Welch Allyn Connex® VM data management system

Directions for use

Advancing Frontline Care™

Federal law restricts this device to sale by or on the order of a physician.

For information about any Welch Allyn product, call Welch Allyn Technical Support:

USA	+1 800 289 2501 +1 315 685 4560	Australia	+61 2 9638 3000
Canada	+1 800 561 8797	China	+86 21 6327 9631
European Call Center	+353 46 90 67790	France	+33 1 55 69 58 49
Germany	+49 695 098 5132	Japan	+81 3 6383 0852
Latin America	+1 305 669 9003	Netherlands	+31 202 061 360
Singapore	+65 6419 8100	South Africa	+27 11 777 7555
Sweden	+46 85 853 6551	United Kingdom	+44 207 365 6780

DIR 80015826 Ver. B

Manufacturer

Welch Allyn, Inc.
4341 State Street Road
Skaneateles Falls, New York 13153-0220
USA

www.welchallyn.com

EC REP

Regulatory Affairs Representative
Welch Allyn, Limited
Navan Business Park
Dublin Road
Navan, County Meath
Republic of Ireland

CE 0297

Meets essential requirements of European Medical Device Directive 93/42/EE

Contents

Introduction

About these directions for use

Topics included cover the primary use of the product.

Before using the Connex VM system, you must read and understand the directions for use.

For information on using devices that connect to the Connex VM system, consult the directions for use that came with the devices.

Intended use

Welch Allyn Connex is intended for the collection and review of patient data, and also the communication of the data to information systems. It provides notifications when data deviates from ranges, allows manual entry of data, provides a means to identify and manage patients, and provides tools for enhancing productivity.

Healthcare providers and trained personnel are the intended users of the system.

Safety

Safety symbols


Warning statements in this manual identify conditions or practices that could lead to illness, injury, or death.


Caution statements in this manual identify conditions or practices that could result in damage to the equipment or other property.


Consult operating instructions.

General warnings

WARNING The Connex VM system transfers data from a vital signs device only when a user initiates a transfer. Do not mistake the Welch Allyn Connex VM data management system for a patient monitoring device.

WARNING If the Connex VM program or the computer running the program fails, take these steps:
a. If a user attempted to capture or import data prior to the failure, verify that the system received the data.

b. If the system did not receive the data and the user wants to import it when the system becomes operational, ensure that the device retains the data.

About alerts and alarms

The terms "alarm" and "alert" both refer to readings that are out of range. If a reading is too high or too low according to the device settings, that reading appears as an alarm (red or yellow, dependent upon the device). If a reading is too high or too low according to the Connex VM settings only, that reading appears as an alert (yellow).

Alarm example (red or yellow = according to the device settings):

148/85

Alert example (yellow = according to the Connex VM settings only):

103.3

If a vital signs reading exceeds both alarm and alert limits, only the alarm will be shown. For a vital signs capture, one vital sign reading may cause an alarm, while another may cause an alert.

Getting started

Start the Connex VM program

1. Start the Connex VM program
    - On the Windows desktop, double-click the Welch Allyn Connex Workstation icon .
    - From the Windows Start menu, click **Start** > **All Programs** > **Welch Allyn** > **Connex VM**.
2. If prompted, log on.

    The **Home** page appears. You can now perform tasks according to the permissions that have been set up for you.

End your Connex VM session

Go to the menu bar and click the desired command.

- **File** > **Exit** closes the Connex VM program.
- **File** > **Log off** ends your session and leaves the Connex VM program ready for the next user to log on.

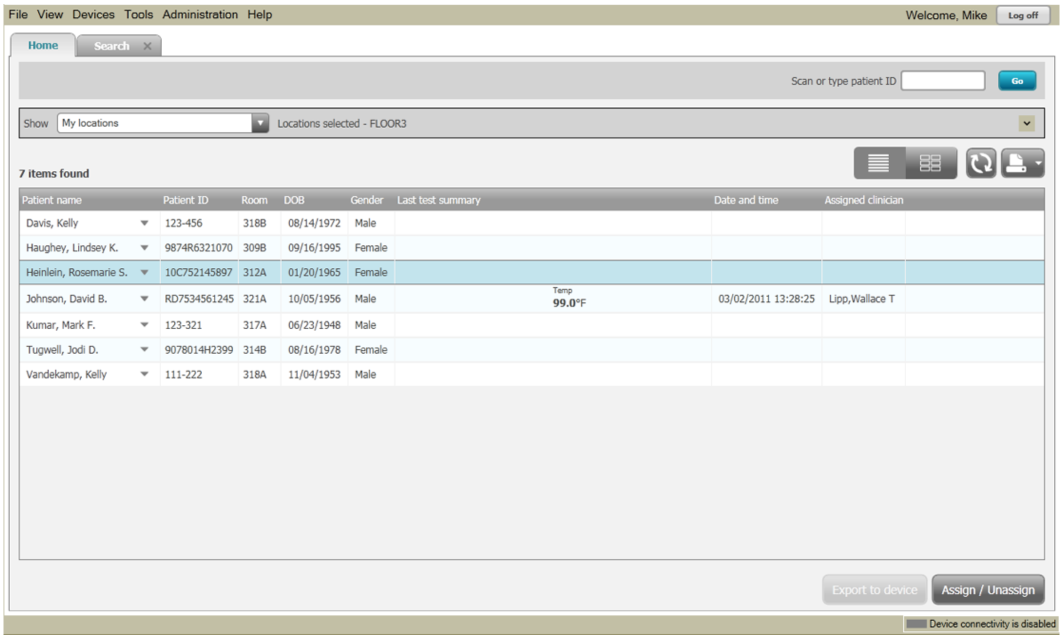
About the Home page

The **Home** page is the first page that appears when you open the program. This page enables you to view a list of patients as determined by the selection in the Show list. From the **Home** page you can also initiate many common tasks. You can view the **Home** page at any time by clicking the **Home** tab.

The Scan or type patient ID box

You can enter a patient ID either by typing it or by scanning it using a bar code scanner attached to the computer. Depending on your system configuration, the **Go** button opens either the patient record for that ID or the Capture Vital Signs window.

The Show list



The Show list enables you to select the information that you want to view. Every system comes with an option to show **My locations**. Other options in the Show list are determined by the saved searches that have been created.

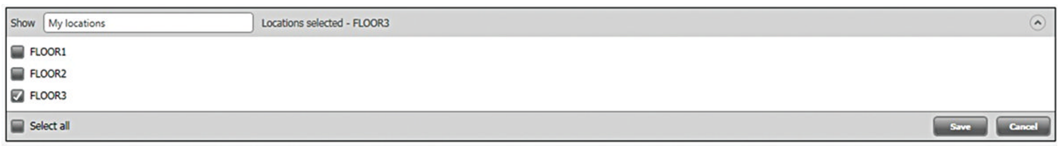
If you want to view information that is not available through your Show list, you can find it by searching.

The My locations option

When you select **My locations** in the Show list, the patients who have been admitted to the selected locations are listed on the **Home** page. (If a patient in a selected location does not appear in your list, you may find that patient by searching.)

You can reveal the location options by clicking the expand symbol ( ).

You can hide the location options by clicking the collapse symbol ( ).



The List and Tile view buttons

The **List** button allows you to display patient data in list format. The **Tile** button allows you to view patient data in tile format.

The Refresh button

The **Refresh** button updates the displayed data to reflect any recent changes to the database.

The Print button

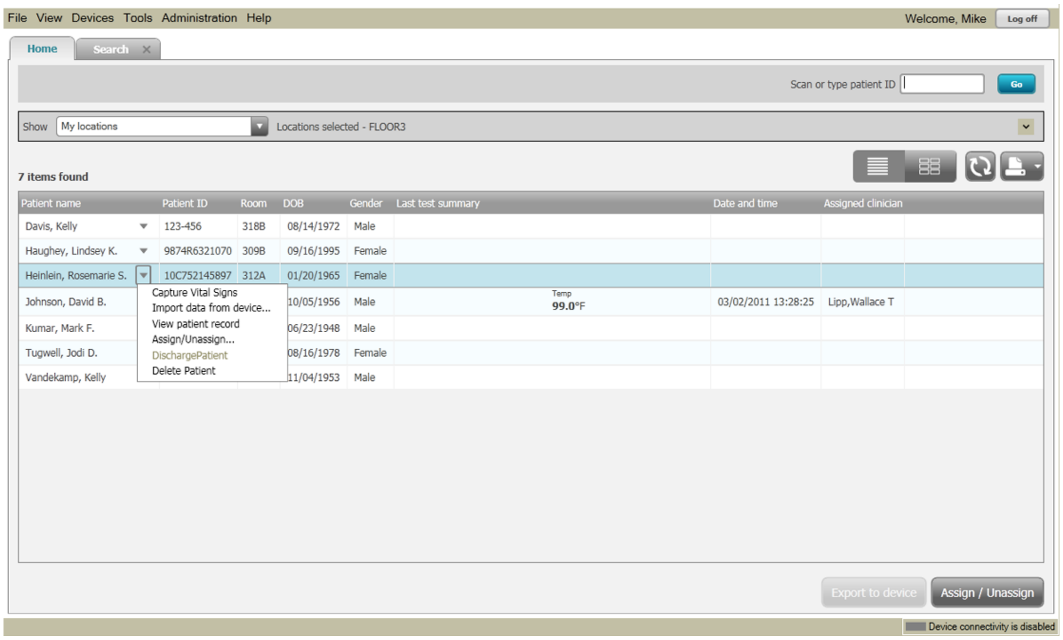
You can print the contents of the current view by clicking the **Print** button. Click the **Print** drop-down arrow, and select the desired command.

The sort order

You can change the order in which the rows are sorted by clicking the desired column heading. For example, you can sort patients' names in alphabetical order by clicking **Patient name**.

The action menus

You can bring up an action menu by clicking the ▼ symbol next to any item in a list.



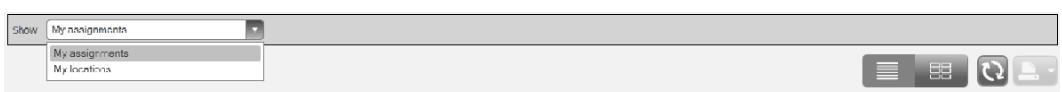
The Assign/Unassign button

The **Assign/Unassign** button enables you to assign patients to yourself or to other clinicians.

The My assignments option

When you select **My assignments** in the Show list, the patients who have been assigned to you are listed on the **Home** page.

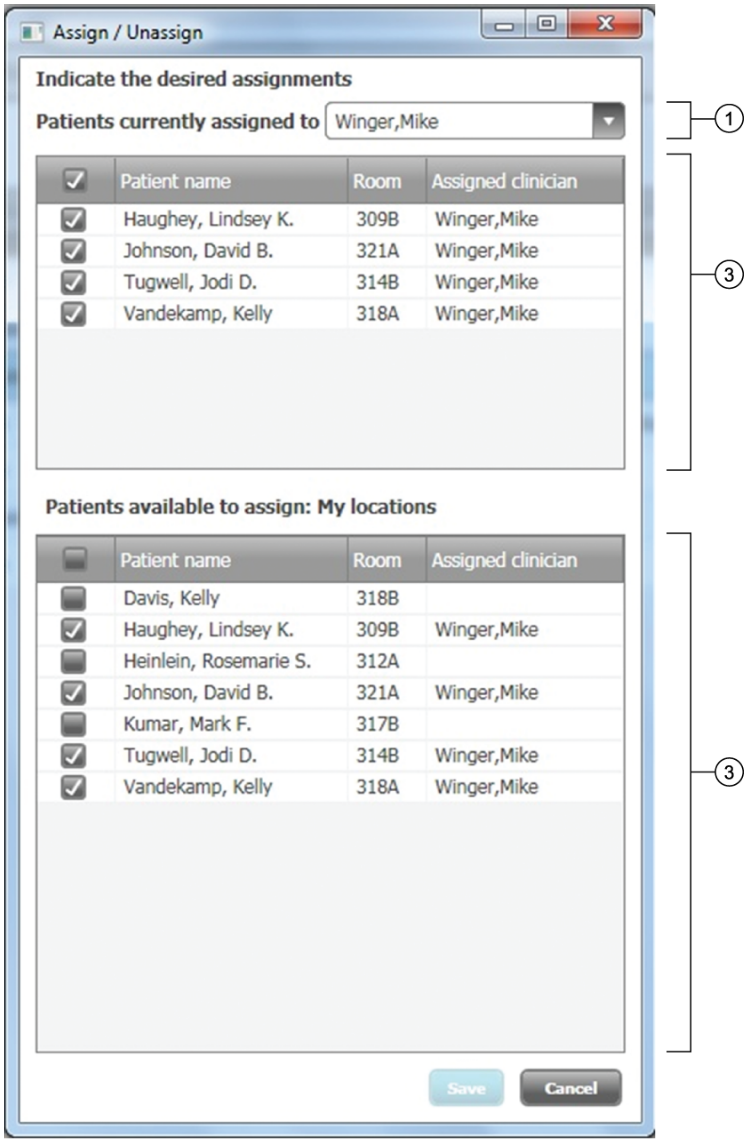
If a patient does not appear in your list, you may find that patient by searching. If the list is empty, no patients have been assigned to you.



About assigning/unassigning patients

You can assign patients to clinicians, and unassign them as well.

The Assign/Unassign window allows for an efficient way to assign and unassign patients to and from clinicians, dependent on user roles and privileges.



Item	Description
①	The selected clinician
②	All of the patients who are assigned to the selected clinician
③	All of the patients listed on the previous page (**Home** or **Search**)

Assign patients to clinicians

If you are set up with permission to do so, you can assign patients to yourself or to other clinicians. You can also make changes to existing assignments.

1. On the **Home** page or **Search** page, show a list that includes the patients whom you want to assign or unassign. (Only the names on that list will be available in the next step.)
2. Click **Assign/Unassign**.
3. Select a clinician.
4. Select or clear check boxes to indicate which patients you want to assign to that clinician.
5. Click **Save.**

Transferring vital signs readings into the system

Capture readings at the workstation

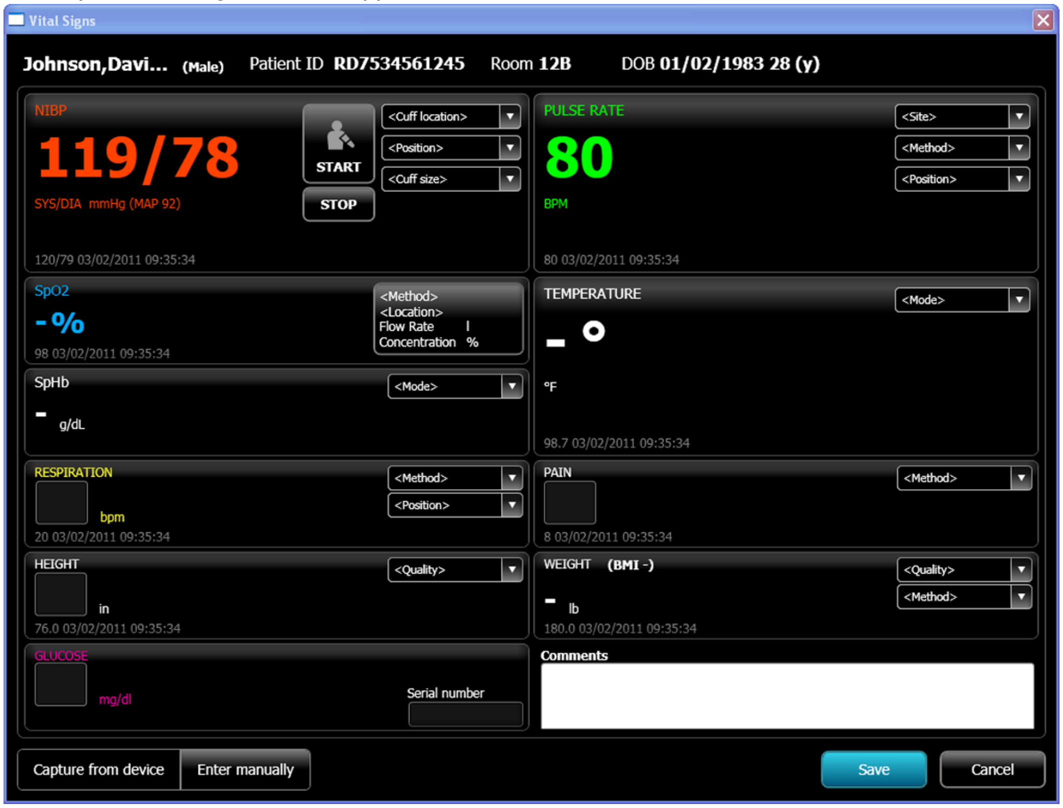
From the Connex VM workstation, you can start an NIBP measurement and capture readings from a vital signs device. This procedure applies to wired vital signs devices that are compatible with the system.

WARNING When you transfer data into the Connex VM system, you associate the data with a patient by selecting a patient name in the system. Verify that you select the correct name. If you select an incorrect name, you associate the data with a wrong patient.

WARNING Whenever you enter data into the Connex VM workstation, verify that the data is correct before you save it.

1. With the vital signs device connected to the Connex VM workstation, take one of these steps from the Connex VM **Home** page:
   - Scan or type the patient ID in the **Scan or type patient ID** box, and then click **Go**. If you see the Patient record page, click **Capture vital signs**.
   - Locate the patient name, and click and select **Capture vital signs**.

The Capture Vital Signs window appears.



2. Confirm that the patient name at the top of the window is correct.
3. If you are taking an NIBP measurement, click **START**.
4. (Optional) Add information or revise the readings.
   - Select modifiers in the lists.
   - Type values in the numerics boxes.
   - Type in the **Comments** box.
   - Manually enter or revise information: Click **Enter manually**. Type values in the numerics boxes for NIBP, pulse rate, SpO2, temperature, hemoglobin, or weight. In the lower part of the window, click and type in the **Test taken** area to change the date or time. During manual entry, data collection from the device is suspended.
5. Click **Save**.

Import multiple readings for one patient

You can import a patient's saved timed-interval readings from a vital signs device into the Connex VM system. This procedure applies to wired vital signs devices that are compatible with the system.

WARNING When you transfer data into the Connex VM system, you associate the data with a patient by selecting a patient name in the system. Verify that you select the correct name. If you select an incorrect name, you associate the data with a wrong patient.

WARNING Whenever you enter data into the Connex VM workstation, verify that the data is correct before you save it.

WARNING When you initiate data import into the Connex VM system from a vital signs device, select all data that needs to be retained. When the Connex VM system imports data, vital signs data (including nonselected data) may be cleared from the device.

1. With the vital signs device connected to the Connex VM workstation, from the Connex VM **Home** page, click ▼ next to the patient name and select **Import data from device**.

   The Import Data from Device window appears.
2. Confirm that the patient ID is correct.
3. (Optional) Clear check boxes next to undesired items.
4. (Optional) Edit the information.
   a. Click the reading that you want to edit.
   b. Click **Edit**.
   c. Type or revise values in numerics boxes, select modifiers in lists, or type in the **Comments** box.
   d. Click **Save**.

      Manually entered information is marked with an asterisk (*).
5. Click **Import**.

   An “Import complete” message appears.
6. Click **Done**.

Import multiple patients' saved readings

You can import multiple patients' saved readings from one vital signs device into the Connex VM system. This procedure applies to wired vital signs devices that are compatible with the system.

WARNING Whenever you enter data into the Connex VM workstation, verify that the data is correct before you save it.

WARNING When you initiate data import into the Connex VM system from a vital signs device, select all data that needs to be retained. When the Connex VM system imports data, vital signs data (including nonselected data) may be cleared from the device.

1. With the vital signs device connected to the Connex VM workstation, in the Connex VM menu bar, click **Devices** > **Import data from device**.

   The Import Data from Device window appears.

2. (Optional) Clear check boxes next to undesired items.
3. (Optional) Edit the information.
   a. Click the reading that you want to edit.
   b. Click **Edit**.
   c. Confirm that the patient ID is correct.
   d. Type or revise values in numerics boxes, select modifiers in lists, or type in the **Comments** box.
   e. Click **Save**.

      Manually entered information is marked with an asterisk (*).

4. Click **Import**.

   An “Import complete” message appears.

5. Click **Done**.

Adjusting settings

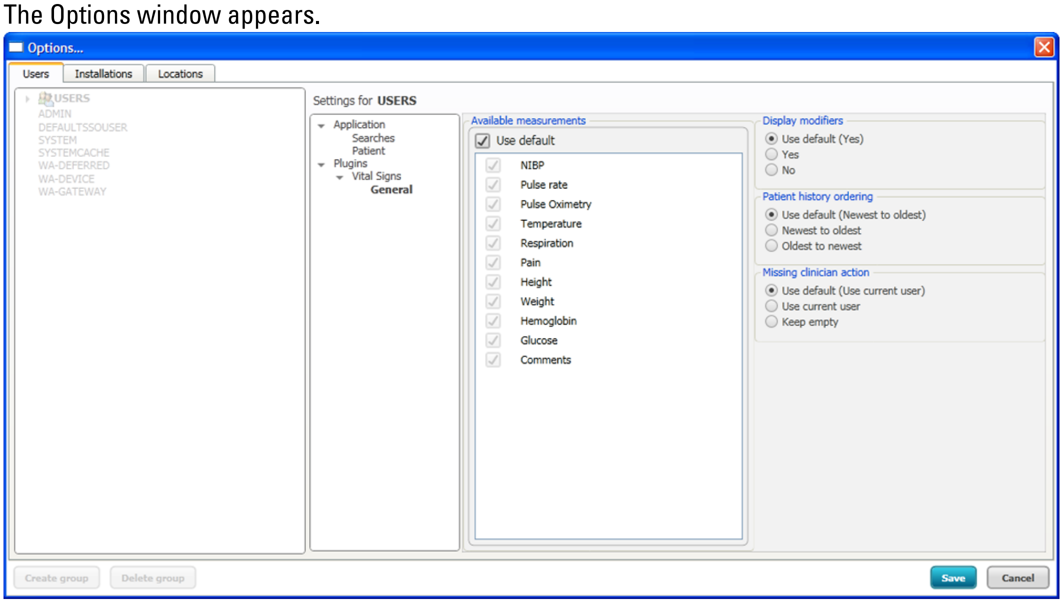
Personalize your Connex VM program settings

In the Options window, you can adjust Connex VM program settings to your personal preferences.

For each setting, you can use the default setting that was set by your system administrator, or you can adjust the setting. For certain categories of settings, you can specify to which locales and languages your adjustments apply.

1. In the menu bar, click **Tools** > **Options**.

   The Options window appears.



2. In the left pane, expand the **Application** listing, and then take these steps:

   a. Beneath **Application**, click the category for which you want to adjust settings.

   b. Click **Edit**.

   c. In the right pane, adjust the settings.

      Clear default check boxes to see setting choices.

   d. Click **Apply**.

   e. Repeat Steps a. through d. until you have completed your adjustments.

   f. Click **Save**.

Program settings

The Connex VM program settings, which are available from the menu bar under **Tools** > **Options**, determine what appears on the screen and in printouts. Unless you are authorized to change settings for multiple users, your changes will be in affect only when you are logged on.

This list is not comprehensive. Only those settings that require description are listed; others are self-explanatory.

Tools > Options > Application > General

Setting	Description
Show Search tab on login	• **Yes**: The **Search** tab is present by default. • **No**: The **Search** tab is absent by default. The user can open it from the menu bar: **View** > **Search**.
Show confirmation dialog on log off	• **Yes**: A confirmation prompt appears when the user logs off. • **No**: No confirmation prompt appears when the user logs off.
Automatic logout on idle	• **Yes**: Whenever the program has been unused for the designated idle period, it logs the user off. In single sign-on configurations, which require that users log on only to the operating system, the program closes instead. • **No**: The program does not log users off or close automatically.
Automatic idle logout timeout	The number of minutes in the idle period.

Tools > Options > Application > Searches

Setting	Description
Standard searches (for example, **My locations**)	• **Available searches**: The standard (built-in) searches that appear in the **Show** list on the **Home** page. • **Search options**: The settings for the standard searches. To view or change these settings, you must select the search name. Before you can make changes to **My locations**, you must clear the **Use default locations** check box.
Saved searches	The saved searches that appear in the **Show** list on the **Home** page.

Tools > Options > Application > Patient

Setting	Description
Default patient action	The action that occurs after the user double-clicks a patient name. • **View selected patient record** • **Acquire vitals** • **Do nothing**
Show patient location	• **Yes**: Patient locations are displayed at the top of the Capture Vital Signs window and at the top of the patient record. • **No**: Patient locations are not displayed.

Change your password

You can change your password at any time.

1. From the menu bar, click **File** > **Change password**.
2. Enter the information indicated on the screen.

Managing patients

Create and admit a new patient

In many configurations, patient records are automatically kept in-sync with the hospital information system. In those configurations, it is generally not necessary or even desirable to enter patient information manually. If the configuration at your facility allows it, you can create a patient by following these steps.

1. Select **File** > **Create new patient**.
2. Enter patient information.
3. Click **Save**.

   The new patient has a admit status of Admitted in the Connex VM program.

Discharge a patient

1. On the **Home** page or **Search** page, click next to the patient name.
2. Select **Discharge Patient**.

Readmit a patient

1. On the **Search** page, click next to the patient name.
2. Select **Readmit Patient**.

Delete a patient

When you delete a patient, the patient record moves to the recycle bin. The deleted record cannot be viewed, updated, or restored.

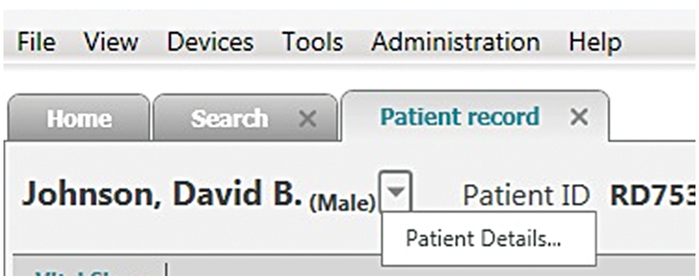
1. On the **Home** page or **Search** page, click next to the patient name.
2. Select **Delete Patient**.

Managing patient data

View or edit a patient record

1. Locate the correct patient name in the list on your **Home** page.
2. Next to the patient name, click ▼ and click **View patient record**.

   The **Patient record** page appears.

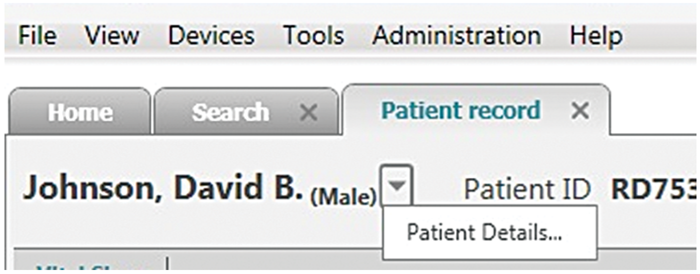
   

3. Next to the patient's name, click ▼ and then click **Patient details**.

   The Patient Details window appears.
4. (Optional) Click **Edit**. Add, change, or remove patient information.

View or edit patient contact information

1. Open the patient record.



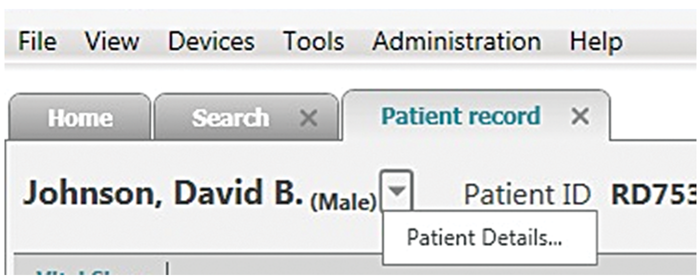
2. Next to the patient's name, click and then click **Patient details**.

   The Patient Details window appears.
3. Click **Contact information** .
4. (Optional) Click **Edit**. Add, change, or remove contact information. Specify which piece of contact information should be primary or secondary.

View or edit patient medical history

You can view a patient's medical history as a whole or for just one point in time by double clicking an entry in the **Date and time** column.

1. Open the patient record.



2. Next to the patient's name, click and then click **Patient details**.

   The Patient Details window appears.
3. Click **Medical history**.
4. (Optional) Click **Edit**. Add, change, or remove medical history information.

Update unreconciled data

Unreconciled data can occur when the data imported from a device does not match any patient records in the system. To search for unreconciled data and reconcile the data with a patient record:

1. Click the **Search** tab or go to **View** > **Search**.
2. Click **Unreconciled data**.
3. Specify search criteria.
4. Click **Search**.
5. Select the check box to indicate which record you want to assign to a patient ID.

6. Click **Edit**.

   The Edit window appears.
7. Type or scan the patient ID in the **Patient ID** box.
8. Click **OK**.

Delete records from the recycle bin

All information deleted from the Connex VM system will be in the recycle bin. Information deleted from the recycle bin cannot be restored.

1. Click the **Search** tab or go to **View** > **Search**.
2. Click **Recycle Bin**.
3. Enter your search criteria.
4. Delete records from recycle bin.

   To permanently delete records, select check boxes to indicate which records you want to delete, then press the **Delete** button.

Export a patient list

1. On the Home page, click the **Export to device** button.

   The Upload patient list to device window appears.
2. Use check boxes to specify patients for the export list.
3. Click **Next**.
4. Verify that you have selected the correct names.
5. Click **Confirm**.

   The Export complete message appears.
6. Click **Done**.

Managing saved vital signs

View vital signs information

1. Locate the correct patient name in the list on the **Home** page.
2. Next to the patient name, click ▼ and then click **View patient record**.

   The **Patient record** page appears.
3. Specify a date range in the **Show** list.
4. Select a view.
   - **Summary** displays patient data for NIBP, pulse rate, SpO2, hemoglobin and temperature.
   - **Vital Signs - Tabular View** shows all vital signs in a numeric table.
   - **Vital Signs - Graph view** shows the trends for the selected vital signs.

Searching

Search for patients

1. Click the **Search** tab or go to **View** > **Search**.
2. Click **Patients**.
3. Enter your search criteria.
4. Click **Search**.

Build or edit a saved search

The saved search builder enables you to create searches that use more criteria than basic searches provide. You can also control what information (which columns) will appear in the results of saved searches. After you save a search, it is accessible from the **Search** page. If a saved search will be needed regularly, you might also want to add it to the **Show** list on the **Home** page.

1. Open the **Search** page either of these ways:
   - Click the **Search** tab.
   - From the menu bar, go to **View** > **Search**.
2. Click **Saved search**.
3. Click **Build or edit a saved search**.

   The Build or Edit a Saved Search window appears.
4. Follow the instructions on the screen.

   When you click **Finish**, the search is saved.
   To use a saved search any time, return to the **Search** page, select **Saved search**, and click under **Select an existing saved search**.

   To control which saved searches appear in the **Show** list on the **Home** page, go to **Tools** > **Options** > **Application** > **Searches**.

Search for unreconciled data

Unreconciled data can occur when the data imported from a device does not match any patient records in the system. You can search for unreconciled data and print a report of that information, or you can delete the unreconciled data from the Connex VM system.

1. Click the **Search** tab or go to **View** > **Search**.
2. Click **Unreconciled data**.

3. Specify search criteria.
4. Click **Search**.
5. If the data is invalid, select the top checkbox to delete all information displayed for that data type. If the data is invalid for just one patient, select the checkbox next to that patient and click the **Delete** button.

Search for a user

1. Click the **Search** tab or go to **View** > **Search**.
2. Click **Users**.
3. Enter your search criteria.
4. Click **Search**.

Search for tests

1. Click the **Search** tab or go to **View** > **Search**.
2. Click **Tests**.
3. Enter your search criteria.
4. Click **Search**.

Search in the recycle bin

All information deleted from the Connex VM system will be in the recycle bin. Information in the recycle bin cannot be restored.

1. Click the **Search** tab or go to **View** > **Search**.
2. Click **Recycle Bin**.
3. Enter your search criteria.
4. Click **Search**.
5. Expand the vital signs section to view all data in the recycle bin from the specified timeframe.

Managing users

Create a user account and assign roles

1. In the menu bar, click **Administration** > **New user**.

   The New User window appears.
2. Specify account details.
   a. Enter ID information.
   b. (Optional) Select the **Account is active** check box.

      If you do not select this box, you can activate the account later.
   c. (Optional) Select the **Change the password at next logon** check box.

      The password is set, and the user can change it at the next logon.
   d. Select the **Set password** check box, and then enter and confirm the password.
3. Type the user title and name in the **Clinician name** boxes.
4. Select a settings group.
5. Select check boxes next to one or more user roles.
6. Click **Save**.

Modify a user account

1. Click the **Search** tab or go to **View** > **Search**.
2. Click **Users**.
3. Enter your search criteria.
4. Click **Search**.

   A list appears.
5. Next to the user ID, click and select **Edit user details**.

   The Modify User window appears.
6. Click **Edit**.
7. Modify information.
8. Click **Save**.

Inactivate or activate a user account

1. Click the **Search** tab or go to **View** > **Search**.

2. Click **Users**.
3. Enter your search criteria.
4. Click **Search**.

   A list appears.
5. Next to the user ID, click and select **Edit user details**.

   The Modify User window appears.
6. Click **Edit**.
7. Clear or select the **Account is active** check box.
8. Click **Save**.

Delete a user account

1. Click the **Search** tab or go to **View** > **Search**.
2. Click **Users**.
3. Enter your search criteria.
4. Click **Search**.

   A list appears.
5. Next to the user ID, click and select **Delete**.

Troubleshooting

Why isn't the workstation communicating with the server?

Possible cause	Corrective action
When I open the Connex VM program, I get an error message.	Contact your network administrator or IT resource.
The wireless network connection has been lost.	Adjust the computer's position to a location where there is a known network connection. The system will attempt to reconnect until it is successful.
The network is down; a path to the server cannot be found.	Check other software for the same difficulty, and notify your network administrator or IT resource.
The server is down.	Contact your network administrator or IT resource.
The computer is not connected to the network.	Contact your network administrator or IT resource to connect the computer to the network.

Why isn't the wired device communicating?

Possible cause	Corrective action
The device is turned off or unplugged.	Turn on or plug in the device.
The connectivity cable is unattached from the device or the computer.	Attach the cable to the device and the computer.
The connectivity cable is damaged.	Use another cable to transfer the data.
The device has been replaced with another device.	Exit the Connex VM program, unplug the cable, reattach, and then restart the program.
The Connex VM system does not recognize the device.	In the bottom right corner of the Connex VM window, right-click the phrase **No device connected**, and then click **Refresh devices**. The message changes to **Device connected**.

Why can't I progress to the next step after scanning the bar code?

Possible cause	Corrective action
The cursor is not blinking in the **Scan or type patient ID** box on the **Home** page.	Click inside the **Scan or type patient ID** box on the **Home** page.
The wristband is improperly printed or damaged.	Scan another patient's wristband. If it scans successfully, have a new wristband issued for your patient.
The bar code scanner is not working.	For cordless bar code scanners, check the battery light. Recharge the battery if necessary.

Why can't I find a certain patient in the system?

Possible cause	Corrective action
The patient has no record in the system.	Add the patient if appropriate, or check with the admissions department of your facility. Patient information was not received in the Connex VM system; contact your network administrator or information technology/information systems resource.
An error has occurred during admission.	Check with the admissions department of your facility.
Patient record was saved as unreconciled data.	Search for record in unreconciled data.

Why can't I find a certain patient in the Show list on the Home page?

Possible cause	Corrective action
The patient has recently been transferred to the floor or is listed at a different location.	Search for the patient.

Why aren't vital signs readings imported from a connected device?

Possible cause	Corrective action
An error has occurred on the device.	Retake the measurement.
The device is powered down.	Power the device up.
The Connex VM system does not recognize the device.	In the bottom right corner of the Connex VM window, right-click the phrase **No device connected**, and then click **Refresh devices**. The message changes to **Device connected**.