

**Shift Handoff Tool  
Implementation Guide  
and  
Technical Manual**



**Clinician Desktop Service  
Veterans Health Information Technology**

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## Revision History

Date	Description	Author
October 2018	<a href="#">Setup: New SERVICE/SECTION</a>	REDACTED
June 2008	Initial Release	REDACTED

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# Introduction

This manual covers technical aspects of the Shift Handoff Tool for Information Resource Management Service (IRMS) staff and Clinical Applications Coordinators (CACs). Included are installation, setup, and maintenance instructions as well as complete technical data.

The Shift Handoff Tool is a utility that assists hospital staff going off shift to create a report for the incoming shift. This report contains demographic and medical information about each patient being handed off. At a minimum it shows medications and allergies, but can be customized to show other medical information that is relevant to the patient's condition.

# Installation

There is both an M (or Server) component and a Windows (or Client) component. All the required files are contained in the distribution zip file: SHIFTHANDOFFTOOL.ZIP

**Table 1: Contents of SHIFTHANDOFFTOOL.ZIP**

File	Description
ShiftHandoffTool.exe	ShiftHandoffTool Executable
CRHD.HLP	CRHD Help File
CRHDIG.DOC	Install Guide (Word Version)
CRHDIG.PDF	Install Guide
CRHDIGTM.DOC	Implementation Guide and Technical Manual (Word Version)
CRHDIGTM.PDF	Implementation Guide and Technical Manual
CRHDUM.DOC	User Manual (Word Version)
CRHDUM.PDF	User Manual
CRHDRN.DOC	CRHD Release Notes (Word Version)
CRHDRN.PDF	CRHD Release Notes

## Server Installation

See the Shift Handoff Tool Install Guide (CRHDIG.PDF) for complete instructions on installation of the M component.

## Client Installation

The installation of the Windows component will vary according to your own local management policies. Basically, it consists of the following steps:

1. Place the executable, ShiftHandoffTool.exe, and the help file, CRHD.hlp, in the same directory on each workstation or on a network drive accessible from each workstation.
2. Add Shift Handoff Tool to the Tools menu of CPRS.

In addition, you can also setup the Shift Handoff Tool to run as a standalone application by doing the following to workstations in the hospital area(s) that are going to use this tool:

- Place a shortcut to ShiftHandoffTool.exe on the desktop. The parameters on the command line of this shortcut (S= and P=) must be the same as the parameters in the CPRS shortcut. S=Vista Server P=RPC Broker Port

## Tools Menu

You may set up the tools menu on the User, Location, Service, Division, or System level. The lowest level overrides higher levels.

```
Select GUI Parameters Option: ?

CS GUI Cover Sheet Display Parameters ...
HS GUI Health Summary Types
TM GUI Tool Menu Items
MP GUI Parameters - Miscellaneous
UC GUI Clear Size & Position Settings for User
RE GUI Report Parameters ...
NV GUI Non-VA Med Statements/Reasons
RM GUI Remove Button Enabled
NON GUI Remove Button Enabled for Non-OR Alerts
EIE GUI Mark Allergy Entered in Error

Enter ?? for more options, ??? for brief descriptions, ?OPTION for help text.

Select GUI Parameters Option: TM GUI Tool Menu Items
```

CPRS GUI 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 [choose from INSTITUTION]
- 4 System SYS [DEVCUR.FO-SLC.MED.VA.GOV]

Enter selection: **3** Division INSTITUTION

Select INSTITUTION NAME: **salt**

- 1 SALT LAKE CITY UT EES 925
- 2 SALT LAKE CITY UT NHC 6609AA
- 3 SALT LAKE CITY UT USAF 660CZ
- 4 SALT LAKE CITY HCS UT VAMC 660
- 5 SALT LAKE CITY OIFO UT ISC 5000

Press <RETURN> to see more, '^' to exit this list, OR

CHOOSE 1-5: **5** SALT LAKE CITY OIFO UT ISC 5000

----- Setting CPRS GUI Tools Menu for Division: SALT LAKE CITY OIFO -----Select

Sequence: **2**

Are you adding 2 as a new Sequence? Yes// **y** YES

Sequence: 2// **2**

Name=Command: **&Shift Handoff Tool=C:/CPRS/ShiftHandoffTool.exe S=%SVR P=%PORT**

Select Sequence:

# Maintenance

## Secondary Menu

CRHD SHIFT CHANGE HANDOFF is the secondary menu exported with this application. You cannot run ShiftHandoff.exe from a workstation unless you have this menu option or you have programmer access mode. All users of this application should have this menu assigned to them as a secondary menu or as part of their primary menu tree.

## Security Keys

The following keys are exported for use with the Shift Handoff Tool:

CRHD SHIFT CHG HANDOFF MGR (This gives access to Preference Page)

CRHD HOT TEAM MGR (This gives access to the configuration Handoff Tool (HOT) list)

## Parameters

The following parameters are kept in the CRHD HANDOFF PARAMETERS (#183) file.

**Table 2: Content of the CRHD HANDOFF PARAMETERS (#183) file**

Parameter Name	Description
TEMP_FLD_1_TITLE	Temporary field 1 Title
TEMP_FLD_2_TITLE	Temporary field 2 Title
TEMP_FLD_3_TITLE	Temporary field 3 Title
TEMP_FLD_4_TITLE	Temporary field 4 Title
TEMP_FLD_COLOR	Temporary field color
TEMP_FLD_FONTCOLOR	Temporary field font color
STUDENT	Medical Students and phone
RESIDENT	Resident and phone
PATIENT_DEMOGRAPHICS	Patient demographics
PATIENT_DEMO_PRINTLBL	Print patient demographics labels
MED_DETAIL_FLG	Include Meds details
MED_EXCLUDE_IV	Exclude IVs from Med list
CONSULTS	Consults request
LABS_IMAGING	Labs and Radiology
PRINT_ORIENTATION	Portrait/Landscape
ORDER_BY	Sort patients by for printed report
MULTI_DNR	Display multiple active DNR orders if found
FILE_Location	Team Info file location

The following parameters are stored in the VistA PARAMETER DEFINITION FILE (#8989.51) file:

**Table 3: Contents of the VistA PARAMETER DEFINITION FILE (#8989.51) File**

<b>Parameter Name</b>	<b>Description</b>
CRHD DEFAULT PREFERENCE	Default Preference
CRHD DNR ORDER TITLE	DNR search strings
CRHD DNR ORDERABLE ITEMS	DNR search items
CRHD TEMP FLD EXPIRE	Temporary field expiration in days



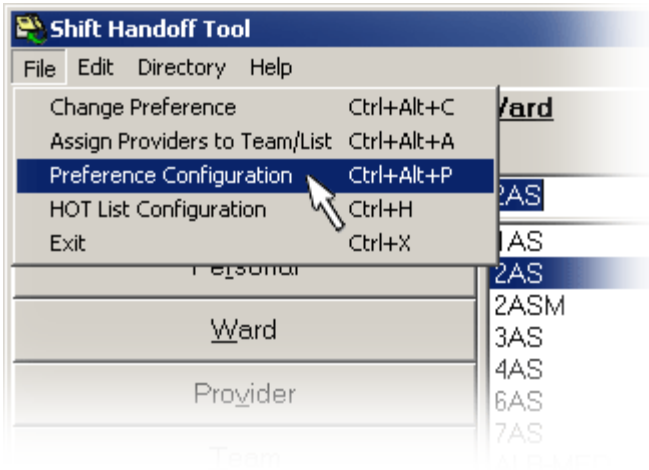
# Setup

Managers and Clinical Application Coordinators (CACs) do not need to use VistA to manage team lists and preferences. Holders of the CRHD SHIFT CHG HANDOFF MGR key have access to the Preference Configuration dialog and can enter and manage multiple configurations. Holders of the CRHD HOT TEAM MGR key have access to the Handoff Team (HOT) list management dialog.

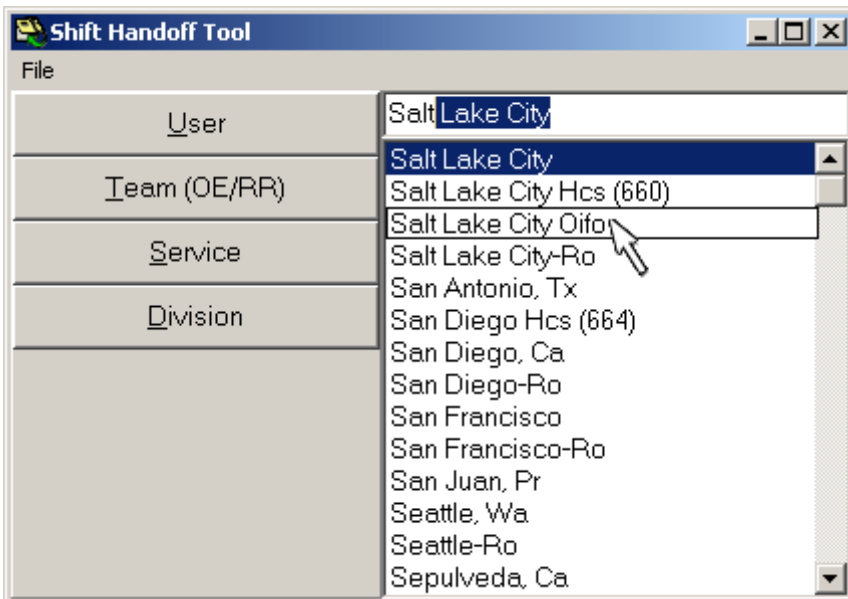
An important point is that each list, including HOT lists, has a different setup associated with it. Many aspects of the final printout can be managed separately for each list. The Shift Handoff Manager or CAC for each service should study the options carefully so lists can be configured to the greatest possible advantage.

## Shift Handoff Manager

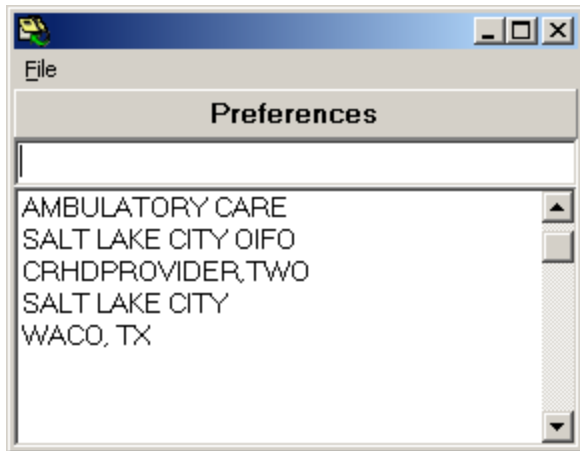
The Preference Configuration menu command does not appear on the File menu unless the user holds the CRHD SHIFT CHG HANDOFF MGR key.



Selecting this menu command brings up the selection dialog:



Preferences can only be named after providers, teams, service, or divisions that already exist in the system. Notice, for example, that all medical centers are listed. These are only used as names for profiles and do not interact with any system external to your local site.



Notice above that we have five preferences defined, one is name after a local clinic, another is names after a provider, and three of them are named after medical centers. All are simply being used as names of preferences in our local system.

## Creating a New SERVICE/SECTION Entry

Though VistA is not needed to manage team lists and preferences, it is necessary to use VistA to create a new SERVICE/SECTION.

**Note:** This file requires programmer access (@) to add or edit items. The requestor will need to work with their local/regional systems manager to request the changes.

VistA FileMan may be used to create the new SERVICE/SECTION entry as in the example below.

```
VA FileMan 22.2

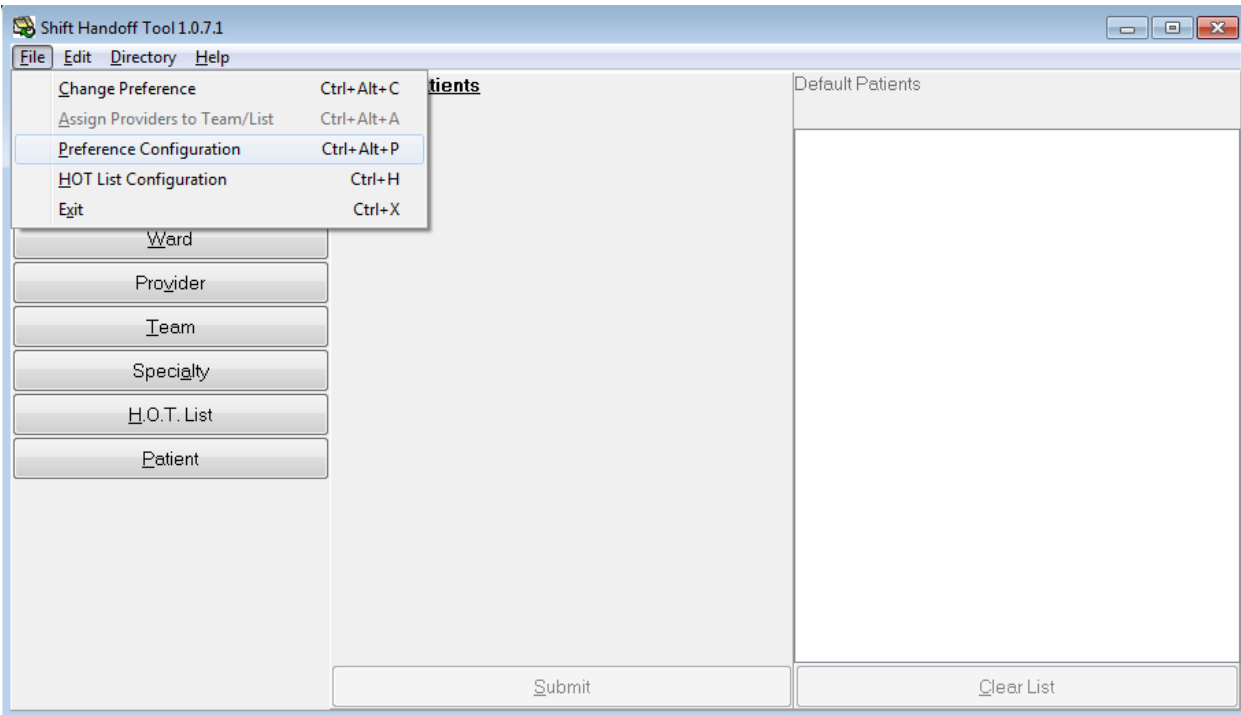
Select OPTION: ENTER OR EDIT FILE ENTRIES

Input to what File: SERVICE/SECTION// (158 entries)
EDIT WHICH FIELD: ALL//

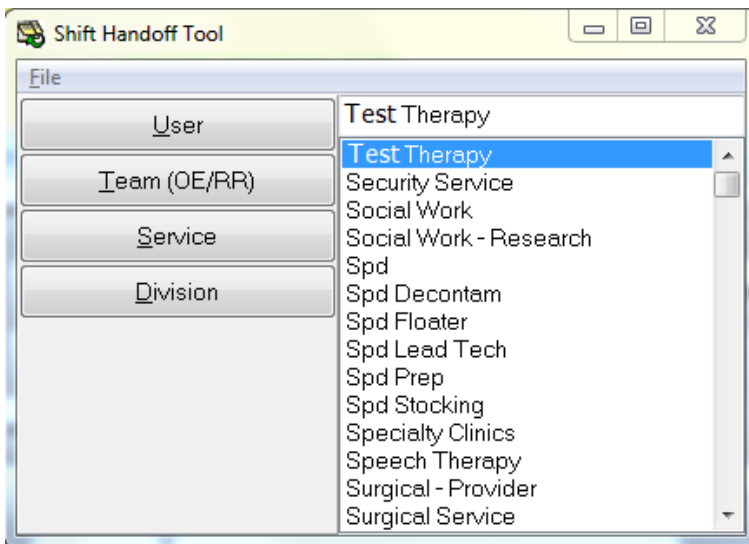
Select SERVICE/SECTION NAME: TEST THERAPY
Are you adding 'TEST THERAPY' as a new SERVICE/SECTION (the 159TH)? No// Y (Yes)
SERVICE/SECTION MAIL SYMBOL: JSJT
SERVICE/SECTION PARENT SERVICE: 117
1 117 PHYSICAL THERAPY 117
2 117 SPEECH THERAPY 117 SPEECH THERAPY
CHOOSE 1-2: 1 PHYSICAL THERAPY 117
ABBREVIATION: JSJT
DESCRIPTION:
Edit? NO//
MAIL SYMBOL: JSJT//
PARENT SERVICE: PHYSICAL THERAPY//
TYPE OF SERVICE: C PATIENT CARE
CHIEF: Staff, Chief
Select CHIEF PHONE:
ASST CHIEF:
Select ASST CHIEF PHONE:
LOCATION:
MIS COSTING CODE:
COST CENTER:
TYPE OF COSTING SECTION:
AMBULATORY CARE FLAG:
Select DATE CLOSED:
NATIONAL SERVICE:
COORDINATOR (IRM):
```

Select SERVICE/SECTION NAME:

Once the new SERVICE/SECTION has been created, login to the Shift Handoff Tool GUI application. Select File/Preference Configuration (or < Ctrl > <Alt> < P >) from the top menu bar.



Then select the [ Service ] button. Highlight in the list box the Service you would like to add to the CRHD HANDOFF PARAMETERS NAME file (#183) and double click or select < Enter >. Reminder, the service MUST exist in SERVICE/SECTION file (#49) for it to show up in this list.



The Shift Handoff Preference Configuration window for the Service Name that was selected will be displayed. Select the [ SUBMIT DATA ] button at the bottom of this window.



If VistA FileMan is now used to inquire on the CRHD HANDOFF PARAMETERS NAME file (#183), the Service should now be seen.

```

VA FileMan 22.2
Select OPTION: INQUIRE TO FILE ENTRIES
Output from what File: SERVICE/SECTION// 183 CRHD HANDOFF PARAMETERS (4 entries)
Select CRHD HANDOFF PARAMETERS NAME: ?
Answer with CRHD HANDOFF PARAMETERS NAME
Choose from:
EDUCATION
TEST THERAPY
Select CRHD HANDOFF PARAMETERS NAME: NAME
Searching for a NEW PERSON, (pointed-to by NAME)
Searching for a OE/RR LIST, (pointed-to by NAME)
Searching for a FACILITY TREATING SPECIALTY, (pointed-to by NAME)
Searching for a TEAM, (pointed-to by NAME)
Searching for a SERVICE/SECTION, (pointed-to by NAME)
TEST THERAPY JSJT PHYSICAL THERAPY
...OK? Yes// (Yes)
Another one:
Standard Captioned Output? Yes// (Yes)
Include COMPUTED fields: (N/Y/R/B): NO// BOTH Computed Fields and Record Number (IEN)
NUMBER: 4      NAME (SRV): TEST THERAPY
NAME: PATIENT_DEMOGRAPHICS  VALUE: 2,6,7,8,12,,5
NAME: PATIENT_DEMO_PRINTLBL  VALUE: 0
NAME: MED_DETAIL_FLG  VALUE: 0
NAME: PRINT_ORIENTATION  VALUE: L
NAME: CONSULTS  VALUE: 0
NAME: LABS_IMAGING  VALUE: 0
NAME: MED_EXCLUDE_IV  VALUE: 0
NAME: ORDER_BY  VALUE: 0
NAME: MULTI_DNR  VALUE: 0
NAME: TEMP_FLD_COLOR  VALUE: 65535
NAME: TEMP_FLD_FONTCOLOR  VALUE: 0
Select CRHD HANDOFF PARAMETERS NAME:

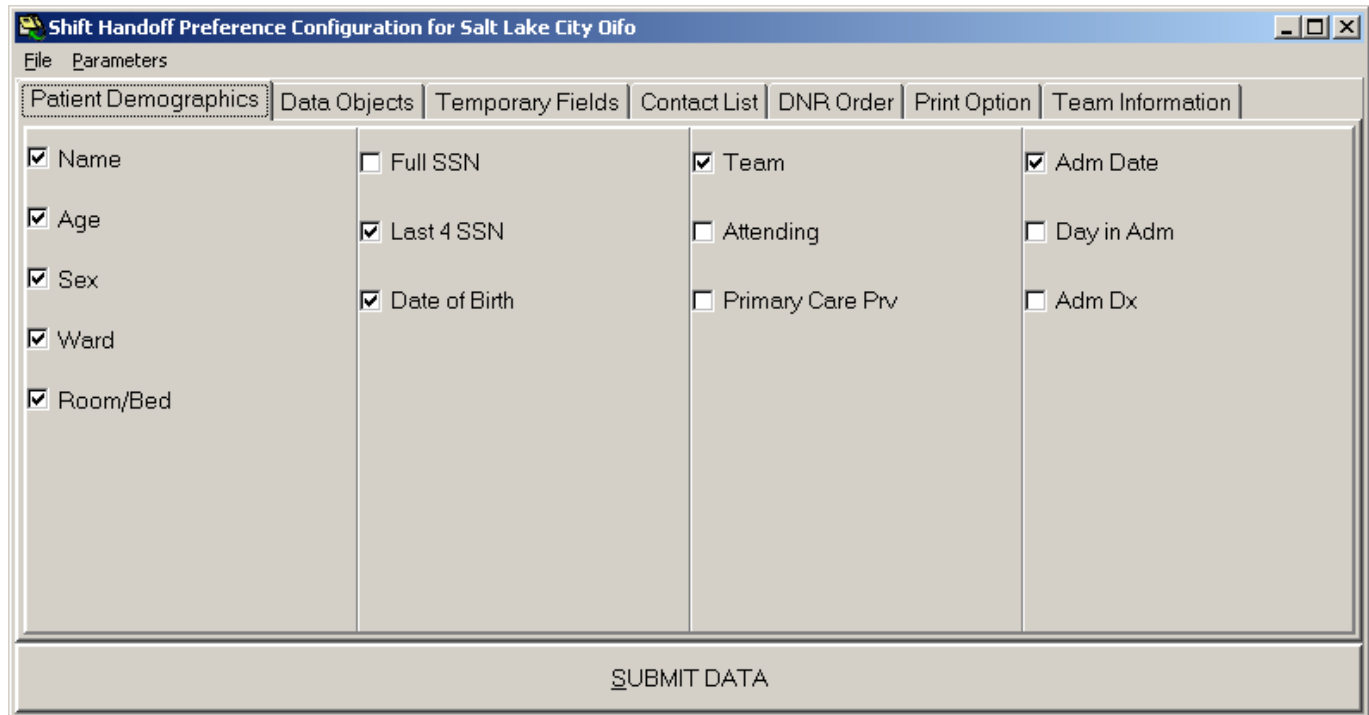
```

## Preference Configuration

The Preference Configuration dialog has seven (7) tabs. They are Patient Demographics, Data Objects, Temporary Fields, Contact List, DNR Order, Print Option, and Team Information. The setting on each of these can be changed using the parameters that are exported with this application. However, all settings can be completely controlled by the Preference Configuration dialog.

### Patient Demographics

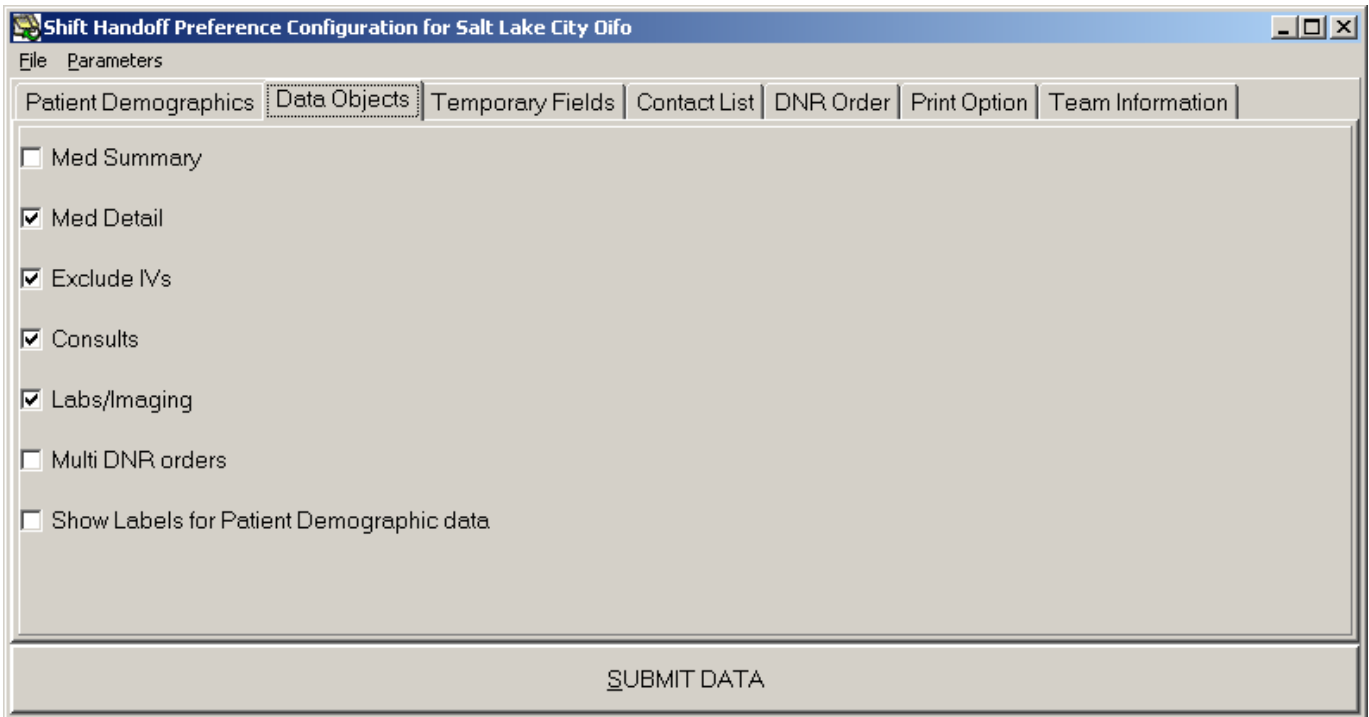
The Patient Demographics tab looks like this:



Name, Age, Sex, Ward, and Room/Bed are all mandatory and cannot be unchecked. Full SSN and Last 4 SSN refers to what will print out on the report. The full SSN appears on the screen in either case. (We recommend that you select Last 4 SSN because it is more consistent with privacy considerations.) One or the other must be displayed. Displaying the Date of Birth, Attending, Primary Care Prv, Adm Date, Day of Adm, and Adm Dx are all optional.

### Data Objects

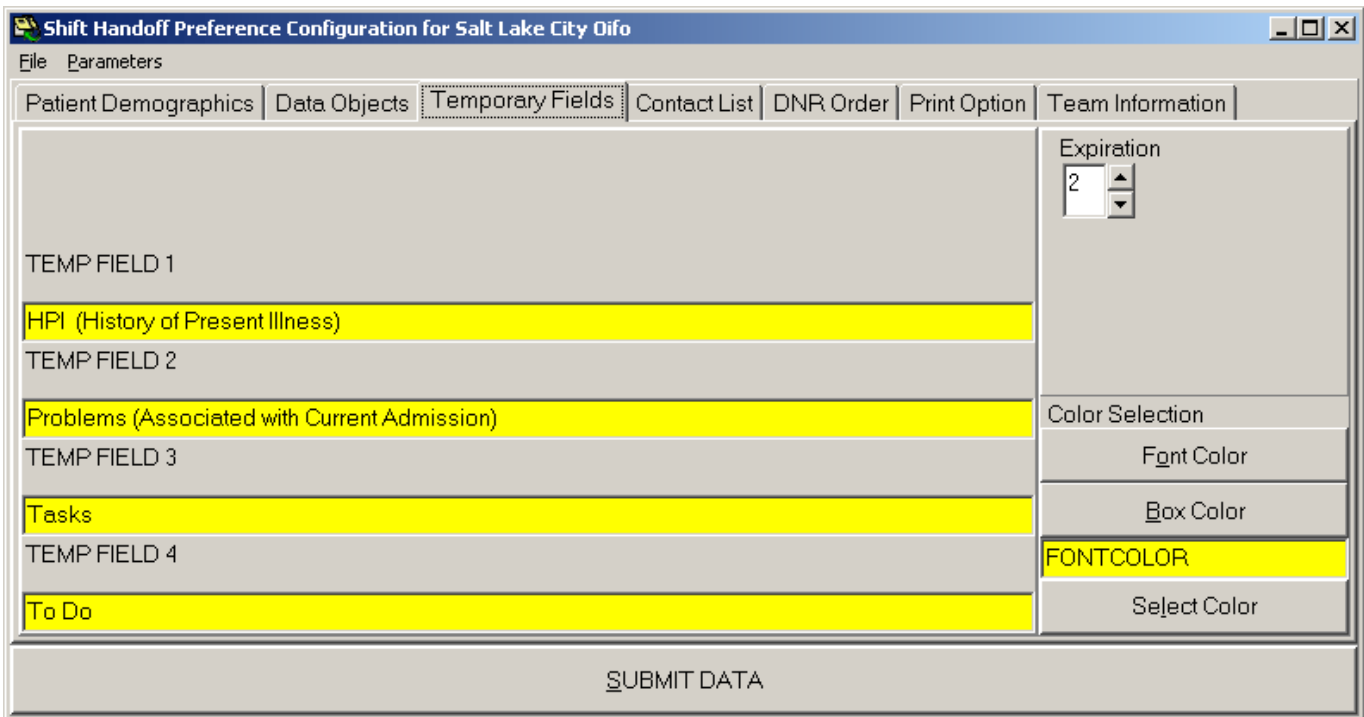
The Data Objects control what data objects display on the screen and are printed on the report. The tab appears as such:



Medications will display and be listed, the only option is whether a summary or detailed medication list is used. IVs can be excluded from the medication list (which, if chosen, excludes all IV medications including antibiotics). The Consults and Labs/Imaging check boxes control whether these lists will be present on the screen or report. Multi DNR orders controls whether just the most recent DNR order appears, or all DNR orders are listed. Show Labels for Patient Demographics, if left unchecked, will not label this information on the printout.

## Temporary Fields

You can detail up to four additional fields for providers to enter context sensitive information about each patient. In the Patient Data dialog these fields appear with a different background indicating data can be entered. The default color is a deep yellow intended to suggest a Post-it® note. This is because **none** of the information is kept permanently as part of the patient record. The tab looks like this:



The default is that the title of each field is blank. Blank fields do not appear on the Patient Data dialog, so if you wish to use these temporary fields you must enable them by assigning a name to them (like HPI, etc.)

If you don't like the bright yellow background, you can select a more preferred background color and font color to use for these fields with the controls in the lower right-hand corner of this tab. You must press both the Select Color and then click on the Submit Data button to make a color change permanent.

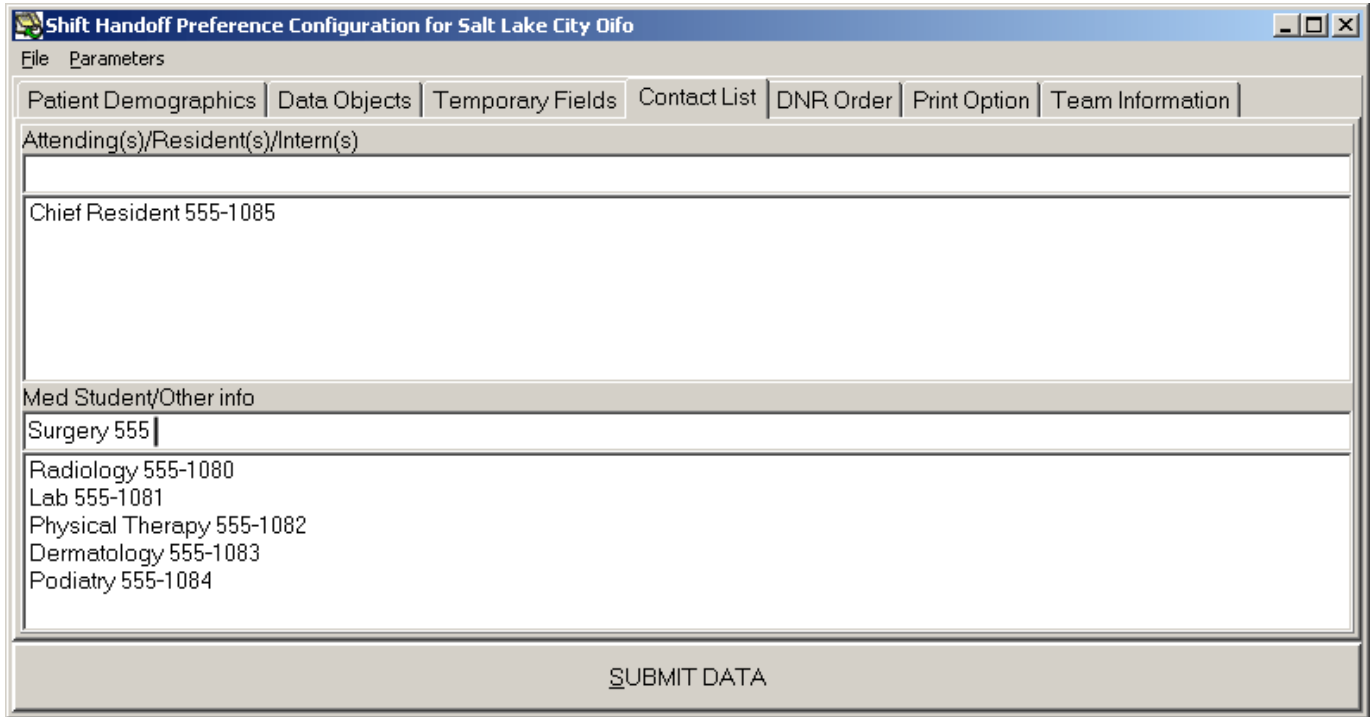
In the upper right-hand corner of the tab is a selection box marked Expiration. This is the number of days any information entered in the temp fields is retained. This data is kept in the CRHD TEMPORARY DATA (#183.2) file. The count starts whenever data is entered or modified in one of the temp fields. Once expiration has been reached, the information entered in each temporary field is deleted. The expiration can only be set on the Division level, all lists below Division inherit that value. The intention of this system is to provide a mechanism for the passing of context sensitive information from shift to shift during an incidence of care. Any information that needs to be preserved in the patient record must be entered via CPRS and then signed.

The maximum value of the Expiration field is 7 days. When temporary fields are accessed, the last date edited is checked. If the day plus Expiration is less than the present date, the field is blanked out. This is done on a field by field, patient by patient basis.

Temporary field names are limited to 30 characters.

## Contact List

The contact list is only used if there is no defined contact list with the team. The recommendation is to make entries at the Division level, that way all lists in the division inherit the contacts. This is an example of a possible division level contact list:



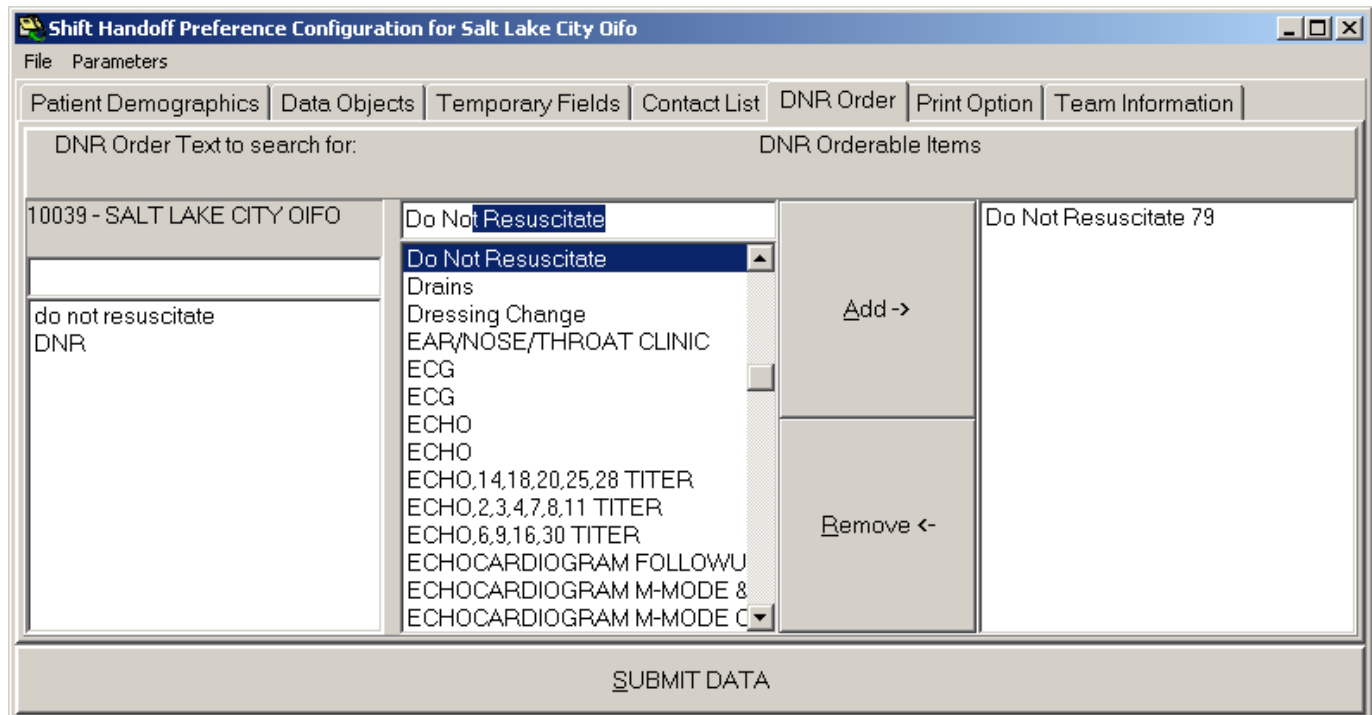
The screenshot shows a software window titled "Shift Handoff Preference Configuration for Salt Lake City Oifo". The window has a menu bar with "File" and "Parameters". Below the menu bar is a tabbed interface with the following tabs: "Patient Demographics", "Data Objects", "Temporary Fields", "Contact List", "DNR Order", "Print Option", and "Team Information". The "Contact List" tab is currently selected. The main area of the dialog is divided into sections. The first section is labeled "Attending(s)/Resident(s)/Intern(s)" and contains a text box with the entry "Chief Resident 555-1085". The second section is labeled "Med Student/Other info" and contains a list of entries: "Surgery 555", "Radiology 555-1080", "Lab 555-1081", "Physical Therapy 555-1082", "Dermatology 555-1083", and "Podiatry 555-1084". At the bottom of the dialog is a button labeled "SUBMIT DATA".

As with other dialogs for maintaining lists in Shift Handoff Tool, items are deleted by double clicking or by right clicking and selecting delete from the drop-down menu.



## DNR Order

The DNR Order tab is provided as a way to map local Do Not Resuscitate (DNR) order names. To this point, DNR orders are strictly controlled by the local medical center policy. In some cases, different terminology is used. In other cases, more than one DNR order is present among the orderable items to cover varying situations, such as differentiating between cardiac and pulmonary DNR circumstances. The DNR Order tab looks like this:

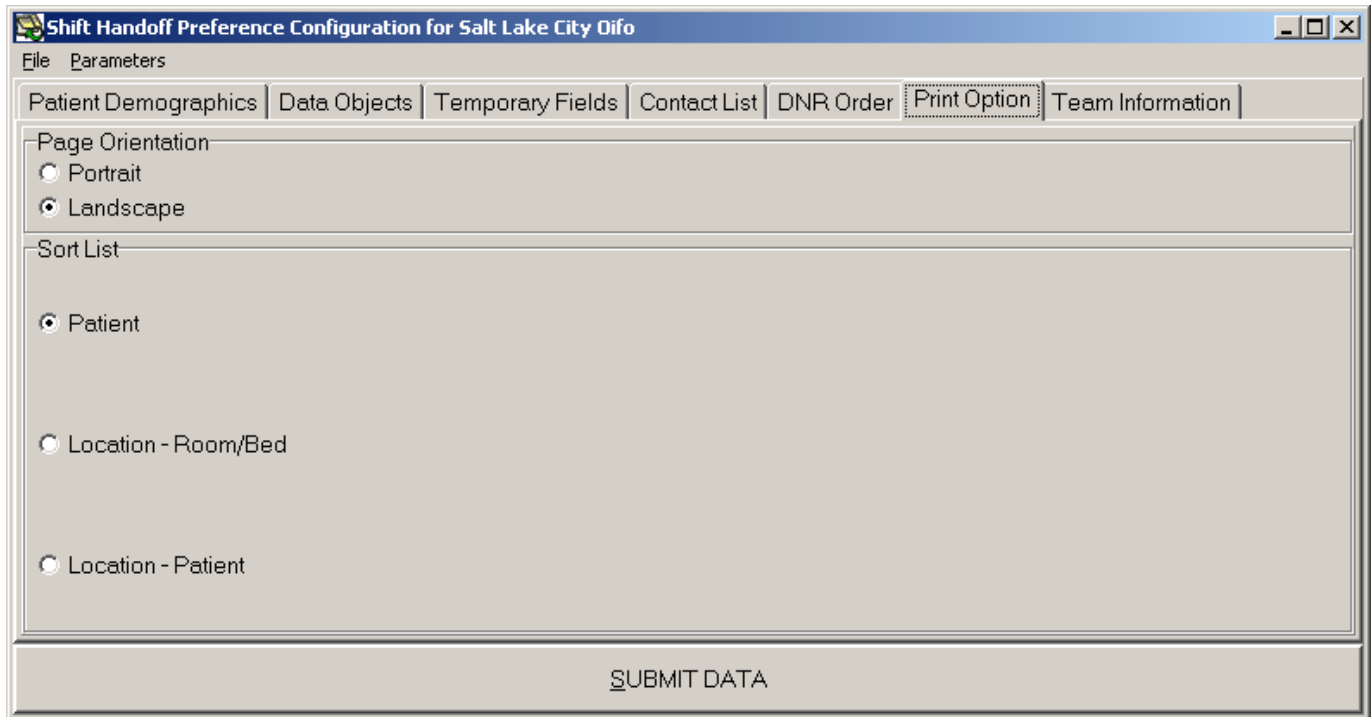


This tab gives you two ways to define DNR orders. The first, in the left hand box, allows you to type in strings and phrases that are typically present in a DNR order. Type the strings or phrases into the text box and press the Enter key. What you type is added to the list. (As with many things in Vista, it is not case sensitive.) You can double click on an item to remove it from the list.

The second, in the remainder of the tab, is to specify specific items from the orderable items file to be included. Type search terms into the text box at the top of the center column. Select orderable items by double clicking on them, or selecting them and hitting the Add key. The list of orderable items with their Internal Entry Numbers (IENs) is built in the right hand frame. To delete items from this list within the right window pane, either double click on the item or select it and then click on the Remove key.

## Print Option

The Print Option tab allows you to specify preferences for the printout. It allows you to specify Portrait or Landscape orientation of the printing, and it allows you to select the print order, either alphabetically by patient, by room number, or by patient location. The tab looks like this:



The screenshot shows a software window titled "Shift Handoff Preference Configuration for Salt Lake City Oifo". The window has a menu bar with "File" and "Parameters". Below the menu bar is a tabbed interface with the following tabs: "Patient Demographics", "Data Objects", "Temporary Fields", "Contact List", "DNR Order", "Print Option" (which is the active tab), and "Team Information".

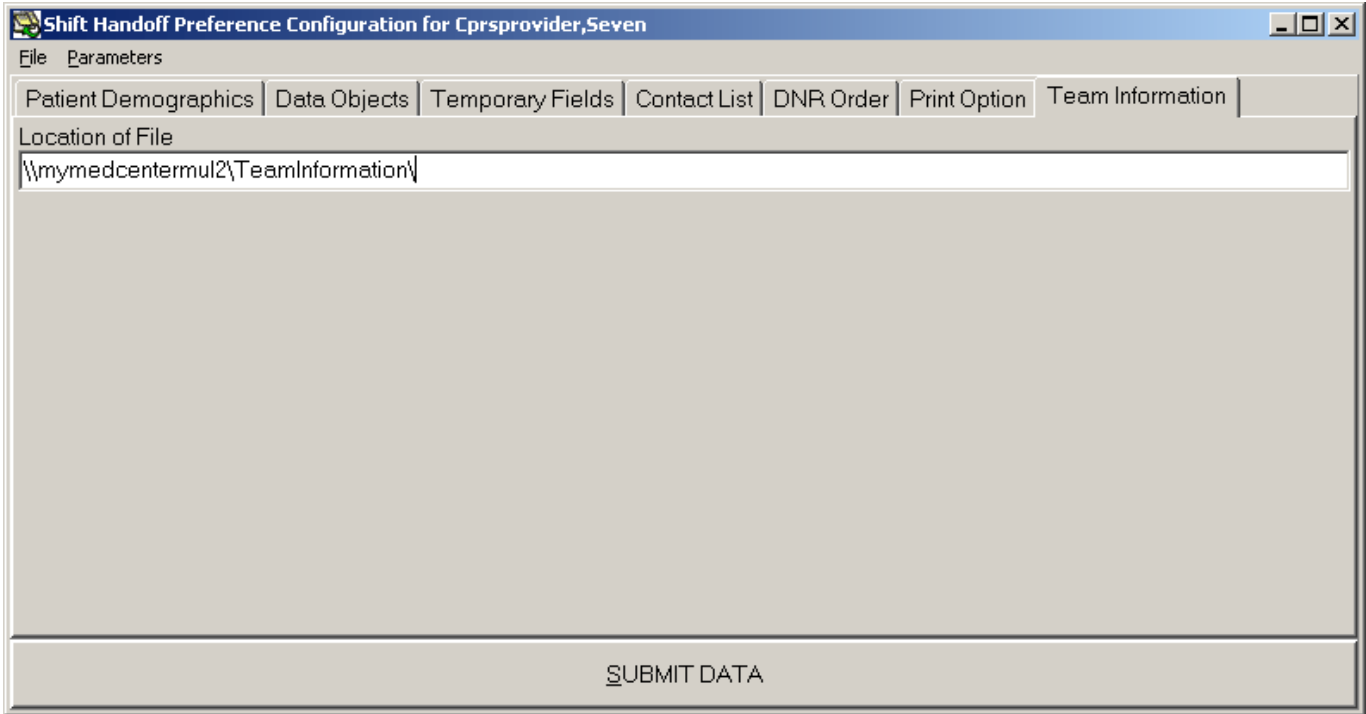
Inside the "Print Option" tab, there are two sections:

- Page Orientation:** This section contains two radio buttons: "Portrait" (which is unselected) and "Landscape" (which is selected).
- Sort List:** This section contains three radio buttons: "Patient" (which is selected), "Location - Room/Bed" (which is unselected), and "Location - Patient" (which is unselected).

At the bottom of the window, there is a button labeled "SUBMIT DATA".

## Team Information

The Team Information tab specifies a file location to find text information files about the team. These files can be accessed a number of places while running the application. The default location is the directory which the application is executed from. This is usually, but not always, C:\Program Files\Vista\ShiftHandoff\. When specifying an alternate location be sure to use the backslash character “\” to separate fields and indicate the end of the address as in this example:

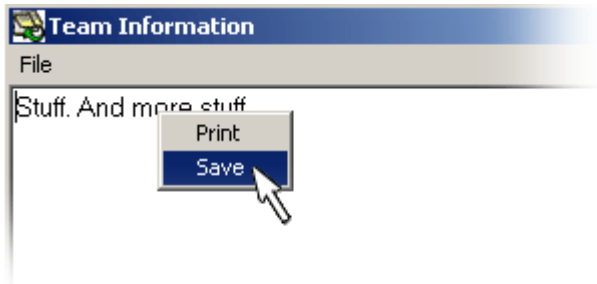


These files can be created by you and must reside either on the workstation that will be used or on a Windows server accessible from a workstation. The naming convention is the name of the team followed by the .TXT extension. Notepad can be used to initially create these files. You can override the file name with the Assign Providers to Team/List dialog.



**Note:** Back and front slashes (\ and /), asterisks (\*), and question marks (?), as well as most other punctuation cannot be used as part of file name. Rather than require sites using this feature to change team names, you can use the Assign Providers to Team/List dialog to supply an alias that the system will use as a file name.

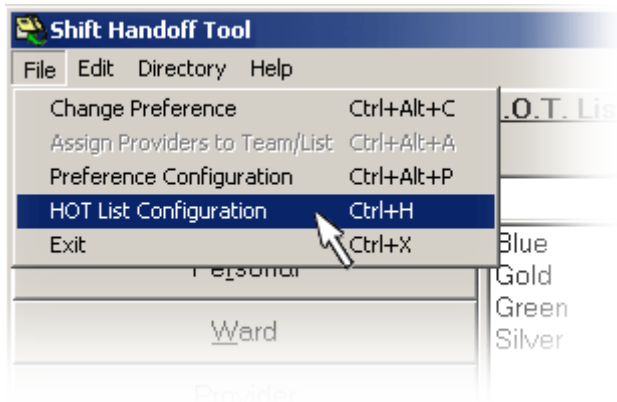
Once created, users with the CRHD HOT TEAM MGR key can edit the team information from ShiftHandoffTool.exe. Holders of this key get the following right-click menu:



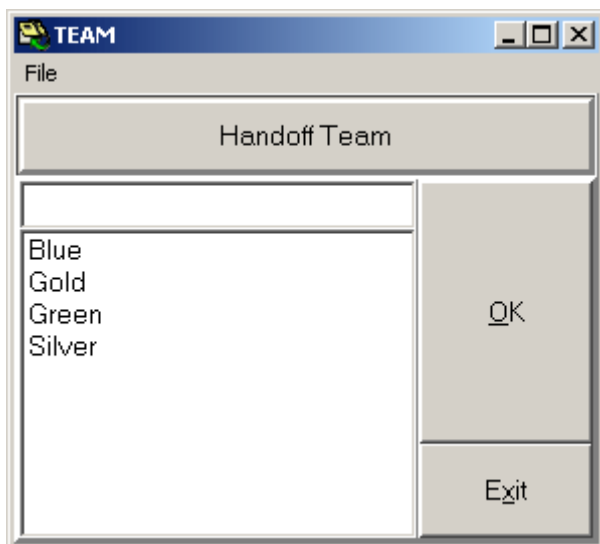
**Note:** This file is for team-centric information, not patient information. All users need to be cautioned that no patient, individually identifiable information should be placed in this file.

## Handoff (HOT) Team Manager

Users with the CRHD HOT TEAM MGR key have access to the Handoff Tool (HOT) List creation and management functions. HOT Lists are only maintained within the Shift Handoff application and have no relation to lists maintained in VistA. When this key is present in a user's account, the File menu command HOT List Configuration becomes active.



Selecting this command opens the TEAM dialog, that looks like this:



From this dialog you can do three things:

1. Create a new HOT List.
2. Delete a HOT List.
3. Configure a HOT List (i.e., add patients, delete patients, add provider information connected to a specific patient, add providers, delete providers, add information about each provider on the team.

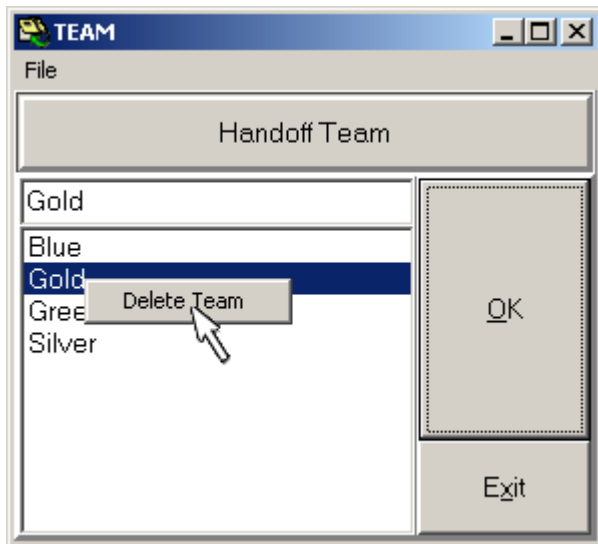
The only constraint on HOT Lists is that they are for **inpatients** only. Patients cannot be added to HOT lists unless they have been admitted and a patient will be automatically removed when a discharge action is taken on that patient.

### Create new HOT List

To create a new HOT List, simply type its name in the text box at the top of the dialog. When you press enter or click the OK button, it asks, "Do you want to Save \_\_\_\_\_ as a New Team?" If you answer yes, it goes on to the next dialog.

## Delete HOT List

To delete a hot list, select it, right click, then select Delete from the drop-down menu. Here is an example:



## Configure HOT List

Here is an example of the HOT List configuration dialog:

The screenshot shows a software window titled "Blue" with a "File" menu. It is divided into two main sections: "Patient List" and "Provider List".

- Patient List:** Contains a list of patient identifiers (e.g., Cprspatient.Three) and a list of roles (Attending, Resident, Intern, Fellow, Med Student, Nurse). A "Double click to add to patient list." callout points to the patient list. A "Double click to add to provider list." callout points to the provider list.
- Provider List:** Contains a list of provider identifiers (e.g., Cprspatient.Eleven) and a list of roles (Attending, Resident, Intern, Fellow, Med Student, Nurse). A "Double click to add to provider list." callout points to the provider list.
- Configuration Fields:**
  - Class:** A dropdown menu with "RES" selected. Callout: "Fill in Class for providers by selecting them from this list."
  - Office Phone:** A text field with "555-3812". Callout: "These phone numbers come from the New Person file."
  - Pager:** A text field with "555-3226". Callout: "These phone numbers come from the New Person file."
  - Privileges:** Two checkboxes: "Modify Patient List" and "Modify Provider List". Callout: "Checking these boxes gives the highlighted provider the indicated privilege."
- Buttons:** "Add ->" and "Remove <-" buttons are present between the lists. A "SUBMIT DATA" button is at the bottom.
- Callout:** "Changes do not take effect until you click here." points to the "SUBMIT DATA" button.
- Information:** "Information added to these fields is for the highlighted patient." points to the role selection area.

Each HOT List has patients and providers associated with it. The providers can be assigned one of six roles: ATTN, RES, INTERN, FELLOW, MED STUDENT, or NURSE. The office phone and digital pager numbers come from the New Person file and are included on the HOT list. These numbers may be overridden from this dialog (but will not update the New Person file). Also, privileges to modify this list can be granted by checking the appropriate box(es) Modify Patient List or Modify Provider List.

Each patient can have an Attending, Resident, Intern, Fellow, Med Student, and Nurse assigned separately to it. Patients are automatically deleted from the list when a discharge action is taken on them.



### Note:

As with other parts of the Shift Handoff Tool, the information entered into this dialog is not kept in the VistA team files. Thus the assignments of providers is only for the purposes of the HOT list and do not impact team information within CPRS/VistA.

## Exported Items

### Assign Menu to Secondary Menu

CRHD SHIFT CHANGE HANDOFF must be assigned to a user to use the Shift Handoff Tool. If a user tries to execute the Shift Handoff Tool GUI (from either the tools menu or from an icon) and they have not been assigned the CRHD SHIFT CHANGE HANDOFF option, the program immediately shuts down.

The recommended placement for the CRHD SHIFT CHANGE HANDOFF option is to set it up as a secondary menu. This option can also be added to a provider's primary menu.

### Security Keys

CRHD SHIFT CHG HANDOFF MGR (Preference setup) (only a few should hold this key, maybe the Clinical Application Coordinator)

CRHD HOT TEAM MGR ( HOT Team manager)

# Files

## CRHD TEMPORARY DATA (#183.2)

This file stores the temporary data entered for each patient. Data fields: Temporary field name, Patient, Author, Date Entered, Last Edit by, Date/Time of Last Edit, Private (not used), Read Only (not used).

## CRHD HANDOFF PARAMETERS (#183)

Preference configuration parameters are stored in this file. The following files are pointed to files:

**Table 4: CRHD Handoff Configuration File Parameters**

File Number	File Name
200	USER
100.21	OE/RR TEAM
45.7	TREATING SPECIALTY (Not used)
404.51	SD TEAM (Not used)
49	SERVICE (Not used)
44	LOCATION
4	DIVISION

Data fields: Name, Entity Name, Value, List Value

## CRHD TEAM CONTACT LIST (#183.4)

This file stores contact information for providers assigned to the selected list.

Data fields: Team, Providers, Class, Pager, Office Phone, Filename.

## CRHD HOT TEAM PATIENT LIST (#183.3)

This file stores a list of patients and providers for the lists created within the Shift Handoff Tool.

Data fields: Team, Inactive (not used), Patients, Attending, Resident, Intern, Fellow, Med Student, Nurse, Providers, Class, Modify Patient List, Modify Provider List, Pager, Office Phone.

## Data Dictionaries

The number-space for Shift Handoff Tool files is 183. A listing of these files can be obtained by using the VA FileMan option DILIST (List File Attributes). Depending on the FileMan template used to print the listing, this option will print out all or part of the data dictionary for the Shift Handoff Tool files.



## Routines

The following routines are exported with the CRHD build:

CRHD	GET THE PATIENT DATA ELEMENTS FOR CHANGEOVER LIST
CRHD1	ADDED TO WORK WITH HAND OFF TEAM SECTION
CRHD10	ASSIGN PROVIDERS TO A TEAM LIST
CRHD11	GET USERS PARAMETERS
CRHD2	GET DATA ITEMS FOR CHANGEOVER LIST
CRHD3	
CRHD4	GET USERS PARAMETERS
CRHD5	MISC ROUTINE FOR HAND-OFF TOOL
CRHD6	MISC ROUTINE FOR HAND-OFF TOOL
CRHD7	TEAM ROSTER
CRHD8	RETURNS THE TEXTS OF AND ORDER
CRHD9	HANDOFF TEAM LIST
CRHDAM	
CRHDDNR	GET ACTIVE DNR ORDER
CRHDDR	RETRIEVE DNR ORDERS USING ORDER DIALOG
CRHDPL	Find personal lists for changeover list
CRHDUD	New Person general information
CRHDUT	GET THE PATIENT DATA ELEMENTS FOR HANDOFF LIST
CRHDUT2	GET THE PATIENT DATA ELEMENTS FOR HANDOFF LIST CONTINUED

## Globals

The shift Handoff Tool creates one global, ^CHRD(.

## Application Programmer Interfaces

The following table shows Remote Procedure Calls (RPCs) that are exported with and used by the Shift Handoff Tool along with the corresponding M code entry point:

**Table 5: RPC Exported with Shift Handoff Tool**

Remote Procedure Call	M Entry Point
CRHD ADDITIONAL USER INFO	AUSRINFO^CRHDUT
CRHD ALL USER PARAMETERS	GETALLP^CRHD4
CRHD AVAILABLE PARAMETERS	GETALLPL^CRHD11
CRHD COMB TM LIST	TMCOMB^CRHD10
CRHD DEFAULT PREFERENCE	DEFPREF^CRHD11
CRHD DELETE A PREFERENCE	DELPREF^CRHD5
CRHD GET CONSULT	CONSULT^CRHDUT
CRHD GET DNR TITLES	GETDNRT^CRHD4
CRHD GET IMAGING	IMAGING^CRHDUT
CRHD GET LABS	LABS^CRHDUT
CRHD GET ONE PARAMETER	GETONEP^CRHD4
CRHD GET ORDERABLE ITEMS	LORDITM^CRHDDR
CRHD GET PAT LIST	GETPTLST^CRHD3
CRHD GET PREFERENCES	GETP^CRHD6
CRHD GET TEAM PHONE NUMBERS	TEAMMEM^CRHD7
CRHD GET TEMP FLD	GTEMPXT^CRHD3
CRHD GET USER DIVISIONS	USERDIV^CRHD5
CRHD GET USER PARAMETERS	GETIT^CRHD11
CRHD GET XPAR VALUES	GETPAR2^CRHD6
CRHD HOT CAN EDIT	CANEDIT^CRHD9
CRHD HOT DELETE PAT/PRV	DELENTS^CRHD1
CRHD HOT DELETE TEAM LIST	HOTMDEL^CRHD9
CRHD HOT MODIFY LIST	MOD^CRHD9
CRHD HOT PATIENT LIST	HOPLIST^CRHD9
CRHD HOT PATPRV	PATPRV^CRHD9
CRHD HOT PROVIDER BY CLASS	HOTMMEMS^CRHD1
CRHD HOT PROVIDER LIST	HODLIST^CRHD9
CRHD HOT PROVIDER LIST2	HOTMMEM^CRHD1
CRHD HOT PROVIDER PATIENTS	HOTPRVPT^CRHD1
CRHD HOT PRV INFO	PRVINFO^CRHD9
CRHD HOT TEAM LIST	HOLIST^CRHD9
CRHD HOT TEAM PHONE INFO	HOTEAM^CRHDUD

<b>Remote Procedure Call</b>	<b>M Entry Point</b>
CRHD HOT TEAM SAVE	HOTMSAVE^CRHD9
CRHD HOT TM MGR	HOTMMGR^CRHD1
CRHD INPT LIST	LISTINPT^CRHD3
CRHD IS RECORD LOCKED	LOCK^CRHD2
CRHD LIST DIVISIONS	DIV^CRHD5
CRHD LIST SERVICES	SRV^CRHD5
CRHD MGR	MGR^CRHD7
CRHD MOD TM PROVIDERS	TMMOD^CRHD10
CRHD PAT ACTMEDS	ACTMED^CRHD
CRHD PAT ALLERGIES	ALG^CRHD
CRHD PAT CODESTS	CODESTS^CRHD
CRHD PAT DEMO	PATDEMO^CRHD
CRHD SAVE DNR TITLES	SAVEP^ CRHD6
CRHD SAVE PARAMETERS	SAVEPARM^CRHD4
CRHD SAVE TEMP FLD	TEMPDATA^CRHD2
CRHD SAVE XPAR PARAMETERS	SAVEP2^CRHD6
CRHD SERVICE INFO	SRV^CRHDUD
CRHD SORT PRINT LIST	SORT^CRHD8
CRHD TM PRV INFO	TMPRVINF^CRHD10
CRHD TM PRV LIST	TMLIST ^CRHD10
CRHD USER PHONE INFO	DISPEMP^CRHDUD
CRHD USER PHONE NUMBERS	USERPHPG^CRHD9

# How to Generate On-Line Documentation

## Routines

The namespace for the Shift Handoff Tool application is CRHD. A listing/printout of any or all of the Shift Handoff Tool routines can be produced by using the Kernel option XUPRROU (List Routines). This option is found on the XUPROG (Programmer Options) menu, which is a sub-menu of the EVE (Systems Manager Menu) option. When prompted with “routine(s) ? >:” type in CRHD\* to get a listing of all Shift Handoff Tool routines.

The first line of each routine contains a brief description of the general function of the routine. A listing of just the first line of each Shift Handoff Tool routine can be produced by using the Kernel option XU FIRST LINE PRINT (First Line Routine Print). This option is found on the XUPROG (Programmer Options) menu, which is a sub-menu of the EVE (Systems Manager Menu) option.

## Files

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## External Relationships

There are DBIAs (Data Base Integration Agreements) covering the following procedure calls:

ORQPT DEFAULT LIST SORT	DEFSORT^ORQPTQ11
ORQPT DEFAULT LIST SOURCE	DEFSRC^ORQPTQ11
ORQPT PROVIDER PATIENTS	PROVPTS^ORQPTQ2
ORQPT SPECIALTIES	SPEC^ORQPTQ2
ORQPT SPECIALTY PATIENTS	SPECPTS^ORQPTQ2
ORQPT TEAM PATIENTS	TEAMPTS^ORQPTQ1
ORQPT TEAMS	TEAMS^ORQPTQ1
ORQPT WARDS	WARD^ORQPTQ2
ORWPT BYWARD	BYWARD^ORWPT
ORWPT LAST5	LAST5^ORWPT
ORWPT FULLSSN	FULLSSN^ORWPT
ORWPT LIST ALL	LISTALL^ORWPT
ORWTPP DELLIST	DELLIST^ORWTPP
ORWTPP NEWLIST	NEWLIST^ORWTPP
ORWTPP PLISTS	PLISTS^ORWTPP
ORWTPP SAVELIST	SAVELIST^ORWTPP
ORWU NEWPERS	NEWPERS^ORWU
ORWU USERINFO	USERINFO^ORWU

# Troubleshooting

**Question:** A user tries to run Shift Handoff Tool, either from the Tools menu or from the icon, and the splash screen just appears for half a second and then it is gone. This user cannot run the application. What is wrong?

**Answer:** Make sure the user has the CRHD SHIFT CHANGE HANDOFF menu option assigned to them.

**Question:** We used to use the CAIRO shift handoff software and some of our providers prefer it. However, when members of the same team look at the new Shift Handoff Tool it appears as though data is missing. What's going on?

**Answer:** CAIRO and the Shift Handoff Tool use different files. On installation data is copied from the old CAIRO files into the new Shift Handoff Tool files so that operations can proceed seamlessly. However, the two applications do not talk to one another. All providers must use the new Shift Handoff Tool executable in order for the new software to work properly.

**Question:** Our printed reports go on forever, repeating the same data on the last pages. What's going on and how can we fix it?

**Answer:** This is a known bug. Before printing, review the report with the print preview menu option. If a repeat is found in the output causing the printout to loop endlessly, several things can be done:

- Find the patient where the looping starts and reduce the amount of information in the temporary fields. This will change the formatting of the output and may solve the problem.
- Go back to the Preference Configuration, Print Option tab and change the Page Orientation from Landscape to Portrait.
- Go back to the Preference Configuration, Data Objects tab and change the Med Detail to Med Summary.
- Go back to the Preference Configuration, Data Objects tab and select Exclude IVs