Quick Start Guide

for Palm OS® Devices

patientkeeper®

Mobile Clinical Results™

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Contents

About This Guide

This guide is intended for healthcare providers who use the PatientKeeper software application on a handheld device, or PDA, to access patient information from their institution's systems. Each institution selects the brand and model of PDA that they wish to use, so specific issues related to particular models cannot be addressed in this guide. Instead, this guide gives a general overview of features that are commonly found in *most* Palm OS® handheld models.

Features of Your Handheld Device

At initial implementation of the PatientKeeper system, your system administrator may issue the following items to each healthcare provider:

- ❖ Handheld device (PDA) with stylus
- ❖ Charging cradle
- ❖ AC power adaptor
- ❖ USB Cable
- ❖ Additional back-up battery (optional)
- ❖ Plastic or leather case, possibly with a belt clip (optional)
- ❖ Owner's manual for the handheld device (optional)
- ❖ Software CDs containing additional programs needed to connect to your home or office PC (optional)

Charging Your Battery

When you receive the handheld device, the battery may already be fully charged for first-time use. If it is not charged, you should use your charging cradle and AC power adaptor to charge the battery (you do not need to connect your cradle to a PC in order to simply charge your device). To charge your device:

1. Connect the AC adapter to the cradle (if it is not permanently attached), and plug the cord into an electrical outlet.

2. Place the cradle on a flat surface.

3. Insert the handheld device firmly into the cradle.

   Note: some cradles have a second slot for charging a back-up battery. If so, you may also insert an extra battery for charging.

4. Let the battery charge. Most handheld devices contain some type of LED light which indicates when a battery is fully charged. Consult your device's owner's manual for more information.

Recommendations

❖ *Get into the habit of charging your handheld device on a nightly basis, so that you never experience a dead battery when you arrive at the institution!*

❖ *If you have a spare battery, keep it charged, and keep it with you. A spare battery is of no use if it is not charged, or if you leave it at home or in a remote office.*

If Your Battery Dies...

If you forget to charge your battery and you run out of power, follow either of these procedures:

❖ Insert your handheld device into the cradle/AC adaptor to recharge.

❖ If your cradle/AC adapter is not available, but you have a back-up battery, remove the dead battery from the back of your device and replace it with the charged battery. (Some of the newer devices have an internal back-up battery that lasts up to 30 minutes, so that you do not lose your data while you switch out the main battery; consult your device's owner's manual for more information.)

If you are at the office or hospital, and do not have access to your charging cradle or a spare battery, check with your system administrator.

Your Storage Case and Stylus

Every handheld device comes equipped with a stylus for use with the touch screen. It is important not to use a pen or pencil tip with the touch screen, as this may damage the display. The device will also have a slot for storage of the stylus. Use the storage slot, as styluses are very easy to lose.

You may have also been issued a plastic or leather case for your device, as well as a belt clip. To protect the touch screen, please be sure to store your handheld device in its case when not in use.

Starting PatientKeeper

Tap on the PatientKeeper category to open it.
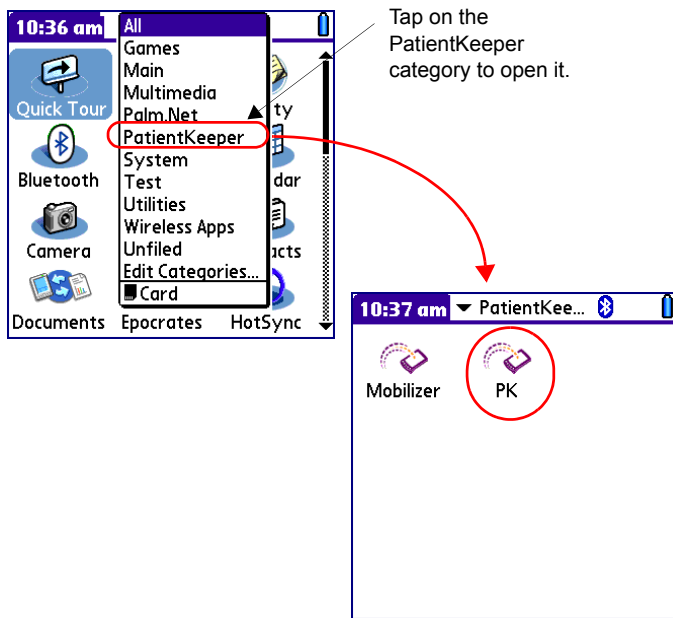
1. Tap on the categories drop-down list in the top right corner of the screen with your stylus and a list of category folders is displayed.

2. In most organizations, you will see a PatientKeeper category displayed on this list. Simply tap on the PatientKeeper category to view the applications within it.

3. Tap on the icon labeled **PK** with your stylus, and the PatientKeeper application starts.

   Note: If PatientKeeper does not have its own category on the category list, try looking in the Main or Unfiled categories. You should then be able to locate the **PK** icon and tap on it, as illustrated above.

🌀 Logging Into PatientKeeper

Tap here to toggle between uppercase and lowercase.

Tap here to select special characters.
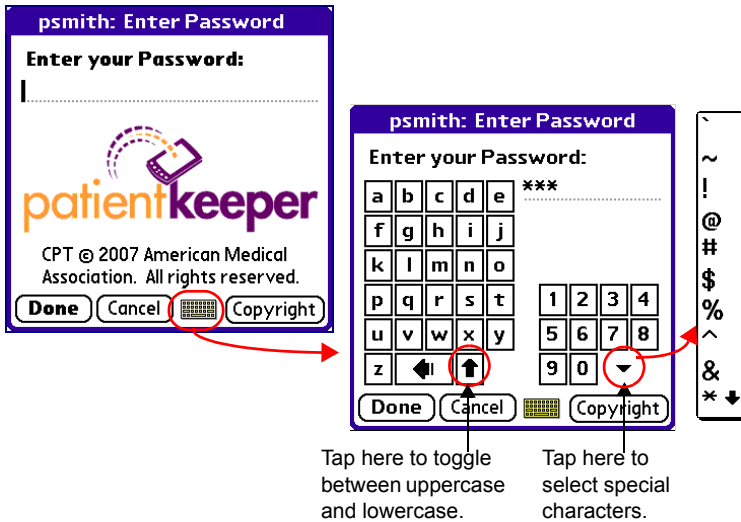
The PatientKeeper login window displays your username and requires you to enter a password before you can access any patient data. Your system administrator will assign you a password at the initial implementation of the system.

1. Tap on the keyboard icon to open the keypad, and then tap each character of your password. *Passwords are case sensitive*--use the **Up Arrow** key to toggle between uppercase and lowercase if necessary.

   Note: using graffiti to enter your password is not recommended.

2. Tap **Done** in the lower left corner of the screen when you are finished entering your password.

⚡ Syncing your Device

Access to patient data is available on your handheld device via a technology called *syncing*.

What is Syncing?

The syncing process transfers data between your handheld device and the PateintKeeper server. When you sync your device, the PatientKeeper system downloads your short patient list, along with the most recent visit, demographic, and clinical information for the patients on that list. The sync process also sends any new information you have posted on your handheld device back to the server.

Where do I Sync?

In most institutions, syncing takes place on the hospital or office premises. Depending on the type of connection method(s) your institution has chosen to implement, you may be required to go to a specific location within the facility.

In some cases, you may also be able to sync from home or from a remote office, assuming that you have a laptop or desktop PC that is able to connect to your institution's systems (usually via a VPN connection).

If your handheld device is in the class commonly referred to as *smart phones*, you may be able to sync using your cellular network connection. This means that you can sync from any location where you have a good cellular phone signal and data coverage.

Please refer to *Establishing a Network Connection* on page 11 for a more thorough explanation of synchronization methods.
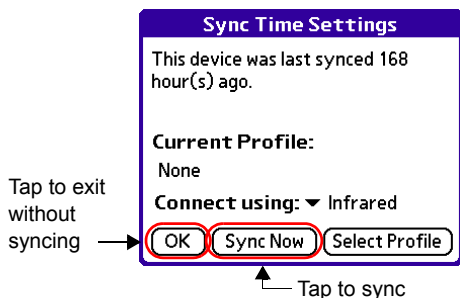
When do I Sync?

To obtain the most recent patient data, you should always sync at the beginning of each work day, prior to seeing patients or performing rounds. The PatientKeeper system will remind you to

sync if your data is "stale," and give you an opportunity to do so when you log in. You may re-sync at any time, and it is recommended that you do so several times a day, in order to obtain the most current data (new admissions, new demographic information, new lab or test results, etc.).

⬛ **Performing a Sync**

The first time you log into the PatientKeeper system on a given day, you will see a message indicating the number of hours since your last sync. This lets you know when the patient data on your handheld device is old, and indicates that you should refresh it by syncing your device with the database.

Sync Time Settings

This device was last synced 168 hour(s) ago.

Current Profile:
None

Connect using: ▼ Infrared

Tap to exit without syncing ──▶ (OK) (Sync Now) (Select Profile)

└── Tap to sync

You must have a connection to your institution's network in order to sync your device (see the section entitled *Establishing a Network Connection* on page 11 for further information). Assuming that such a connection has been made, you could now tap the **Sync Now** button at the bottom of this screen and retrieve the most current patient data. If you do not yet have a connection, you can tap **OK** in the lower left corner to exit this screen without syncing.

If you choose not to sync from this screen, you can initiate a sync at a later time from any of the main PatientKeeper screens. In the example below, we are viewing the Patient List main screen.

Data expiration control button

Tap to open Module drop-down list, then select Mobilizer.
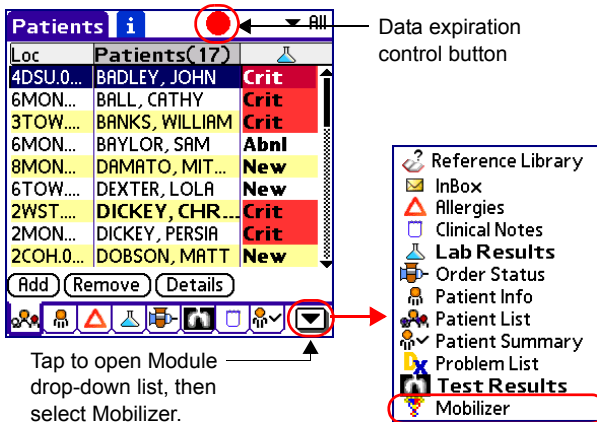
1. From here you may start a sync in one of two ways:

   ❖ Tap the data expiration control button.

   ❖ Tap on the **Down Arrow** to open the **Module** drop-down list, and then select the Mobilizer module.

   Depending on which option you chose, you will see one of these two screens. Both function in a similar manner, only the layout is slightly different.

Tap here to sync
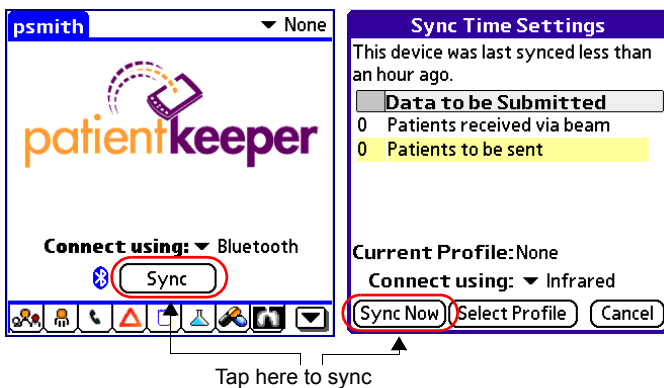
2. Select a connection method of Infrared, Wireless, Cradle, Bluetooth, or Other in the **Connect using** field. Once you

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select a connection method and sync, that method is selected by default for future syncs. (The section entitled *Establishing a Network Connection* on page 11 contains more information on this topic.)

3. Tap **Sync** or **Sync Now** to sync your device immediately.

⚡ Establishing a Network Connection

There are several ways to establish a connection for syncing. Each institution implements the system they feel best suits their needs. Your system administrator will let you know which of the methods below you should use.

- ❖ *Syncing Via Wireless Access Points* on page 11
- ❖ *Syncing Via Infrared Sync Stations* on page 11
- ❖ *Syncing Via your PC* on page 12
- ❖ *Syncing via Cellular Phone Network* on page 13
- ❖ *Syncing via Bluetooth* on page 13

Syncing Via Wireless Access Points

If your institution has implemented wireless access, an administrator will inform you in which areas of the hospital or office the access points are located. For example, there might be entire floors or sections of the facility that are considered to be accessible for wireless connection. As long as you are within the area specified by your system administrator, you can initiate a sync on your handheld device at any time.

1. Make sure you are within range of wireless access points.

2. Initiate a sync using any of the methods described in the previous section, *Performing a Sync* on page 8.

3. Select **Wireless** in the **Connect Using** field.

   Note: do not attempt to sync in an elevator or near a running microwave. The radio signals necessary for transmission are interrupted in these circumstances.

4. Tap the **Sync** or **Sync Now** button.

Syncing Via Infrared Sync Stations

An Infrared (IR) sync station is an actual physical device that is located on a desk or counter. You must hold your handheld device within six inches of the station in order to sync. The sync stations are usually located in common areas of your facility, where physicians are most likely to pass through.

1. Align your device's IR port (typically at the top of the device) with the sync station's IR port.

2. Initiate a sync using any of the methods described in the previous section, *Performing a Sync* on page 8.

3. Select **Infrared** in the **Connect Using** field.

4. Tap the **Sync** or **Sync Now** button.

Syncing Via your PC

It is possible to sync your Palm device by establishing a connection with your desktop or laptop PC. The PC can be located remotely (for example, in your office, or at home), but it must have access to the institution's network, typically through a VPN connection. There are two basic requirements in order for this to work properly:

❖ Your PC must have the standard Palm® Desktop Software that allows you to perform a HotSync between your Palm and your PC (to synchronize items such as appointments, memos, tasks, etc.)

❖ You must install Softick™, a third party software package that enables your Palm device to share your PC's connection to your institution's network servers.

Please contact your system administrator if you need assistance installing the above software. The remaining instructions assume that you have completed the installation of these two items.

1. Establish a connection between your PC and your Palm device, using your cradle and USB cable. You are now ready to use Softick to establish the network connection your Palm device needs to synchronize with the PatientKeeper server.

2. Initiate a sync using any of the methods described in the previous section, *Performing a Sync* on page 8.

3. Select **Cradle** in the **Connect Using** field.

4. Tap the **Sync** or **Sync Now** button.

Syncing via Cellular Phone Network

If your handheld device is a smart phone, and your organization has implemented syncing via cellular phone access, you can sync your device from almost any location, at any time.

1. Make sure your smart phone shows good signal strength and has data coverage. *How do you know if you have data coverage?* Try launching your internet browser to see if you can connect to an internet site like Google™.

2. Initiate a sync using any of the methods described in the previous section, *Performing a Sync* on page 8.

3. Select **Other** in the **Connect Using** field. The first time you sync, you will see a configuration screen where you must select your cellular phone carrier. Select a carrier and then tap **Done**.

    Note: once you have established your carrier, it remains selected for future syncs.

4. Tap the **Sync** or **Sync Now** button.

Syncing via Bluetooth

Bluetooth® is a short-range wireless communication standard that allows your handheld device to connect to the institution's information systems using Bluetooth network devices as access points. These devices can transmit between 30 and 300 feet. Your administrator will inform you in which areas of your facility the network devices are located. For example, there might be certain sections or floors that are considered to be accessible for Bluetooth connection. You may also be required to store a Bluetooth username and password on your handheld device in order to access these network devices. Your system administrator can help you with this step.

As long as you are within the area specified by your system administrator, and you have the correct Bluetooth username and password information, you can initiate a sync on your handheld device at any time.

To start a sync using Bluetooth, follow these steps:

1. Make sure you are within range of a Bluetooth network device.

2. Initiate a sync using any of the methods described in the previous section, *Performing a Sync* on page 8.

3. Select **Bluetooth** in the **Connect using** field, and then tap the **Sync** or **Sync Now** button.

    Note: If Bluetooth is currently turned off on your handheld device, you are prompted to turn it on, as illustrated here. Tap **OK** to turn it on.

4. The first time you initiate a Bluetooth sync, you are presented with the Palm Bluetooth Discovery Results. This screen is used to display all of the Bluetooth devices with which you are able to connect. To display only those access point devices that are currently within range, tap on the **Show**: drop-down list and select **Nearby devices**.
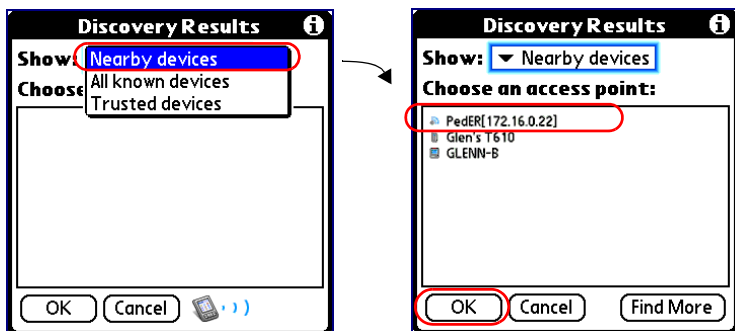
5. A list of all the access point devices that are within range and that can provide network service is displayed. Select an access point from the list and tap the **OK** button. The sync now proceeds.

> **Note**: The access point you selected is saved for future syncs; you will not be required to select it again as long as you remain within range.

Keep in mind that Bluetooth access points have a limited range. As you move about the facility, you may move out of the range of the last access point you used for syncing, and into the range of a new access point. In this case, you must connect to the new access point prior to syncing. If you find that you are moving in and out of range of different access points frequently, the easiest way to handle this situation is to scan for the closest access point just prior to each sync. To do so, tap the small Bluetooth icon on the Mobilizer screen, prior to tapping the **Sync** button in Step 3 above. This opens the Discovery Results screen (illustrated in Step 4), where you can scan for **Nearby devices**. After you select an access point and tap **OK**, the system returns to the Mobilizer screen where you can tap the **Sync** button to start the synchronization process.

🖐 Introduction to PatientKeeper

When your device has finished syncing, it immediately displays the Patient List module of the PatientKeeper Mobile Clinical Results™ application. The Patient List is the main access point for patient information. Many of the elements found on the Patient List screen can also be found on the main screens of the other PatientKeeper modules. These features behave in a similar manner across all of the modules, and are described below.

1. Column headings for sorting or resizing

2. Module tabs

8. Home button

4. Drop-down list of filters

5. Data expiration control

6. Scroll bar

3. Drop-down list of modules

7. Menu button
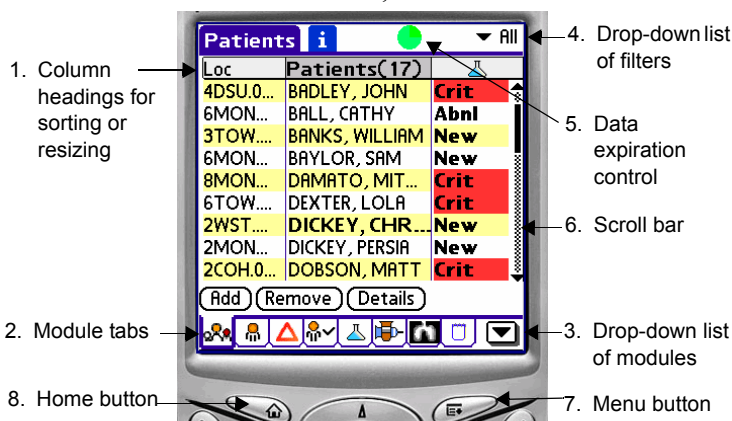
1. Column Headings for Sorting or Resizing
Most columns throughout PatientKeeper can be used to sort the displayed data. Simply tap the column heading once to sort the list in ascending order, and tap it again to sort in descending order. You can also make a column wider or narrower by tapping and holding on the column divider, and then dragging it to the left or right.

2. Module Tabs

Each module of patient information is represented by an icon on a tab. Tap on any tab and the corresponding module is opened for the currently selected patient.

| Patient List | Patient Info | Order Status | Medications | Test Results | Problem List | Inbox |

Allergies   Lab Results   Clinical Notes   Patient Summary   Vitals & I/O   Provider Directory
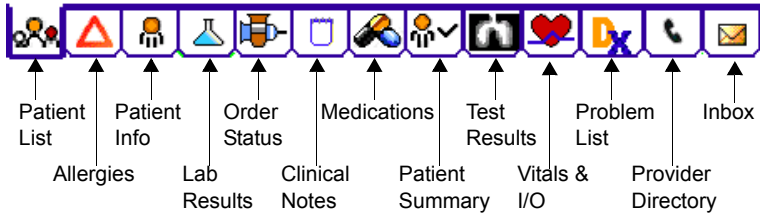
You can set your preference for which tabs are displayed by tapping the **Menu** button and then selecting **Manage Modules** from the **Configure** menu. Simply check the modules that you want to appear as module buttons. You can change the left-to-right *order* of the tabs by dragging and dropping them into the desired position on any main screen.

3. Drop-Down List of Modules

Tapping on the **Down Arrow** opens a Modules menu. Similar to the Module Tabs (item 2 above), selecting an item on this list allows you to easily switch to a different module, changing the display of data for the currently selected patient.
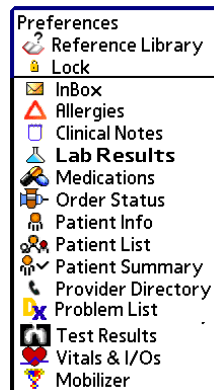
4. Drop-Down List of Filters

Filters are used to decrease the number of items that are currently displayed on the screen (patients, lab results, test results, etc.), allowing you to momentarily focus on a particular subset. Most screens have a pre-defined list of commonly used filters; simply tap on the drop-down list to select a filter. Select **All** from any filter list to revert back to the full list of items.

5. Data Expiration Control

This control appears at the top center of all PatientKeeper main screens, and is used to monitor the freshness of data on your handheld device. When your data is fresh, it appears as a green circle ● . As data becomes more stale, it changes color from green to red ●, reminding you that it is time to sync your device. If you have entered or changed any data on your handheld device, and therefore have information that needs to be submitted to the server, a lightning bolt icon overlays the data expiration control ⚡ ⚡. You may tap the data expiration control at any time to start a sync.

6. Scroll Bar

When the current display is longer than one page, use the scroll bar to view the entries at the bottom. Similar to your PC, tap and hold on the bar as you drag it down.

7. Menu Button

Tapping the **Menu** button displays menu items at the top of the screen, allowing you to perform various tasks. The actual menu items vary, depending on

the data that is currently displayed, and the options that your organization has chosen to implement. This example illustrates the menu items available in the Patient List module.

8. Home Button

Tap the **Home** button to close the PatientKeeper application. This does not lock the application; you can restart it without re-entering your password. To lock the application and prevent others from using your device to access patient data, tap the **Down Arrow** to open the Modules menu and select **Lock**.

9. Drop-Down List of Patients

Although not available in the Patient List module, *almost every other module* displays the currently selected patient at the top of the screen. Using the Patient Info module as an example below,

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you can tap on the patient name heading to open a drop-down list
of your patients. You can now select a different patient, while still
viewing the Patient Info module.
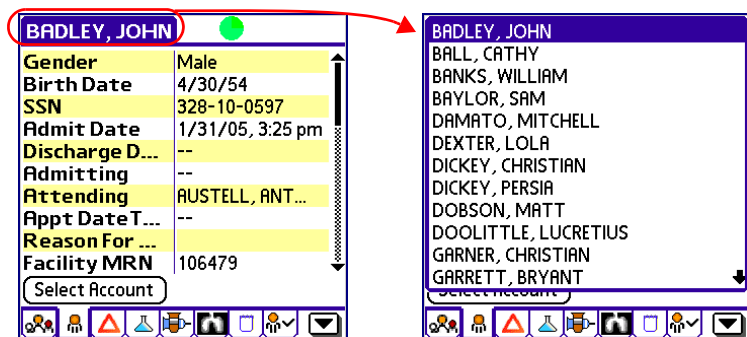
Patient List Module

The first window that is displayed after syncing is the Patient List window. The Patient List is often referred to as your *short list*, as it contains only those patients who have a recent inpatient or outpatient visit, and with whom you have some type of active relationship (you are the admitting, attending, or scheduled provider, for example). The system might also be configured to add patients with whom you have no relationship to your short list, via provider groups or data populators.
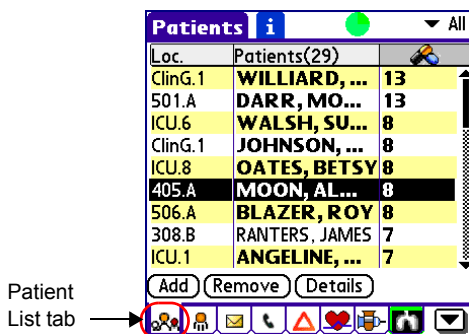
■ The **Patients** column heading also displays the number of patients on your short list.

■ The **Patient Name** is bolded if the patient has new data that you have not yet viewed.

■ To view additional data about any patient on your list, simply tap on a name to select it, and then tap on any module tab (Patient Info, Lab Results, etc.)

■ The third column of this display is dynamic; you can change what is displayed in it at any time, as well as sort by that item (see *Dynamic Third Column* on page 21).

■ You can add or remove patients from your short list at any time, using the buttons at the bottom of the screen.

Dynamic Third Column

The third column of the Patient List is dynamic, in that you can change it to display any one of a variety of data items. Simply tap the third column heading to view a drop-down list of possible display items. Since each institution selects the data items they wish to use in the third column, your choices may not be the same as those illustrated here.

Choices for dynamic third column
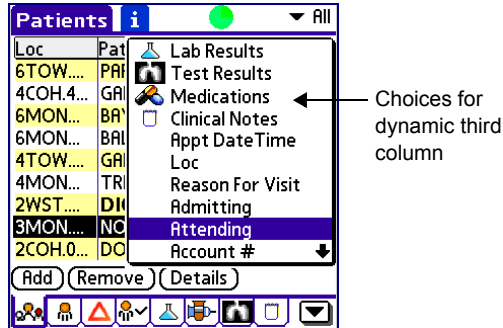
- The first time you select a third column item, the system sorts your patient list in *ascending order* by that item.

- If you tap on the third column heading and select *the same item a second time*, the system reverse sorts the list in *descending order* by that item.

- If you select Lab Results as the third column, it shows the status of the lab results for each of the patients on your short list. The status enables you to quickly identify those patients who have abnormal, critical, or new lab results that you have not yet viewed. Furthermore, the lab results third column is *interactive*. Tapping on the lab result status opens the lab

results main screen for that patient, so that you can immediately view the results in question.

■ If you select Test Results, Medications, or Clinical Notes as the third column, the system displays the *number of items* (results, medication orders, or notes) that are available for each patient. Again, tapping on the number opens the main screen for that module.

⚙ Filtering the Patient List

You can filter the Patient List to display only those patients meeting certain criteria. Filters allow you to temporarily focus on a particular subset of patients, such as those in a particular nursing unit. You can always revert back to your full patient list by selecting **All** from the filter list. To filter the Patient List, do as follows:

1.   Tap the **Down Arrow** ▼ in the upper right corner of the screen.

2.   From the list that appears, select the filter you wish to use. For example, you might select the **MON** filter, to view only those patients in the MON nursing unit.
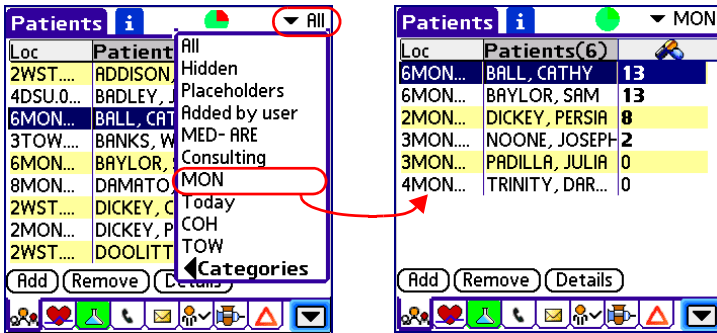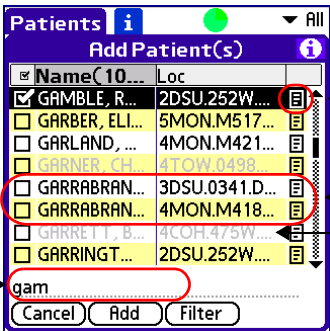
The list of filters for your Patient List may differ from the ones shown in our example. The standard filters that appear on every system include the following:

All	Shows every non-hidden patient on your list.
Hidden	Shows only those patients that you have hidden.
Placeholders	This filter is not applicable to Mobile Clinical Results.
Added by user	Shows only those patients that you have added to your short list yourself, from the organization's master list of patients (see *Adding a Patient* on page 24).
Personal	You can define your own personal filters on the web application (or ask an administrator to create one for you).
Stock	Stock filters are defined by administrators for all users in a specific department. They might include, for example, filters by location, type of visit, or visit date.

⚒ **Adding a Patient**

You can easily add a patient to your short list at any time. You might do this if another provider asked you to care for their patient. It is important to note that a given patient can have multiple encounters, or visits, at any institution. Each patient displayed in the main view of your patient list is actually a patient/encounter combination, commonly referred to as an *account*.

1. Tap on the **Add** button at the bottom of the Patient List window. The system displays an alphabetical list of all of the patients in the institution, often referred to as the *long list*.

Tap the **Details** icon to view the details of the patient and encounter.

This patient has more than one encounter.

Use graffiti or the keypad to enter the first few letters.

The light grey patients are those who are already on your patient list.

2. You may use the scroll bar to find the patient, or use letter completion. To use letter completion, enter the first few letters of the patient's last name using graffiti or your keypad, and the system jumps to patients whose names begin with those letters.

3. Tap on the box next to the patient's name to place a check in it. You can select as many patients as you want on this screen.

4. Tap **Add** at the bottom of the screen to select the patient(s).

   Note: you can exit this screen without selecting anyone by tapping **Cancel** at the bottom of the screen.

5. Select the relationship that best describes your relationship to the patient(s), and then tap **OK**.

Tap on the field to open a drop-down list of relationships.

Your patient list appears, with the new patient(s) included on it. Please note that you must sync your device to obtain detailed clinical data for the newly added patient(s).

⚙ Removing a Patient

You can easily remove patient accounts from your patient list to keep a short, usable list of active patients.

1. Tap on the line containing the patient's name to select it.

2. Tap the **Remove** button at the bottom of the screen. The system displays the screen below.

Current patient selected for removal.

Tap **OK** to remove only the currently selected patient.

Tap **More** to select more patients for removal.
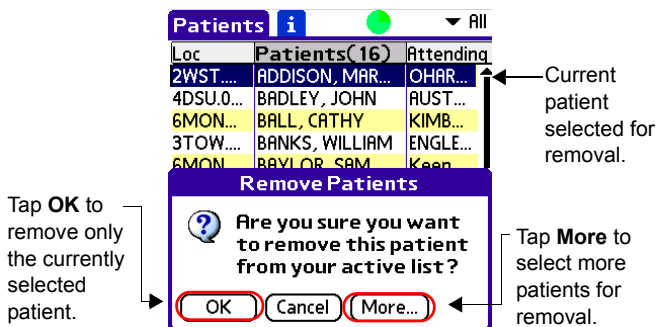
3. Tap **OK** to remove only the one patient you have selected on your patient list. Tap **More...** to view another screen where you can select more patients to remove from your short list.

4. Specify when you would like the patient removed from your list. Tap **Now** to remove the patient immediately, or tap **At Sync** to remove him the next time you sync your device.
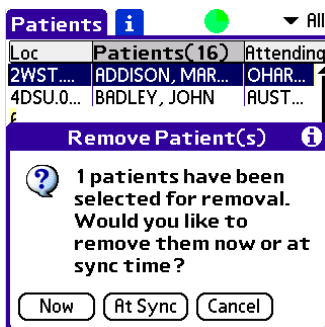
Viewing Details for a Patient

To view or edit encounter information for a patient on your short patient list, tap on the patient's row, and then tap on the **Details** button. The screen below appears:

From this option you can also:

- Select a different **Account**, if the patient has more than one encounter.

- Change your relationship to the patient.

- Remove the patient from your list.

⚙ Patients Menu

The **Patients** menu is accessed by tapping on the **Menu**
button near the bottom of your handheld device, while viewing
the main Patient List screen.

```
┌─────────────────────────────┐
│ Patients Configure About    │
├─────────────────────────────┤
│ Add...                  ✓A  │
│ Remove...               ✓R  │
├─────────────────────────────┤
│ Un/Hide Selection  ✓H       │
├─────────────────────────────┤
│ Send Patient(s)...   ✓S     │
└─────────────────────────────┘
```
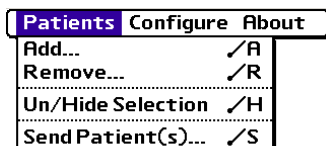
The items on this menu allow you to perform the following:

■ **Add...** add a patient to your short list from the institution's
long list (described in *Adding a Patient* on page 24)

■ **Remove...** remove a patient from your list (described in
Removing a Patient on page 26)

■ **Un/Hide Selection**: hide or un-hide a patient on your patient
list. This option temporarily takes the patient out of your
view, while still leaving him on your patient list. You must
use the **Hidden** filter on the Patient List to view the patients
you have hidden.

■ **Send Patient(s)...**: send a patient on your list to another
provider's list. This option is described more fully later in
this guide (see *Sending a Patient to Another Provider* on
page 29).

⚙ Sending a Patient to Another Provider

You can send a patient from your list to another provider, thereby adding the patient to their list. You might do this when consulting another physician for their opinion, or when passing care of a patient to another provider.

1. Tap on the row containing the patient's name to select it.

2. Tap on the **Menu** 📋 button, and then select **Send Patient(s)...** from the **Patients** menu.
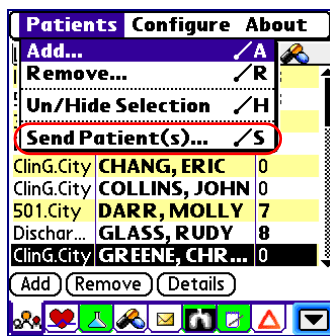
Patient selected to send.

3. Determine whether you want to send *more* than just the currently selected patient, as well as *how* you want to send the patient(s).
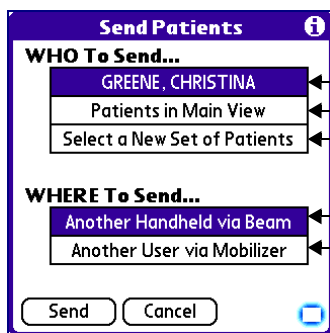
The currently selected patient.
All patients on your Patient List.
Select a specific group of patients.

You can beam the patient info immediately, or send it via your next sync.

If the provider to whom you wish to send the patient is standing nearby, you can align your infrared ports and beam the patient immediately. If the provider is not available, you can select his/her name from a list and send the patient next time you sync your device.

🛎 **Patient Info Module**

The Patient Info module displays basic demographic and encounter information about any person on your patient list. Depending on how your system is configured, this includes information such as date of birth, gender, admission date, appointment date, reason for visit, and other basic information.

If a patient has had more than one encounter in the institution's system, different demographic information may exist related to the various encounters. The Patient Info module lets you view the information from each of these encounters.

1. On the main Patient List screen, tap the row containing the patient's name to select it.

2. Tap on the **Patient Info** tab. The system displays the Patient Info main screen.

Patient Info tab.

❖ If any item extends beyond view, you can tap on it to view a screen containing only that item.

❖ To view visit information for a different account (encounter), tap on the **Select Account** button. On the resulting screen you can change the **Account** number to view visit information related to that account.

✉ Inbox Module

The Inbox module allows you to view text-based messages and alerts on your handheld. The kinds of messages you see depend on how your system is configured. For example, you might see:

❖ System notices, such as upgrade notices, or scheduled down time

❖ Notices that another provider has sent you a patient

❖ Alerts for abnormal or critical lab results

Some modules display an alert message when you open the module. You must take some action, such as viewing the alert, dismissing the alert, or setting a specific amount of time to wait before receiving the alert again (**Snooze**) while continuing on to the module that generated the alert.
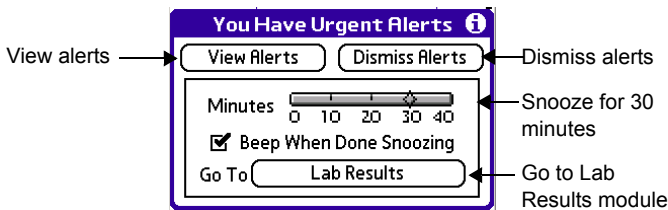
To go to the Inbox main screen, you can either tap on the **View Alerts** button from the alert message (illustrated above), tap the **Inbox** module tab, or choose Inbox from the **Modules** menu.
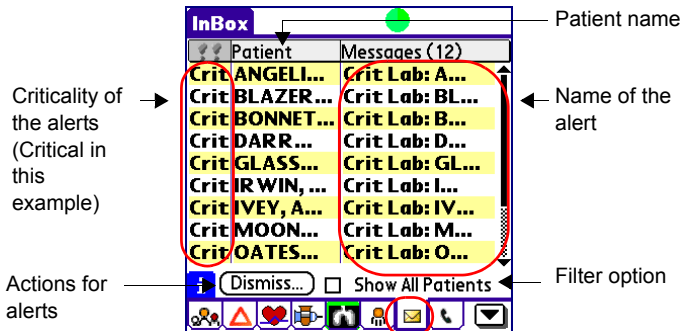
Tap on any alert to view its details:

Tap here to Acknowledge the alert. Once done, the alert is removed from the Inbox.

Tap here keep the alert in the Inbox.

Tap here to open the Lab Results module and view the result that generated the alert.
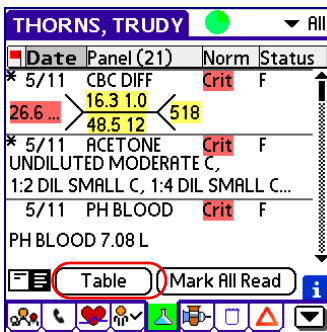
⚗ Lab Results Module

The Lab Results module organizes lab results into *panels* and *components*. A panel can consist of a single component, or a group of components that are performed together. For example, a Prothrombin Time (PT) panel might consist of that single component, while a Complete Blood Count (CBC) panel might consist of several components.

The system presents lab results data in a variety of formats, so you can quickly find the information you need, as well as compare data over time. There are two main views of lab results: Panel view and Table view. These two views organize the panels and components differently. Panel view is organized in a list format; it shows you a vertical listing of *panels*, with or without additional details about the components within them. Table view uses a table, or grid, format. It lists *components* on the vertical axis, with the dates of the individual occurrences of those components along the horizontal axis. The table cells contain the results of the components on each occurrence date.
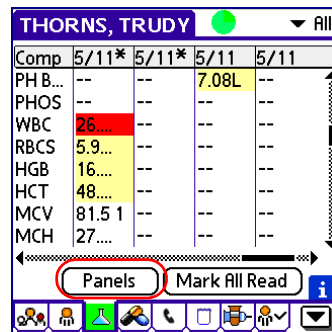
You can toggle between Panel view and Table view using the buttons located at the bottom of the lab results main screen. Use the **Panels** button to switch to Panel view. Use the **Table** button to switch to Table view.

Panel View	Table View

Tap buttons to toggle between views.

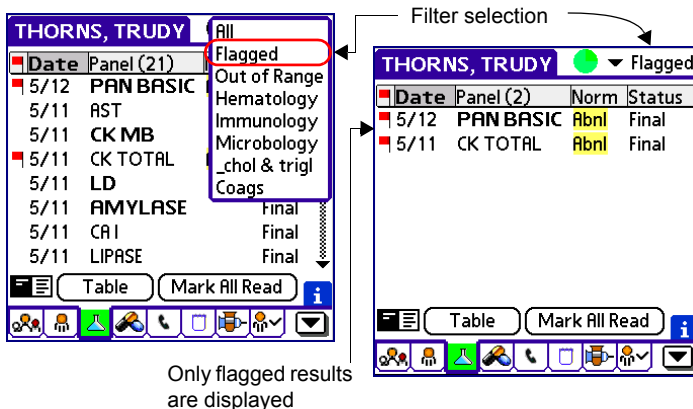■ Tap on any panel or component to see detailed information.

- The Lab Results tab is highlighted with a green background ( ) if the patient has any unviewed results.

- The **Panel Name**, **Component Name**, or lab result **value** is bold if you have not yet viewed the result. Once you have viewed the result, the item turns to standard text.

- The **Norm** column (Panel view) and numeric values (Table view) indicate whether the result is normal or abnormal. The value is highlighted in red if critical ( ), yellow if abnormal ( ).

- You can use **Importance Flags** ( ) to mark any results that you think are of special note, or that require further review. You can then filter the lab results on both Panel and Table view to see only those that you have marked as important. Importance flags are visible only to you; other providers cannot see them.

- You can use **Annotations** to enter personal notes on a particular lab result. If you have entered an annotation on a result, it is indicated by an asterisk (*).

Filtering Lab Results

You may filter the list of lab results from both Table view and Panel view. When you select an item from the filter list, the current view, whether Table or Panel, shows only those lab results that meet the filter criteria:

All	Shows all of the patient's lab results that are currently available on your handheld device.
Flagged	Shows only those lab results that you have marked with an importance flag. See *Annotations and Importance Flags* on page 42.
Out of Range	Shows only those lab results that are outside of the normal range. These would typically have a status of either Abnormal or Critical.
Categories	Select a category to see the results of all of the panels that fall within that category. If your institution uses them, categories are broad groupings of lab panels that are defined by the institution. For example, you might see Cardiac, Chemistry, or Endocrine.
Snapshots	Select a snapshot item to view a custom grouping of specific components and their results. For example, you might want to see all tests related to coagulation together (such as an INR, PTT, and PT), even though they might not have been administered in a group as a panel, or given on the same date. Your system administrator can set up popular departmental snapshots, or you can also create your own personal snapshots of favorite groupings (for instructions, please refer to the *PatientKeeper Physician Portal User's Guide)*.

To filter the lab results, tap the **Filter** drop-down list in the upper right corner of the screen and select your filter criteria.


Filter selection

Only flagged results are displayed

🧪 Marking Lab Results as Read

When a patient has new lab results, the background of the Lab Results tab is green, and each new result is displayed in **bold** font. When you tap on a lab result from the main screen to view it, the font style of that item changes from bold to regular text to indicate its "viewed" status. Once you have viewed *all* of the patient's new lab results, the background of the Lab Results tab also turns from green (🧪) to white (🧪).

To quickly mark all of a patient's results as viewed, you can tap on the **Mark All Read** button at the bottom of the main Panel view or Table view screen. You might do this if, for example, you had already seen the patient's results in his chart.

Main screen with both viewed and unviewed results.

All results now viewed.
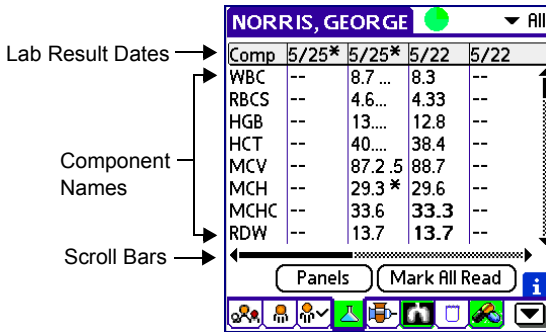
Tap here

⚗ **Using Table View**

The Table view is a very granular view of the lab results data. Information is displayed at the component level, rather than at the panel level. The Table view uses a table, or grid, format. It lists component names in the left-most column, with the dates of the individual occurrences of those components along the top row. The table cells contain the results of the lab components on each occurrence date.
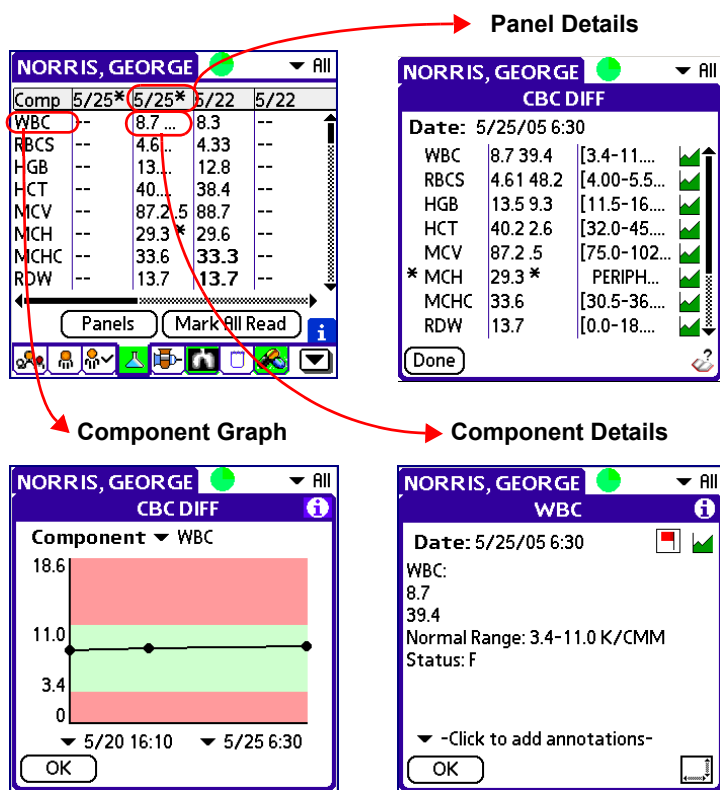

In the left-most column, components within a panel are grouped together, and the list is then sorted alphabetically by panel name (though the panel name is not displayed). Along the top row, the most recent lab result dates are listed first (on the left), with older dates continuing on to the right. Use the horizontal scroll bar at the bottom of the table to scroll forward and backward through the dates.

You can change the display in three manners:

Panel Details

Component Graph

Component Details

- Tap on a column heading date to open the Panel Details screen and view the details of all of the components that were performed as part of a panel on that specific date.

- Tap on a component name in the left-most column to view a graph containing all of the values for that type of component (see *Graphing Lab Results* on page 41 for further information on graphs).

- Tap on table cell containing a lab result value to open the Component Details screen for that one specific component.

⚗ Using Panel View

The Panel view has two options for display: the Detail view and the Summary view. The Detail view (the default) shows the panel name, the individual components within the panel, the results for each component, the normalcy status, and the completion status. The Detail view also shows you a diagram for panels such as CBC and Chem 7. The Summary view shows only a list of panel names, the normalcy status, and the completion status.

Tap on the Detail icon (🔲) to display the Detail view, or the Summary icon (🔲) to display the Summary view.
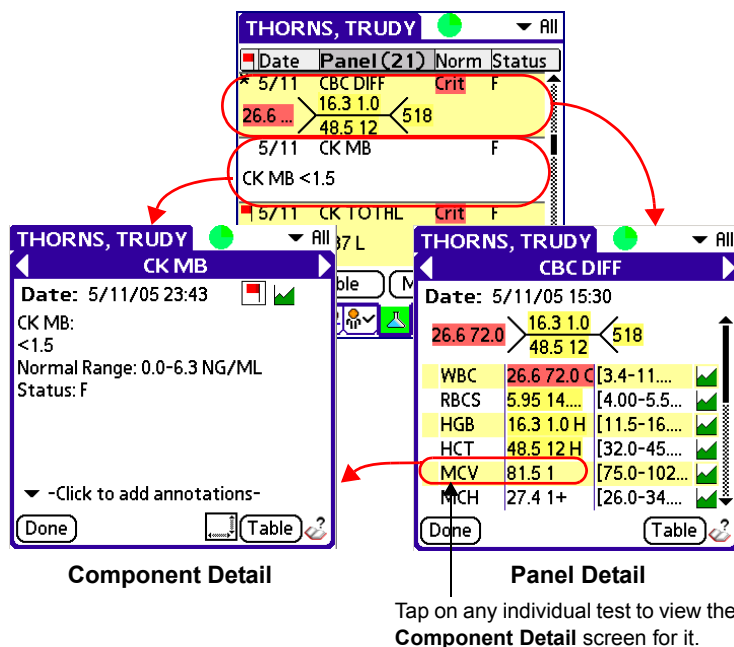
Detail Panel View   **Summary Panel View**

Tap on these icons to toggle between Summary and Detail views.

To view additional information for a panel of components, tap on a panel from the main Panel view screen (either Summary or Detail).


Component Detail   **Panel Detail**

Tap on any individual test to view the **Component Detail** screen for it.

■ Panels containing only one component display the **Component Detail** screen (above left). This screen shows you the result, the normal range for the component, the completion status, and any annotations you have entered.

■ Panels containing a battery of components show the **Panel Detail** screen (above right). This screen shows you each component in the panel, the results, and the normal range.

■ You can tap on the **Table** button on either of these detail screens (**Panel Detail** or **Component Detail**) to view that specific panel or component, along with all other instances of that panel or component, in a table format.

⚗ **Graphing Lab Results**

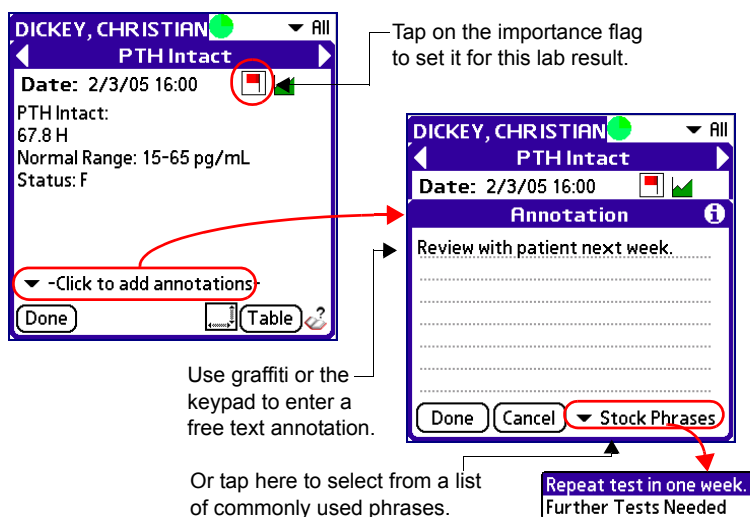You can easily graph lab results from a variety of locations.

- From Table view, you can click on a component name in the left column to display a graphical representation of all of that component's results.

- From the **Component Detail** or the **Panel Detail** screen, you can tap on the Graph icon(📈) next to the component result in question.

Tap on a data point to see specific details.
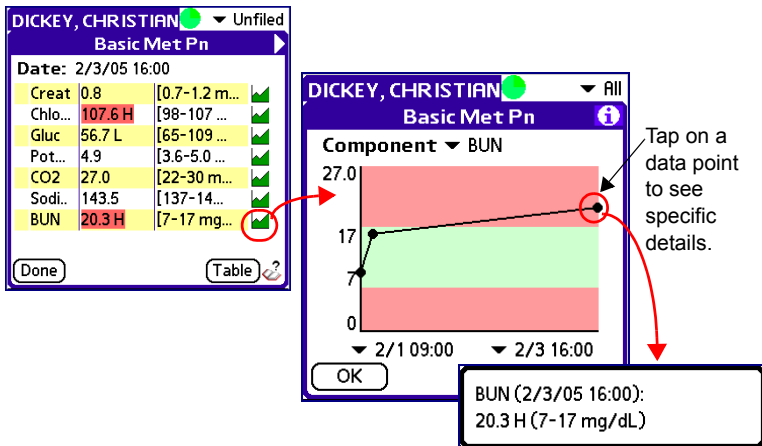
- The system graphs all available data for the component. In the example above, the lab was resulted three times, so all three results are included on the graph.

- Tap on any data point on the graph to view specific details about it.

- The green band on the graph represents the normal range for the result, while the red areas represent the abnormal range.

Annotations and Importance Flags

On the **Component Detail** screen of any lab result, you can enter annotations or personal notes. You can also mark the lab result with an **Importance Flag**.

Tap on the importance flag
to set it for this lab result.

Use graffiti or the
keypad to enter a
free text annotation.

Or tap here to select from a list
of commonly used phrases.

■ Tap on the flag icon (■) in the upper right corner to mark the lab result with an **Importance Flag**.

■ The text of the result is automatically wrapped for easier reading. However, for those results that would normally be displayed in a table or column format, you can turn off wrapping by tapping the **Word Wrap** icon (▭), so that you can view the information in its original format.

■ Tap on **Click to add annotations** to open a screen where you can enter comments:

  ❖ Use graffiti or the keypad to enter a free text comment.

  ❖ Tap on **Stock Phrases** to select from a list of phrases that are commonly used by most providers.

⊞ Test Results Module

The Test Results module allows you to view text-based clinical results for each patient. The kinds of results available for viewing depend on how your system is configured. Typically, institutions use the Test Results module to display the results of radiology, pathology, microbiology, or other test types that involve clinical interpretation.
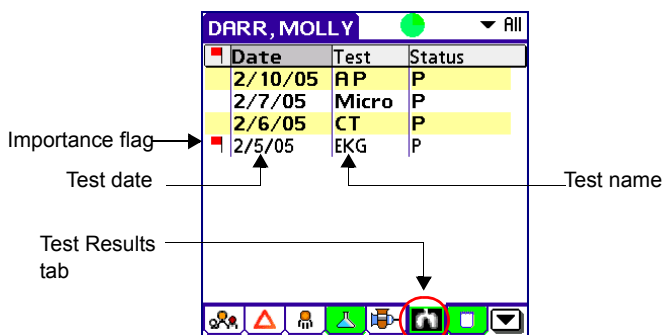
■ Tap on any test result to see detailed information.

■ The Test Results tab is highlighted with a green background (⊞) if the patient has any unviewed results.

■ The **Test Name** is bold if you have not yet viewed the result. Once you have viewed the result, the name turns to standard text.

■ You can use **Importance Flags** (◀) to mark any results that you think are of special note, or that require further review. You can then filter the test results on the main Test Results screen to see only those that you have marked as important. Importance flags are visible only to you; other providers cannot see them.

Viewing the Details of a Test Result

Tap on a test result from the main Test Results screen to see the details of the result.

Enter a word here, then tap the Magnifying Glass.

The word is found.

Tap here to set Importance Flag.
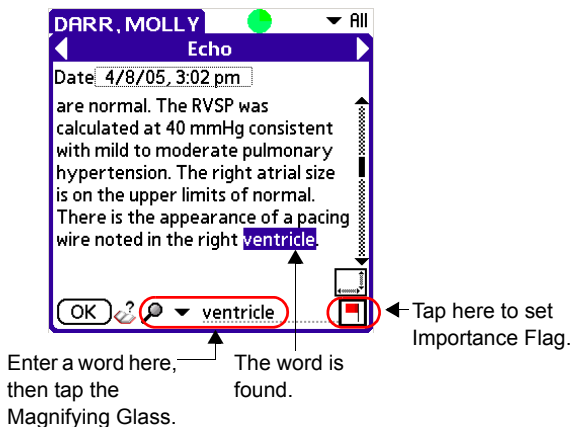
- Tap on the flag icon ( ) in the lower right corner to mark the test result with an **Importance Flag**.

- The text of the result is automatically wrapped for easier reading. However, for those results that would normally be displayed in a table or column format, you can turn off wrapping by tapping the **Word Wrap** icon ( ), so that you can view the information in its original format.

- If the text is extensive, you can search for specific words or phrases. Use graffiti or the keypad to enter the word or phrase on the dotted line at the bottom of the screen. Next, tap on the **Magnifying Glass** icon ( ). Each time you tap the **Magnifying Glass**, the system finds the next instance of the word or phrase you entered.

🗒 **Clinical Notes Module**

The Clinical Notes module allows you to view text-based clinical notes for each patient. The kinds of notes available for viewing depend on how your system is configured. Typically, you would be able to view clinical notes such as operative notes, procedural notes, progress notes, or consult notes.
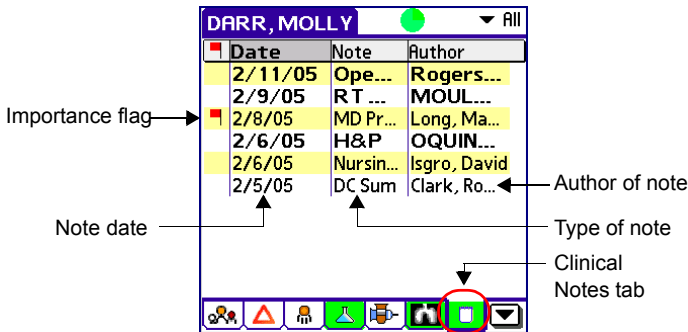

- Tap on any clinical note to see the full text of the note.

- The Clinical Notes tab is highlighted with a green background ( ) if the patient has any unviewed notes.

- The **Clinical Note Name** is bold if you have not yet viewed it. Once viewed, the name turns to standard text.

- You can use **Importance Flags** ( ) to mark any notes that you think are of special significance, or that require further review. You can then filter the notes on the main Clinical Notes screen to see only those that you have marked as important. Importance flags are visible only to you; other providers cannot see them.

⬜ **Viewing the Details of a Clinical Note**

Tap on a note from the main Clinical Notes screen to see the full text of the note.

Tap here to set Importance Flag.

Enter a word here, then tap the Magnifying Glass.
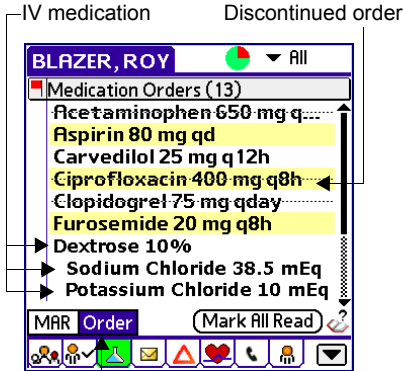
The word is found.
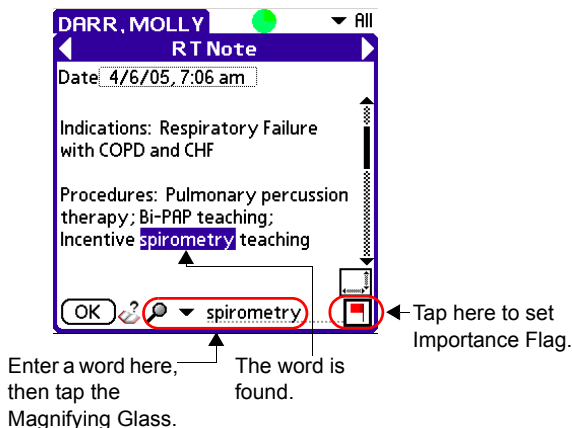
- Tap on the flag icon (⬛) in the lower right corner to mark the clinical note with an **Importance Flag**.

- The text of the note is automatically wrapped for easier reading. However, for those notes that would normally be displayed in a table or column format, you can turn off wrapping by tapping the **Word Wrap** icon (⬜), so that you can view the information in its original format.

- If the text is extensive, you can search for specific words or phrases. Use graffiti or the keypad to enter the word or phrase on the dotted line at the bottom of the screen. Next, tap on the **Magnifying Glass** icon (🔍). Each time you tap the **Magnifying Glass**, the system finds the next instance of the word or phrase you entered.
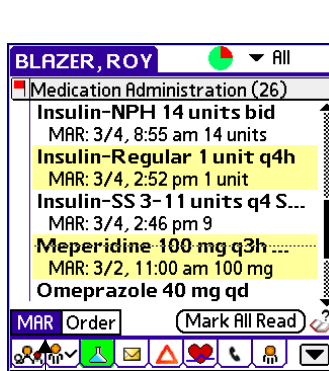
🩺 Medications Module

The Medications module displays the selected patient's medication orders. There are two views: Order view and MAR view. Order view shows you the medication name, dose/unit, route, and frequency. MAR view shows the same information, along with the most recent *Medication Administration Record* (*MAR*) data for the patient, if MAR data is available in your source medication system.

Order View   **MAR View**

IV medication   Discontinued order

Tap here to toggle between views

- Tap on any medication order to see the details of the order.

- The Medications tab is highlighted with a green background (🩺) if the patient has any unviewed medication orders and those specific **Medications** that you have not yet viewed are in bold text. Once viewed, the medication order name turns to standard text.

- Discontinued orders are displayed with strike-through text.

- Intravenous orders are indicated by a base medication with additive and/or diluent medications indented underneath it.

- You can use **Importance Flags** (🚩) to mark any medication orders that you think are of special significance. You can then filter the medications on both Order and MAR view to see
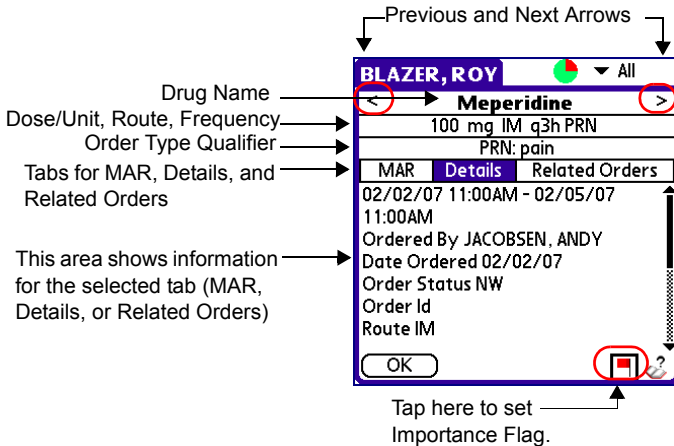
only those that you have marked as important. Importance flags are visible only to you; other providers cannot see them.

- Use the filter drop-down list to display only those medication types in which you are interested:

All	All medications
Active	Medications that are currently being administered. This includes all medications that don't have an end date, or that have an end date later than the current date/time.
Scheduled	Medications that are given, generally repeatedly, at a regular time interval.
PRN	Only medications that are to be given on an *as needed* basis.
Conditional	Only medications with a dosing schedule based on some piece of clinical data or a clinical judgement (for example, blood glucose level for insulin).
Important	Only medications that you have flagged as important.
Alternate	Only medication orders in which two medications, or differing doses of the same medication, are given sequentially.
Discontinued, or **Status: D/C**, or **Status: Discontinued**	Depending on your source medication ordering system, any of these three filter names may be used to signify medications that are no longer being actively administered.
Status: ABC	Depending on your source medication ordering system, additional filters may be available, each of which uses the format **Status**: followed by an abbreviation such as **CM** for completed, or **DC** for discontinued.

Viewing the Details of a Medication Order

Tap on a medication order from either the Order or MAR view to see the details of the order.

Previous and Next Arrows

Drug Name
Dose/Unit, Route, Frequency
Order Type Qualifier
Tabs for MAR, Details, and Related Orders

This area shows information for the selected tab (MAR, Details, or Related Orders)

BLAZER, ROY ▼ All

< **Meperidine** >
100 mg IM q3h PRN
PRN: pain

| MAR | Details | Related Orders |

02/02/07 11:00AM - 02/05/07 11:00AM
Ordered By JACOBSEN, ANDY
Date Ordered 02/02/07
Order Status NW
Order Id
Route IM

OK

Tap here to set Importance Flag.

- Tap on the **Previous** or **Next** arrows to scroll through the patient's medication orders sequentially.

- Tap on the flag icon ( ) to mark the medication order with an **Importance Flag**.

- Tap the **Details** tab to see additional details about the medication order, such as stop and start times, ordering physician, etc.

- Tap the **MAR** tab to see a full history of administrations for this medication order (this tab is present only if there is at least one administration record for the order).

- Tap the **Related Orders** tab to see any Linked ( ) or Split ( ) orders associated with this medication (this tab is present only if there are linked or split medications associated with the selected order). You can then tap on the linked or split order in the details section to see information about the linked or split medication.

Patient Summary Module

The Patient Summary module allows you to quickly view a summarized list of all new clinical data for a specific patient, or for all of the patients on your short list. It provides a quick interface to the lab results, test results, medications, and clinical notes that you have not yet viewed on your handheld device.
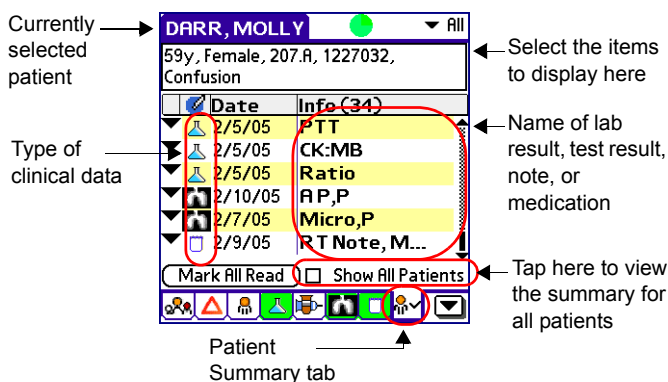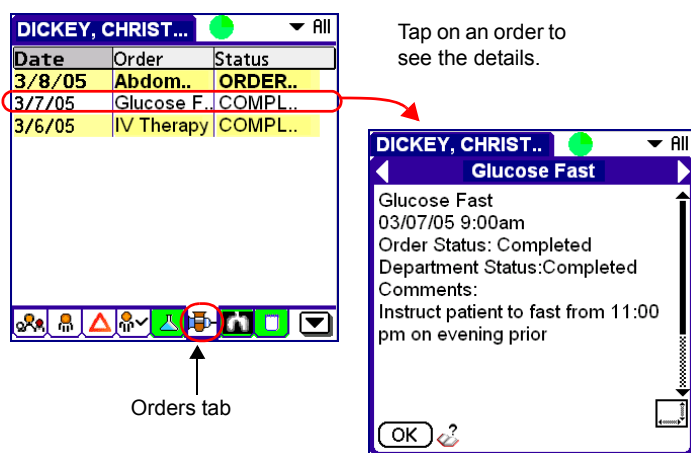

- The icon column identifies the type of data (Lab Results, Test Results, Medications, or Clinical Notes).

- You can choose the demographic items you want to display in the area just below the patient name. To set your preferences, tap the **Menu** button and then select **Demographics** from the **Prefs** menu.

- Tap on any item's row to view the details of that specific item. The standard detail screen for that type of item (lab result, test result, medication, or clinical note) is displayed.

- You can mark all of the results on the screen as having been read by you, using the **Mark All Read** button.

- When you first access the Patient Summary module, the system displays new clinical data for *the currently selected patient*. You can easily switch to a view of *all patients on your short list* by tapping on the **Show all patients** checkbox.

⊞ Order Status Module

The Order Status module displays the status of patient orders. The Order Status module lets you see the status of the ordering process within the order entry system, as well as the status from the department that processes the order.

This application is unique in that it not only shows you tests that have available results, but also shows you those in progress. This allows you to avoid redundant ordering for tests that have been taken, but for which the results are not yet available.

Tap on an order to see the details.

Orders tab

■ To view the details of a specific order, simply tap on it.

■ The text of the order is automatically wrapped for easier reading. However, you can tap the **Word Wrap** icon (▭) to turn off wrapping and view the information in its original format.
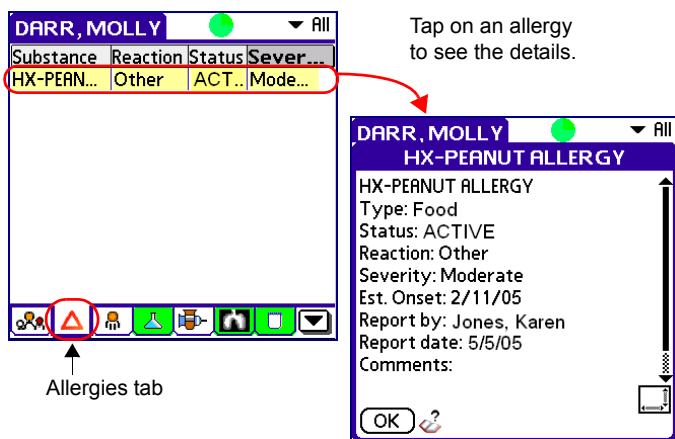
⚠ **Allergies Module**

The Allergies module lets you view the list of allergies, and the
details of any specific allergy, for a patient.

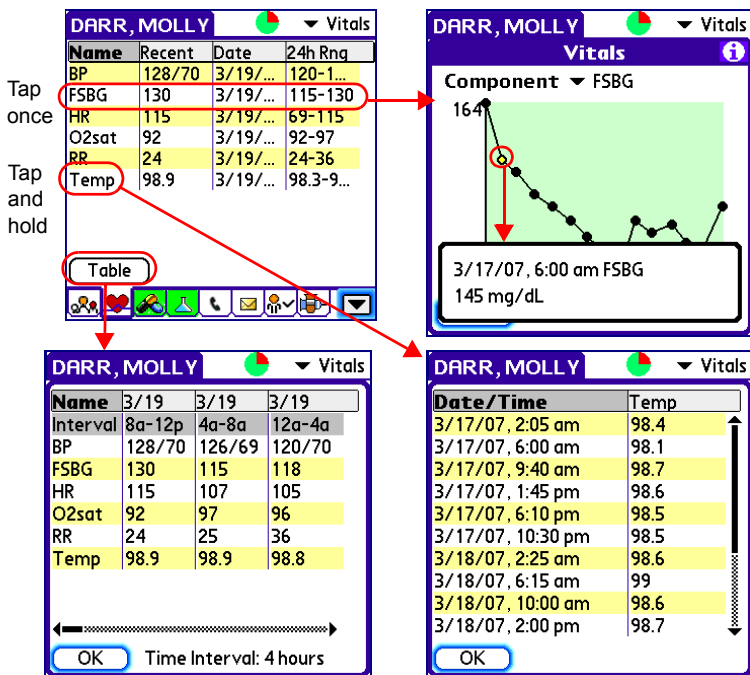Tap on an allergy
to see the details.

Allergies tab

- To view the details of a specific allergy, simply tap on it.
- The text of the allergy is automatically wrapped for easier
  reading. However, you can tap the **Word Wrap** icon ( ) to
  turn off wrapping and view the information in its original
  format.

💜 Vitals & I/O Module

The Vitals & I/O module displays a history of vital signs and intake and output measurements for a particular patient.

When you first access the Vitals & I/O module for a patient, the system displays the patient's vitals signs. Which physiological parameters are displayed as vital signs varies by institution. A few of the more commonly used parameters include pulse rate, respiratory rate, blood pressure, blood pressure mean, temperature (Farenheit or Celsius), or O2 Sat by Pulse.

■   For each type of vital sign the system displays the most recent reading (**Recent**), the date and time it was taken (**Date**), and the minimum and maximum readings taken within the last 24 hours (**24h Rng**). You can tap on the **Date** column heading to toggle this column to show the value of previous reading.

- Tap on any vital sign's row to see a graph of all readings for that particular vital sign. Tap on any point on the graph to view the details of that specific measurement.

- Tap *and hold* on a vital sign name to see a list of all readings for that particular vital sign in text format.

- Tap on the **Table** button to view the information in a table format, with readings displayed in 4 hour increments.

For intake and output, the system provides fluid balances, which represent the totals of fluid intake and fluid output, as well as Net, or the difference between the total intake and total output. Some intake and output components, however, are not fluids and are therefore not included in these calculations. Examples are stool count and number of breast feedings.

To switch to the Intake/Output screen, tap on the drop-down list located at the top right corner of the Vitals screen and select **I/O**.

Tap here and choose I/O.

Tap here to toggle between 8-hour and 24-hour view.

- You can view the intake/output measurements in 8 hour or 24 hour increments. Tap on the **8H** or **24H** buttons to toggle between the views.

Reference Library

The PatientKeeper Reference Library™ gives you easy access to a set of third party reference tools on your handheld device. The following references are currently available in the Mobile Clinical Results application:

- ❖ Epocrates Rx™ (www.epocrates.com)
- ❖ *mobile*MICROMEDEX™ (www.micromedex.com)
- ❖ Lexi-Comp™ (www.lexi.com)
- ❖ Skyscape (www.skyscape.com) Only for Palm OS® devices.
- ❖ Isabel (www.isabelhealthcare.com) You must have a web browser installed on your handheld device for this reference tool to work.
- ❖ Google™ (www.google.com) You must have a web browser installed on your handheld device for this reference tool to work.

The Reference Library is designed so that additional third-party software references can easily be integrated into the library. For purposes of illustration, this document uses Epocrates as the sample reference tool. Other third-party references would be accessed using the same techniques as those described below for Epocrates. Please note that each reference handles queries and displays information differently.

This section describes how to *access* the third-party reference from within the PatientKeeper application and *initiate a query*. It does not describe how to *fully use* the reference software itself. Please refer to the particular third-party software vendor for specific instructions on how to use their software product.

You can access the Reference Library from the following modules:

- Allergies
- Clinical Notes
- Problem List
- Test Results
- Orders
- Medications
- Lab Results

⚗️ **General Inquiries**

Select the Reference Library from the **Modules** menu list when you have a general question that is not necessarily related to the patient or data that happens to be currently displayed on the screen.

1. Tap the **Down Arrow** ▼ at the bottom of any module's main screen, and then select **Reference Library** from the drop-down list. The first time you access the Reference Library in this manner, the system displays the **Target** tab:

Select the reference you wish to use and tap **Save**.
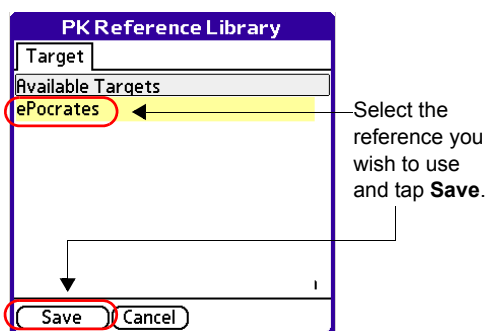
2. You must now choose the third party reference tool you wish to use, such as Epocrates, on the **Target** tab. Tap on a reference and then tap **Save**. In this example, Epocrates is now selected as the reference for all future general inquiries. This means that the next time you select Reference Library from the **Modules** menu, the Epocrates reference will be automatically selected, and you will skip directly to Step 3 below.

3. After selecting a target reference, the system displays the main query screen, illustrated below. You can perform a search using either of these two methods:

❖ Use graffiti to enter the word or phrase for which you wish to search, and then tap **Go**.

❖ Select an item from the **Recent Queries** drop-down list, and then tap **Go**. This list contains the last 20 phrases you used for inquiries.

The reference tool now searches it's database for information relevant to the word or phrase that you entered.

To change your target reference in subsequent searches, tap on the reference name.

Type the word or phrase for your inquiry here.

Or, use the **Recent Queries** drop-down list.
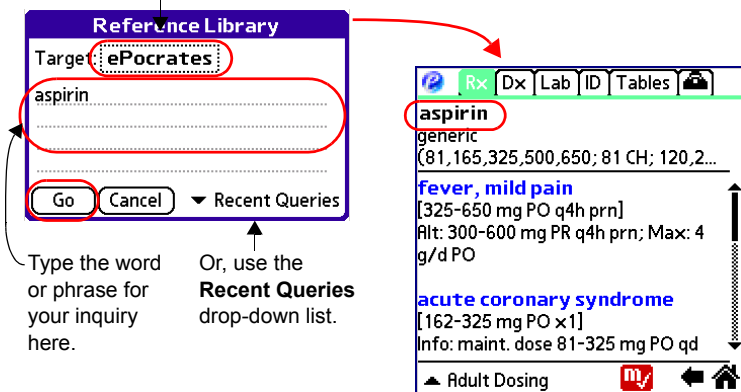
Context Sensitive Inquiries

The context sensitive search tool is extremely useful for providers who are reviewing patient data and wish to look up information related to what is currently displayed on the screen. For example, you might be viewing a patient's clinical note, and find it useful to search for information related to a diagnosis or procedure that is described in the note.

The steps to perform a context sensitive search while viewing a patient's detail screen are very similar in each module. As an example of how it works, we will illustrate a context sensitive search in the Clinical Notes module. The first time you perform a search requires a few extra steps to establish your preferences (steps 4 and 5 below). Subsequent searches use these settings as defaults and are performed more quickly.

> **Note**: *Tap and hold* on the **Reference Library** icon in any detail screen to reset your preferences.

1. To start a context sensitive search, tap on a note, test result, lab result, etc., from any module's main screen, thereby opening that module's detail screen.

2. If desired, highlight a word or phrase in the detail screen's text, by dragging your stylus over it.

3. Tap on the **Reference Library** icon ( ).

Highlight the text for your inquiry.

Reference Library icon.
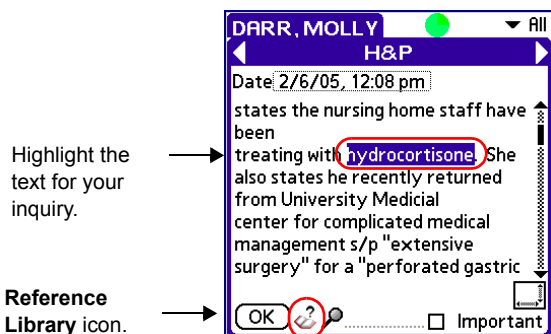
The Reference Library screen opens. It consists of two tabs: **Target** and **Data**. The items you select on these tabs establish your preferences for the reference library in this module.

4. Tap on the **Target** tab: the first time you perform a context sensitive search in a particular module, you must select a target reference, such as Epocrates. Tap on a reference to select it. From this point forward, that reference is automatically selected for all future inquiries from this module.

5. Tap on the **Data** tab: the first time you perform a context sensitive search in a particular module, the module extracts two pieces of information, labeled **Data Type** and **Selected Text**, and offers those words as search strings. You must select one, or both, of these items to use in your search. The data types that you select are used as the default for all future searches.

Check the boxes next to the data types you want for your inquiry. In this example, we only want to search for the **Selected Text** (Hydrocortisone).

The text you highlighted is placed in the **Selected Text** field.

Tap to turn on the **Edit Data** option.
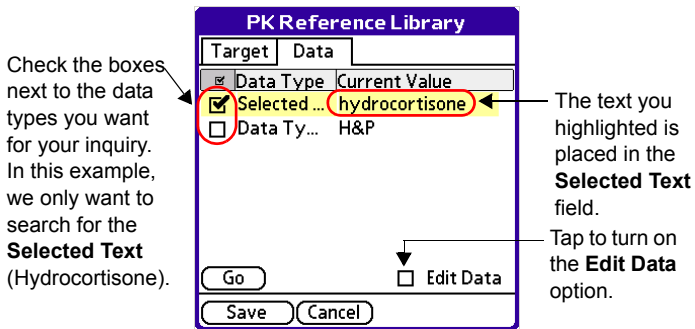
❖ The words that the PatientKeeper system extracts depend on the detail screen of the particular module you are viewing. In the Clinical Notes module, the **Data Type** field contains the type of note. The **Selected Text** field contains either the entire textual content of the note (if you did not highlight anything in step 2), or the text that you highlighted ("hydrocortisone" in our example).

❖ If you turn on the **Edit Data** option by tapping the checkbox, the system will always display your search string and target (so that you may review and/or edit them) prior to performing an actual search in this module.

6. Once you have selected your Target and Data, tap **Go** on the **Data** tab. The reference tool now searches it's database for information relevant to the word or phrase that you selected, and displays it on your device.

📞 Provider Directory Module

The Provider Directory module displays basic contact information for any providers that your institution wishes to maintain in the PatientKeeper system. You can look up phone numbers (pager, office, mobile, home, or service), specialties, departments, addresses, and e-mail addresses.
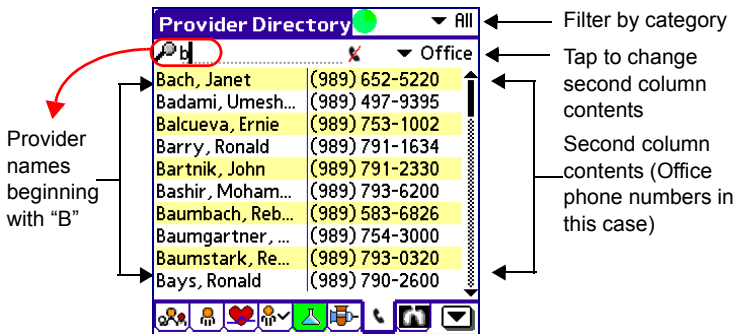
- **Tap on the Category filter** (upper right corner) to view a specific category of physicians. Each institution can choose how they wish to categorize the provider list (for example, by location, specialty, department, or team).

- **Tap on the drop-down list** just below the Category filter to change the contents of the second column. For example, you could display Pager numbers instead of Office numbers.

- **Use the search field** (next to the magnifying glass icon) to find a specific provider. To do so, use graffiti or the keypad to enter the first few letters of the name of the provider you want. As you continue to tap letters, the screen is filtered to include only those providers whose first or last names match the letters you entered.

- **Tap on any provider name** to display all known contact information for the given provider.

- **Tap *and hold*** on any provider *phone number* to dial that number on your handheld device (only for those devices that can also act as mobile phones).

Glossary of Terms

Bluetooth
A short-range wireless communication standard that allows you to sync your handheld device within your institution's network, without having to plug into any hardware. Typically, you must be on the institution's premises to be within syncing range.

Cradle
A docking stand for a handheld device. It allows you to charge your device, or to connect it to a PC (via a USB cable). When your device is connected to a PC via a cradle, you may also be able to sync your device using the PC's network connection.

Cellular Phone Network

Some handheld devices are also cellular telephones (often referred to as *smart phones*). If your organization has implemented syncing via cellular phone access, you can sync your device through your cellular phone network.

Handheld Device
A personal desktop assistant (or PDA) that can be used by providers to access the PatientKeeper system.

Infrared Sync Stations
A physical device that allows you to sync your handheld device with your institution's network, using an infrared beam. You must be within close proximity to a station (six inches) in order to sync.

Module Tabs
Tabs at the bottom of most PatientKeeper screens that allow you to navigate between the various categories of patient information (for example, Patient List, Patient Info, or Inbox).

Patient List, or Short Patient List
A customized list of patients for a particular provider. The PatientKeeper system automatically generates it by selecting all patients who have a recent inpatient or outpatient visit, and who

have some type of active relationship with the provider. Providers can also add additional patients to their lists, or remove patients.

PatientKeeper Patient Care Suite
The application software you are using to access patient data. It can be used from a PC or from a handheld device.

PatientKeeper Mobile Clinical Results
The software component of the PatientKeeper Patient Care Suite that lets you access clinical patient data (such as lab results, test results, or clinical notes) from a handheld device.

PatientKeeper Physician Portal
The web-based component of the PatientKeeper Patient Care Suite that lets you access clinical patient data from a laptop or desktop computer.

Stylus
A plastic or metal wand used to tap and select items on the touch screen of your handheld device.

Sync
The process used to download the latest patient data onto your handheld device, as well as upload the changes you have made back to your institution's network. There are several ways to do this: via a wireless network, infrared sync stations, cellular phone network, bluetooth, or your device's cradle and a PC.

USB Cable
Part of your handheld device's cradle. This cable allows you to connect to your desktop PC. It is necessary if you are syncing your handheld device via your PC.

Wireless Network
A system of radio signal transmitters/receivers that allow you to sync your handheld device within your institution's network, without having to plug into any hardware. Typically, you must be on the institution's premises to be within syncing range.

Top 10 Tips

1. *Charge your handheld device nightly.*
2. *Keep your spare battery charged and with you.*
3. *Use your device daily.*
4. *Use your stylus (not a pen or pencil point).*
5. *Sync at the beginning of each work day and several more times during the day (whenever your patient data becomes stale ●).*
6. *Do not sync in elevators or near a running microwave (if syncing wirelessly).*
7. *Use the Patient List 👥 to navigate to the desired data.*
8. *Read your messages and alerts ✉ when you receive them.*
9. *Lab results are on the flask tab 🧪, while test results are on the x-ray tab 🩻.*
10. *For help, contact your system administrator.*

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