



WardWatch v3.1

User Manual



Version 3.1

June, 2003

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Important

Please read the Software User License Agreement found in the appendices of this document. Using any part of the software application, WardWatch, indicates that you accept the terms of the Software User License Agreement.

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Chapter

1

Getting Started

Introduction

Welcome to WardWatch. WardWatch has been designed specifically for the Palm organizer to aid medical staff involved in ward rounds. It is intended to record investigations, medications and dosages, and consultations that are requested by the senior Consultant (Specialist) or Registrar during Ward round examinations and to record the results of these investigations for recall in later rounds and on the desktop.

WardWatch's features include:

- Ability to record basic patient details: name, hospital record number, DOB, sex, admission date, ward, room and bed, consultant, notes, diagnosis, and allergies.
- Automatic calculation of patients' age that also caters for Paediatrics.
- Easy tracking of patient records with the ability to group and order records by various methods, including ward, consultant (specialist), record number and others.
- Tracking of patient investigations, medications, lab results, notes, and consultations, with the ability to mark the status and results of each these events (items). Icons are used to quickly identify the category and status of events.
- Sorting of patient events (items), including the generation of "to do" lists.
- Easy navigation of patient records for daily review.
- Transfer patient records between Palm organizers using infrared
- Printing of patient records and to do lists using Stevens Creeks PalmPrint application to many of the infrared enabled printers.
- Backup and recovery of the patient records during the HotSync process.
- Context specific autofill in events detail screen and clearing of autofill DB.
- PatientInfo popup for fast access to crucial patient information on patient screens.
- On screen access to patient sorting and display options on patients list
- Filtering of events with status and type in Events and Patient View screens
- One tap change of event status from Patient View screen
- Ability to delete of entire categories of patient records.
- Password protection of patient records
- Requires PalmOS 2.0/3.0/4.0/5.0

WardWatch Desktop's features include

- Hotsync of patient and event records with Windows desktop companion
- Patient view or event views
- Creation, modification and deletion of patient records and associated events on the desktop.
- Sorting of patient records on any field headers; name, age, sex, MRN, bed, ward, and consultant, and diagnosis.
- Sorting of patient event records on fields; date, type, status, test, result, note, created
- Lookup function for searching for a patient's record.
- Printing of selected patients and events to desktop printer.
- Multiple palm user capabilities.
- Requires Windows 98/Me/NT4/2K/XP and Palm Desktop 3.0 or greater

New in Version 3.1

Integration capabilities with other patient record systems.

- Ability to export patient records to a file for exchange with other doctors or for the purpose of archiving patient records that are current not used.
- Import Patient records from HOSPAS patient record system
- Allow third party developers to integrate WardWatch with other patient record management systems in use.

Download and Installation of WardWatch

If you haven't done so already visit <http://www.torlesse.com/wardwatch> to obtain the latest version of WardWatch and download it to your desktop computer. Choose the compressed format suitable for your computer.

WardWatch can be downloaded in the following formats.

- As a self-installing executable which includes the MS Windows Hotsync conduit with the desktop companion (WardWatch Desktop). This install is for MS Windows (98, Me, NT, 2000, XP) only.
- As an archive file that requires manual install. Archive file formats are available for either Windows (zip) or macintosh (sit).

For MS Windows use the self-installing executable (WardWatch.exe). Simply download this program and run it. This program contains the WardWatch application that runs on the Palm, the Hotsync Conduit and the Desktop companion. During installation the WardWatch.prc file is loaded into the install directory ready for next palm hotsync and the WardWatch conduit is installed into the Hotsync manager. The installation program will ask for an install location. The default is C:\Program

Files\WardWatch. WardWatch Desktop top can be found under Start > Programs > WardWatch > WardWatch Desktop.

For Macintosh users (or Windows users not requiring the hotsync conduit) there are WardWatch archive files to download (WardWatch.sit and WatchWatch.zip). There are four separate files you will find in the archive.

- WardWatch.prc – the WardWatch application.
- WW_Manual.pdf – this manual
- WW_License.txt – the software license
- WW_ReleaseNotes.txt – the release notes for this version

To install WardWatch.prc follow the instructions in Chapter 3 of the Palm V Handbook, Chapter 4 of the Basic Handbook (For the Palm III Organizer) or Chapter 11 of the Palm Pilot Handbook (for earlier Palms). These chapters describe using the Install Tool to install add-on applications.

Before using WardWatch Desktop

Before you can use WardWatch Desktop you need to start WardWatch on the Palm, accept the license agreement and perform another Hotsync. This will create the basic data files on the desktop

Starting WardWatch on the Palm



WardWatch

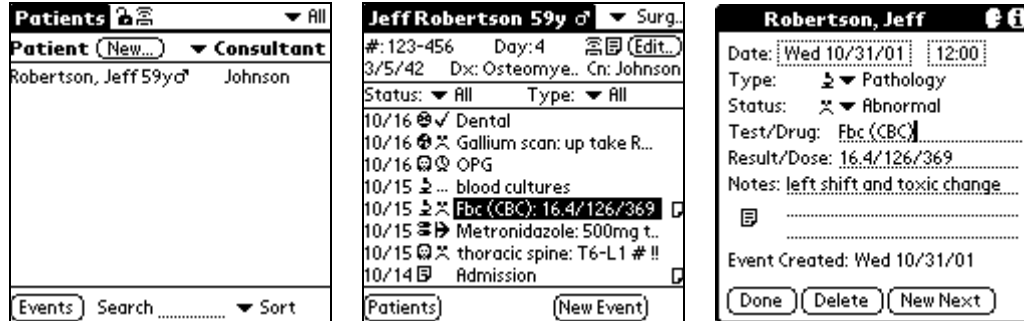
After installing WardWatch, locate the WardWatch icon on the Palm and tap on it. This will start WardWatch for the first time.



The first screen you are presented with reminds you that this is a 30 day evaluation copy. Tap on “I Accept” to accept the license agreement and continue. You must read the software license in the appendices and make sure you agree to the terms and conditions. If you do not agree with the software license you must delete WardWatch from you Palm Organizer and PC.

Sample Patient Record

When you start WardWatch for the first time a sample patient is created. This patient is shown below. The patient is fictitious and the events are for example only.



Patients screen

Patient View screen

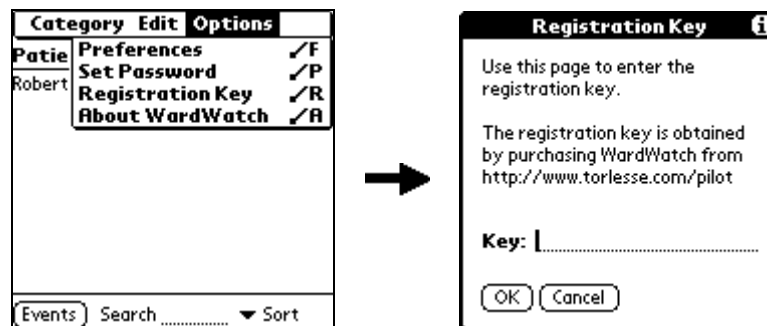
Event Detail screen

Tapping on the patient record “Robertson, Jeff 59y” in the **Patients** screen takes you to the **Patient View** for that patient. If you tap on an event (for example Fbc – Full Blood Count) you are taken to the event details screen. From the **Patient View** screen you can also tap on the individual note icons for each event to be taken directly to the notes for that event.

Tapping the **New Event** button in the patient view screen allows you to create a new event. Tapping the **Edit** button at the top of the **Patient View** screen takes you to the **Update Patient** screen – from here you can delete the sample patient. The icons at the top of the patient view screen allow you to go to the unstructured notes screen for this patient, or allow you to beam this patient to another Palm organizer.

Loading the Registration Key

If you have purchased WardWatch you will have received a Registration Key to unlock the evaluation version. Enter the complete Registration Key from the **Patients** screen by choosing the Menu **Options** then **Registration Key**. Tap **OK** and you will receive confirmation that the key has been stored.

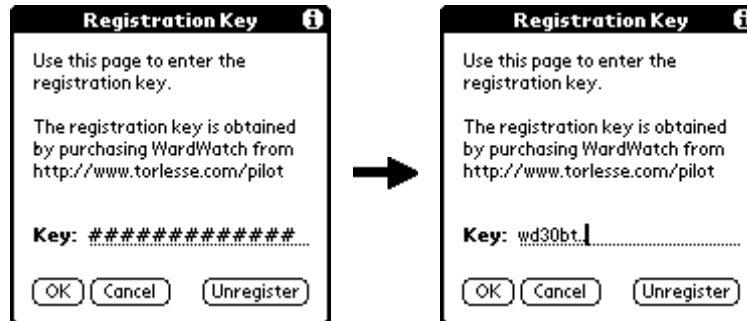


IMPORTANT: Keep your registration key in a safe place; you may need it if you need to recover WardWatch from backup. You may also need it for technical support and

when obtaining upgrades. Your registration key is unique and identifies your Palm Organizer as a valid user of WardWatch.

Loading an upgrade key

If you are purchase an upgrade to WardWatch you will need to have the original key loaded before loading the upgrade key. After loading the original key simply delete the ##### in the "Key:" field and enter the upgrade key into the Key: field and click ok. Hotsyncing will cause the desktop companion to be registered



Setting up Patient Categories

Before entering patient records into WardWatch, you may want to decided how you will use the patient categories. Full details on how/why to do this are explained in Customization and Preferences section.

The use of categories is the similar to the categories in the Palm address book application. Categories are also used for beaming or printing of groups of patient records.

Typical uses of the categories are as follows

- To differentiate between in and out patients (eg Out Patients, Clinic 21, Clinic A)
- To break patients into different wards (eg Ward 12, Ward B, South Wing)
- To differentiate patients admitted under different consultants or specialists (eg Johnson, Simpson, Carson,)


You will need to experiment to decide which categories make the most sense for your use of WardWatch.

Chapter

2

Ward Rounds

Patients (List) screen

Patients  ▼ All	
Patient (New...)	▼ Consultant
Andrew, Anna 85y♀	Baker
Papadopolous, M. 96y♀	Baker
Ratowicz, Doris 86y♀	Baker
Smile, Peter 57y♂	Baker
Wong, Helena 90y♀	Baker
Evans, Peta 79y♀	Carson
Ferari, Roberto 62y♂	Carson
Jonson, Kristina 66y♀	Carson
McGann, Fergus 86y♂	Carson
Smith, Clarice 76v♀	Carson


Events Search ▼ Sort

The **Search** field may be used to find patients by entered their surname. This feature is only available when you patients are sorted by Surname.

This is the main screen of WardWatch. It shows a list of all the patients in the current category. By default, it also shows the patients age and sex, and the consultant to whom this patient belongs. By adjusting the preferences you change what details are shown on the **Patients** screen.

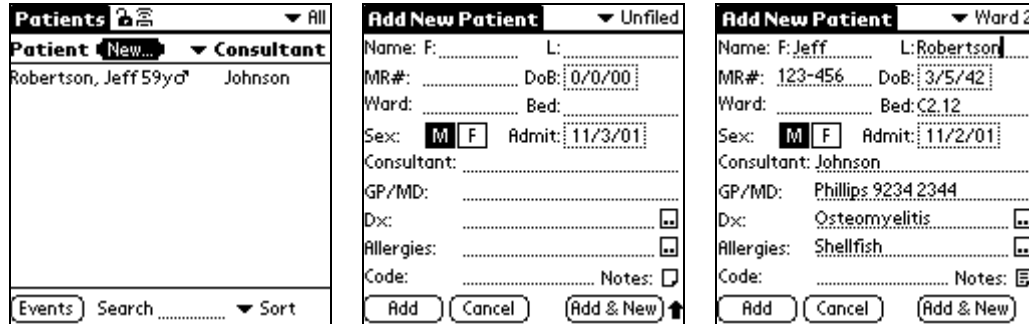
Tapping on the **Consultant** pulldown will give you the option of changing what is displayed in the right hand column. You have the option of Consultant, Category, Ward, Room/Bed, MRN, Diagnosis and None.

Tapping on the **Sort** pulldown gives you different options to sort the patient list. The options include Patient, Consultant & Patient, Consultant & Room, Ward, Room & Bed. Note that you can only search for a patient when the patients are sorted by the patients' names.

When the number of patients in the patient list exceeds the screen size the buttons  will appear in the bottom right corner. Tapping these will move the screen up or down a single patient. Pressing the hard plastic up/down buttons on the Palm Organizer will also scroll the patient list up or down an entire page.

Creating a Patient Record

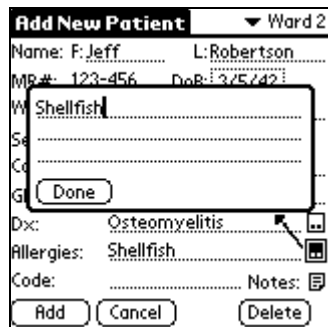
Before doing your ward round it is necessary to load your patient list into WardWatch. In version 3.0 of WardWatch you will be able to do this from the Windows Desktop.



Tap the **New** button on the **Patients** screen to bring up a blank Patient record.

The cursor will be flashing in the **Lastname** field. Enter the Patient's surname then use either the Next Field graffiti stroke (↗) or tap to move to the **First Name** field. Fill in each of the fields on this screen.

After filling in all the details tap on **Add**. If you wish to enter another patient's details you can tap on **Add & New** and immediately start entering details for the next patient.



Additional details for the Diagnosis, Allergies and Notes can be entered by tapping on the [...] icon next to each of these fields

Notes

- To enter the Date of Birth first tap on the **DoB** field, and you will be prompted for the **Year of Birth**. You then will be taken to a calendar for the year the patient was born.
- Tap on either **M** or **F** for the **Sex** field
- The fields **Ward**, **Consultant** and **GP** are Auto-fill fields. This means WardWatch will remember previous names entered and attempt to guess the name based on the first few characters you enter.
- You need to choose how you will use the categories for your patients. The **Unfiled** field at the top right of the screen is the category. Generally you would use the

categories for either the Ward (default) or Consultant. Depending on which of these you choose you can leave the corresponding field (either Consultant or Ward) blank.

- If you have entered the name of someone and you have their phone number in the Address book you can add the phone number to the field in WardWatch by going to the Menu **Options** then **Phone Lookup**.

Patient View

Once you have created a patient tapping on **Add** will take you to the Patient View screen, shown below. From here you can add further details by tapping on the icons below or tap **Patients** to be taken back to the Patients screen. The **New Event** button is used for patient events and is described later.

Jeff Robertson 59y ♂		▼ War..
#: 123-456	Day: 4	(Edit...)
3/5/42	Dx: Osteomye..	Cn: Johnson
Status: ▼ All	Type: ▼ All	
Patients		New Event

The top three lines of the Patient View is a summary or the patient's details. Tapping anywhere in these lines will display the Patient Info Popup. The summary show the patient's name, age, sex. On the second line the **Day:** indicates the number of days since admission, the **#:** is the patient's hospital number, and **Cn:** shows the consultant. On the third line is the Date of Birth, the Diagnosis (**Dx:**).

In the top right corner tap on;



to beam the patient to another Palm Organizer. This is described later.



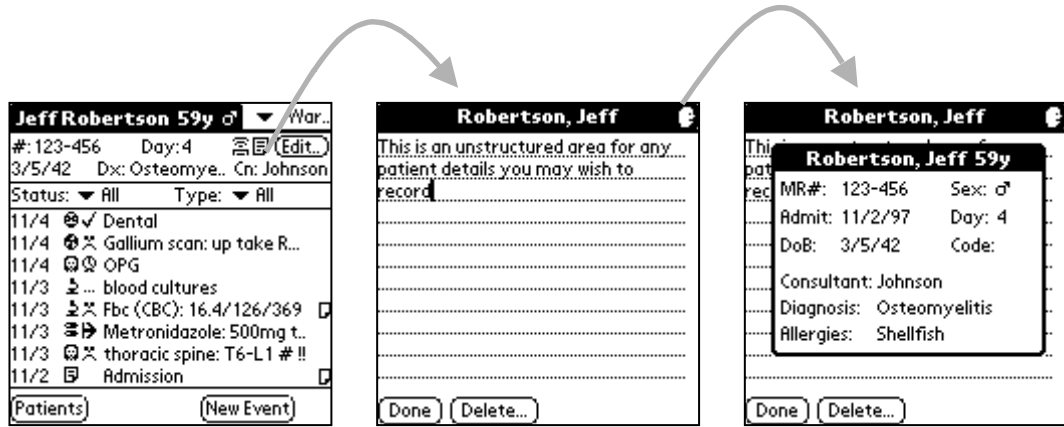
to go the unstructured notes shown below.

[edit] to update the patients details

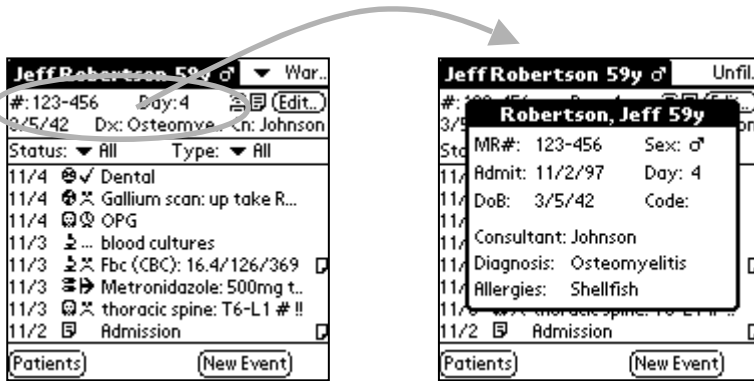
tap anyway in the patient header to go to the info popup.



tap on the face icon to bring up the **Patient Info** popup in the notes page.




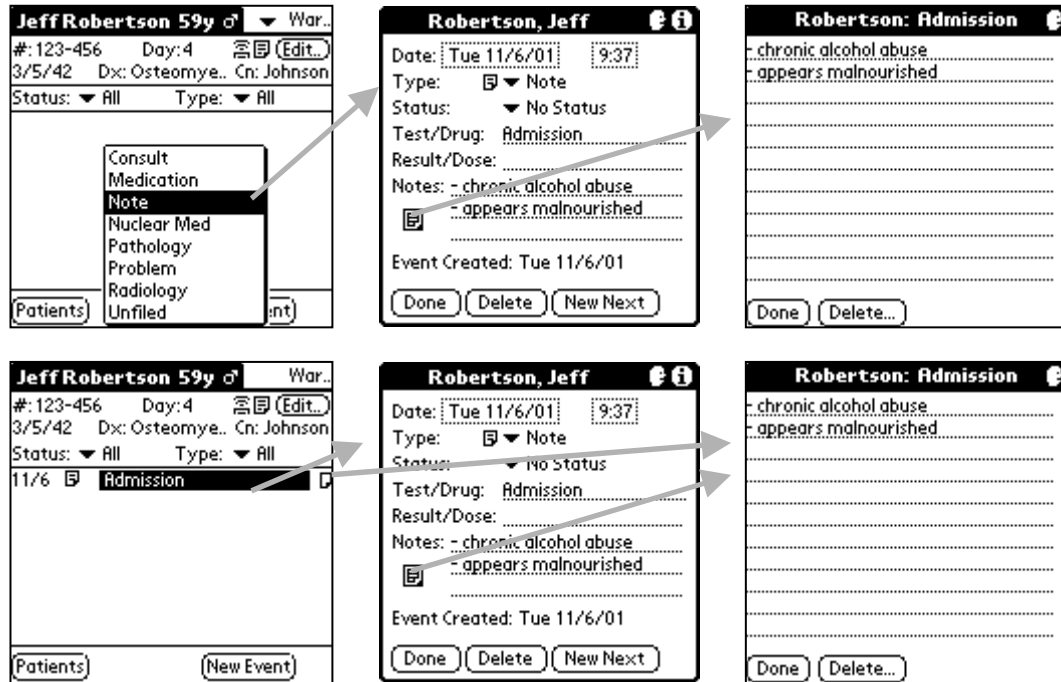
Tapping anywhere in the patient summary will popup the **Patient Info** screen.




From this screen, you can now enter events (items) for the patient. If you wish, the admission notes can be recorded as the first event.

Admission Notes

If you need to record detailed admission notes, the first event that is created for a patient can be the Admission note. Tap on **New Event** in the **Patient View** to create an event, tap on the event type and change it to Note, tap on the status and change it to No Status. You can now record your data in the **Notes** field, having first written Admission in the **Test/Drug** field. If the notes are more than three lines tap on the  icon to go to a full screen for entering detailed notes for the patient.



In the second copy of the Patient View screen above, the Admission note event is shown. Tap on the Admission note event to be taken to the event details screen. Alternately tap on the note icon () to taken to the event notes.

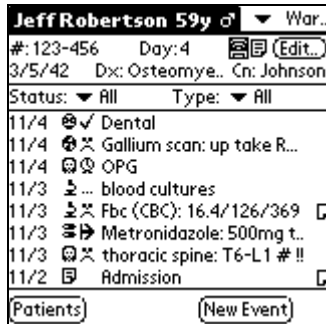
Discharge Planning notes can be recorded in the same way as the admission notes.

The Round

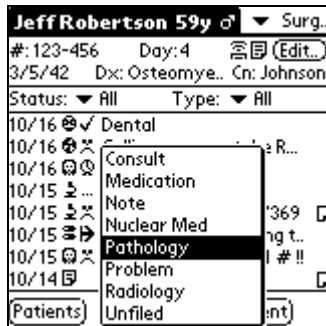
Once the patients details (and the optional admission notes) have been entered for each of your patients you are ready for a ward round with your Consultant (Specialist).

Individual Patient Records

Tapping on a patient in the Patients list will bring up the events (items) for that patient.



The main roll of WardWatch during the round is to record the investigations, consultations, and medication changes as requested by the consultant (and/or registrar) thereby creating yourself a “to do” list. Tap the **New Event** button on the **Patient View** screen.



Tapping **New Event** will popup the event type – choose this and you will be taken to the event details screen. Here you need to choose the event status (**ToDo** default). The **Test/Drug** field has context specific autocomplete. It will attempt to guess the value you are typing based on previous entries of the same event type.

Hint: You can jump between patient records without returning to the Patients screen by using the buttons at the bottom next to the patients button. These buttons are only shown if there are patients records to jump to.

Event Types and Status

The following table show the icons used to indicate the event types and status. If you rename the event types the same icon will still be displayed for that event type.

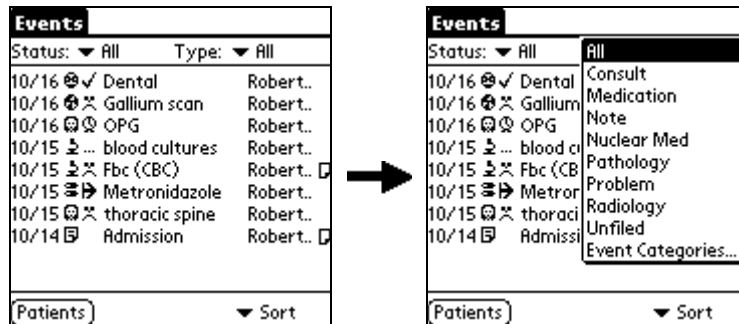
Type	Status
0 Unfiled	No Status
1 Medication	ToDo
2 Pathology	... In Progress
3 Radiology	Normal
4 Nuclear Medicine	Abnormal
5 Consult	Start
6 Problem	End
7 Note	? Unknown
	Done

Review and Follow Up

After the ward round it is then necessary to organize the investigations requested from the consultant. From the **Patients** screen you can view the events for all patients by tapping on **Events**. In this screen you can filter events with any specific status of any type – for example all the **InProgress Radiology** events.

All Events

The **Events** screen shows all the events for all patients. The two pull down lists on the top line of the **Events** screen are used to filter the events. The first pull down list is for the event status and the second is the type.

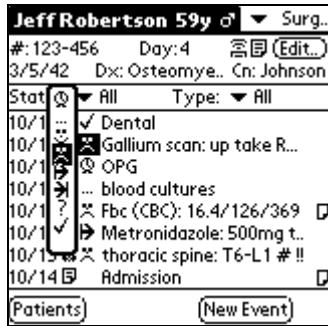


You can sort the events by date or by patient. Tapping on an event will take you to the details of that event

Patient View

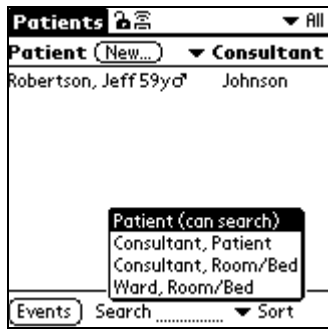


It is possible to filter the events for individual patients. By tapping on the Status and the Type field you can choose to only display specific events for this patient. For instance all the **ToDo** events.



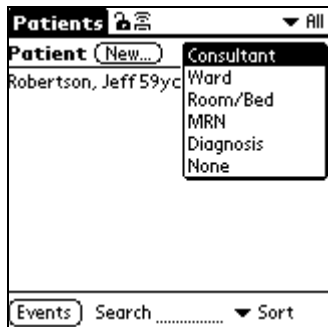
By tapping on the status for the patient it is possible to change the status without going into the details for that event. The date can be changed in a similar way by tapping on the date field.

The (next) Round



Sorting Patients

Tapping on the **Sort** field in the bottom right will bring up the list of options for sorting the patients. When patients are sorted alphabetically the **Search** field can be used to locate a patient using their surname.

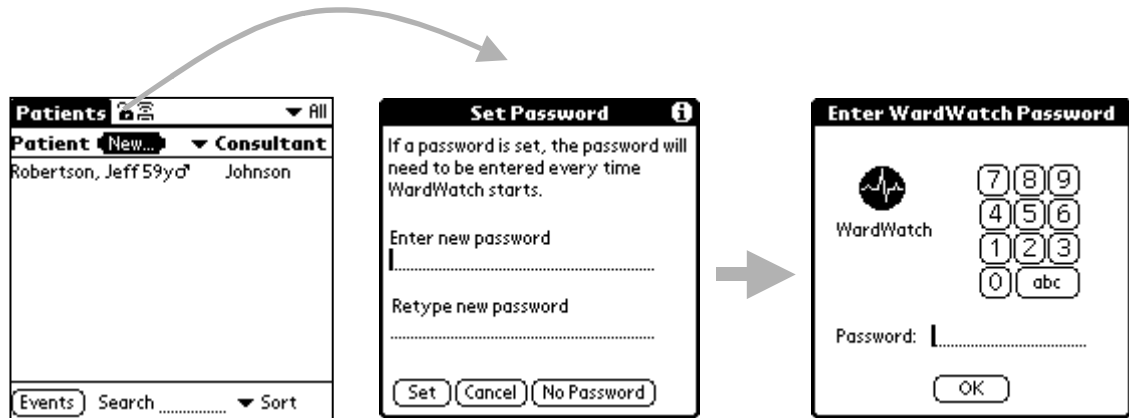


Displaying Details

Tapping on the **Consultant** field in the top right will bring up the list of options showing which information for the patient can be displayed in the right hand column.

Password Protection

To provide privacy and protect your patient records from unwanted access a password can be set on WardWatch. This password will need to be entered when ever WardWatch is invoked. The padlock icon on the **Patients** screen will show as locked or unlock to indicate if the password is set or not. Tapping on the padlock will allow you to set, change or clear the password.



Terminology

Events or Patient Events: An event (or patient event) is any investigation, dosage, consult, or other items that you have recorded for a patient. Events are listed in the **Patient View** screen in chronological order.

Event Types: Each event is a member of a single Event Type. WardWatch comes with the following event types: Unfiled, Medication, Pathology, Radiology, Nuclear Med, Consult, Problem, and Note. You may customize WardWatch by changing these names or adding your own event types.

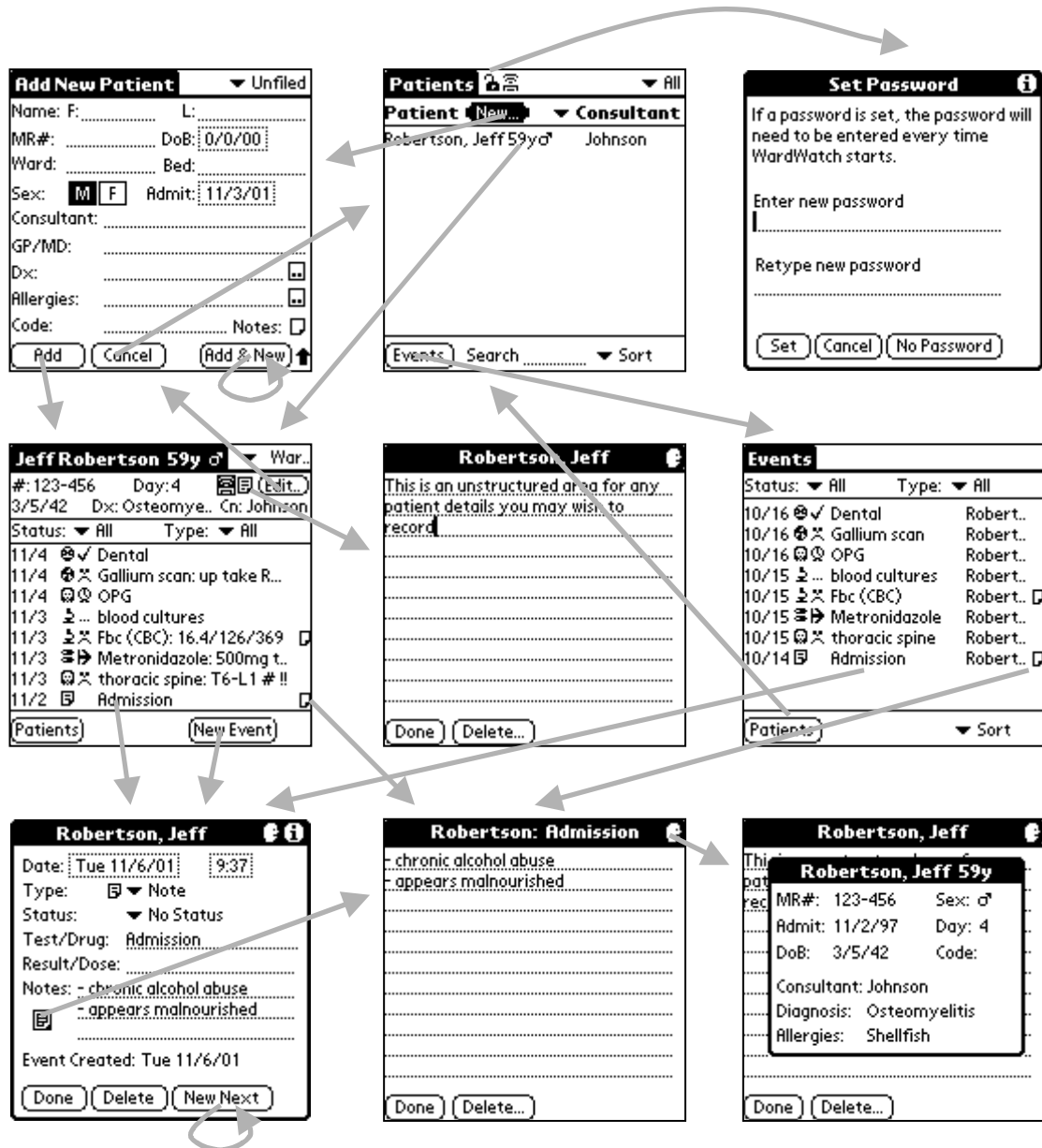
Patient's Age

Whenever the age of the patient is displayed the following conventions are used.

Patient's Age	Display	Example
Less than 14 days	as days	6d
Less than 20 weeks (and more than 14 days)	as weeks	11w
Less than 24 months (and more than 20 weeks)	as months	14m
More than 2 years	as years	35y

Screen Navigation

The diagram below shows the main navigation around WardWatch.



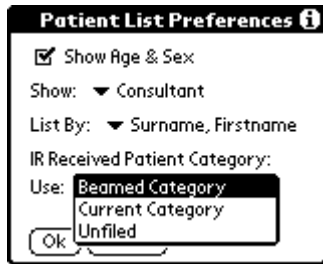
Chapter
3

IR Beaming and Printing

IR Beaming

WardWatch supports the hand over of patients to other medical staff through the Infrared beaming capabilities of the Palm Organizers. Infrared beaming is supported in Palm III Organizers and later models. The Infrared Port (IR) is located on the top of the Palm.

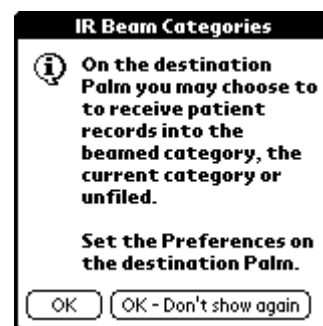
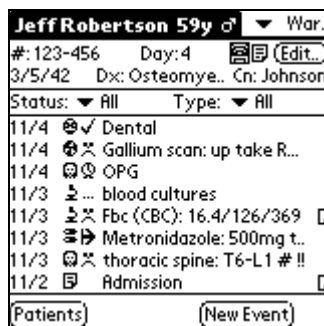
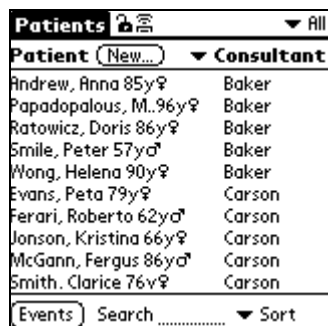
Custom Categories: When patient records are beamed the custom patient categories and custom event categories are also beamed. The maximum number of custom categories allowed by the Palm OS is 15. If the number of unique categories on the sending and receiving Palm Organizers is greater than 15 some records may be placed in the Unfiled category.



By default patient records received by IR beaming are placed in the same category as they were in the sending Palm. If necessary the Patient Category is created. Instead you may choose to receive the patient records to the currently selected category, or to the Unfiled category.

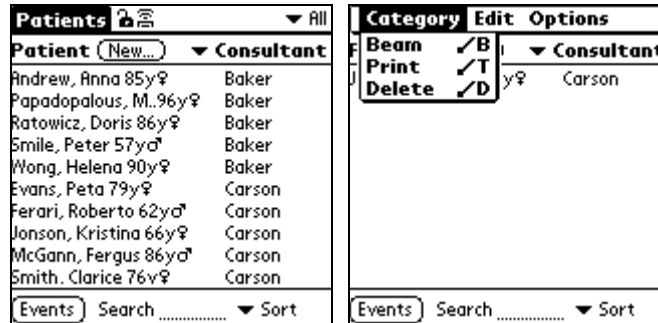
Beaming a Single Patient

From the **Patients** screen, tap on the patient you wish to beam. Once in the **Patient View** for that patient you can either tap on the beam icon (📡) in the top right corner or go to the menu Patient – Beam (/B).



Hint: Make sure the IR port of the Palm Organizer is pointing at the IR port of the other device (ie top of one pointing to the top of the other). The Palm Organizers must be at least five centimetres apart and no more than one metre. The path between the organizers must be clear of obstacles.

Beaming a Category of Patients



To beam a complete category of patients. From the **Patients** screen select the category you wish to beam, then go to the **Category** menu and tap **Beam**. Or simply tap on the icon (☰).

IR Printing

IR Printing requires the PalmPrint application from Stevens Creek. This application can be found at <http://www.stevenscreek.com/pilot/palmprint.shtml>. You may download an evaluation copy to trial the printing facility.

Make sure you configure PalmPrint to work with your printer before attempting to print. Please refer to the PalmPrint documentation.

Once PalmPrint is installed, printing of patient records is performed in a similar fashion to the beaming of records. To print a single patient, go into the **Patient View** screen for that patient and go to the menu **Patient – Print**. To print a category of patients, select the category in the **Patients** screen, and go to the menu **Category – Print**.

Printing All Events (Todo lists)

IR Printing is also available from the **Events** screen. Select the filters you require. For example status of "ToDo" and event category of "All". Then go to the menu **Events – Print**.

```
-----
                WardWatch v2.5 Patient Event Summary Report
                Printed on 2 Aug 2001 at 1:06 pm
                Category: All Status: All
                Printed for POSE
-----
```

```
-----
Date       Time       Category      Status
-----
29/6/99  12:00 am  Consult      Done
Robertson, Jeff  123-456  Bed: C2.12
Dental
-----
29/6/99  12:00 am  Nuclear Med  Abnormal
Robertson, Jeff  123-456  Bed: C2.12
Gallium scan : up take R. mandible + T10
-----
29/6/99  12:00 am  Radiology    To Do
Robertson, Jeff  123-456  Bed: C2.12
OPG
-----
28/6/99  12:00 am  Pathology    In Progress
Robertson, Jeff  123-456  Bed: C2.12
blood cultures
-----
28/6/99  12:00 am  Pathology    Abnormal
Robertson, Jeff  123-456  Bed: C2.12
Fbc (CBC) : 16.4/126/369
Notes: left shift and toxic change
-----
28/6/99  12:00 am  Medication   Start
Robertson, Jeff  123-456  Bed: C2.12
Metronidazole : 500mg tds
-----
28/6/99  12:00 am  Radiology    Abnormal
Robertson, Jeff  123-456  Bed: C2.12
thoracic spine : T6-L1 # !!
-----
27/6/99  12:00 am  Note         No Status
Robertson, Jeff  123-456  Bed: C2.12
Admission
Notes: - chronic alcohol abuse
       - appears malnourished
-----
```


Chapter

4

WardWatch Desktop

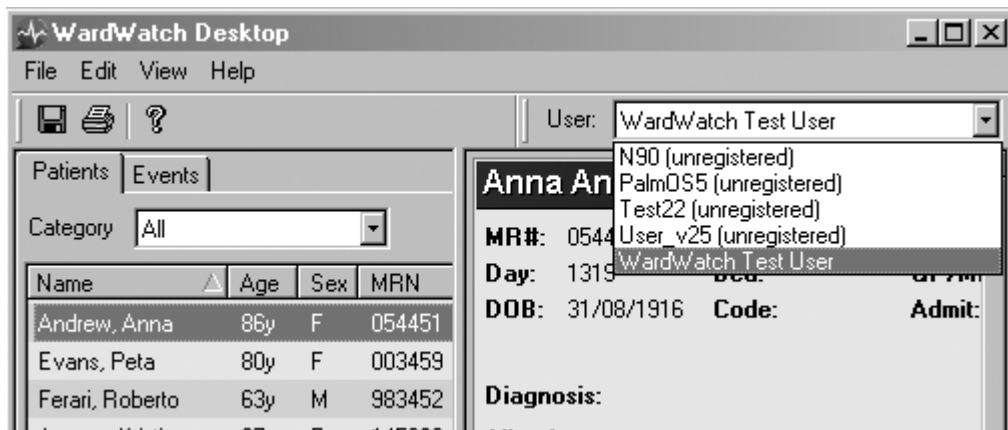
Overview

In order to access or add patient records on the desktop you **must first** hotsync your palm to install WardWatch. You then need to start WardWatch on the Palm and accept the license conditions then **hotsync again**. This will cause the initial data files and the sample patient to be created on the desktop.

Desktop consists of two views. The Patient List View and the Events List View. You can switch between these views by clicking on the Patients and Events tabs at the top left. For more details see Screen Layout and Shortcuts

The registration key you are supplied with when you purchased WardWatch will activate the Palm and if you paid for the desktop component it will activate the desktop also. The registration key is always entered on the Palm as covered in getting started.

Selecting a User

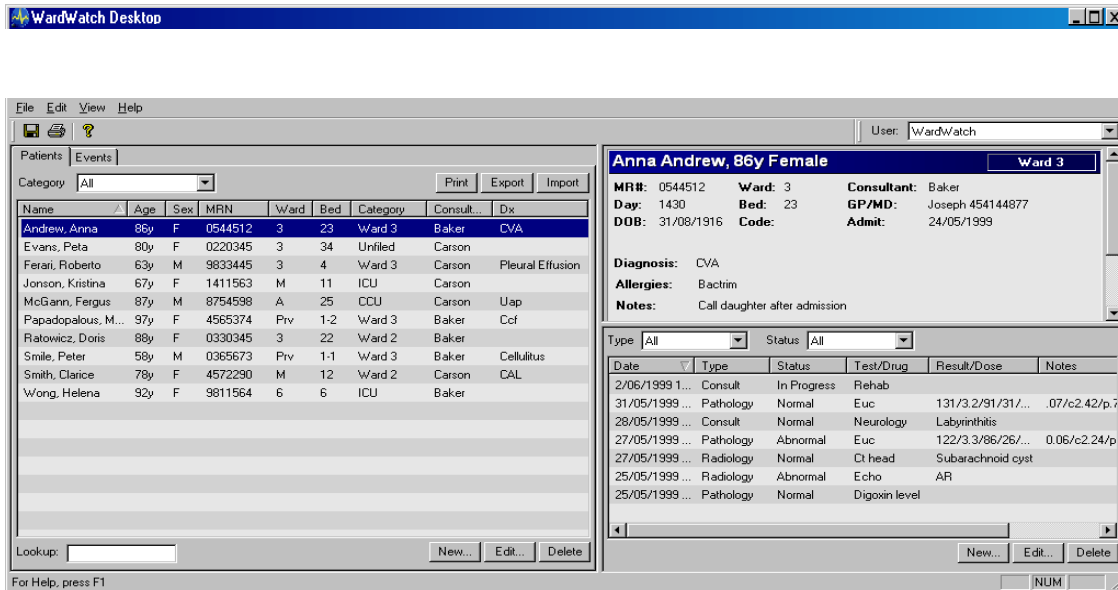


Like Palm Desktop, WardWatch desktop has a drop down box at the top right of the screen that lets you choose a Palm user. The WardWatch data for the selected user is displayed and edited in WardWatch Desktop.

The user dropdown list also indicates if this user is registered to use the desktop companion. Registration is performed by purchasing WardWatch and entering the registration key through WardWatch on the Palm.

Note if you only purchased WardWatch Palm Application and not the desktop companion the desktop will indicate it is unregistered

Screen Layout and Shortcuts



WardWatch desktop shows lists of patients or events on the left side of the screen. To change between showing lists of patients or events, click the **'Patients'** or **'Events'** tab at the top of the left side of the screen.

The right side of the screen shows details about the patient or event selected on the left side of the screen. If a patient is selected on the left side of the screen, the events for the patient will be displayed in the bottom half of the right side of the screen.

Any column in a table can be sorted on by clicking the title of the column. By clicking the title of a column again, the sort will swap between ascending and descending. Tables have drop down boxes above them that allow you to filter which patients or events are displayed.

If you double click on an item in a list or on the details of a patient or event, a screen will pop up to allow you to edit the details you double clicked on. This is the same as clicking the **'Edit'** button after selecting a patient or event in a list.

Pressing the **'Delete'** key on the keyboard allows you to delete the selected patients or events in a table.

Pressing **Ctrl+N** will bring up the dialog box to create a new patient and **Ctrl+E** will create a new event for the current patient

Categories

Patient Categories and Event Types can only be edited on the Palm. Edit these on the Palm and Hotsync to make these categories and types available on the desktop.

On the desktop companion you can restrict the view to only see those patients or events in a certain category.

Saving

When you exit WardWatch Desktop or press the Hotsync button on your Palm, WardWatch saves all your most recent changes. You may also choose **File > Save** to force changes to be saved at any time.

During a Hotsync, WardWatch desktop is disabled - you cannot use it until the Hotsync is complete.

Note that if a Patient's details or an event record has been changed on both the desktop and the Palm, then the Palm record will overwrite the desktop. You will be informed of this in the Hotsync log.

Reverting

If changes are made and you need to revert to the last saved copy of the patient records choose **File > Revert**. This is particularly useful if the wrong patient records were imported.

Printing

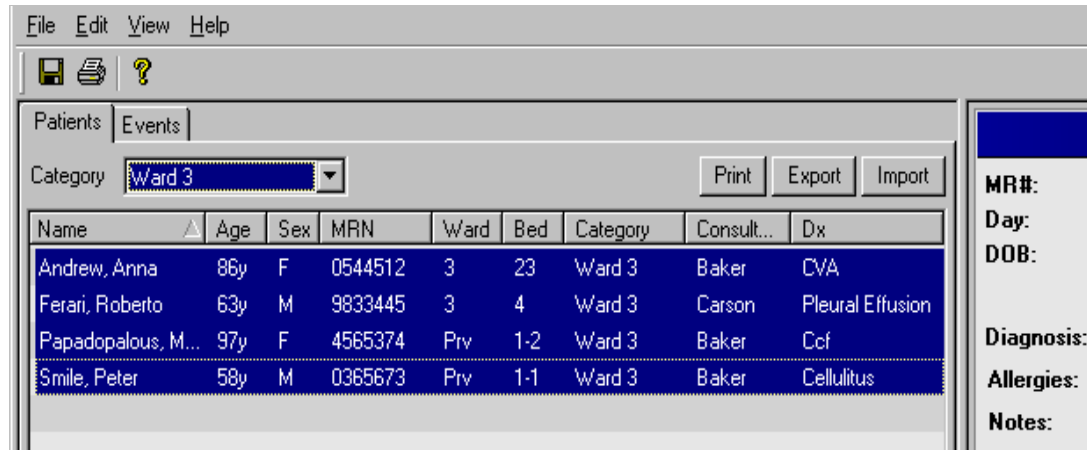
Select a patient and click on print. The patient will be printed as below.

Name	Age	Sex	MRN	Wd.	Bed	Category	Cons.	Dx.
Robertson, J	60y	M	123-456		C2....	Unfiled	Johnson	Osteomyelitis

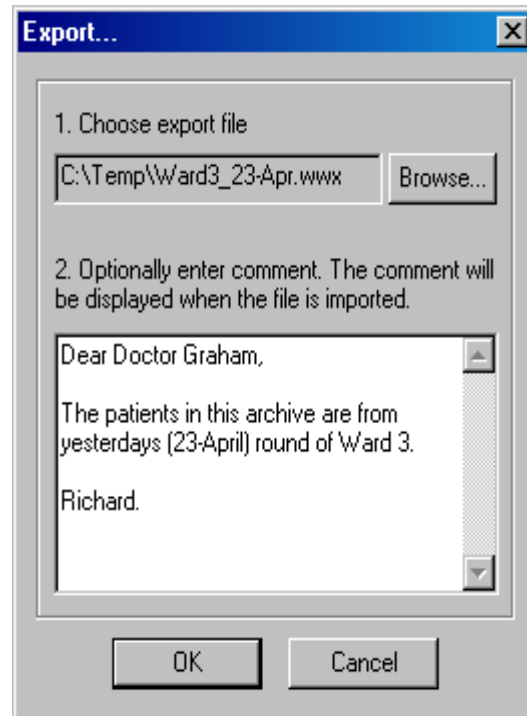
Date	Type	Status	Test/Drug	Result/Dose	Notes
31/12/2002 00:00	Consult	Done	Dental		
31/12/2002 00:00	Nuclear Med	Abnor...	Gallium scan	up take R. mandible + T10	
31/12/2002 00:00	Radiol...	ToDo	OPG		
30/12/2002 00:00	Pathol...	In Progress	blood cultures		
30/12/2002 00:00	Pathol...	Abnor...	Fbc (CBC)	16.4/126/369	left shift and toxic change
30/12/2002 00:00	Medica...	Start	Metronidaz...	500mg tds	
30/12/2002 00:00	Radiol...	Abnor...	thoracic spine	T6-L1 # !!	
29/12/2002 00:00	Unfiled	No Status	Admission		- chronic alcohol abuse - appears malnourished

Exporting, Importing and Archiving Patient Records

Exporting is performed by selecting a group of patients and then clicking the Export button. For example from the categories list choose “Ward 3” then click on the first patient and hold the Shift button while pressing the down arrow this will select all the patients in the list as below.

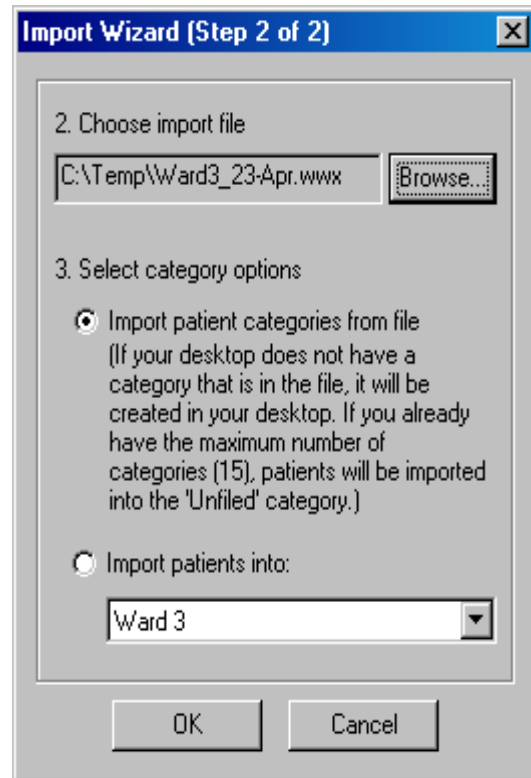
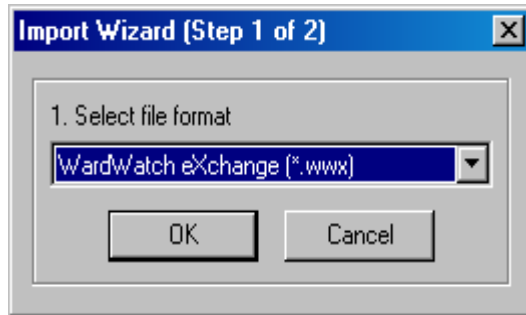


Now click on the Export button and in the export dialog box click on the browse button and find the folder and enter the name of a new file to create. You can also add an optional comment in the WardWatch eXchange file. This is displayed when the file is import into WardWatch desktop at a later time

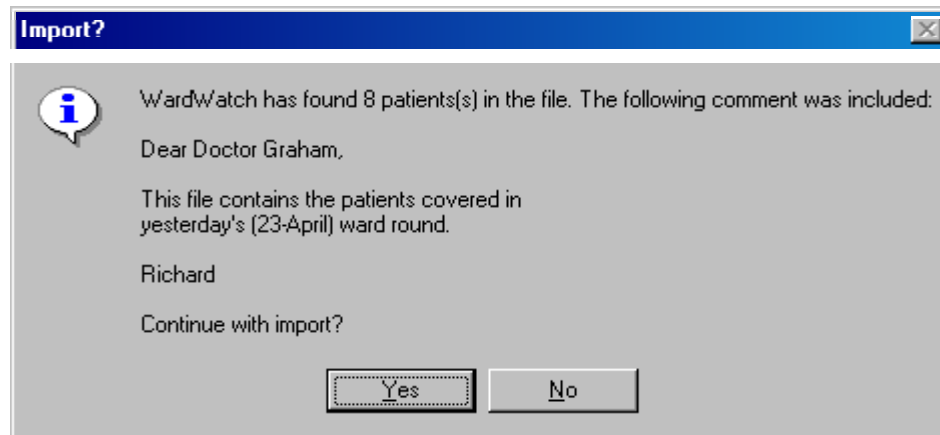


Clicking OK will then create a file in the C:\Temp directory called Ward3_23-Apr.wwx. The file will have an icon showing that it is a WardWatch eXchange file and extension .wwx. Double clicking on this file will trigger WardWatch and the import dialog box.

Importing patient records is very straight forward. It is recommended that before importing the Save button (or File > Save) is clicked on. This will allow easy rollback if the wrong file is imported. To import either the WardWatch eXchange file (.wwx) is double clicked on or the Import button on the WardWatch desktop is clicked.



Choose to import the “WardWatch eXchange” format and click OK, then click Browse to choose the name of the .wwx file to import. Finally you can choose to either use the categories in the WardWatch eXchange file or import all the new patients into an existing category.



Before importing the patients the number of patients found in the file and the optional comment are displayed.

Reverting. If the wrong file is imported or there is an error in the file. Click on File > Revert to revert to the last saved patient record database.

Archiving patient records is achieved by selecting the patients to archive. Exporting these patient records then deleting the patient records. The patient

records in this file may be reload into WardWatch at anytime later using the import facility.



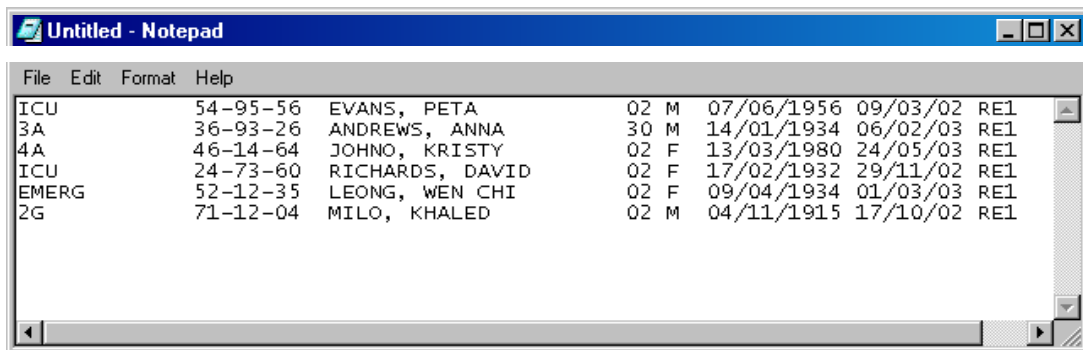
Archive.wvx

Importing Patient Records from Hospas

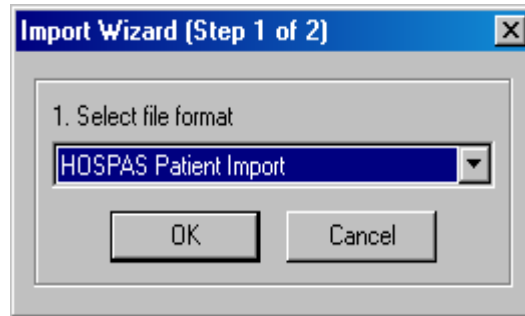
WardWatch can import patient records from the HOSPAS patient record system used in many Australian hospitals as follows.

In order to import patient records from HOSPAS you will need to have WardWatch desktop loaded onto the same machine that has access to HOSPAS. Typically HOSPAS is accessed via Telnet or a terminal emulator.

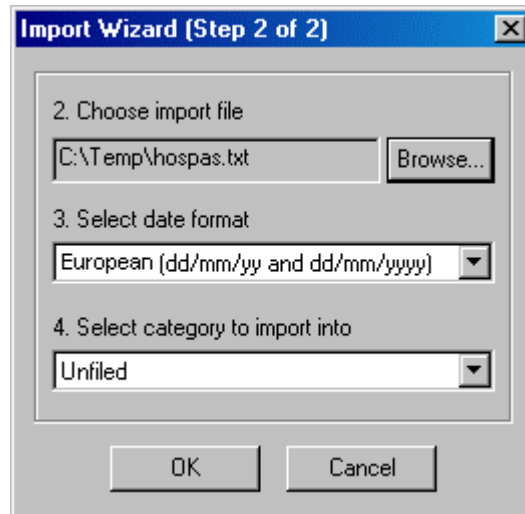
1. Open Hospas and bring up the list of patients you which to import .
2. Using the window to Hospas select the patient records and click Edit and copy from this window.
3. Open Notepad on your machine (Start > Run > Notepad or Start > Programs > Accessories > Notepad)
4. Cut and paste from Hospas just the patient records into notepad as shown below



5. From Notepad select **File > Save As** and choose a temporary filename for import. EG c:\temp\hospas.txt
6. Go to WardWatch desktop as an optional step save any changes to the current patients by clicking **File > Save**. This allows you to use the **File > Revert** if the import did not work according to expectations.
7. From WardWatch desktop and import the new text based file. In WardWatch select Import and Choose HOSPAS Patient Import



8. Choose the temporary file and choose the European date format



9. Choose the category into which these records are to be import and click OK.

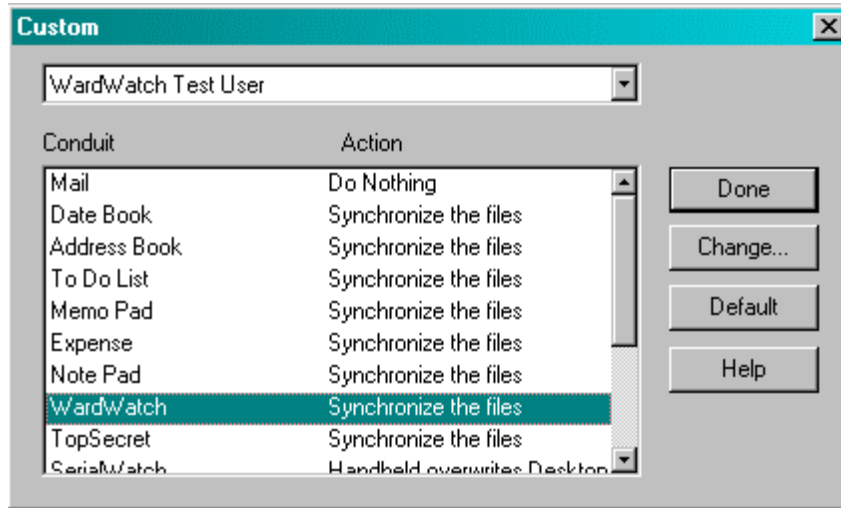
Notes

- a) Before finally import you will be informed how many patient records have been found, warned of any errors.
- b) You may use the **File > Revert** menu option to revert to the last saved set of patient records. For this reason it is a good idea to save any changes before the patient records before importing. Note that closing WardWatch desktop or Hotsyncing will automatically cause any changes to be saved.

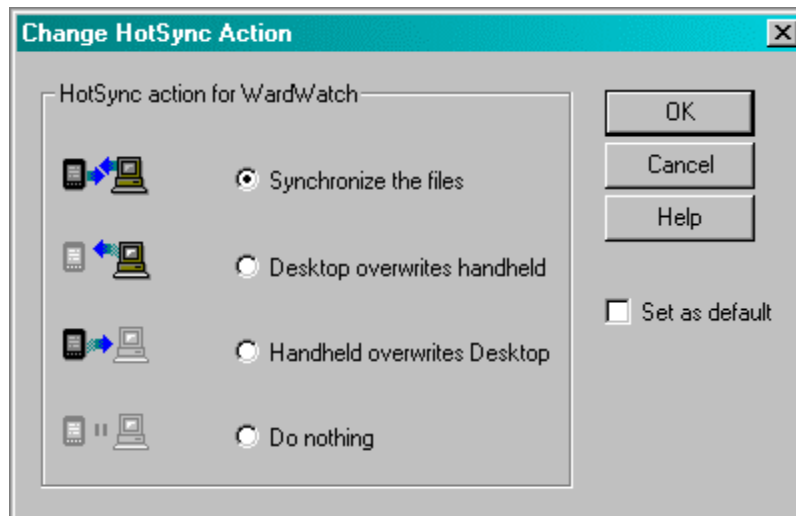
Modifying Hotsync Behaviour

If you decide you don't require the patient export feature of WardWatch and you wish to minimize the time it takes to hotsync your Palm you can disable the export mechanism.

With the Hotsync manager running, right click on the hotsync icon in the System tray and select Custom from the menu. Alternatively from the Palm Desktop, select the menu Hotsync and then the option Custom.



This will bring up the actions that are currently performed each Palm user. Choose your palm user, then select the line “WardWatch Handheld overwrites desktop” and click Change. Select the **Do Nothing** radio box and the **Set as default** checkbox then click OK. Patient export will now be disabled for all further hotsyncs. Select **Handheld overwrites Desktop** and select **Set as default** and click OK to re-enable.

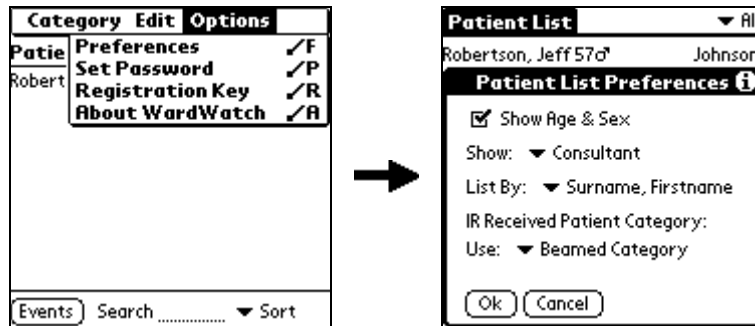


Chapter

5

Customization and Preferences

Patients Preferences

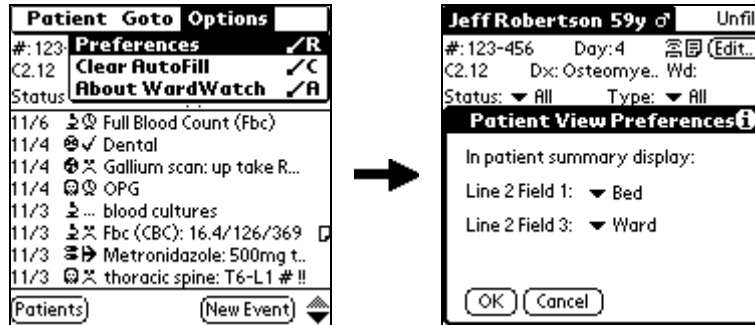


To change the preferences of the **Patients**, bring up the **Options** menu and tap **Preferences**.

- **Show Age & Sex:** Check this option if you want the patient's age and sex to be displayed in the **Patients screen**.
- **Show:** This preference determines what is displayed in the right hand column of the **Patients screen**. The options are **Consultant**, **Ward**, **Room/Bed**, **Record Number**, or **None**
- **List By:** This preference determines the order in which patient records are displayed in the **Patients screen**. The options are; **Surname, Firstname** or **Consultant, Surname**, or **Room/Bed**, or **Ward, Room/Bed**. The options with two parameters indicate the primary and secondary sorting fields. For example **Consultant, Surname**, ie the records are first ordered by **Consultant** and then by **Surname**.
- **IR Received Patient Category:** When receiving patients' records by IR beaming you may place the received records into one of the following categories.
 - The **Beamed Category**, the patients' records will be placed into the same category as on the sending Palm, the category will be created if necessary, if creating the category exceeds the Palm OS limit of 15 categories, the patient's record will be placed in the **Unfiled category**.

- The **Current Category**, the patients' records is placed in the current selected category. If the selected category is All the record is placed in Unfiled
- The **Unfiled Category**, the beamed patients' records are placed in the Unfiled category.

Patient View Preferences



The fields in the “patient summary” in the **Patient View** screen may be customized using the **Patient View Preferences**. There are currently two fields that may be customized.

- **Line 2, Field 1:** The default for this field is the Date of Birth (**DOB**). If you prefer you can display the **Room/Bed** instead.
- **Line 2, Field 3:** The default for this field is the name of the consultant. If you use the patient categories for the consultant's name then it makes more sense to replace this field with the ward. The options are **Consultant** or **Ward**.

Setting up Patient Categories

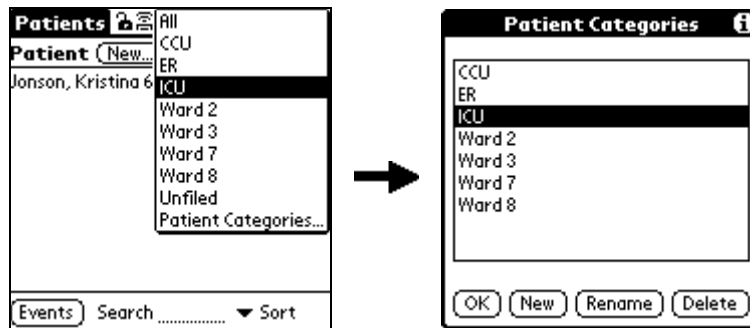
Before entering patient records into WardWatch, you may configure the categories that you would like to use for your patients.

WardWatch uses categories to enable quick access and grouping of patient records. The use of categories is the same as the built in address book application. Categories are also used for beaming or printing of groups of patient records.

There are two standard ways in which categories can be used with WardWatch. The “patient category” can be used for either the ward or the consultants' name. If you're unsure what would be more efficient, don't worry you, can change over at a later time. By default, WardWatch uses categories to record the ward your patients reside in.

In the **Patients** screen, tap on **All** in the top right hand corner. This will drop down the current list of categories. Tap on **Patient Categories...** and you will be taken to the Patient Categories screen. From this screen you can delete the example categories

and add the categories you would prefer to use for your own patients. In the diagram below the example categories have been replaced by Ward names.



Ward Categories

If the category field is used for Ward (default) the other preferences should be as follows

- Patients screen Preferences: Show: Consultant, List By: Consultant, Surname
- Patient View Preferences: Line 2 Field 3: Consultant, Line 2 Field 1 either

In this case ignore the ward field in the patient details.

Consultant Categories

If the category field is used for the Consultant

- Patients screen Preferences: Show: Ward, List By: Ward, Bed/Room
- Patient View Preferences: Line 2 Field 3: Ward, Line 2 Field 1: either

In this case ignore the consultant field in the patient details.

Other Patient Categories

If you use the category field for another purpose, please email the authors of WardWatch so they can consider better ways of structuring the application.

Chapter

6

Backup and Recovery

Backup

Standard HotSync provides backup of the WardWatch databases. After performing a HotSync two database files will be present in your user's backup directory on your PC's hard disk. If you installed the Palm Desktop software in C:\Palm, look for your databases in the following location.

C:\Palm\\Backup

- WwPatientDB.pdb – this file contains your patient records in a binary format readable by your Palm Organizer.
- WwEventDB.pdb – this file contains all the events for all your patients again in a binary format readable by your Palm Organizer.

Note <userdir> = First six characters of the surname + the initial of the username for your Palm Organizer.

You should also backup the WardWatch directory

C:\Palm\\WardWatch

It is recommended that you take additional copies of these files periodically. For example you may want to keep a copy of these files at the end of each week before deleting patient records from your Palm Organizer. This will allow you to restore your database to any particular week.

HOTSYNC YOUR PALM ORGANIZER FREQUENTLY TO AVOID LOSS OF DATA.

Recovery

IMPORTANT. Before recovery of the databases for WardWatch.prc, it is advisable that you make a copy wwPatientDB.pdb and wwEventDB.pdb from the backup directory to another directory for safekeeping. The location of these files is described in the Backup section.

Recovery of the WardWatch database is from the last HotSync or from a specific HotSync. It is not possible to combine the records from multiple HotSync backups. (if

you took copies of your databases on two different dates, you cannot merge the databases together).

There are two ways you can recover the WardWatch records from your last HotSync.

Complete Palm Recovery

If you have had a hard reset of your Palm Organizer or flat batteries and have lost all data from your Palm device you can recover WardWatch and the databases as part of the standard HotSync. The first HotSync after complete loss of data will load WardWatch, its databases and the license key.

Recovery of the WardWatch Databases Only

If you have accidentally deleted WardWatch and its records, or somehow loss the WardWatch records recovery involves installing the patient and event database files describe above.

1. Make a backup of your wwPatientDB.pdb and wwEventDB.pdb files as described above.
2. Use the Palm Install Tool to install WardWatch.prc, wwPatientDB.pdb, and wwEventDB.pdb.
3. Tap on the WardWatch icon on your Palm Organizer, it will start with the Evaluation Expired form. Tap on Enter Registration Key and enter the key you received when you purchased WardWatch.

Note if you have not yet purchased WardWatch you will still have access to you patient records, but will be subjected to the Evaluation Expiry screen each time you start WardWatch.

4. After confirming the patient records are up to date, set the hotsync conduit to "Handheld overwrites Desktop" and perform a hotsync. Confirm that the hotsync conduit settings reverted to "Synchronise Files" in the hotsync conduit.
5. Reset your Preferences in the Patients screen and Patient View screens as desired.

WardWatch Desktop Import / Export Specification

Introduction

WardWatch 3.1 (WW) provides the facility to import and export patient and event data in a standard format. This format will not be the same as the format used to store WW data on Palm WW or Desktop WW but will be designed expressly for import/export.

Data import/export is carried out by the WW desktop application. This application will be able to be invoked on the command line or in an interactive GUI mode. *Only GUI import/export available in version 3.1. Command line will be available in later releases.*

Import/export data will be in a format that can be read and written by both spreadsheet applications such as MS Excel (individuals) and DBMS such as Oracle (enterprises).

A single import/export file holds both patient and event data.

File Type

The type for the import export will be .wwx and an icon will be associated with this allowing this to open WardWatch desktop on double click.

Comma Delimited File Format

WW import/export files will be in a comma delimited format. This means that:

- Fields are separated by the comma character (',')
- Records are separated by the new line ('\n') character
- Fields are enclosed by double quotation marks (eg, "my field text")

Notes

Import/export field data must not contain the double quotation mark. The single quotation mark (') should be used instead. If data which contains double quotation marks is exported from WW, all double quotation marks will be replaced by the single quotation mark

Fields which contain commas or new line characters must always be enclosed in double quotation marks. Fields that do not contain commas or new line characters may optionally be enclosed in double quotation marks.

The new line character used to separate records can be either Mac, Windows or Unix format. This means that it can be either '\n', '\n\r' or '\r\n'. All these new line character combinations will be treated in the same way.

as the first character of a newline where a new record is expected will indicate that this line is to be treated as a comment.

Record Types and Fields

There are two types of WW data records – event records and patient records. The first field of a patient record always contains a 'P' and the first field of an event record always contains an 'E'.

Header Record

The first line of the wwx file is a mandatory header line indicating the version of the wwx file. The first line must appear exactly as below.

```
#Version: 3.1
```

Comment Record

The second line of the wwx file is an option comment that will be displayed during the import process of a wwx file. It contains information related to the file. The comment may be one or more lines. If the comment is multiline it must be enclosed in double quotations. "". The comment line must contain #Comment: as the first characters if WardWatch desktop is required to display the comment.

```
#Comment: "Dear Dr. Phillips  
This file contains patient records from last nights round."
```

Patient Records

The patient record fields are as follows:

Field Name	Field Type	Field Notes
Type indicator	char(1)	Indicates if this record is a patient or an event. Always P for a patient record
<u>Local ID</u>	int	This ID is unique within the file. If present, it is used link events with patients. <i>It will be the ONLY primary key in version 3.1.</i>
MRN	text	Medical record number for the patient. If present, forms part of primary key for patient.
Surname	text	If present, forms part of primary key for patient.
First name	text	If present, forms part of primary key for patient.

Date of birth	date	If present, forms part of primary key for patient. (yyyy-mm-dd)
Sex	char(1)	M (male) or F (female)
Admit date	date	Must be later than 1/1/1970 (yyyy-mm-dd)
Bed	text	
Ward	text	
Consultant name	text	
GP/MD name	text	
Note	text	
Diagnosis	text	
Allergies	text	
Code	text	
Category	text	Patient category

Bold = mandatory Underline = primary key

Below is an example record (should all be on one line):

"P", "21341", "52-34-55-2", "Smith", "Miranda", "1981-4-20", "F", "2002-5-13", "7", "Northwest", "Fredricks", "Francis J", "bad lacerations", "Cellulitus", "shellfish", "FCE"

Event Records

The event record fields are as follows:

Field Name	Field Type	Field Notes
Type indicator	char(1)	Indicates if this record is a patient or an event. Always E for a event record
<u>Local ID of Patient</u>	int	This ID is unique within the file. If present, it is used link events with patients. <i>It will be the ONLY foreign key used in version 3.1.</i>
MRN	text	Medical record number for the patient. If present, forms part of primary and foreign key for event.
Surname	text	If present, forms part of primary and foreign key for event.
First name	text	If present, forms part of primary and foreign key for event.
Date of birth	date	If present, forms part of primary and foreign key for event.
Create date	date	Date that the event was created. Forms part of the primary key for the event. (yyyy-mm-dd)
Event date	date	Date that the event occurred. Forms part of the primary key for the event. (yyyy-mm-dd)
Event time	time	Time that the event occurred. Forms part of the primary key for the event. (h:m [24h])
Test	text	Forms part of the primary key for the event.
Result	text	
Note	text	
Status	text	Status of the event (eg, complete, start, end etc)

Type	text	Type of event (eg, pathology, medication etc)
------	------	---

Bold = mandatory Underline = foreign key to patient table

Below is an example record (should all be on one line):

```
"E", "21341", "52-34-55-2", "Smith", "Miranda", "1981-4-20", "2002-01-21", "2002-01-21", "15:25:42", "VitD", "27 (42-169)", "", "Abnormal", "Pathology"
```

Import Notes

In version 3.1, only new patient and event records will be created. It is not possible to update and existing patient or event record.

Export Notes

Patient records are placed before their event records
Any double quotes in field data are replaced by single quotes.
DOS format ("r\n" as new-line markers) will be used.
All fields will be placed within double quotes.

Sample Data

```
#Version: 3.1
#Comment: "This is the comment Line1
Line 2 of the comment!"
"E", "1", "0544512", "Andrew", "Anna", "1916-8-31", "F", "1999-5-24", "23", "3", "Baker", "Joseph874541877", "", "", "", "", "Ward 3"
"E", "1", "0544512", "Andrew", "Anna", "1916-8-31", "1999-6-2", "1999-6-2", "14:49", "Rehab", "", "", "In Progress", "Consult"
"E", "1", "0544512", "Andrew", "Anna", "1916-8-31", "1999-5-31", "1999-5-31", "0:0", "Euc", "131/3.2/91/31/7.5/", ".07/c2.42/p.76/m.66", "Normal", "Pathology"
"E", "1", "0544512", "Andrew", "Anna", "1916-8-31", "1999-5-28", "1999-5-28", "0:0", "Neurology", "Labyrinthitis", "", "Normal", "Consult"
"E", "1", "0544512", "Andrew", "Anna", "1916-8-31", "1999-5-27", "1999-5-27", "0:0", "Euc", "122/3.3/86/26/4.4/", "0.06/c2.24/p.62/m.65", "Abnormal", "Pathology"
"E", "1", "0544512", "Andrew", "Anna", "1916-8-31", "1999-5-27", "1999-5-27", "0:0", "Ct head", "Subarachnoid cyst", "", "Normal", "Radiology"
"E", "1", "0544512", "Andrew", "Anna", "1916-8-31", "1999-5-25", "1999-5-25", "0:0", "Echo", "AR", "", "Abnormal", "Radiology"
"E", "1", "0544512", "Andrew", "Anna", "1916-8-31", "1999-5-25", "1999-5-25", "0:0", "Digoxin level", "", "", "Normal", "Pathology"
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "F", "1999-6-2", "34", "3", "Carson", "Rodgers", "", "", "", "", "Unfiled"
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-3", "1999-6-3", "15:35", "Echo", "LU mod dil", "EF 15 mod - sev dysfuc", "Abnormal", "Radiology"
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-3", "1999-6-3", "13:35", "Abc", "7.41/33/63/21", "O2 sat93", "Abnormal", "Pathology"
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-3", "1999-6-3", "13:34", "AncA", "", "", "In Progress", "Pathology"
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-3", "1999-6-3", "13:34", "ds DNA", "", "", "In Progress", "Pathology"
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-3", "1999-6-3", "13:33", "Esr", "", "", "In Progress", "Pathology"
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-3", "1999-6-3", "13:33", "Rheumatoid factor", "", "", "In Progress", "Pathology"
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-3", "1999-6-3", "13:33", "ANA", "", "", "In Progress", "Pathology"
```

```
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-3", "1999-6-3", "13:32", "C  
rp", "4", "", "Normal", "Pathology"  
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-2", "1999-6-  
2", "11:26", "Physio", "Spirometry", "", "ToDo", "Consult"  
"E", "2", "0220345", "Evans", "Peta", "1922-5-28", "1999-6-2", "1999-6-  
2", "11:26", "Macrochantin", "", "", "End", "Medication"
```

Appendix

B

Evaluation Version

Evaluation Limitations

The evaluation version of WardWatch is the full version of WardWatch but with the limitations below imposed. These restrictions are removed by entering the Registration Key.

- After 30 days WardWatch on the Palm will have a 10 second delay during startup. This delay only occurs at startup and does not have any other effect. You may delete WardWatch and reinstall it to obtain a further 30 day evaluation. However, this also means deleting the patient records currently stored with WardWatch.
- You will not be able to create more than 15 patients. You can delete existing patients and create new ones, but whilst using the evaluation version you are restricted to 15 patients.
- You cannot beam, print or delete categories or multiple of patient records. You can beam or print a single patient, but not an entire category.
- Recovery of your patient database from backup will result in the immediate expiry of the evaluation version. You are able to recover your patient records, but will be subject to the 10 second delay at startup.

These restrictions are all removed once you have purchased WardWatch and entered the registration key.



Software User License Agreement

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You are expressly not permitted to distribute the Registration Key that is provided when purchasing the Software or may be provided by Torlesse Systems to you for promotion purposes. The Registration Key is used to fully enable the product ("Registered Software version") and may only be used on one(1) Palm Organizer and one (1) PC.

You may distribute the evaluation version of the Software WITHOUT the Registration Key on the condition that this License Agreement is distributed with the evaluation version of the Software.

The evaluation version of the software provides a 30 day trial. If you continue to use the Software after that period to track patients you are required to purchase a registration key. If you require a further 30 days usage for trial purposes only, you are permitted remove the Software and reinstall it.

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Torlesse Systems Pty Ltd, assumes no responsibility for any damages, loss, injury, or death caused by deletion or corruption of data caused by malfunction, or failure of the Software. Be sure to protect patient records against theft and backup records onto other media to protect against data loss.

SERVERABILITY: In the event that any provision of the License Agreement is found to be invalid, illegal, or unenforceable, the validity, legality and enforceability of any of the remaining provisions shall not in any way be affected or impaired and a valid, legal and enforceable provision of similar intent and economic impact shall be substituted therefore.

Torlesse Systems Pty Ltd (ACN 003 291 085)

YEAR 2000 COMPLIANCE: WardWatch is Y2K compliant. WardWatch uses the Palm OS for date calculations and hence is dependent on the compliance of the Palm OS. Palm Computing states that the Palm Organizers are Y2K compliant on the following web page.

<http://www.palm.com/custsupp/helpnotes/palmapps/year2000.html>