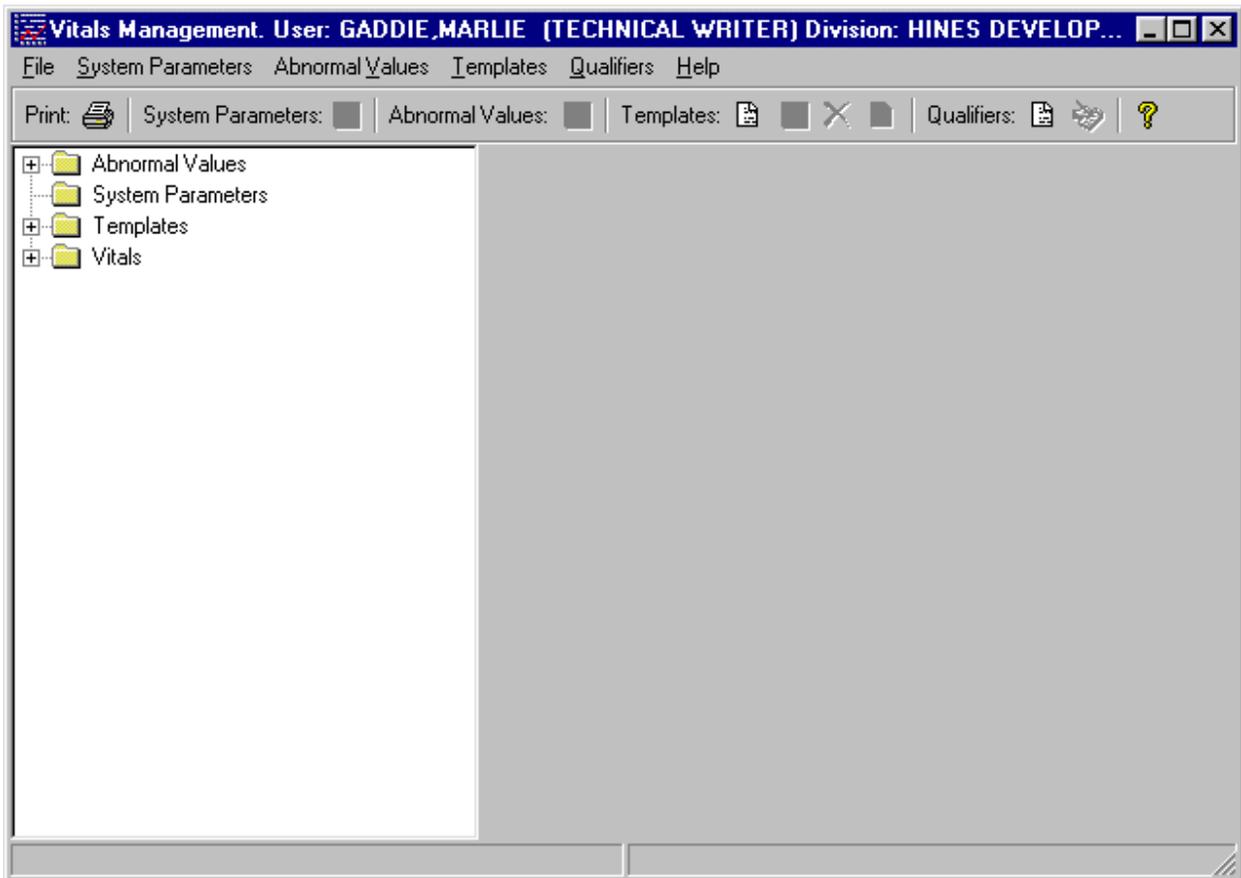


Fig. 3-1

## Adding Vitals Qualifiers

Qualifiers describe how patient vital signs and miscellaneous measurements were taken. These package qualifiers are categorized by location (e.g., right arm, left leg), position (e.g., lying, sitting, standing), method (e.g., cuff, Doppler, auscultate, assisted ventilator, T-piece), site (e.g., right, left), quality (e.g., actual, estimated), and cuff size (e.g., adult, small adult, pediatric). Synonyms are used as qualifier abbreviations and are appended to the measurement's numeric values on graphic reports. There is a Qualifiers Table report that lists the current vital types and their associated categories, qualifiers and synonyms found in the VitalsManager module.

These categories (i.e., Cuff Size, Method, Location, Position, Quality, and Site) are nationally defined and cannot be changed locally. With the exception of the Pain and Central Venous Pressure vital types, the other vital types are linked to one or more categories. The linkages between categories and vital types are also nationally defined and cannot be changed locally. The hierarchy of vital type, category, and qualifier is as follows:

Vital Type  
 Category  
 Qualifier

Sites can create qualifiers, once created a qualifier cannot be deleted. Editing Qualifiers is allowed, but should only be done to correct misspellings. Changing a qualifier's name will change that qualifier on every record in the system including past records. **Do not edit a qualifier to change the name of the qualifier.**

The package coordinator is responsible for keeping the qualifier list updated. To view the qualifiers, click the Plus "+" sign to the left of the Vitals folder on the Vitals Manager window (Fig. 3-1 in Getting Started section). Then click on the desired vital type. You will see a list of categories and qualifiers display on the right side of the Vitals Manager window. The qualifiers for a category are listed next to each category. If the package coordinator wants to add a new qualifier, then they should follow the instructions below.

From the main menu bar select Qualifiers, New Qualifier. The following window appears.

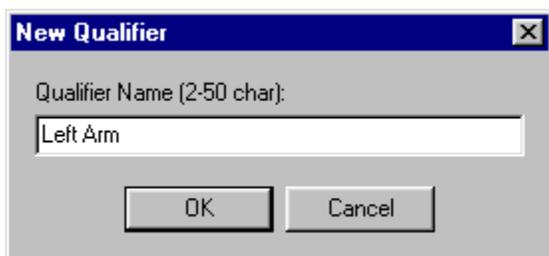


Fig. 3-2

Enter a name for the new qualifier (Fig. 3-2). Click the OK button to continue.

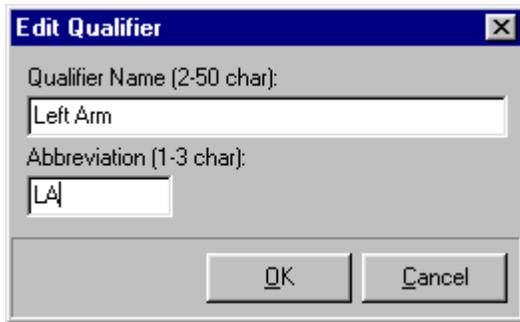


Fig. 3-3

Enter an abbreviation for the qualifier (Fig. 3-3). Click the OK button to add the new qualifier to the list.

### Associating Vitals Qualifiers with a Category

To view the existing categories and their associated qualifiers, click the Plus “+” sign to the left of the Vitals folder. Then click on the desired vital type. You will see a list of categories and qualifiers display on the right side of the Vitals Manager window (Fig. 3-4). The qualifiers for a category are listed next to each category.

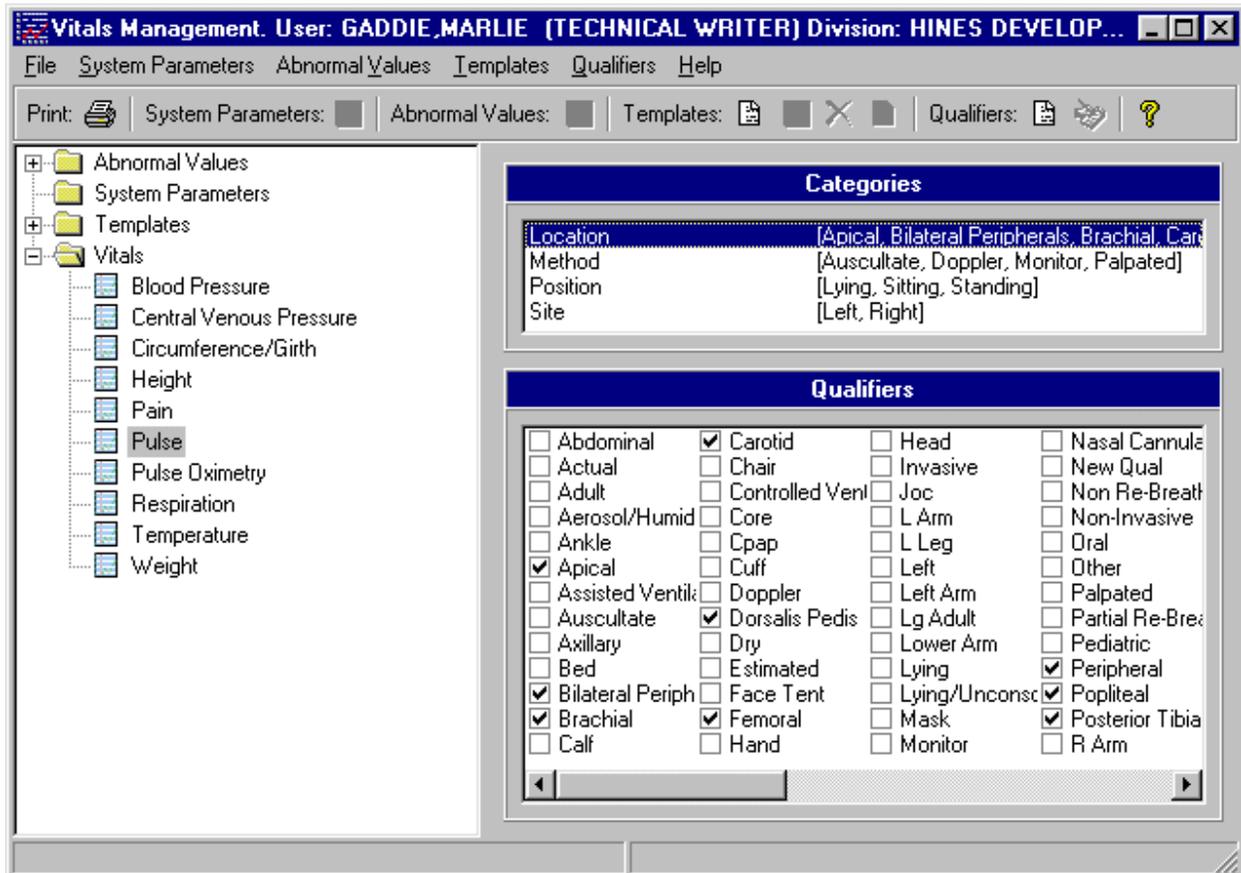


Fig. 3-4

To associate a vitals qualifier with a category, select the desired category by clicking on it (Fig. 3-4). Select the appropriate qualifiers for that category by clicking on them, checkmarks will appear next to the selected qualifiers. **Category changes are automatically saved.** The qualifiers selected here for a category and vital type will be the only qualifiers the user will be able to select from when entering patient data.

**Note:** Pain and Central Venous Pressure cannot be associated with any qualifier.

## Editing Abnormal Values

An abnormal value is defined as a value outside the normal range for a vital type. You can define what these high/low values should be so that when a user enters a vital/measurement outside the normal range of values for a vital type, the value will show on the data table as an abnormal value. It will be bold, or a different color dependant upon how it is defined in the User Options option in the Vitals module. User Options is used to define what the text should look like in the data table (bold, different color, etc.) for both normal and abnormal values. Refer to the section on [Editing User Options](#) in the Entering Vitals Data chapter in this manual.

To edit abnormally high and low vital type values double click on the Abnormal Values folder to open it, then click on the vital type you wish to edit high/low values for. The following window appears (Fig. 3-5).

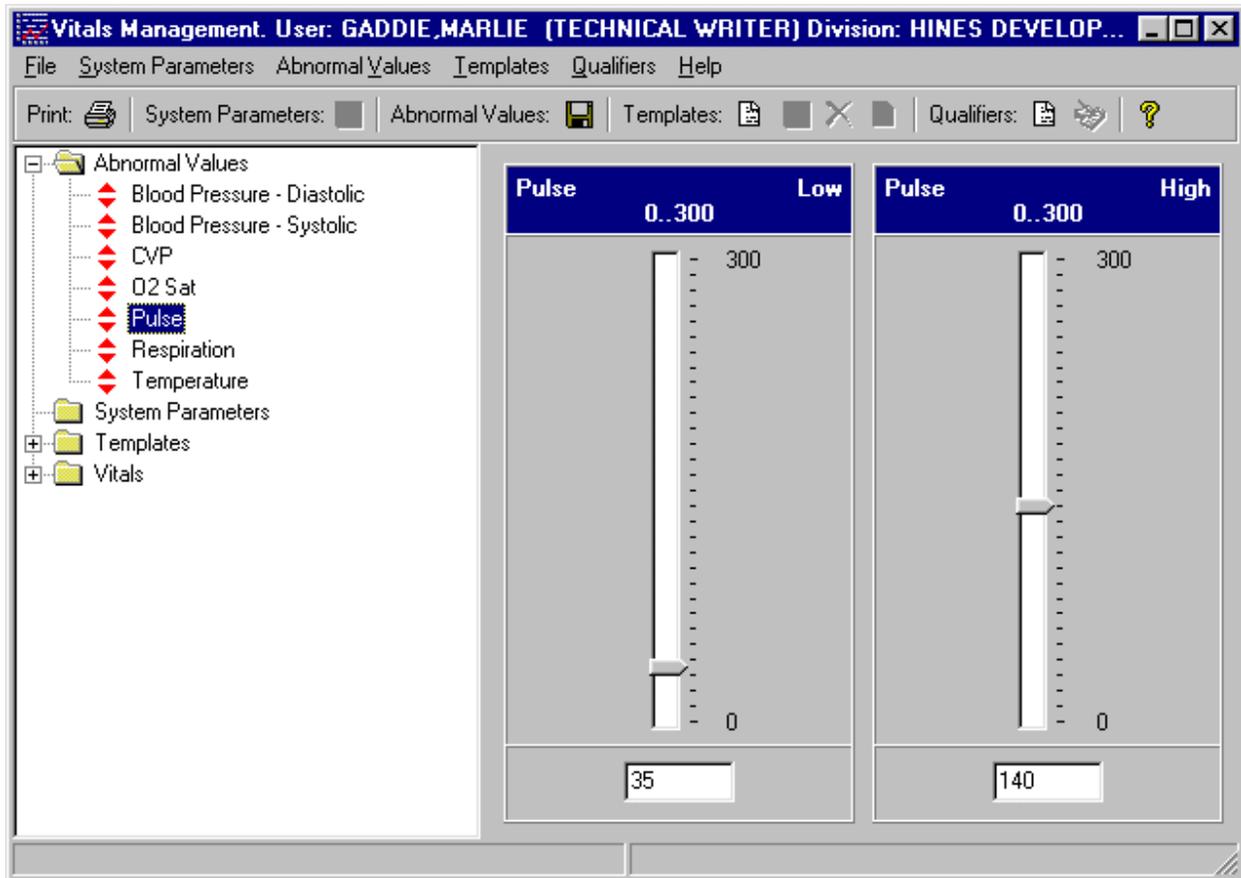


Fig. 3-5

You can either move the bar up or down to change the abnormal value or type in the abnormal value. If you type in a value, the meter will not reflect the value until you click in an area outside the box where you entered the value. **Click the Save Abnormal Values button next to the Abnormal Values heading at the top of the window to save the values** (Fig. 3-5).

## Editing System Parameters

There are 3 system parameters in the Vitals Manager module. They are:

- Allow User Templates**
- Help Menu Web Address**
- Version Compatibility**

To edit system parameters double click on the System Parameters folder to open it (Fig. 3-6). Below are instructions for editing each of the system parameters.

**Allow User Templates** allows a CAC or package coordinator to decide whether a clinician should be able to create/edit user templates in the Vitals Manager and Vitals modules. When the checkbox is checked, a clinician is able to create/edit user templates in the Vitals Manager and Vitals modules.

**Help Menu Web Address** contains the address for the Vitals Home Page and directs the user's default browser to this page when accessed.

**Version Compatibility** is used to check if a client version is compatible or not with the current version of Vitals running on the *VISTA* M server. All previously installed versions of Vitals/Measurements are listed in this parameter. Only the version(s) that are compatible with the current server version are checked. These versions are identified by their executable name and the Windows file version. Because backward compatibility is required, more than one version of the software may be flagged as compatible.

**Special Note:** The *VISTA* server install (KIDS Build) will automatically set the Help Menu Web Address and Version Compatibility parameters for the client/server versions being installed. After an installation this parameter should be carefully reviewed. Modification of this parameter should not be needed unless the site is testing a patch or performing local modifications to the client software.

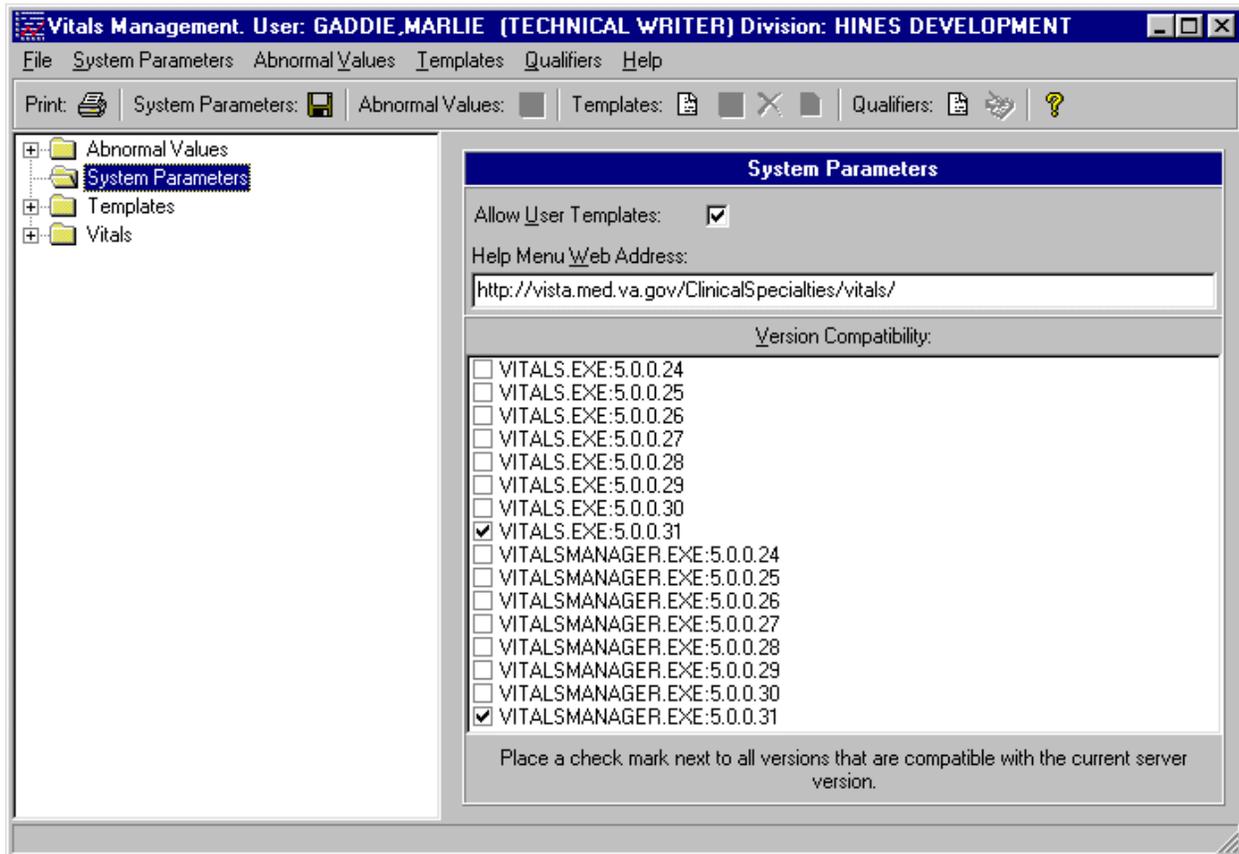


Fig. 3-6

**Click the Save System Parameters button next to the System Parameters heading at the top of the window to save the values.**

## Creating/Editing a Template

Templates are a set of vitals/measurements grouped together to make data entry simpler and easier. In the VitalsManager module, templates can be created for the following categories:

- System - System wide templates
- Division - Used for multi-divisional sites
- Location - Ward locations
- User - Individual users

**Note: The system parameter Allow User Templates must be checked, and system parameters saved in order to see user templates.**

All templates are created the same way. The following instructions show how to create/edit a template for a location.

To create a new template, go through the main menu bar and select Templates, New Template. You can also click on the Create a New Vitals Input Template button on the toolbar to create a new template. The following window appears (Fig. 3-7).

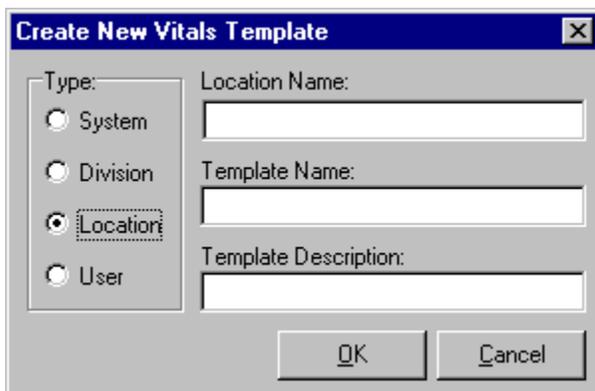
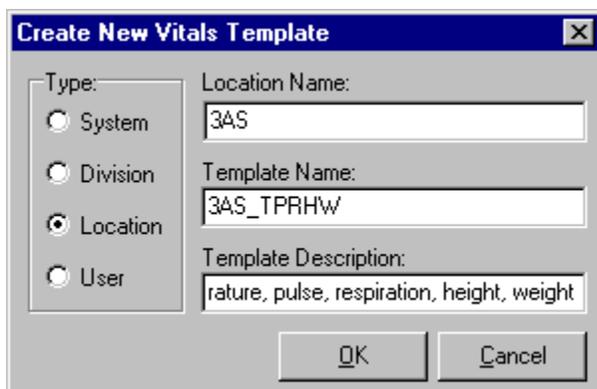


Fig. 3-7

In the Type section of the window, select the type of template you want to add by clicking the appropriate radio button. In this case the type selected is Location.



The screenshot shows a dialog box titled "Create New Vitals Template". It features a "Type:" section on the left with four radio button options: "System", "Division", "Location" (which is selected), and "User". To the right of these options are three text input fields. The first field, labeled "Location Name:", contains the text "3AS". The second field, labeled "Template Name:", contains "3AS\_TPRHW". The third field, labeled "Template Description:", contains "rature, pulse, respiration, height, weight". At the bottom of the dialog are two buttons: "OK" and "Cancel".

Fig. 3-8

Enter the name of the (division, location, user) this template is to be associated with in the Division/Location/User Name field (Fig. 3-8). In this case the field says Location Name. For Location, only entries in the Hospital Location (#44) file may be selected. For Division, only entries in the Institution (#4) file may be selected. For User, only entries in the New Person (#200) file may be selected. For System, only entries in the Kernel System Parameters (#8989.3) file may be selected.

Enter the name of the template you want to add in the Template Name field (maximum length is 30 characters).

Enter a short description of the template in the Template Description field (maximum length is 50 characters). This field is optional. Click the OK button to create the blank template.

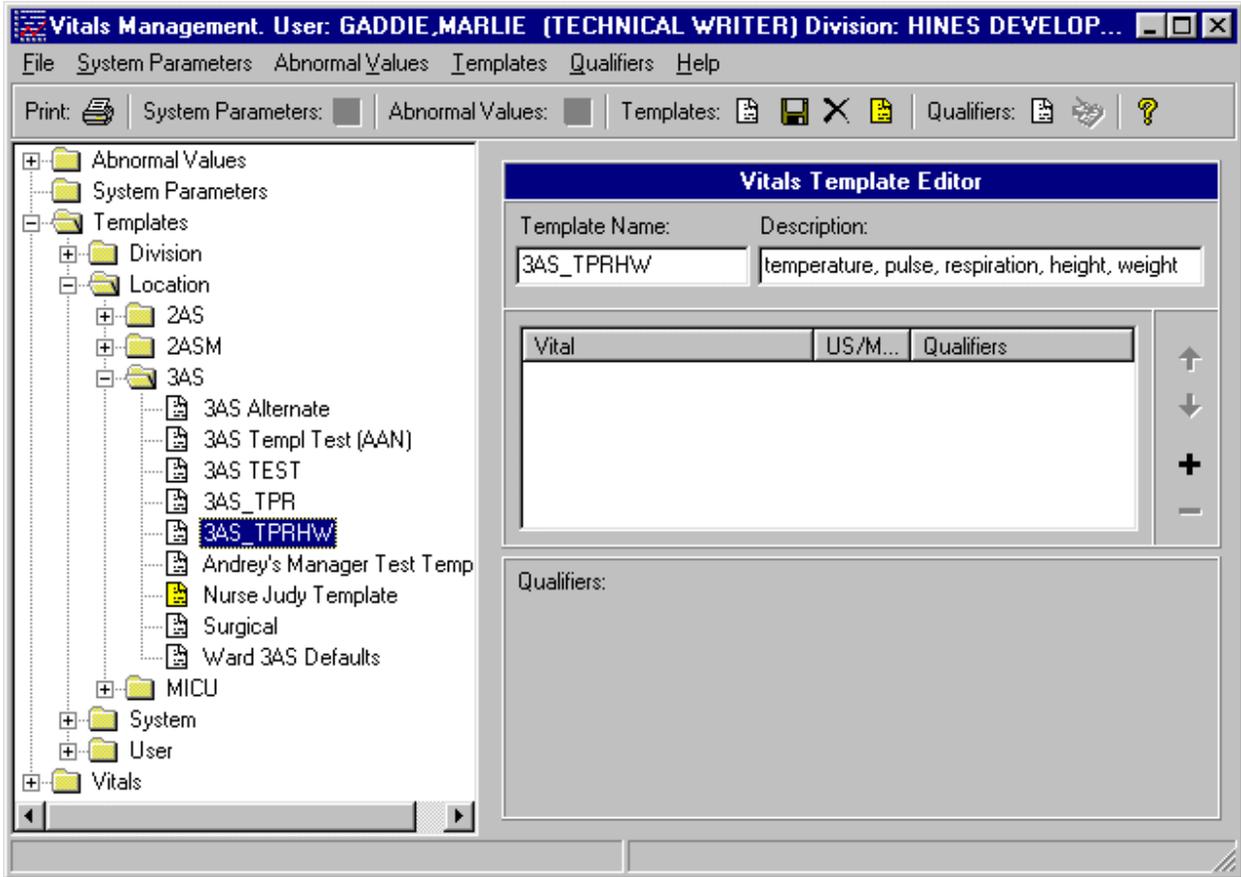


Fig. 3-9

Your new blank template appears on the screen (Fig. 3-9).

Now you can edit your template to add vital types and qualifiers to it. Click on the plus sign (+) on the right side of the screen display to add vital types to the template and the following window appears.

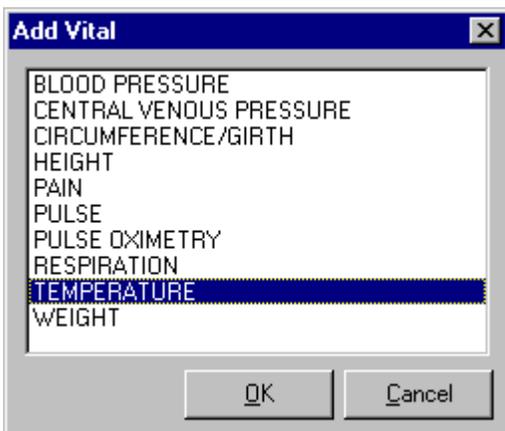


Fig. 3-10

Click on each of the vital types you want to add to your template (Fig. 3-10). You may select multiple vital types by holding down the Ctrl key and selecting multiple vital types, or hold down the Shft key to select a range of vital types. Click the OK button when finished.

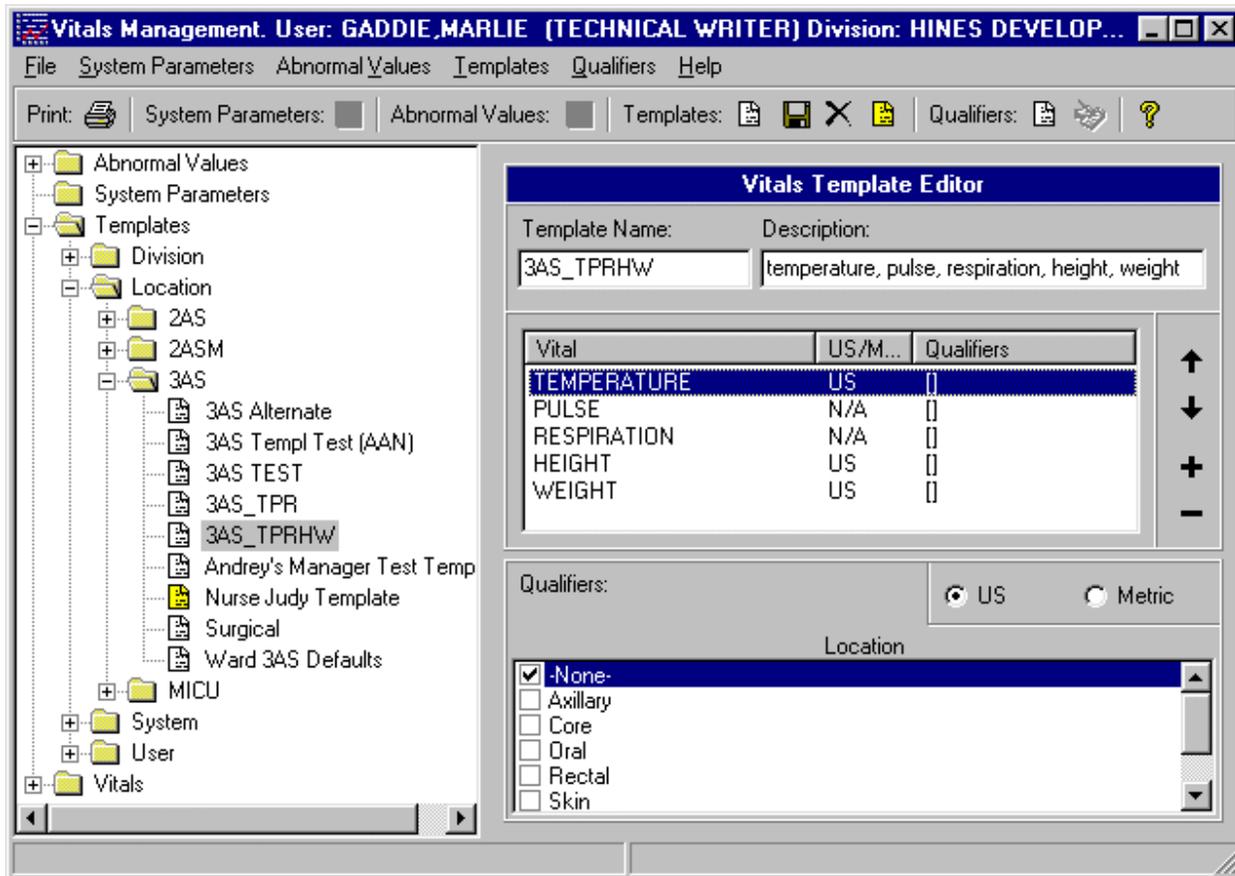


Fig. 3-11

Your template now has vital types, but no qualifiers (Fig. 3-11). To add qualifiers you must select each vital type to edit it. Select a vital type by clicking on it, and the qualifiers for that vital type appear on the bottom portion of the screen.

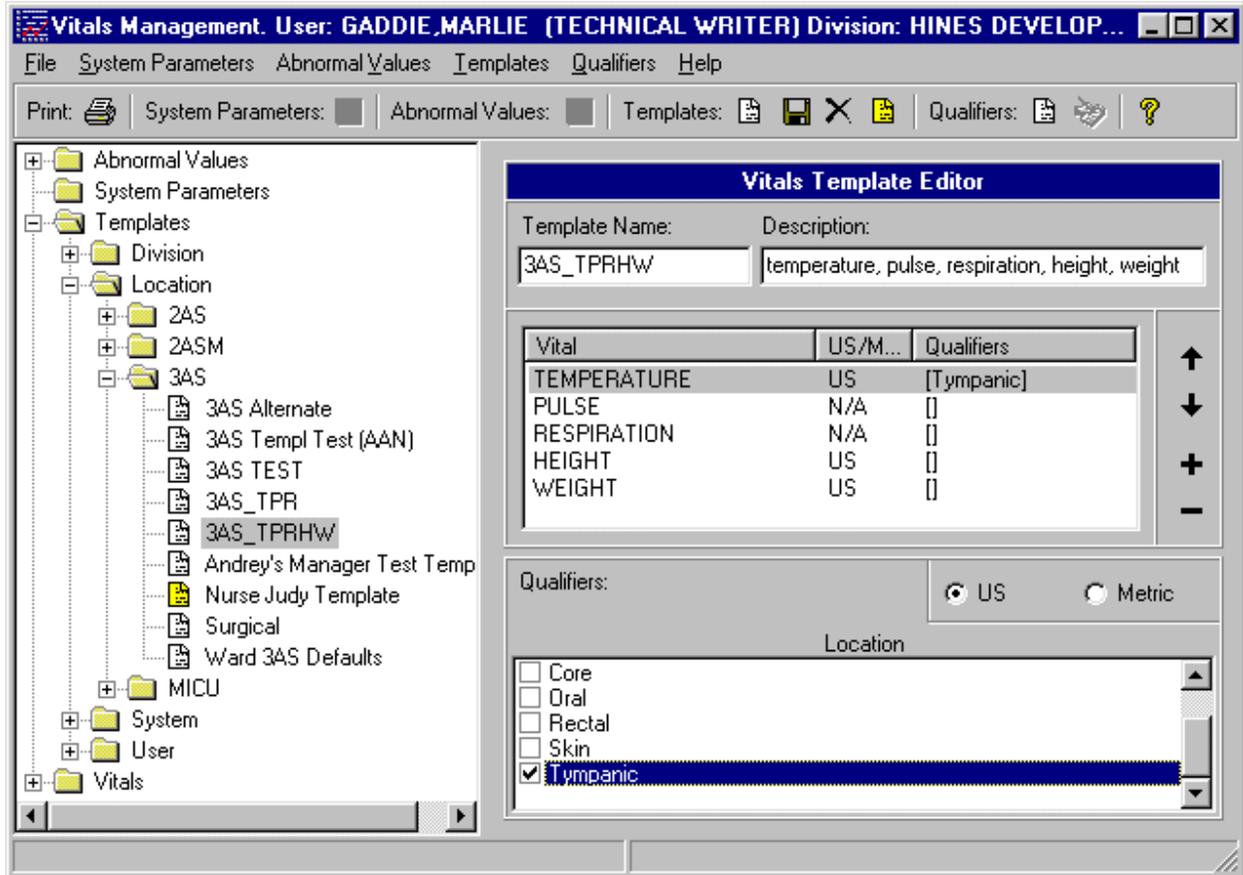


Fig. 3-12

Select the qualifiers desired by clicking on the desired checkboxes, only one qualifier can be selected from each category (Fig. 3-12). You can select US or Metric scale for each appropriate vital type from the Measurement box. US is the default. **Qualifiers are automatically saved.**

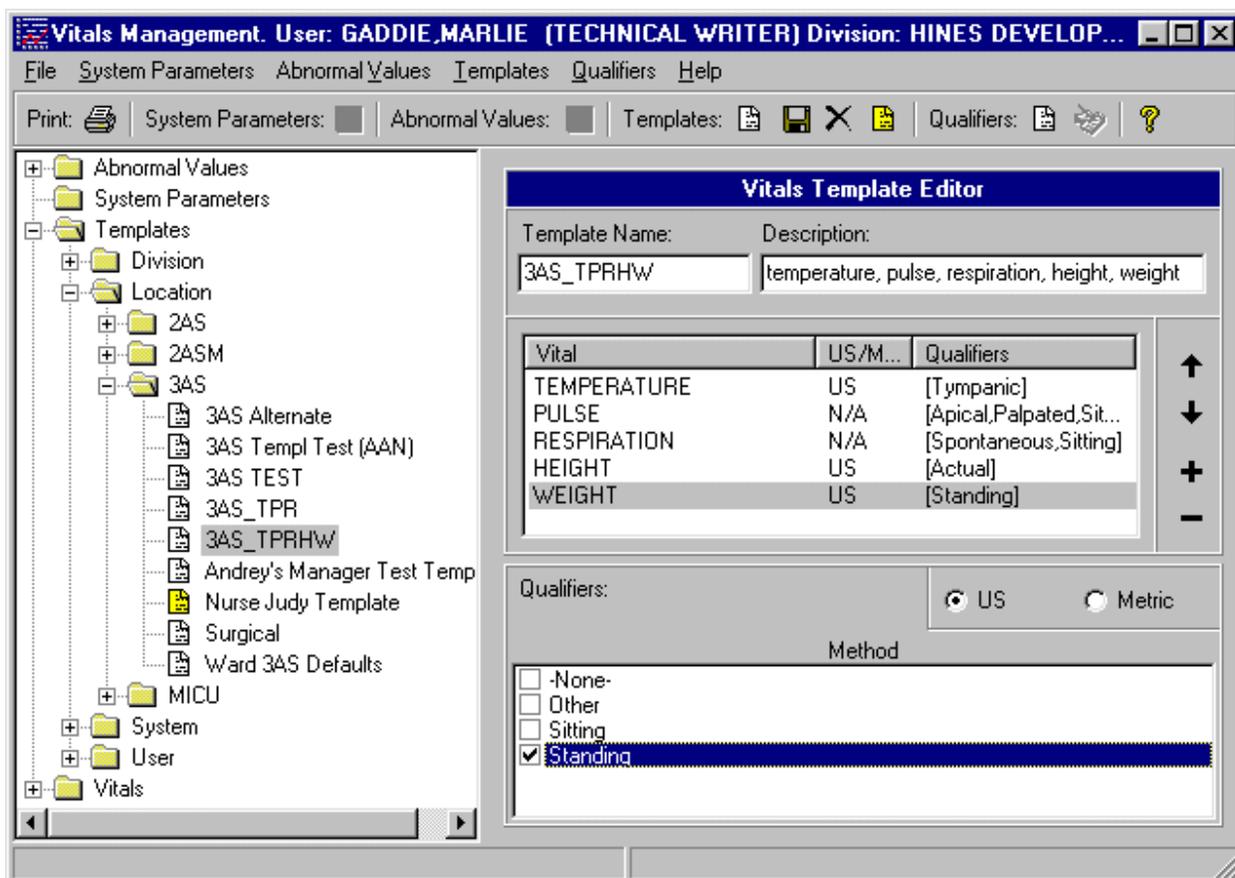


Fig. 3-13

Now your template is complete (Fig. 3-13).

Make a template a default by going through the main menu bar and selecting Templates, Set Default Template, or click the Set Template as Default button on the toolbar.

The default templates show up with a yellow icon on the list on the left side of the screen.

Each Division, Location, and User (e.g., 3AS) can have only one template at a time designated as the default. Designating a template as a default is merely a way to indicate a preference for that template. You do not have to indicate a template as a default. However, it is recommended that you designate one System level template as a default. When first time users enter patient data, the default System template will be displayed until the user selects another template instead.

Select a vital type and click the minus sign (-) button on the right side of the Template Editor screen to remove a vital type from the template.

Use the up/down arrow buttons to move vital types around in the list.

Go through the main menu bar and select Templates, Save Template, or click on the Save Template button to save the template settings.

To delete a template, highlight the template name, then from the main menu bar select Templates, Delete Template, or click on the Delete Template button.

## Printing Qualifiers Table

The Qualifiers Table lists all qualifiers under each of their vital types and categories, including each qualifier's synonym. The Package Coordinator may use this listing to determine the accuracy and completeness of the qualifier selection. Qualifiers that are not associated with a category and vital type do not appear in this listing.

To print the Qualifiers Table go through the main menu bar and select File, Print Qualifiers Table.

The following screen appears:

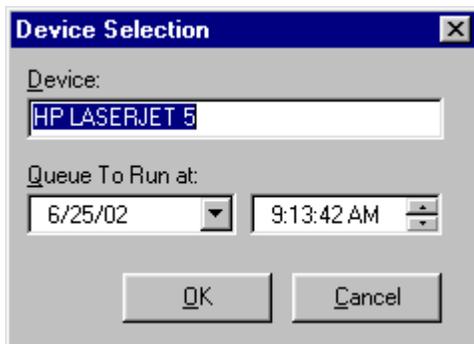


Fig. 3-14

Select an appropriate device in the Device field (Fig. 3-14). Select a date/time to queue this report in the Queue To Run at field. The default date/time is the current server date/time. This report can't be queued to run for a past date/time. Click the OK button to print the report.

## 4. Package Operation

Having completed the instructions for implementing the software as indicated in Chapter 2 - Implementation and Maintenance, you are now ready to enter patient data. The content contained in the following sections provides information on the modules which can be assigned to patient services staff. This information includes examples of the screens and how-to instructions for using the software.

Remember that online help is available when questions arise. The user can click the Help button or menu at the top of the screen to see a table of contents and index containing help on how to enter data, print reports, etc. There is help available on every screen by pressing the F1 key.



## 5. Entering Vitals Data

The Vitals module is used to enter vitals data, create user templates, view allergies, mark incorrect vitals as entered in error, and edit user preferences for data display on the vitals data table. These topics are discussed in this chapter. The Vitals module also lets the user print several different Vitals reports, this is discussed in the [Reports](#) chapter in this manual.

**This chapter shows you how to:**

1. [Enter vitals data](#)
2. [Create a user template](#)
3. [View allergies](#)
4. [Mark vitals as entered in error](#)
5. [Edit user options](#)

### Opening Screen

When you double click on the Vitals icon, enter your access and verify codes at the *VISTA* sign-on window, and click on the OK button, the first screen that you will see will be the following (Fig. 5-1):

**Note:** The screen layout is saved between sessions, so the last lookup that was used appears when opening the Vitals module. For example, if “Ward” was the last selection made in the Patient Group List, then it will be the default selection when the current session is opened. The software will display previous values as defaults whenever possible.

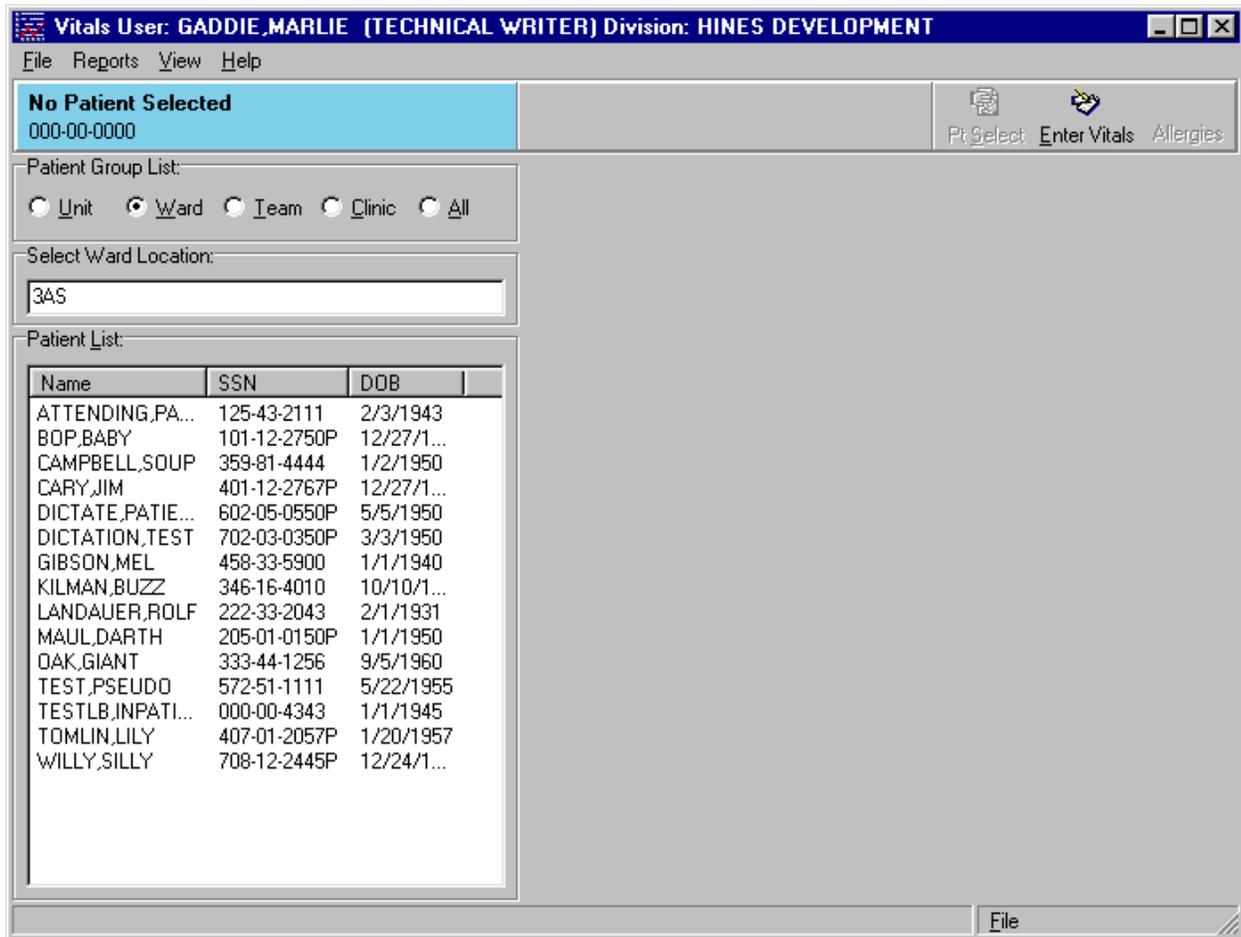


Fig. 5-1

## Buttons



Pt Select

Opens and closes the patient selector panel. This is a toggle switch. See Fig. 5-1.



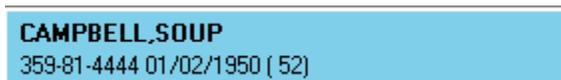
Enter Vitals

Opens the Vitals Input screen so users can select templates and enter vitals data. See Fig. 5-1.



Allergies

Displays any allergies the patient may have. See Fig. 5-1.



Displays a patient information screen containing general patient information. Users can send this report to a printer. See Fig. 5-1.



**Exp. View** Opens and closes the template selection panel on the Vitals Input screen. This is a toggle switch. See Fig. 5-6.



**LatestV** Opens and closes the latest vitals display panel on the Vitals Input screen. This is a toggle switch. See Fig. 5-6.



**Template** Opens a template selector window from the Vitals Input screen. See Fig. 5-6.



**Hospital** Opens hospital selector window from the Vitals Input screen. See Fig. 5-6.



**Date/Time** Opens date/time selector window from the Vitals Input screen. See Fig. 5-6.

## Entering Vitals Data

To enter vitals data, you will use a template. Templates are a set of vitals/measurements grouped together to make data entry simpler and easier. Templates for system, divisions, locations, and users can be created in the Vitals Manager module. Refer to the section on [Creating/Editing a Template](#) in the Site Files chapter of this manual for more information on creating/editing templates for system, divisions, locations, and users. If allowed, templates can be created for yourself as a user in the Vitals module. These templates are called user templates. For information on creating a user template refer to the section on [Creating a User Template](#) later in this chapter.

The Patient Selector must be open in order to select a patient. To open the Patient Selector, go through the main menu bar and select File, Open/Close Patient Selector, or click the Pt Select button on the top right side of the screen. The last lookup that was used appears when opening the Patient Selector.

Patients can be selected by Unit, Ward, Team, Clinic, or All. “Unit” allows the user to select from a list of Nursing units. “Ward” allows the user to select from a list of MAS Wards. “Team” allows the user select from a list of teams defined in the OE/RR List file (#100.21). “Clinic” allows the user select from a list of clinics for a predetermined period of time (e.g., Today, Yesterday, Past week). “All” allows the user to select a single patient by name or SSN.

To begin selecting patient names, click the desired radio button under Patient List, (in this case Ward is selected), then double click the desired ward under Select Ward Location. A list of patients in that ward are listed on the bottom left portion of the screen (Fig. 5-2).

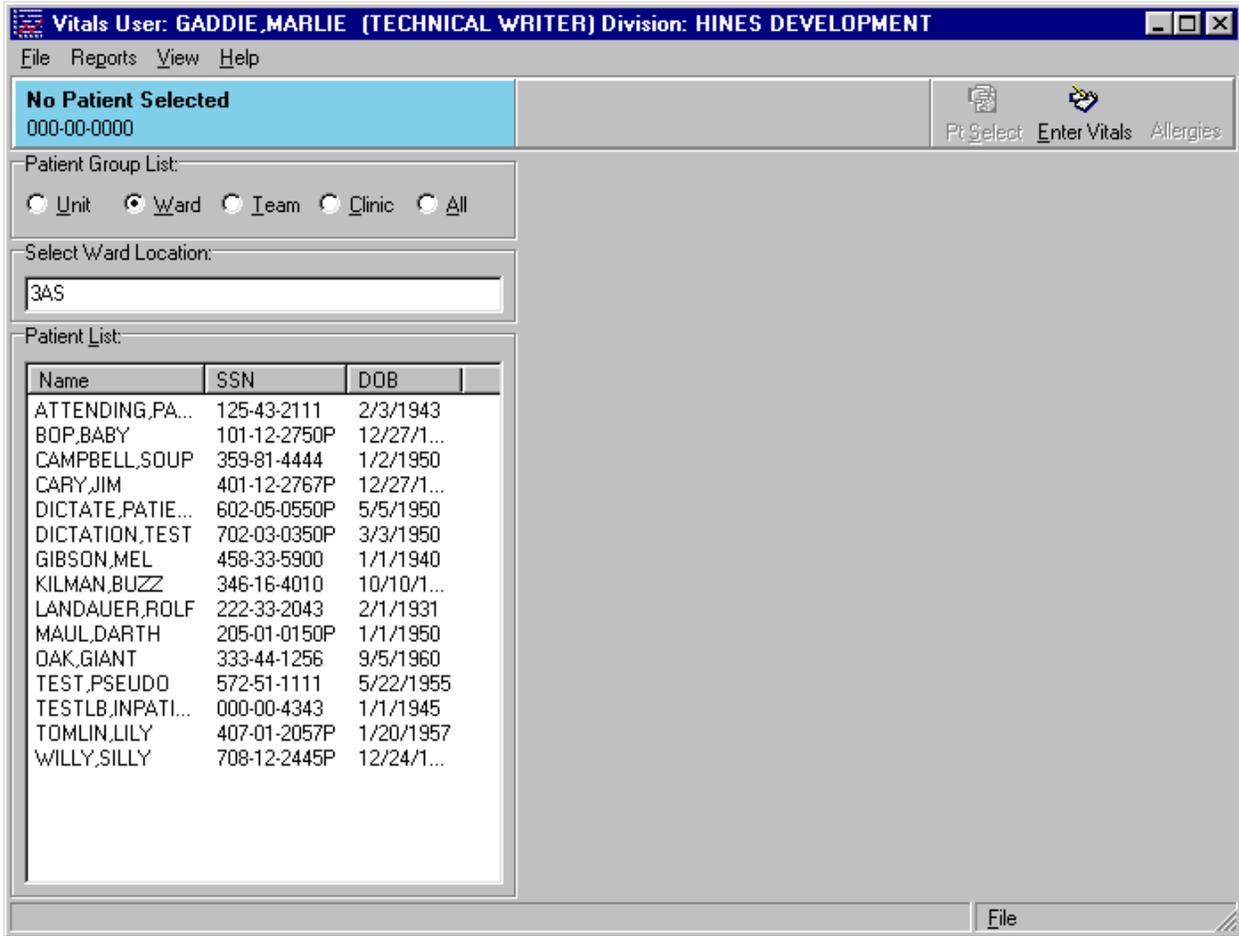
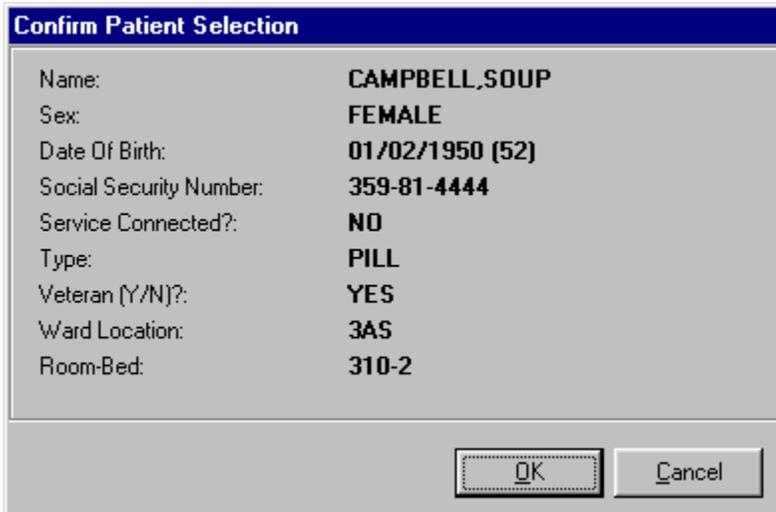


Fig. 5-2

At this point you can either select a single patient name, or select multiple patient names.

### Entering Data for a Single Patient

Select a single patient name by double clicking on it. A confirmation screen appears (Fig. 5-3).



The image shows a dialog box titled "Confirm Patient Selection" with a blue header. The main area is a light gray rectangle containing a list of patient information. At the bottom right of the dialog are two buttons: "OK" and "Cancel".

Name:	<b>CAMPBELL,SOUP</b>
Sex:	<b>FEMALE</b>
Date Of Birth:	<b>01/02/1950 (52)</b>
Social Security Number:	<b>359-81-4444</b>
Service Connected?:	<b>NO</b>
Type:	<b>PILL</b>
Veteran (Y/N)?:	<b>YES</b>
Ward Location:	<b>3AS</b>
Room-Bed:	<b>310-2</b>

Fig. 5-3

This screen shows you additional information on the selected patient. In most cases this screen appears, in other cases (sensitive patient, means test, duplicate SSN), security warnings or alerts appear. If the patient selected is a sensitive patient, a sensitive patient screen will appear telling you that this patient's information is on a need to know basis only.

Click the OK button to confirm patient selection.

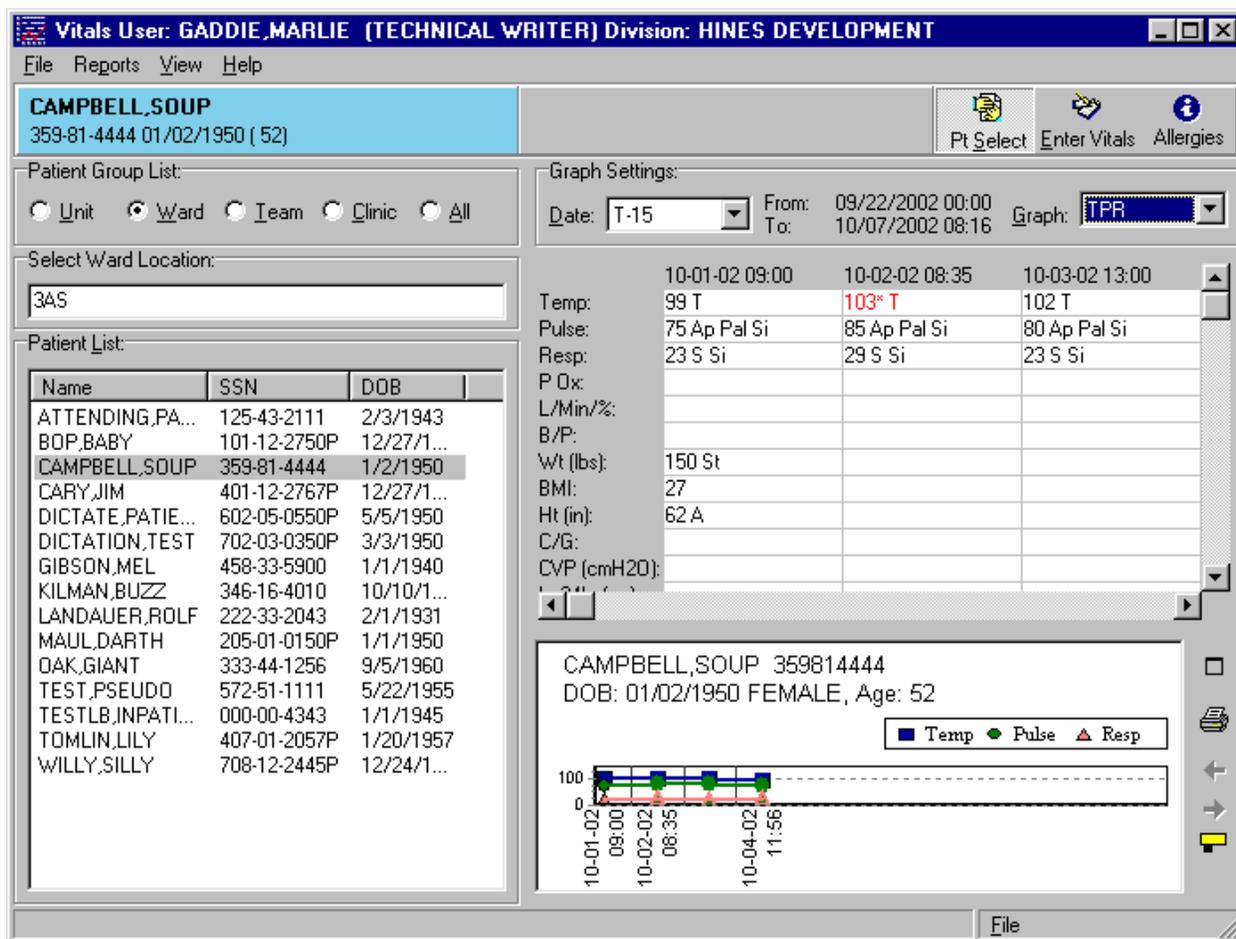


Fig. 5-4

To view existing patient data, select a date range in the Date field (Today-30 is selected here). Data appears in spreadsheet format on the middle right portion of the screen (Fig. 5-4). You can select a predetermined time frame or customized time frame.

You can view a graph for the selected date range by selecting a graph in the Graph field (TPR is selected here), and the graph appears on the lower right portion of the screen (Fig. 5-4). There are several icons located to the right of the graph. The top icon closes the spreadsheet portion of the display and expands the graph display to fill the space. If the Patient Selector is closed at this time, the graph expands to fill the entire screen. The printer icon opens a print dialog box to allow the user to send the graph display to a printer. The graph is printed as it appears on the screen at the time of printing. The left and right arrows allow the user to move across the graph. The bottom icon displays the numerical score(s) on the graph. The top and bottom icons, and the Patient Selector “toggle” when clicked. If the graph display already fills the spreadsheet display area, then clicking the top button will set the graph back to the smaller size and re-display the spreadsheet. If the numerical scores already appear on the graph, then clicking on the bottom icon will hide the numerical scores. Right clicking on a cell in the data table or on the graph will open a small window which displays the value in US standard and metric units. Click in the window to close it.

The most recent patient data is displayed at the right side of the spreadsheet and graph. The oldest patient data is on the left side of the display.

Click on the patient name at the top left corner of the screen to display a report containing general patient information.

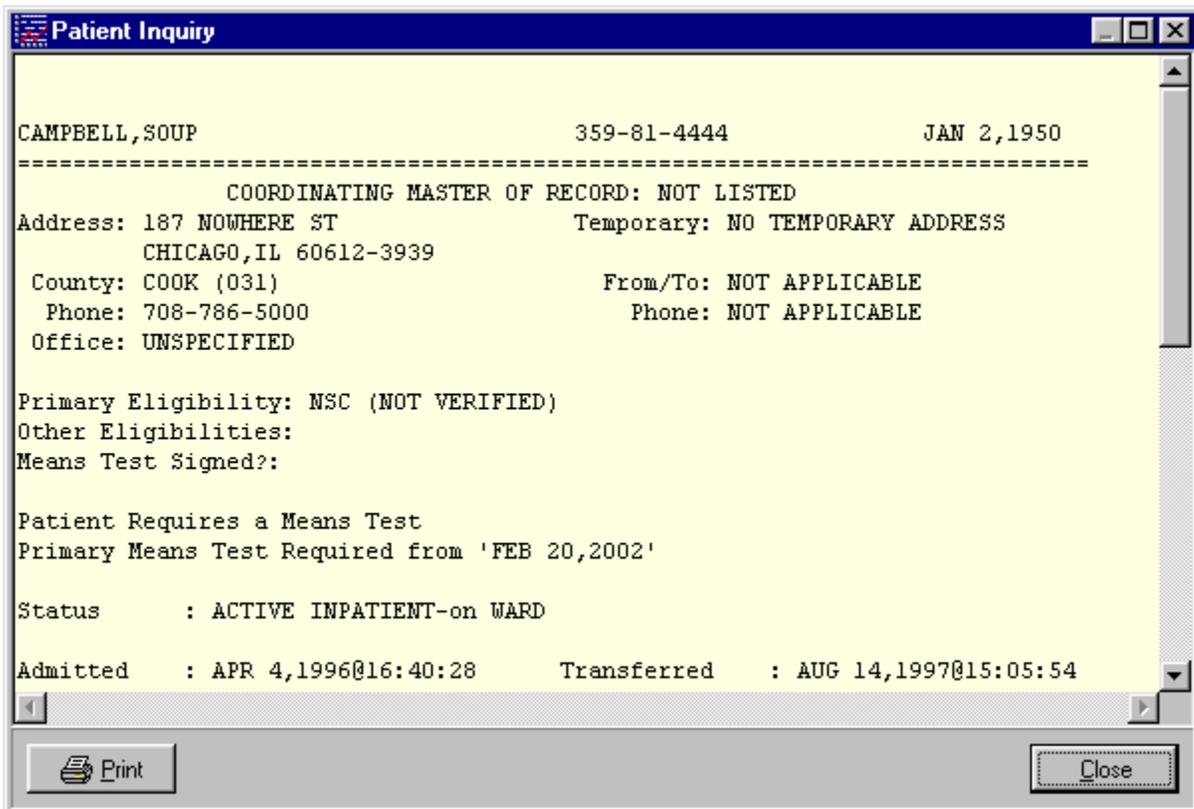


Fig. 5-5

Click the Print button to print this report. Click the Close button to close this screen.

After the user selects a patient, they can click the Pt Select button to close the Patient Selector. This will expand the spreadsheet and graph displays for the selected patient. Click the Pt Select button again (another toggle button) to open the Patient Selector.

Click the Enter Vitals button to open the Vitals Input screen.

## Entering Vitals Data

**Vitals Input**

**CAMPBELL.SOUP**  
359-81-4444 01/02/1950 ( 52)

**Hospital Location** NUR 3AS  
**Date/Time** 10/16/02 06:46:42

Template Hospital Date/Time Exp. View Latest V.

Hospital Location: NUR 3AS

Vitals input template: <3AS\_TPRHW>

Patient on pass:  Units as Drop Down List

#	U...	R...	Vital	Value	Units	Qualifiers
1.	<input type="checkbox"/>	<input type="checkbox"/>	Temperature:		(F)	<input type="checkbox"/> [Tympanic]
2.	<input type="checkbox"/>	<input type="checkbox"/>	Pulse:			<input type="checkbox"/> [Apical,Palpated,Sitting]
3.	<input type="checkbox"/>	<input type="checkbox"/>	Respiration:			<input type="checkbox"/> [Spontaneous,Sitting]
4.	<input type="checkbox"/>	<input type="checkbox"/>	Height:		(in)	<input type="checkbox"/> [Actual]
5.	<input type="checkbox"/>	<input type="checkbox"/>	Weight:		(lb)	<input type="checkbox"/> [Standing]

Latest vitals on file for this patient:

Date & Time	Vital	USS Value	Metric Value	Qualifiers
10/15/02 11:22	Temperature	111 F	43.9 C	TYMPANIC
10/07/02 08:22	Pulse	75		APICAL,PALPATED,SITTING
10/07/02 08:22	Respiration	27		SPONTANEOUS,SITTING
09/04/02 13:22	Pulse Oximetry	11%*		AEROSOL/HUMIDIFIED MASK
09/13/02 09:35	Blood Pressure	120/80*		CUFF ADULT
10/01/02 09:00	Height	5 ft 2 in	157.48 cm	ACTUAL
10/01/02 09:00	Weight	150 lb	68.18 kg	STANDING
	Body Mass Index	27		
09/04/02 13:22	CVP	11.0 cmH2O	8.1 mmHg	
09/04/02 13:22	Circumference/Girth	11 in	27.94 cm	ABDOMINAL
09/13/02 08:10	Pain	4		

Save Exit

Fig. 5-6

The Hospital Location field contains the hospital location where the vitals were taken. Enter the hospital location for this patient into the Hospital Location field (Fig. 5-6). You can also click on the Hospital button and select a hospital location (Fig. 5-7). Hospital Location defaults to the hospital location of the selected inpatient.

**Hospital Location Selector**

Hospital Location where vitals taken

NUR 3AS

Ok Cancel

Fig. 5-7

Select a Hospital Location from the dropdown list. Click the OK button to complete the selection. Click the Cancel button to cancel the selection.

Click on the Date/Time button and select a date/time (Fig. 5-8). The default date/time is the current server date/time. The date/time selected appears at the top of the window.



Fig. 5-8

Select a date from the calendar by clicking on it. Click the Today button to select the current date. Select a time either by entering in the time in the Time field, or by selecting the time using the hour and minute lists under the Time field. Click the Now button to select the current time. Click the Midnight button to select 12:00 midnight. Click the OK button to complete the selection. Click the Cancel button to cancel the selection. You cannot select a date/time in the future.

Templates in the Templates list are sorted by system, division, location, and user. Templates for system, division, and location are available to everybody. The user can select anybody's user template as long as they have the GMV MANAGER key. If the user does not have the GMV MANAGER key, then they can only select from their own user templates. The template list contains all the users own templates and any other templates applicable for that system, division, or location. Select the desired template from the Templates list at the lower left portion of the screen (Fig. 5-6). You can also click on the Template button and select a template (Fig. 5-9). Contact your IRMS support person if you think you should have the GMV MANAGER key.

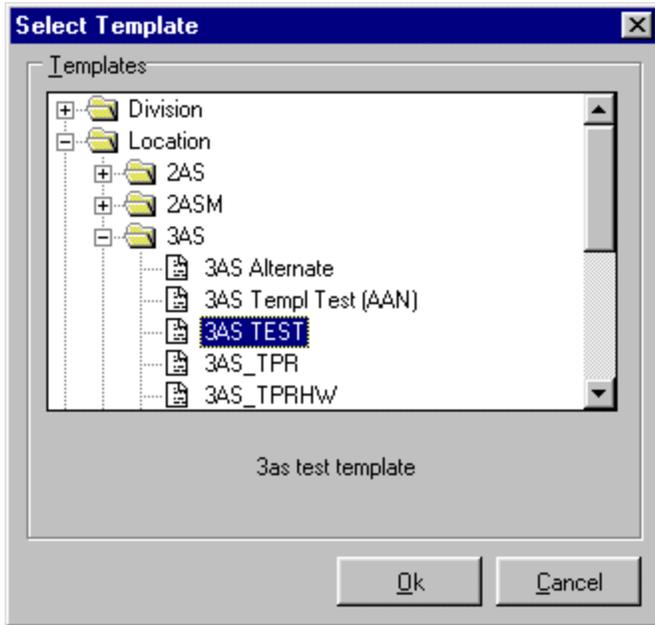


Fig. 5-9

Select a template from the list. Click the OK button to complete the selection. Click the Cancel button to cancel the selection.

Enter values for the vital types by typing them in the appropriate box. The default qualifiers for each vital type appear to the right of the down arrow button for each vital type. Click the down arrow button next to each vital type to select qualifiers other than the default qualifiers for that vital. Check one of the Refused (R), Unavailable (U), or Patient On Pass check boxes as needed if there is no data available to enter for the vital types.

Click the Save button to save the data for these vital types. Click the Exit button to exit the template without saving any data.

The look of the Units column can be changed by checking the Units as Drop Down List box. When the Units column is set to a metric setting that means the data entry for that vital type is expected to be a metric reading. If the user wants to enter the reading in US Standard format then select the US Standard format from the Units column. To make US Standard the default for a vital type, the template definition must be edited. Refer to the section on [Creating a User Template](#) for more information on creating/editing templates.

Click the Exp. View button to view/hide the Hospital Location, and Template fields on the left side of the screen. Click the LatestV button to view/hide the latest vitals display on the bottom of the screen. The latest vitals display shows the most recent reading for each vital type on record for the patient. If there is no reading for a vital type (e.g., CVP), then that vital type is not listed.

## Entering Data for Multiple Patients

You can enter vitals data for several patients at one time by following these instructions.

Multiple patients can be selected by using the Shift button to select a range of patients, or by using the Ctrl button to select specific patients. When multiple patients are selected, no confirmation screen appears. When any sensitive patients are selected, a sensitive patient screen appears for each sensitive patient. You must respond to these screens before entering any data.

If you click the Enter Vitals button without highlighting any of the patient names in the list (for 3AS), then all patients in the list will be selected.

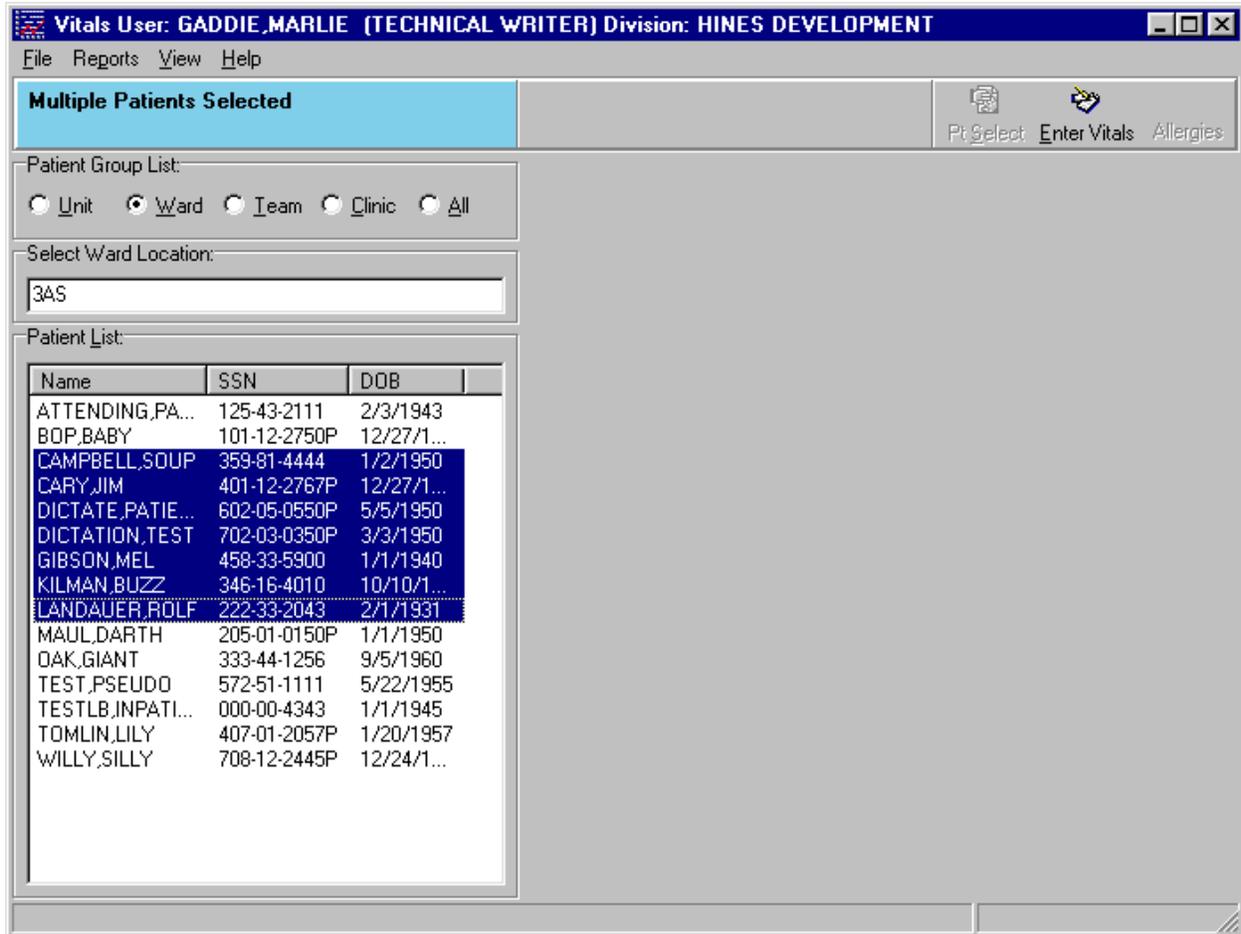


Fig. 5-10

Click the Enter Vitals button to open the Vitals Input screen.

## Entering Vitals Data

**Vitals Input**

**CAMPBELL, SOUP**  
359-81-4444 01/02/1950 (52)

**Hospital Location** NUR 3AS  
**Date/Time** 10/16/02 06:48:13

Template Hospital Date/Time Exp. View Latest V.

Patient List

- CAMPBELL, SOUP
- CARY, JIM
- DICTATE, PATIENT
- DICTATION, TEST
- GIBSON, MEL
- KILMAN, BUZZ
- LANDAUER, ROLF

Hospital Location  
NUR 3AS

Templates

- 3AS
- 3AS Alterna
- 3AS TEST
- 3AS Templ
- 3AS\_TPR
- 3AS\_TPRH
- Andrey's Me
- FRANKS PL
- Nurse Judy
- Surgical
- Ward 3AS D
- 2ASM

Vitals input template: <3AS\_TPRHW>

Patient on pass:  Units as Drop Down List

#	U...	R...	Vital	Value	Units	Qualifiers
1.	<input type="checkbox"/>	<input type="checkbox"/>	Temperature:		(F)	<input type="checkbox"/> [Tympanic]
2.	<input type="checkbox"/>	<input type="checkbox"/>	Pulse:			<input type="checkbox"/> [Apical, Palpated, Sitting]
3.	<input type="checkbox"/>	<input type="checkbox"/>	Respiration:			<input type="checkbox"/> [Spontaneous, Sitting]
4.	<input type="checkbox"/>	<input type="checkbox"/>	Height:		(in)	<input type="checkbox"/> [Actual]
5.	<input type="checkbox"/>	<input type="checkbox"/>	Weight:		(lb)	<input type="checkbox"/> [Standing]

Latest Vitals for patient <CAMPBELL, SOUP>

Date & Time	Vital	USS Value	Metric Value	Qualifiers
10/15/02 11:22	Temperature	111 F	43.9 C	TYMPANIC
10/07/02 08:22	Pulse	75		APICAL, PALPATED, SITTING
10/07/02 08:22	Respiration	27		SPONTANEOUS, SITTING
09/04/02 13:22	Pulse Oximetry	11%*		AEROSOL/HUMIDIFIED MASK
09/13/02 09:35	Blood Pressure	120/80*		CUFF ADULT
10/01/02 09:00	Height	5 ft 2 in	157.48 cm	ACTUAL
10/01/02 09:00	Weight	150 lb	68.18 kg	STANDING
	Body Mass Index	27		
09/04/02 13:22	CVP	11.0 cmH2O	8.1 mmHg	
09/04/02 13:22	Circumference/Girth	11 in	27.94 cm	ABDOMINAL
09/13/02 08:10	Pain	4		

Save Exit

Fig. 5-11

The Patient List on the top left portion of the screen contains the list of names that were previously selected. The arrow indicates which patient you are entering data for. By right-clicking in this box, a button called “Patient On Pass Check Boxes” appears. Click on this button to add checkboxes next to each name (Fig. 5-12).

Patient List

- CAMPBELL, SOUP
- CARY, JIM
- DICTATE, PATIENT
- DICTATION, TEST
- GIBSON, MEL
- KILMAN, BUZZ
- LANDAUER, ROLF

Fig. 5-12

Check each checkbox for any patients that you want marked as “Patient On Pass”. This is a quicker way to enter Patient on Pass data.

Clicking on the patient name at the top left corner of the screen displays a report containing general patient information.

Refer to Fig. 5-5 for information on this Patient Inquiry window.

The Hospital Location field contains the hospital location where the vitals were taken. Enter the hospital location for this patient into the Hospital Location field (Fig. 5-11). You can also click on the Hospital button and select a hospital location (Fig. 5-13). Hospital Location defaults to the hospital location of the selected inpatient.

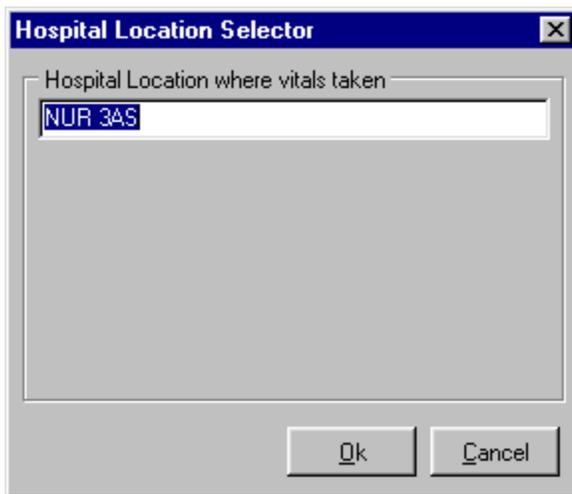


Fig. 5-13

Select a Hospital Location from the dropdown list. Click the OK button to complete the selection. Click the Cancel button to cancel the selection.

Click on the Date/Time button and select a date/time (Fig. 5-8). The default date/time is the current server date/time. The date/time selected appears at the top of the window.



Fig. 5-14

Select a date from the calendar by clicking on it. Click the Today button to select the current date. Select a time either by entering in the time in the Time field, or by selecting the time using the hour and minute lists under the Time field. Click the Now button to select the current time. Click the Midnight button to select 12:00 midnight. Click the OK button to complete the selection. Click the Cancel button to cancel the selection. You cannot select a date/time in the future.

Templates in the Templates list are sorted by system, division, location, and user. Templates for system, division, and location are available to everybody. The user can select anybody's user template as long as they have the GMV MANAGER key. If the user does not have the GMV MANAGER key, then they can only select from their own user templates. The template list contains all the users own templates and any other templates applicable for that system, division, or location. Select the desired template from the Templates list at the lower left portion of the screen (Fig. 5-11). You can also click on the Template button and select a template (Fig. 5-15). Contact your IRMS support person if you think you should have the GMV MANAGER key.

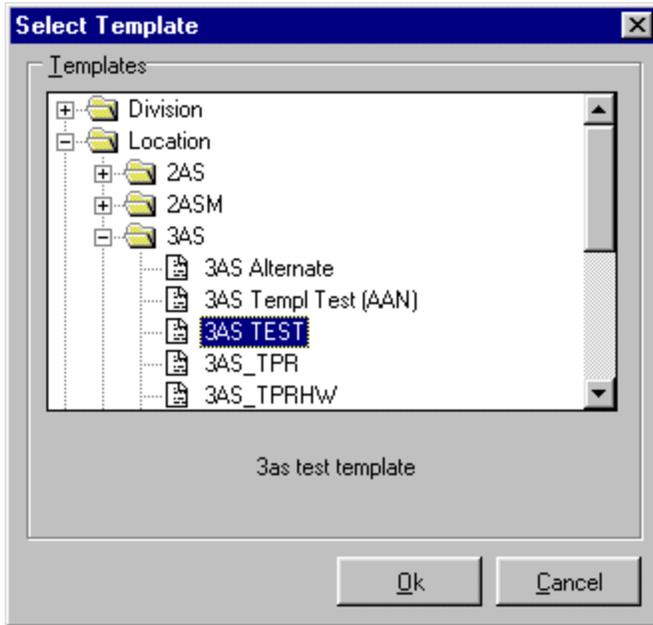


Fig. 5-15

Select a template from the list. Click the OK button to complete the selection. Click the Cancel button to cancel the selection.

Enter values for the vital types by typing them in the appropriate box. The default qualifiers for each vital type appear to the right of the down arrow button for each vital type. Click the down arrow button next to each vital type to select qualifiers other than the default qualifiers for that vital. Check one of the Refused (R), Unavailable (U), or Patient On Pass check boxes as needed if there is no data available to enter for the vital types.

Click the Save button to save the data for these vital types. Click the Exit button to exit the template without saving any data.

When data is entered for one patient, and the user clicks on another patient name without clicking the Save button, the following message appears.

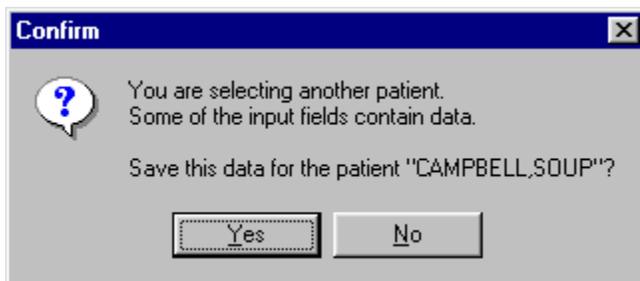


Fig. 5-16

Click Yes to save the data entered for the original patient selected and switch to the new patient. Click No to switch to the new patient without saving the data entered.

The look of the Units column can be changed by checking the Units as Drop Down List box. When the Units column is set to a metric setting that means the data entry for that vital type is expected to be a metric reading. If the user wants to enter the reading in US Standard format then select the US Standard format from the Units column. To make US Standard the default for a vital type, the template definition must be edited. Refer to the section on [Creating a User Template](#) for more information on creating/editing templates.

Click the Exp View button to view/hide the Hospital Location, and Template fields on the left side of the screen. Click the LatestV button to view/hide the latest vitals display on the bottom of the screen. The latest vitals display shows the most recent reading for each vital type on record for the patient. If there is no reading for a vital type (e.g., CVP), then that vital type is not listed.

## Creating a User Template

Templates are a set of vitals/measurements grouped together to make data entry simpler and easier. If the system parameter Allow User Templates in the VitalsManager module is checked, you may create/edit your own templates in this screen. If Allow User Templates is not checked, then the creating of user templates is not allowed. Refer to the section called [Editing System Parameters](#) in the Site Files chapter for more information. To create/edit a template for a system, division, or location refer to the section called [Creating/Editing a Template](#) in the Site Files chapter of this manual.

To create or edit a user template, go through the main menu bar and select File, Edit User Templates. The following window appears (Fig. 5-11).

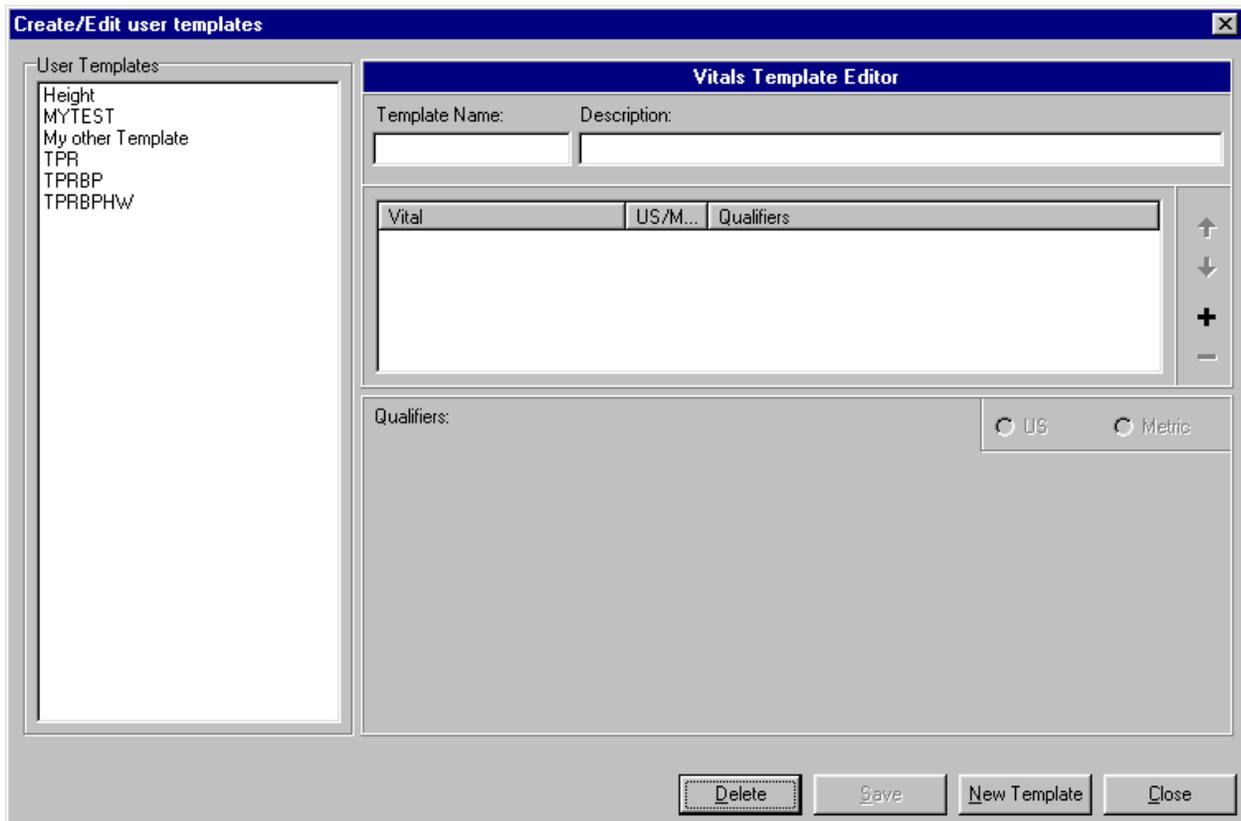


Fig. 5-17

You can only see templates that you created in this window. Click the New Template button to create a new template for yourself as a user.



Fig. 5-18

Enter a name for the template in the Template Name field (maximum length is 30 characters) (Fig. 5-18). The name should help the user distinguish what the template does. Click the OK button to continue.

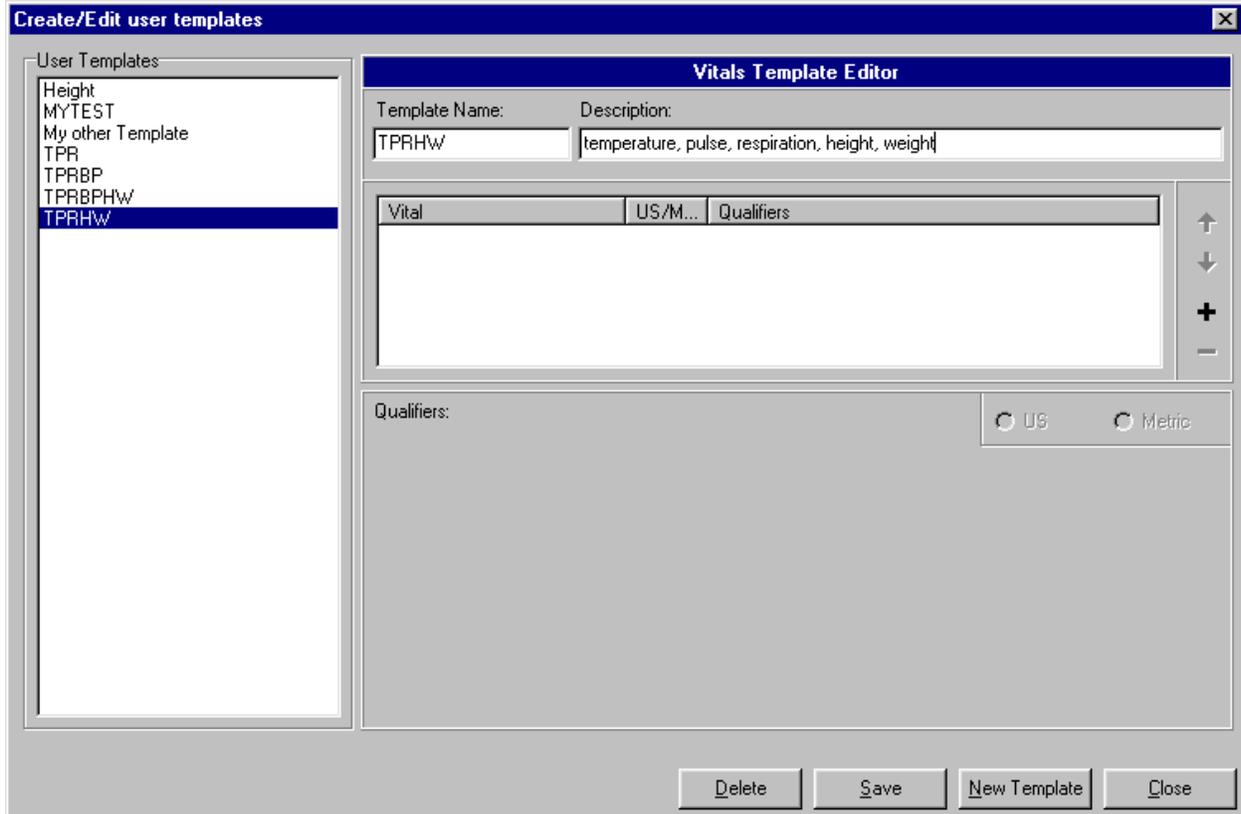


Fig. 5-19

Your new blank template appears in the list on the left side of the screen (Fig. 5-19). Click on the name of your new template to select it.

Enter a short description of the template in the Description field (maximum length is 50 characters). This field is optional.

Now you can edit your template to add vital types and qualifiers to it. Click on the plus sign (+) on the right side of the screen (Fig. 5-19) to add vital types to the template and the following window appears.

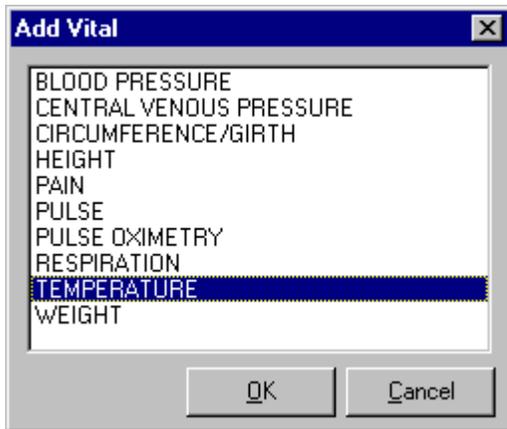


Fig. 5-20

Click on each of the vital types you want to add to your template (Fig. 5-20). You may select multiple vital types by holding down the Ctrl key and selecting multiple vital types, or hold down the Shift key to select a range of vital types.

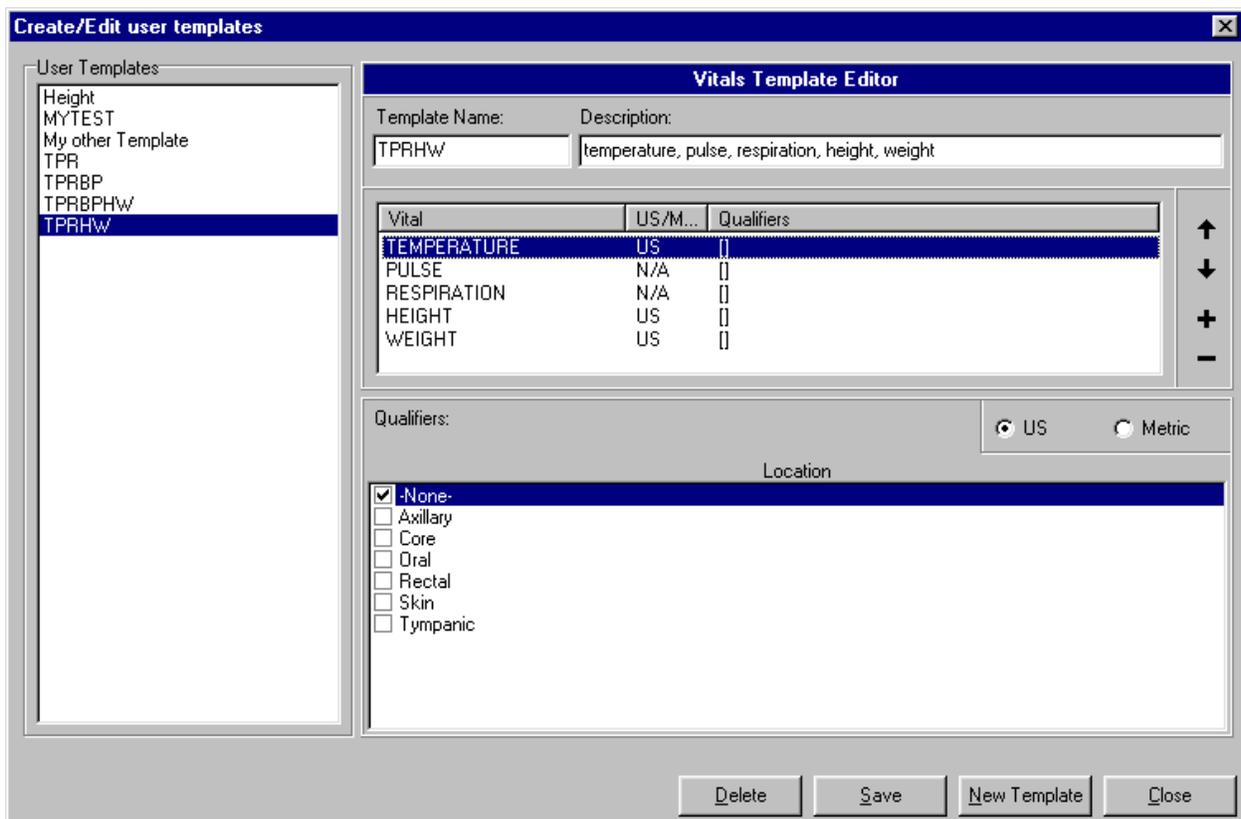


Fig. 5-21

Your template now has vital types, but no qualifiers (Fig. 5-21).

To add qualifiers you must select each vital type to edit it. Select a vital type by clicking on it, and the qualifiers for that vital type appear on the bottom portion of the screen.

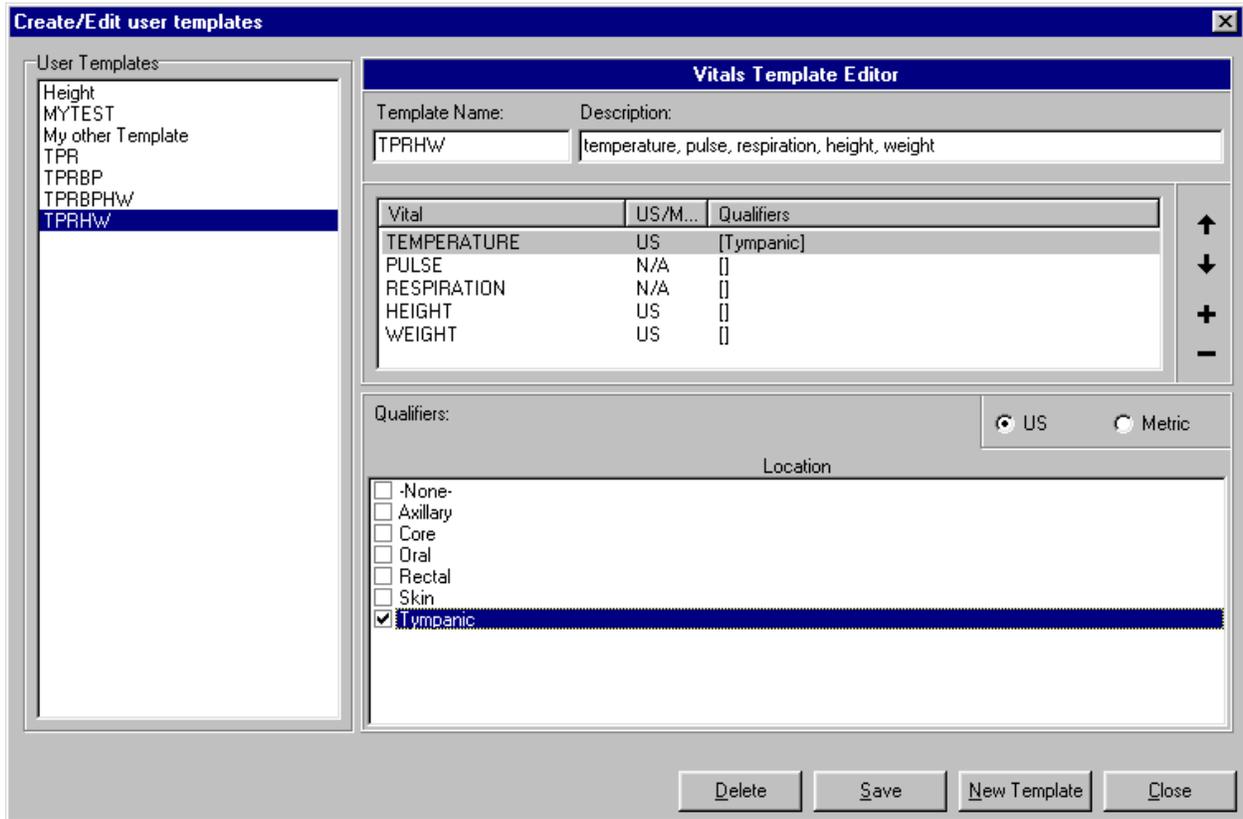


Fig. 5-22

Select the qualifiers desired by clicking on the desired checkboxes, only one qualifier can be selected from each category (Fig. 5-22). You can select US or Metric scale from the Measurement box for each vital type where appropriate. US Standard is the default.

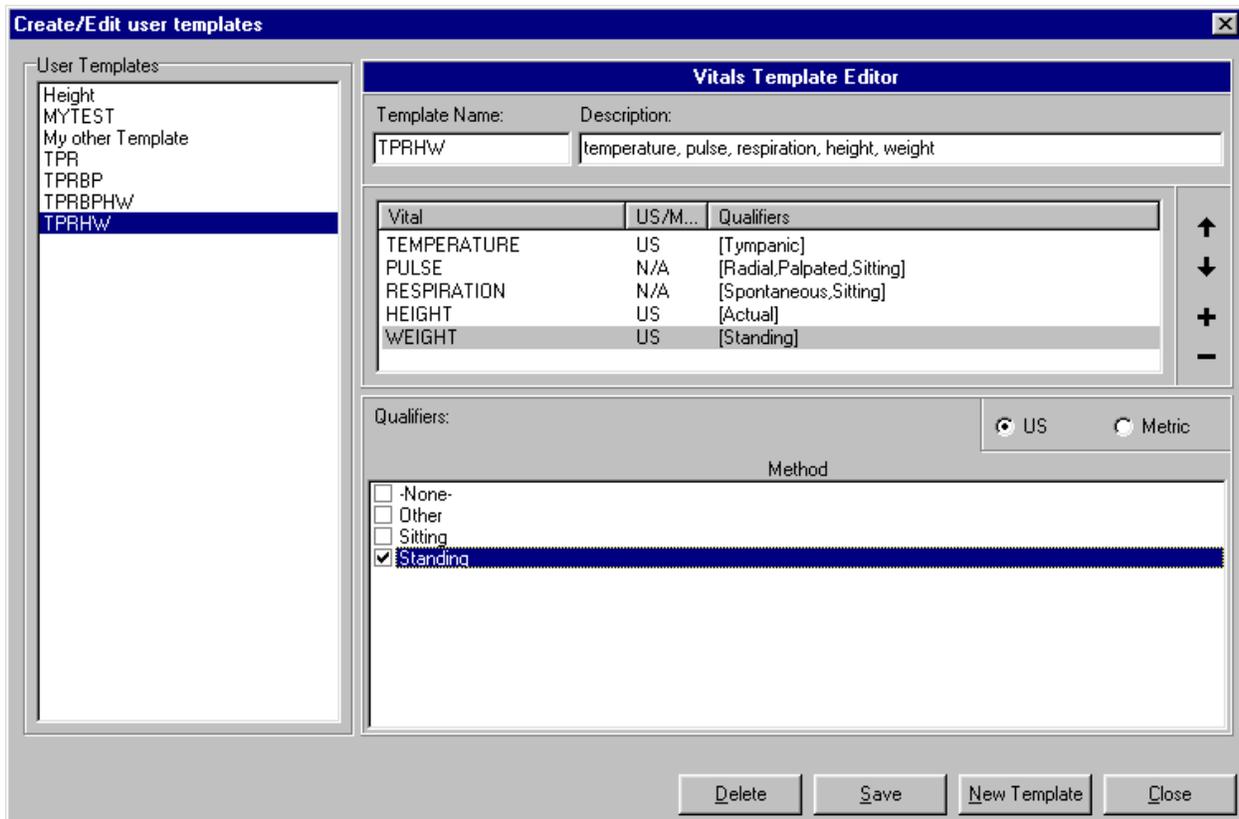


Fig. 5-23

Now your template is complete (Fig. 5-23).

Select a vital type and click the minus sign (-) button on the right side of the Template Editor screen to remove a vital type from the template.

Use the up/down arrow buttons to move vital types around in the list.

Click the Save button to save the template settings.

Highlight a template name and click the Delete button to delete a template.

Click the Close button to close this window.

## Viewing Allergies

To view any allergies this patient may have, click on the Allergies button at the top of the main Vitals window.

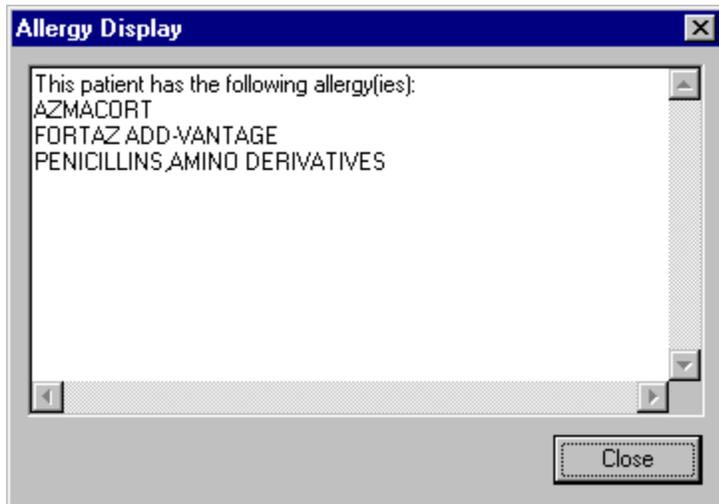


Fig. 5-24

This screen lists any allergies the patient may have (Fig. 5-24). Click the Close button to close this window.

## Marking Vitals as Entered in Error

Users can mark any vitals that were incorrectly entered as “entered in error” by using this option. Users will still need to go back and enter a new data value to correct the entry that will be marked as entered in error. Refer to [Entering Vitals Data](#) for more information.

To mark vitals data as entered in error, go through the main menu bar and select File, Entered in Error. The following window appears (Fig. 5-25).

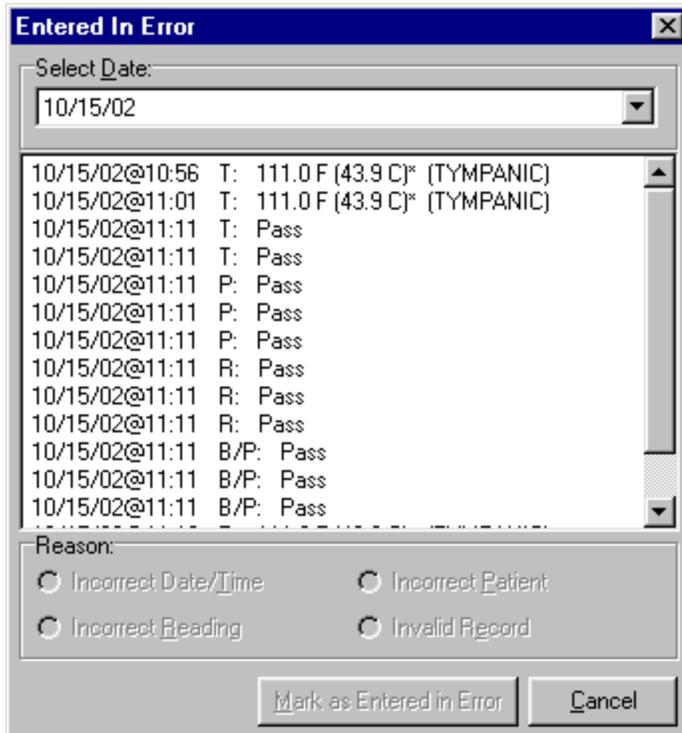


Fig. 5-25

Click on the down arrow button to select a date from the calendar that appears. The default date is today. The date 10/15/02 is selected in this example (Fig. 5-25).

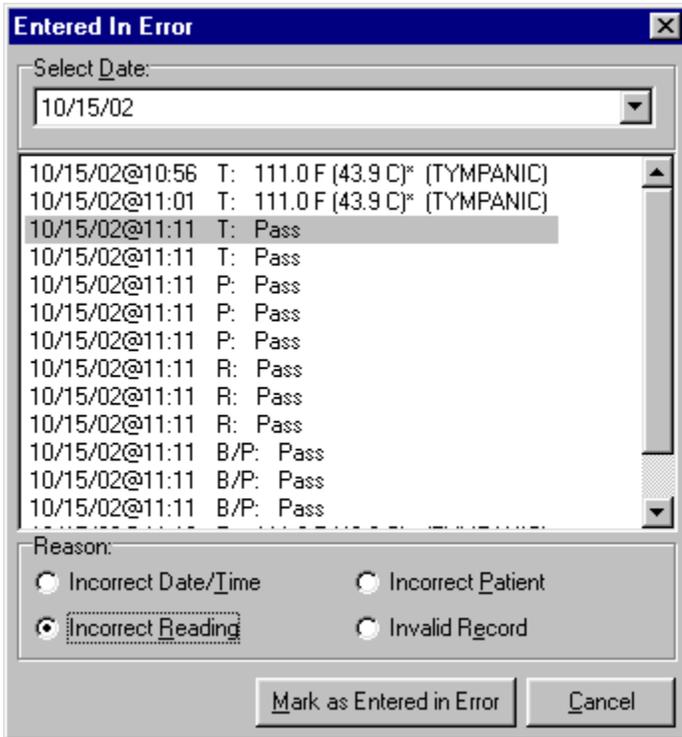


Fig. 5-26

Select the incorrect entry by clicking on the entry (Fig. 5-26). Select the reason the entry is incorrect by clicking the appropriate radio button in the Reason section. Click the Mark as Entered in Error button to mark the vitals as entered in error.

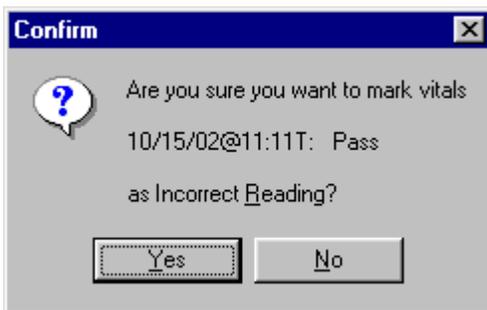


Fig. 5-27

A confirmation screen appears (Fig. 5-27). Click the Yes button to confirm the entry is correct. Click the No button to select a different entry.

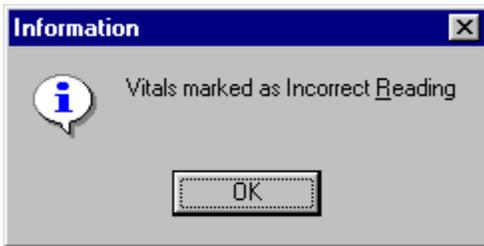


Fig. 5-28

An information screen appears (Fig. 5-28). Click the OK button to complete the process.

## Editing User Options

Users can choose how they want the text on the data table and latest vitals display to look, you can change the color of the text, the background color, bold the text, and show qualifier abbreviations. To edit these preferences, go through the main menu bar and select File, User Options. The following window appears (Fig. 5-29).

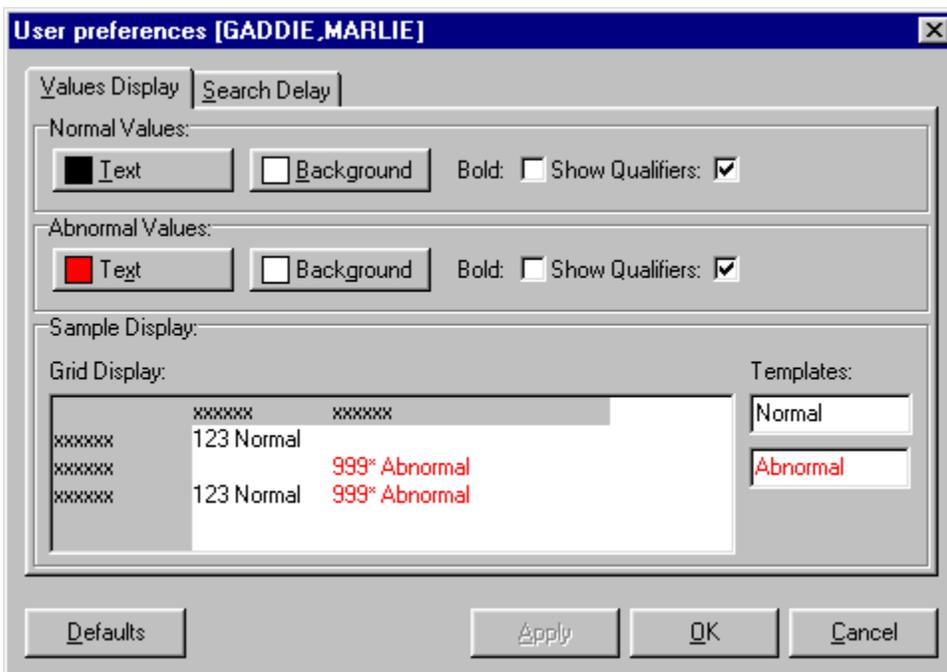


Fig. 5-29

Preferences can be set for both normal and abnormal values. Click the Text button to select a text color for the table and latest vitals display. Click the Background button to select a background color for the table and latest vitals display. Check the Bold checkbox to bold the text. Check the Show Qualifiers checkbox to show qualifier abbreviations with each value.

Click the Defaults button to restore default settings. Default settings for normal values are: Text is black, Background is white, Bold is not checked, Show Qualifiers is checked.

Default settings for abnormal values are:

Text is red, Background is white, Bold is not checked, Show Qualifiers is checked.

Click the Search Delay tab to edit the Search Delay setting. This setting allows the user to define a time lag to use between entering characters and beginning the patient lookup. If the time lag passes before the next character is typed, the patient lookup component will use the characters already entered to create a selection list.

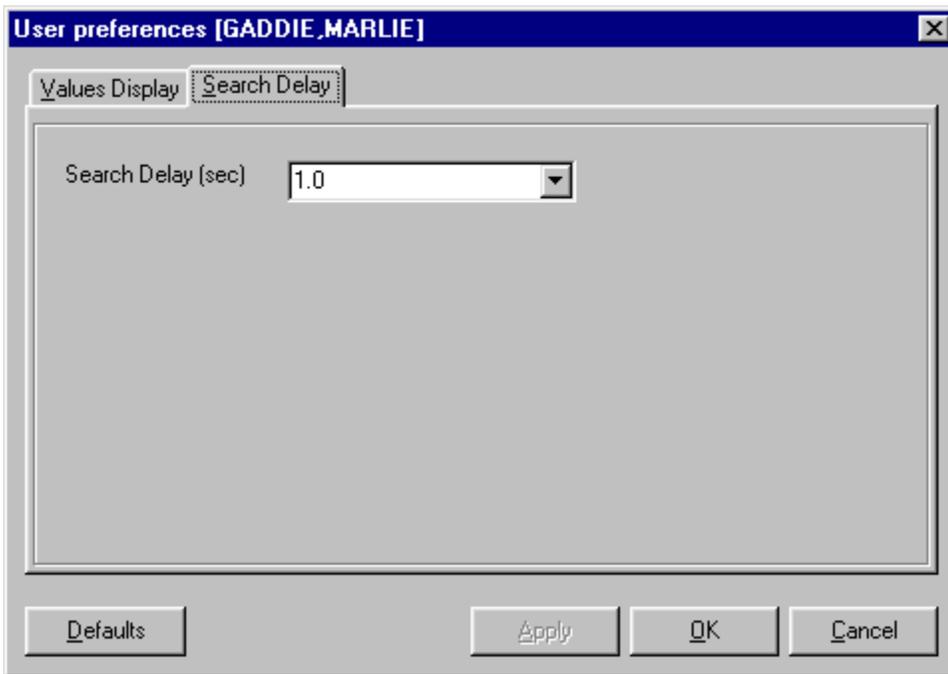


Fig. 5-30

Select the appropriate search delay in seconds from the dropdown list (Fig. 5-30).

Click the Apply button to save the settings. Click the OK button when finished.

## 6. Reports

The Vitals module is used to print several different Vitals reports. The viewing and printing of these reports is discussed in this chapter. The Vitals module also lets the user enter vitals data, create user templates, view allergies, mark incorrect vitals as entered in error, and edit user preferences for data display on the vitals data table, these topics are discussed in the [Entering Vitals Data](#) chapter in this manual.

**This chapter shows you how to:**

1. [View a graphic report](#)
2. [Print a report](#)

### Viewing a Graphic Report

To view a graphic report, select a date range from the drop down box on the top left hand side of the reports screen. Date ranges of T (Today) till Today-30 are available as well as custom dates. When you have selected a date range you may select what type of graph you want to view using the drop down box at the right of the screen.

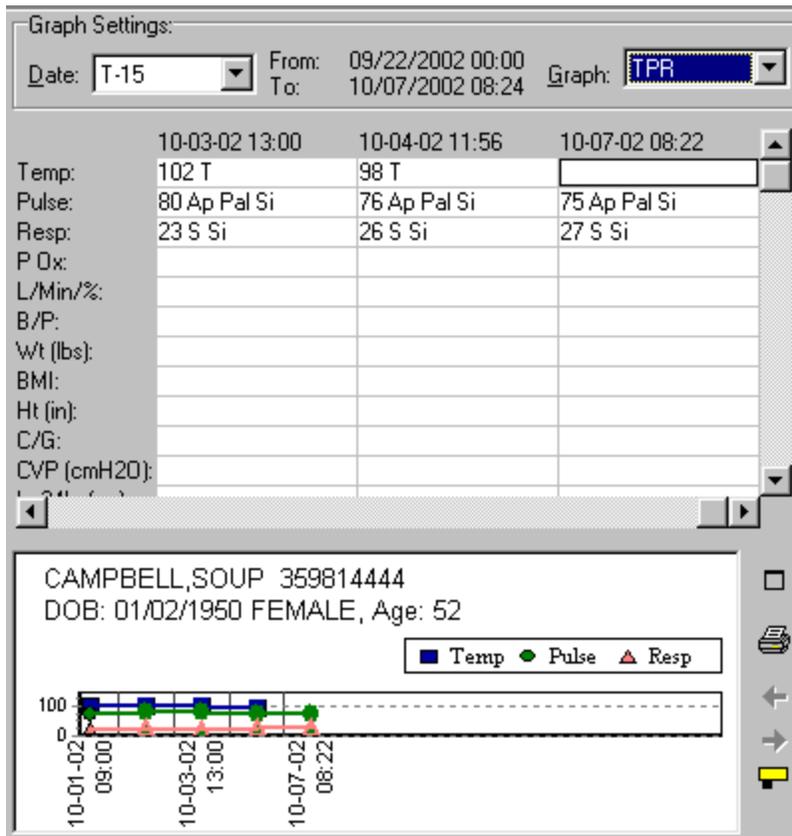


Fig. 6-1

You can view a graph for the selected date range by selecting a graph in the Graph field (TPR is selected here), and the graph appears on the lower right portion of the screen (Fig. 5-4). There are several icons located to the right of the graph. The top icon closes the spreadsheet portion of the display and expands the graph display to fill the space. If the Patient Selector is closed at this time, the graph expands to fill the entire screen. The printer icon opens a print dialog box to allow the user to send the graph display to a printer. The graph is printed as it appears on the screen at the time of printing. The left and right arrows allow the user to move across the graph. The bottom icon displays the numerical score(s) on the graph. The top and bottom icons, and the Patient Selector “toggle” when clicked. If the graph display already fills the spreadsheet display area, then clicking the top button will set the graph back to the smaller size and re-display the spreadsheet. If the numerical scores already appear on the graph, then clicking on the bottom icon will hide the numerical scores. You can click on a specific vital entry in the table at the top, or on the graph on the bottom to view a box with additional information about that vital entry. Click on the box to close it.

Users can display the graph buttons on top of the graph to see the labels associated with the buttons. To change the display of the graph buttons go through the main menu bar and select View, Graph Buttons/Icons.

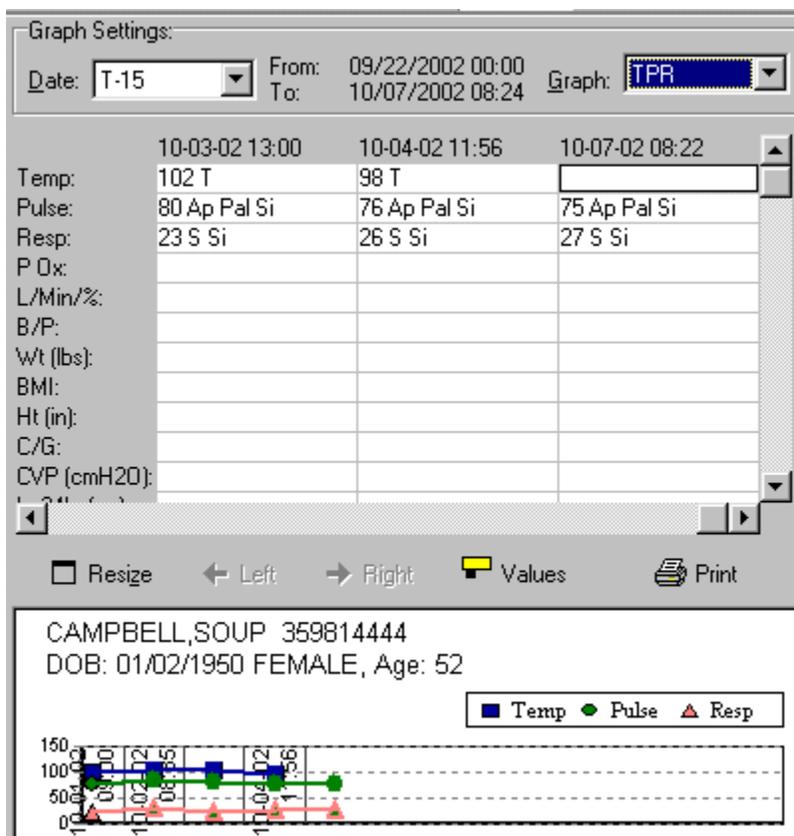


Fig. 6-2

The buttons are displayed on top of the graph with labels associated with them (Fig. 6-2). To change the display of the graph buttons back to their original look, go through the main menu bar and select View, Graph Buttons/Icons again.

The most recent patient data is displayed at the right side of the spreadsheet and graph. The oldest patient data is on the left side of the display.

## Printing a Report

All reports are meant to be queued to a printer.

The following five reports can be run for a single patient, all patients on a MAS Ward or selected rooms on a MAS Ward. Also, **these reports must go to a device that can handle 132 columns for the width.**

- Vital Signs Record
- B/P Plotting Chart
- Weight Chart
- PO<sub>2</sub>/Respiration Chart
- Pain Chart

The following reports can be queued to a printer that can handle 80 or more columns:

- |                                       |  |
|---------------------------------------|--|
| Cumulative Vitals Report              | Can print for a single patient, entire MAS Ward or selected rooms on a ward. |
| Latest Vitals by Location             | Prints for an entire MAS Ward  |
| Latest Vitals Display for a Patient   | Prints for a single patient  |
| Vitals Entered in Error for a Patient | Prints for a single patient  |

To queue a report go through the main menu bar and select Reports, then select the report you want to queue. The following window appears (Fig. 6-2).

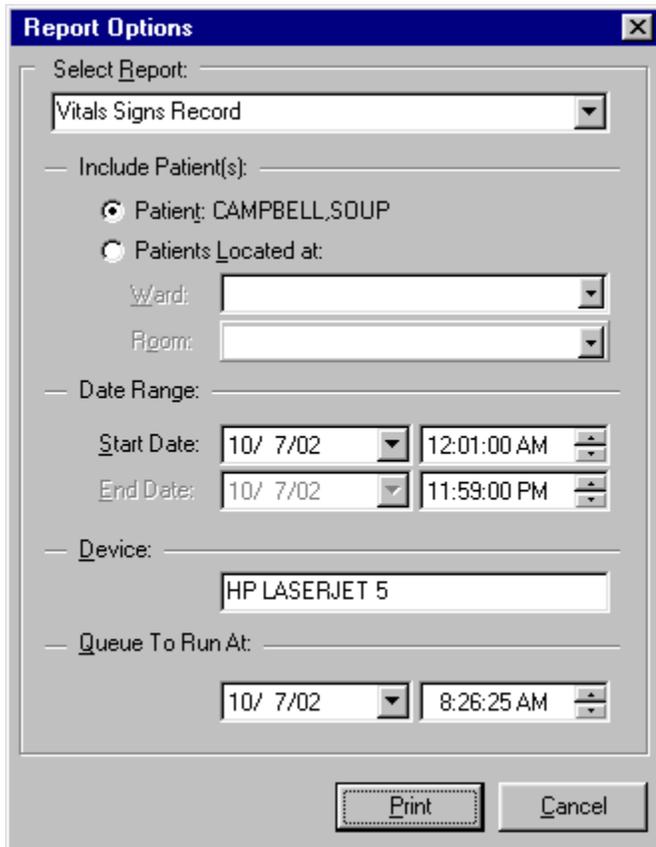


Fig. 6-3

The selected report appears in the Select Report field, you may select a different report at this time if desired.

You may select a specific patient, an entire ward, or specific rooms/beds on a ward. The default patient is the currently selected patient. Ward and Room/beds do not apply when a specific patient is selected.

Enter a Start Date and an End Date for the selected report (if appropriate), the default date for Start Date and End Date is today. You can also click the drop-down arrow next to the appropriate field (Start Date, End Date) to get a calendar where you can choose a date range for the report. Start/End dates do not apply when printing the Latest Vitals by Location report, or the Latest Vitals Display for a Patient report.

Select a device from the Select Device field by typing in a partial name and selecting the appropriate device from the list.

You can also select a date/time to print this report (default is today). Reports can not be queued to print for a past date/time.

Click the Print button to print the report. A dialog box appears indicating the success or failure of the queuing of the report.

## 7. Appendix A - Access Key Listing

The following is a listing of access keys for the Vitals and Vitals Manager applications.

Screen	Caption	1 <sup>st</sup> Access Key	2 <sup>nd</sup> Access Key
User			
	File Menu	Alt + F	
	Open/Close Patient Selector	O	Ctrl + O
	Enter Vitals	E	
	Printer Setup	P	Ctrl + P
	Entered in Error	N	Ctrl + E
	Edit User templates	U	Ctrl + U
	User Options	S	Ctrl + S
	Exit	X	Ctrl + X
	Reports Menu	Alt + P	
	Vitals Signs Record	V	
	B/P Plotting Chart	B	
	Weight Chart	W	
	POx/Respiration Chart	P	
	Pain Chart	A	
	Cumulative Vitals Report	C	
	Latest Vitals by Location	L	
	Latest Vitals Display for a Patient	T	
	Print Vitals entered in error for patient	I	
	View Menu	Alt + V	
	Demographics	D	Ctrl + I
	Allergies	L	Ctrl + L
	Graph Buttons/Icons	B	Ctrl + B
	Help Menu	Alt + H	
	Index	I	Ctrl + H
	Vitals Web Site	W	Ctrl + W
	About	A	Ctrl + A
	Unit	Alt + U	
	Ward	Alt + W	
	Team	Alt + T	
	Clinic	Alt + C	

Appendix A - Access Key Listing

	All	Alt + A	
	Patient List	Alt + L	
	Date	Alt + D	
	Graph	Alt + G	
<b>Screen</b>	<b>Caption</b>	<b>1<sup>st</sup> Access Key</b>	<b>2<sup>nd</sup> Access Key</b>
	Enter Vitals	Alt + E	
	Allergies		
	Patient Inquiry	Ctrl + I	
	Print	P	
	Close	C	
	Allergies		Ctrl + L
	Close		
	Pt Select	Alt + S	Ctrl + O
	Resize icon		F5
	Printer icon		F9
	Left arrow icon		F6
	Right arrow icon		F7
	Show value icon		F8
<b>Vitals Input</b>			
	Hospital Location	Alt + H	
	Templates	Alt + T	
	Patient on Pass	Alt + P	
	Units as Drop Down List	Alt + U	
	Save	Alt + S	
	Exit	Alt + X	
	Exp View	Alt + W	
	Latest V	Alt + V	
	Template button		Ctrl + T
	Hospital button		Ctrl + H
	Date/Time button		Ctrl + D
<b>Printer Setup</b>			
	Name	Alt + N	
	Properties	Alt + P	
	Size	Alt + Z	
	Source	Alt + S	
	Portrait	Alt + O	
	Landscape	Alt + A	
	Network	Alt + W	
	OK		
	Cancel		

Entered In Error			
	Select Date		
	Incorrect Date/Time	Alt + D	
	Incorrect Reading	Alt + T	
	Incorrect Patient	Alt + P	
<b>Screen</b>	<b>Caption</b>	<b>1<sup>st</sup> Access Key</b>	<b>2<sup>nd</sup> Access Key</b>
	Invalid Record	Alt + E	
	Mark as Entered in Error	Alt + M	
	Cancel	Alt + C	
Create/Edit user templates			
	User Templates	Alt + U	
	Template Name	Alt + N	
	Description	Alt + E	
	Template Vitals	Alt + V	
	US		
	Metric	Alt + M	
	Up arrow icon	Ctrl + U	
	Down arrow icon	Ctrl + W	
	Plus sign icon	Ctrl + A	
	Minus sign icon	Ctrl + D	
	Delete	Alt + D	
	Save	Alt + S	
	New Template	Alt + W	
	Close	Alt + C	
User Preferences			
	Values Display	Alt + V	
	Defaults	Alt + D	
	Apply	Alt + A	
	OK	Alt + O	
	Cancel	Alt + C	
	Text (Normal Values)	Alt + T	
	Background (Normal Values)	Alt + B	
	Text (Abnormal Values)	Alt + X	
	Background (Abnormal)	Alt + G	
	Search Delay	Alt + S	
About	OK		
Report Options			
	Select Report	Alt + R	
	Patient	Alt + T	
	Patients Located at	Alt + L	

Appendix A - Access Key Listing

	Start Date	Alt + S	
	End Date	Alt + E	
	Device	Alt + D	
	Queue To Run At	Alt + Q	
	Print	Alt + P	
	Cancel	Alt + C	
<b>Screen</b>	<b>Caption</b>	<b>1<sup>st</sup> Access Key</b>	<b>2<sup>nd</sup> Access Key</b>
<b>Vitals Management</b>			
	File Menu	Alt + F	
	Print Qualifiers Table	P	
	Exit	X	
	System Parameters Menu	Alt + S	
	Save Systems Parameters	S	
	Abnormal Values Menu	Alt + V	
	Save Abnormal Values	A	
	Templates Menu	Alt + T	
	New Template ...	N	
	Save Template	S	
	Delete Template ...	D	
	Set Default Template	E	
	Qualifiers Menu	Alt + Q	
	New Qualifier	N	
	Edit Qualifier	E	
	Help Menu	Alt + H	
	Index	I	
	Contents	C	
	Vitals Website	W	
	About	A	
<b>System Parameters</b>			
	Allow User Templates	Alt + U	
	Help Menu Web Address	Alt + W	
	Version Compatibility	Alt + V	

## 8. Appendix B - Customizing the Client Installation

The client installation by default installs and builds the icons and program folder items without any command line switches. Vitals/Measurements utilizes the ServerList utility of the RPC Broker for selecting a server to connect to if it is configured on the client workstation. Instructions for configuration and utilization of the ServerList utility can be found in the RPC Broker documentation located on the VDL. If the ServerList utility has not been configured on the client, the applications by default will attempt to connect to the server identified in the users HOSTS file as BROKERSEVER on Listener Port 9200. Adding command line parameters to the shortcuts as shown below by right clicking the appropriate Vitals/Measurements application icon and selecting the Properties menu item can easily override these parameters.

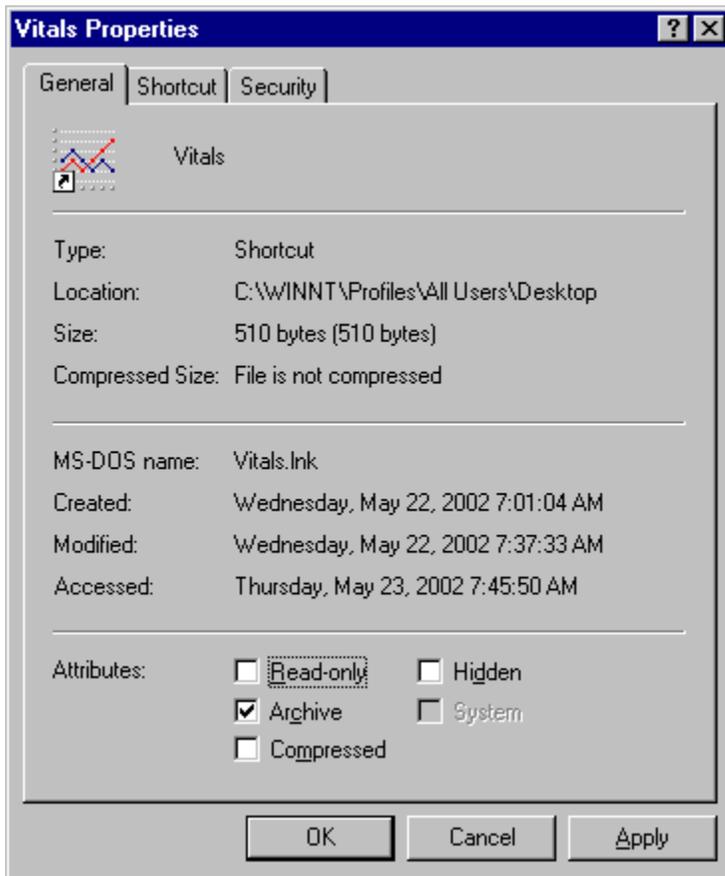


Fig. 8-1

The above (Fig. 8-1) is a standard properties view of the Vitals icon as displayed when right clicking the icon. Select the Shortcut tab to proceed with customization.

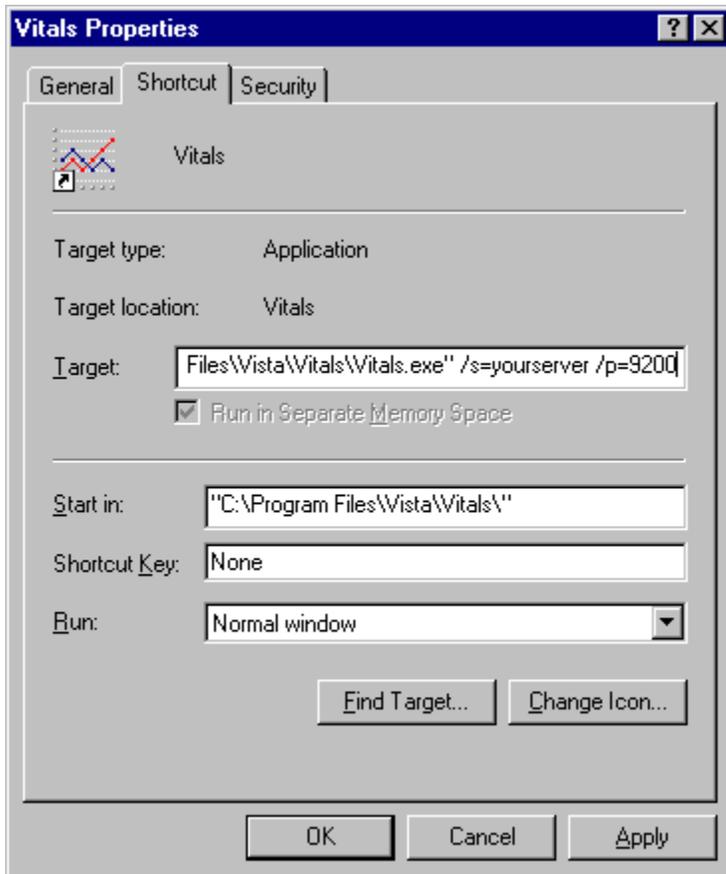


Fig. 8-2

This example (Fig. 8-2) will attempt to connect the application to the server identified in your HOSTS file as *yourserver* and will use listener port 9200.

Vitals/Measurements V. 5.0 command line parameters available from the command prompt or within Windows shortcut definitions are:

```
Vitals.exe      [/server=servername] [/port=listenerport]
                [/tempdir=temporarydirectory] [/helpdir=helpdirectory]
                [/debug={on|off}] [/brokertimeout=seconds]

VitalsManager.exe  [/server=servername] [/port=listenerport] [/helpdir=helpdirectory]
                  [/debug={on|off}] [/brokertimeout=seconds]
```

<b>Switches</b>	<b>Description</b>	<b>Example</b>
/server	<p>Specifies an alternate server to connect to. The server must be defined in the clients hosts. file.</p> <p>Default Hosts. file locations:            NT 4.0/W2K =            c:\winnt\system32\drivers\etc\hosts.            Windows 9x = c:\windows\hosts.</p> <p>Default = BROKERSERVER</p>	/server=vista
/port	<p>Specifies an alternate listener port on the selected server. This is the TCP/IP port that the broker is running on <i>VISTA</i> server.</p> <p>Default = 9200</p>	/port=9200
/tempdir	<p>Location accessible to the client workstation and current user for storage of temporary scratch files.</p> <p>Default = <i>application directory</i>\temp</p>	/tempdir=C:\temp
/helpdir	<p>Location of the Vitals/Measurements windows help files.</p> <p>Default = <i>application directory</i>\help</p>	/helpdir=C:\help
/debug	<p>Set the debug mode for both the RPC Broker and the Vitals/Measurements application.</p> <p>Default = Off.</p>	/debug=On
/brokertimeout	<p>Overrides the timeout for the RPC Broker when executing a Remote Procedure.</p> <p>Default = 30.</p>	/brokertimeout=60
/nonsharedbroker	<p>Force application to use nonshared version of RPC Broker</p>	/nonsharedbroker



## 9. Glossary

**Access Code** A unique sequence of characters known by and assigned only to the user, the system manager and/or designated alternate(s). The access code (in conjunction with the verify code) is used by the computer to identify authorized users.

**ADP Coordinator/ADPAC/Application Coordinator** Automated Data Processing Application Coordinator. The person responsible for implementing a set of computer programs (application package) developed to support a specific functional area such as Nursing, PIMS, etc.

**Application** A system of computer programs and files that have been specifically developed to meet the requirements of a user or group of users. Examples of *VISTA* applications are the PIMS and Vitals/Measurements application.

**Archive** The process of moving data to some other storage medium, usually a magnetic disk, and deleting the information from active storage in order to free-up disk space on the system.

**Backup Procedures** The provisions made for the recovery of data files and program libraries and for restart or replacement of ADP equipment after the occurrence of a system failure.

**BMI** This is the patient's body mass index, which is calculated by dividing the person's weight in kilograms by the square of his height in meters.

**Bulletin** A canned message that is automatically sent by MailMan to a user when something happens to the database.

**Contingency Plan** A plan which assigns responsibility and defines procedures for use of the backup/restart/recovery and emergency preparedness procedures selected for the computer system based on risk analysis for that system.

**Data Dictionary** A description of file structure and data elements within a file.

**Device** A hardware input/output component of a computer system (e.g., CRT, printer).

**Edit** Used to change/modify data typically stored in a file.

**Field** A data element in a file.

**File** The M construct in which data is stored for retrieval at a later time. A group of related records.

**File Manager or FileMan** Within this manual, FileManager or FileMan is a reference to VA FileMan. FileMan is a set of M routines used to enter, edit, print, and sort/ search related data in a file; a data base.

**Global** An M term used when referring to a file stored on a storage medium, usually a magnetic disk. In the Vitals software, for example, vitals data is stored in one global, and patient data is stored in another global.

**GMRV** This signifies the General Medical Record namespace assigned to the Vitals/Measurements application.

**GMRY** This signifies the General Medical Record namespace assigned to the Intake and Output application.

**GMV** Vitals/Measurements namespace, parent package to GMRV.

**GUI** Graphical User Interface - a Windows-like screen that uses pull-down menus, icons, pointer devices, and other metaphor-type elements that can make a computer program more understandable, easier to use, allow multi-processing (more than one window or process available at once), etc.

**I&O** The Intake and Output application.

**IRMS** Information Resource Management Service.

**Kernel** A set of software utilities. These utilities provide data processing support for the application packages developed within the VA. They are also tools used in configuring the local computer site to meet the particular needs of the hospital. The components of this operating system include: MenuMan, TaskMan, Device Handler, Log-on/Security, and other specialized routines.

**LAYGO** An acronym for Learn As You Go. A technique used by VA FileMan to acquire new information as it goes about its normal procedure. It permits a user to add new data to a file.

**M** Formerly known as MUMPS or the Massachusetts (General Hospital) Utility Multi-Programming System. This is the programming language used to write all *VISTA* applications.

**MailMan** An electronic mail, teleconferencing, and networking system.

**Menu** A set of options or functions available to users for editing, formatting, generating reports, etc.

**Module** A component of the Vitals software application that covers a single topic or a small section of a broad topic.

**Namespace** A naming convention followed in the VA to identify various applications and to avoid collision between applications. It is used as a prefix for all routines and globals used by the application. The Vitals package uses GMV as its namespace.

**OIFO** Office of Information Field Office, formerly known as Information Resource Management Field Office, and Information Systems Center.

**Option** A functionality that is invoked by the user. The information defined in the option is used to drive the menu system. Options are created, associated with others on menus, or given entry/exit actions. For example, the GMV V/M GUI is the main menu for the Vitals/Measurements application.

**Package** Otherwise known as an application. A set of M routines, files, documentation and installation procedures that support a specific function within *VISTA* (e.g., the ADT and Vitals/Measurements applications).

**Password** A protected word or string of characters that identifies or authenticates a user, a specific resource, or an access type (synonymous with Verify Code).

**PIMS** Patient Information Management System previously known as the MAS Package.

**Pointer** A special data type of VA FileMan that takes its value from another file. This is a method of joining files together and avoiding duplication of information.

**Program** A set of M commands and arguments, created, stored, and retrieved as a single unit in M.

**Protocol** A single entry point referencing multiple routine entry points to execute several inter related, required processes which perform specific functions. When multiple protocols are associated with a single procedure (i.e., intravenous lines or IV lines), they are found grouped under a single option.

**Qualifier** A word that gives a more detailed description of an item.

**Queuing** The scheduling of a process/task to occur at a later time. Queuing is normally done if a task uses up a lot of computer resources.

**<RET>** Carriage return.

**Routine** A set of M commands and arguments, created, stored, and retrieved as a single unit in M.

**Security Key** A function which unlocks specific options and makes them accessible to an authorized user.

**Sensitive Information** Any information which requires a degree of protection and which should be made available only to authorized users.

**Site Configurable** A term used to refer to features in the system that can be modified to meet the needs of each site.

## Glossary

**Software** A generic term referring to a related set of computer programs.

**Synonym** A qualifier abbreviation appended to vitals/measurements numeric values on graphic reports.

**Task Manager or TaskMan** A part of Kernel which allows programs or functions to begin at specified times or when devices become available. See Queuing.

**User** A person who enters and/or retrieves data in a system, usually utilizing a CRT.

**Utility** An M program that assists in the development and/or maintenance of a computer system.

**Verify Code** A unique security code which serves as a second level of security access. Use of this code is site specific; sometimes used interchangeably with a password.

**VISTA** Veterans Health Information Systems and Technology Architecture.

**Vital Type** A category of vital sign or measurement (e.g., pulse, respiration, blood pressure, temperature).

**Workstation** A personal computer running the Windows 9x or NT operating system.

## 10. Index

### **A**

Adding Vitals Qualifiers, 3-3  
Associating Vitals Qualifiers with a Category, 3-4

### **C**

Creating a User Template, 5-13  
Creating/Editing a Template, 3-7  
CVP, 1-1

### **E**

Editing Abnormal Values, 3-5  
Editing System Parameters, 3-6  
Editing User Options, 5-23  
Entering Data for a Single Patient, 5-4  
Entering Data for Multiple Patients, 5-9  
Entering Vitals Data, 5-1, 5-3

### **F**

Functionality, 1-1

### **G**

Getting Started, 3-2  
Glossary, 7-1

### **I**

Implementation and Maintenance, 2-1  
Implementation Considerations, 2-3  
Information on GUI software, 1-2  
Intranet WWW Documentation, 1-2  
Introduction, 1-1

### **M**

Marking Vitals as Entered in Error, 5-21

### **N**

Non-Virgin Installation of Software, 2-2

### **O**

Opening Screen, 5-1

Index

**P**

Package Operation, 4-1  
Printing a Report, 6-2  
Printing Qualifiers Table, 3-13

**R**

Reports, 6-1  
Resource Requirements, 2-4

**S**

Site Files, 3-1

**V**

Viewing a Graphic Report, 6-1  
Viewing Allergies, 5-20  
Virgin Installation of Software, 2-1