Managing Patient Healthcare Features

This chapter provides guidelines for managing the following patient healthcare features:

- Questionnaires to Track Patient Health Status and Behavior
- Patient Personal Healthcare Tracking and Graphing
- Health Education Video (Content)

Questionnaires to Track Patient Health Status and Behavior

General Comments

- Patient questionnaires are an optional feature. They will only be available if your organization has configured them in your Extended Care installation.
- All questionnaire data is encrypted before it is stored in the Extended Care application.
- One questionnaire can be created for each configured Patient Group.
- A Patient Group questionnaire can have one active questionnaire and a library of archived questionnaires.
- The contents of the questionnaires will likely be decided by the care team managing that specific Patient Group.
- An XML file is used to generate the questionnaire. This may be created by the user/site administrator or created and stored by someone else, for later retrieval by the user/site administrator.
  - See Figure 9-3 for a sample of an XML file.
  - For information on how to create, design, and store the XML files, refer to the *Extended Care 1.1 Server Installation and Administration Guide* posted in Cisco.com.

Questionnaire Work Flow

Your care team will need to make the following decisions with regard to questionnaires:

- Where will the XML source files be stored?
- What naming conventions will be used?

- Who will work with the XML source file to make it comply with the content requirements of the Patient Group care team?

The workflow follows.

Step 1 Patient Group care team designs the contents of the latest questionnaire.

Step 2 Designated person creates the XML file for that questionnaire.

Step 3 The person who creates the XML file you (the user/site admistrator) with the XML file name and location.

Step 4 You add the new questionnaire to the patient portal by following the instructions provided in Adding Questionnaires, page 9-2.

Questionnaire Naming Considerations

The file name for the XML generator file will be determined by whom ever creates that file. The title displayed for the questionnaire in the Extended Care application is entered by the user/site administrator. There are different ways for naming the Questionnaires. Some possible considerations are described below:

- **Speciality**: If you are assigning the questionnaire to a Patient Group, then the questionnaire name could indicate the corresponding specialty group.
- **Geographic Location:** If you are assigning the questionnaire to a Patient Group by the geographic location, then the questionnaire name could also indicate the geographic location.

Adding Questionnaires

Before you can perform this step, you will need to know the name and location for the XML file used to generate the new questionnaire. You will also need to have decided what title you would like to use for all references to the questionnaire.

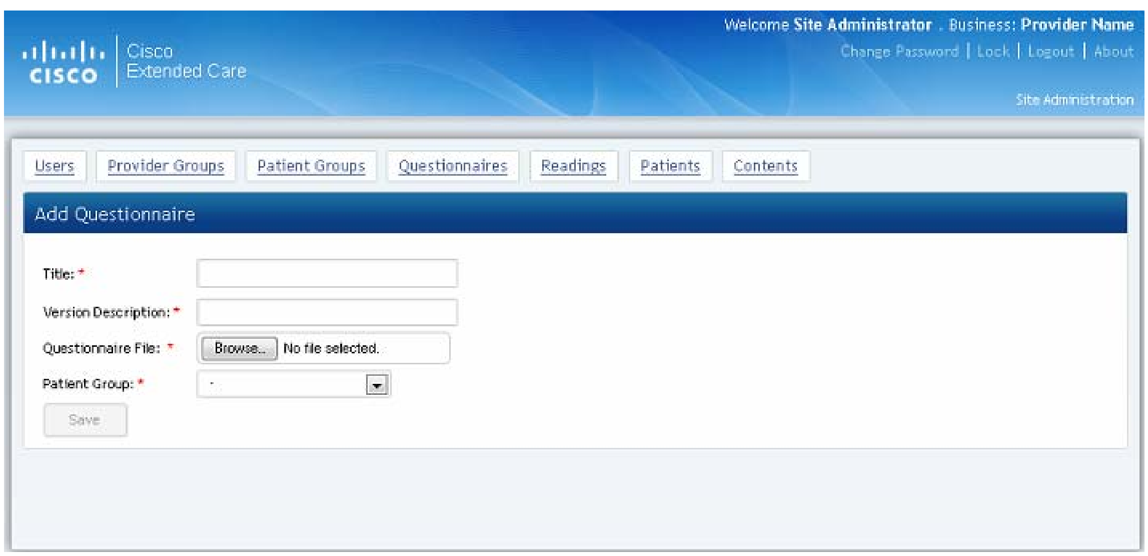
To add a new questionnaire, do the following:

Step 1 Click the **Questionnaires** tab on the administrator task bar.
The *Questionnaires* screen displays as shown in Figure 9-1.

Figure 9-1 Questionnaires screen

Step 2 Click the **Add** button.
The *Questionnaires Add* screen displays as shown in Figure 9-2.

Figure 9-2 Questionnaires Add screen



Step 3 Enter the **Title**, and **Version Description**.

Step 4 In the **Questionnaire File** box, click **Browse** and select the relevant XML questionnaire file.

Step 5 In the **Patient Group** box, select the relevant Patient Group.

Step 6 When you have finished, click **Save**.

Viewing Active and Archived Questionnaires

To view active and archived questionnaires, do the following:

Step 1 Click the **Questionnaires** tab on the administrator task bar.
The *Questionnaires* screen displays as shown in Figure 9-1.

Step 2 Locate the relevant questionnaire from the available list.

Step 3 To view the active or an archived questionnaire, find the **Actions** bar at the far right and click on one of the two links described in Table 9-1.

Table 9-1 Questionnaire Actions Links

Link	Use
View	Click this link to view the contents of the XML file that generated the latest version of the questionnaire.
Show History	Click this link to view all the versions of the selected Questionnaire. Click **View** of relevant version to view the contents of the XML file that generated this questionnaire. For an example, see Figure 9-3.

Note You can get a good idea of what the actual questionnaire will look like if you know this about the XML file:

- The < > symbols set off labels for different parts of the questionnaire. The text between the symbols defines tha part of the questionnnaire.
- The text that follows those symbols is generally text that will appear in the actual questionnaire.

Figure 9-3 Sample XML **Questionnaire File**

```
- <Questionnaire>
  - <Questions>
    - <Question>
        <Id>q1</Id>
      - <Text>
          In the past 4 weeks, how much of the time did your asthma keep you from getting as much done at work, school or at home?
        </Text>
        <AnswerType>Choice</AnswerType>
      - <Choices>
        - <Choice>
            <ScoreValue>1</ScoreValue>
            <Value>All of the time</Value>
          </Choice>
        - <Choice>
            <ScoreValue>2</ScoreValue>
            <Value>Most of the time</Value>
          </Choice>
        - <Choice>
            <ScoreValue>3</ScoreValue>
            <Value>Some of the time</Value>
          </Choice>
        - <Choice>
            <ScoreValue>4</ScoreValue>
            <Value>A little of the time</Value>
          </Choice>
        - <Choice>
            <ScoreValue>5</ScoreValue>
            <Value>None of the time</Value>
          </Choice>
        </Choices>
      </Question>
```

Updating Questionnaires

To update a Questionnaire, do the following:

Step 1 Click the **Questionnaires** tab on the administrator task bar.
The *Questionnaires* screen displays as shown in Figure 9-1.

Step 2 Locate and click on the relevant questionnaire from the available list.
The *Update Questionnaires* screen displays.

Step 3 Enter the **Title**, and **Version Description**.

Step 4 In the **Questionnaire File** box, click **Browse** and select the new XML questionnaire file.

Step 5 In the **Patient Group** box, select the relevant Patient Group.

Step 6 When you have finished, click **Save**.

Note Updating the questionnaire Title, Version Description, Questionnaire File, or Patient Group updates to the new version of the questionnaire.

Deleting Questionnaires

To delete a questionnaire, do the following:

Step 1 Click the **Questionnaires** tab on the administrator task bar.
The *Questionnaires* screen displays as shown in Figure 9-1.

Step 2 Locate and click the check box next to the relevant questionnaire from the available list and then click **Delete**.

Step 3 When asked for confirmation, click **Yes.**

Patient Personal Healthcare Tracking and Graphing

Extended Care enables patients to collect and track personal health indicator data (Readings) they've obtained using personal healthcare devices (for example: blood pressure cuff) or through personal observation (for example: body weight, caloric consumption). Extended Care provides you, the user/site administrator, with tools to configure graphs that display the patient Readings data in a useful format. You may create different Readings graphs, with different design, for each set of data collected and you may create as many as you like for each Patient Group. See Figure 9-4.

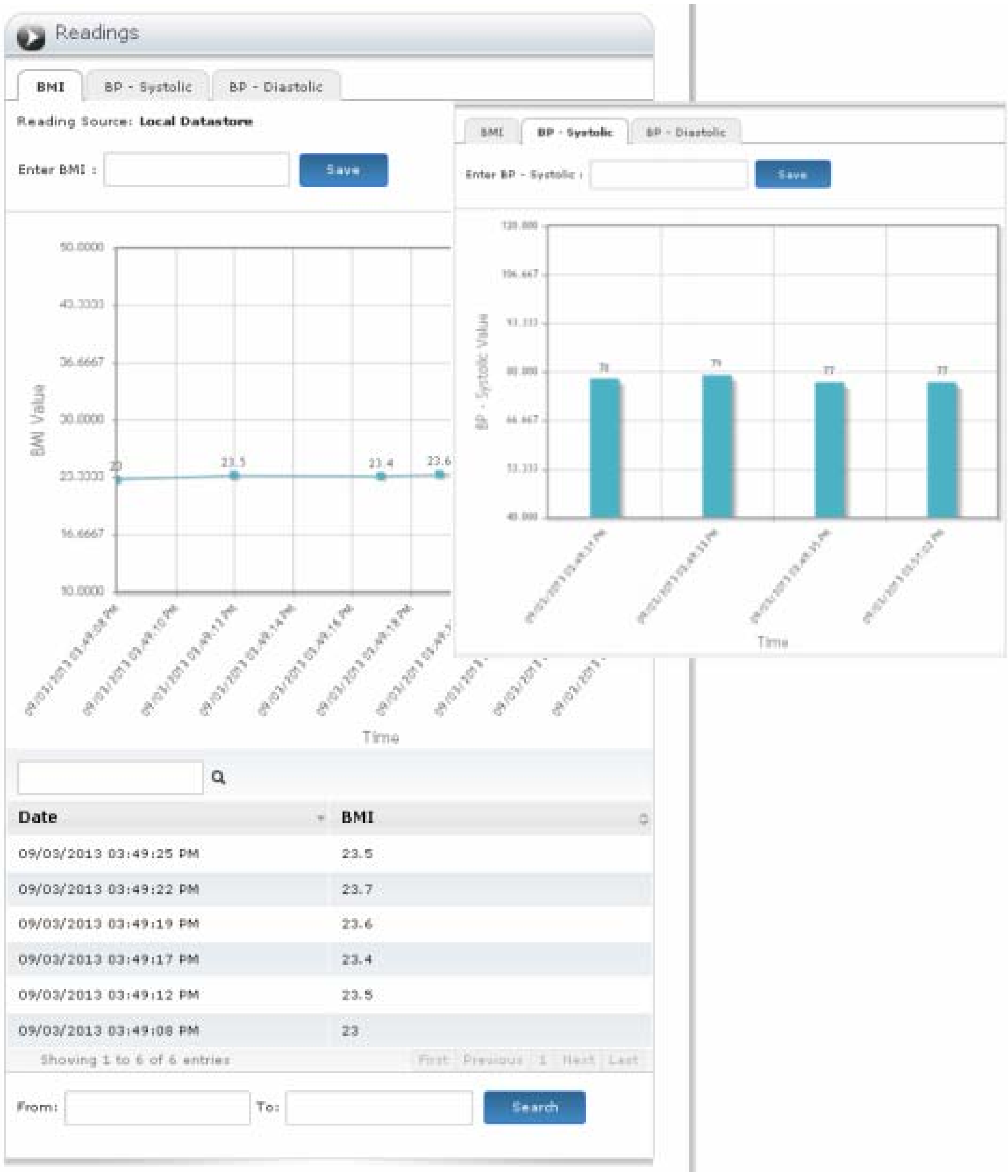
Your Extended Care installation can be configured to download the patient Readings data from a data "store" managed by your healthcare organization. In that case, your organization will have its own method for allowing patients to input their Readings data into the system.

Your Extended Care installation can also be configured so that patients can manually input their Readings data into the Extended Care Readings screen. The Extended Care sample portals are configured to only allow manual entry from the Extended Care screens.

In either type of configuration, the Readings data is never stored in Extended Care; it is stored in the healthcare organization's data "store" and then loaded into Extended Care. Extended Care provides your organization with a data interface, called a connector, which is used to exchange the Readings data between the external Readings store and Extended Care.

Note Health status readings are an optional feature. They will only be available if your organization has configured them in your Extended Care installation.

Figure 9-4 Patient's "Readings" screen



Naming Considerations for Health Readings

There are three identifying names associated with each specific health reading your create.

Connector Name -	This name is created by your organization's Extended Care server/application administrator. Consult with this person to obtain the exact name for this connector.
Reading ID -	Use a unique name that identifies the Reading.
Display Name-	This is the title displayed to patient and provider.

Your naming strategy for **Reading ID** and **Display Name** can help you organize your content and make it more meaningful for end users as well. Some possible considerations are described below:

- **Speciality**: If you are assigning Readings to a Patient Group, then the **Reading ID** name could indicate the corresponding specialty group.
- **Geographic Location:** If you are assigning Readings to a Patient Group by the geographic location, then the **Reading ID** could also indicate the geographic location.

Start from the Readings Screen

The *Readings* screen is your start point to perform the following tasks:

- Create (Add) a new Reading.
- Update a Reading.
- Delete a Reading.

To access the *Readings* screen, click the **Readings** tab on the administrator task bar.

Creating (Adding) a Reading

You will need to know the exact name of the data connectors used to move Readings data back and forth between Extended Care and your healthcare organization's Readings data store. Consult with your organization's Extended Care server administrator to obtain the appropriate connector name for your historical Readings.

Note If your healthcare organization uses multiple data stores for their patient healthcare readings, then Extended Care will require a unique connector to interface with each data store.

To add a new Reading, do the following:

Step 1 Click the **Readings** tab on the administrator task bar. The *Readings* screen displays as shown in Figure 9-5.

Step 2 Click **Add**. The *Add Reading Configuration* screen displays as show in Figure 9-5.

Step 3 Complete each of the screen fields, as described in Table 9-2.

Step 4 When you have finished, click **Add**.

Figure 9-5 Add Reading Configuration screen

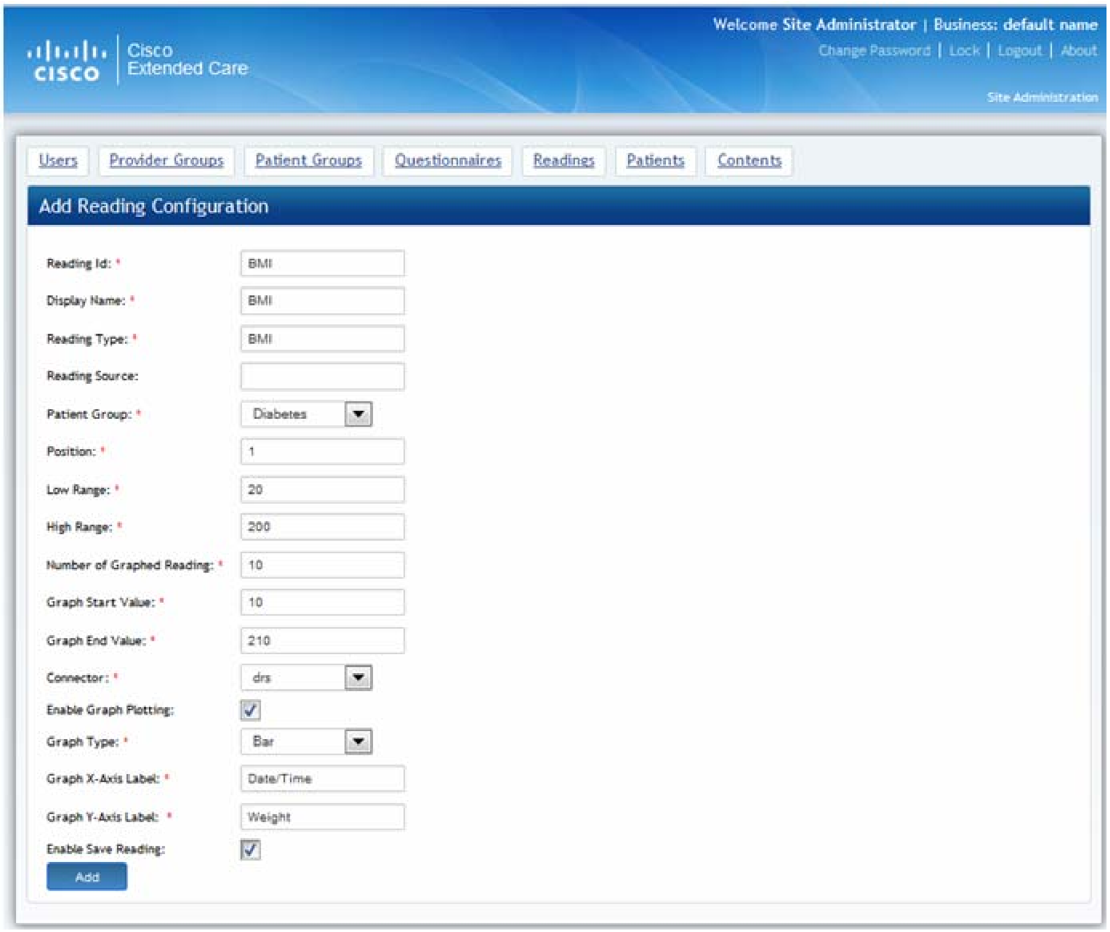


Table 9-2 Field Descriptions for "Add Reading Configuration" screen

Field Name (* = Required)	Purpose/Source	Acceptable Values
Reading Id:*	Use a unique name that identifies the Reading.	Alpha/numeric.
Display Name:*	This is the title displayed to patient and provider.	Alpha/numeric. Note: It is recommended that this value match Reading Type.

Table 9-2 Field Descriptions for "Add Reading Configuration" screen (continued)

Field Name (* = Required)	**Purpose/Source**	**Acceptable Values**
Reading Type:*	If you refer to Figure 9-4, you will see ten diagonal dates that label the plots for ten separate readings. Directly below this is a table of historical readings with a Date column and a column labeled "BMI." *For the Provider Portal only*, this value is defined by what you type for Reading Type. For *the Patient Portal*, the Display Name controls this label.	Alpha/numeric. Note 1: Once created, this value may not be changed. Note 2: It is recommended that this value match Display Name.
Reading Source:	This is an optional field. If your organization uses multiple data stores for their patient healthcare readings, you can use this to identify the data store being accessed by the **Connector**, which you will identify below.	Alpha/numeric.
Patient Group:*	Select the appropriate group from the drop-down box.	Drop-down entry.
Position:*	If you refer to Figure 9-4, you will see three Reading tabs, representing three available Reading types. This field specifies the tab position for this Reading.	Numeric value (0-99)
Low Range:*	This is a numeric value that represents the starting point for the data plot on you graph. It must be greater than the **Graph Start Value** so that the data plot displays above the bottom border of the graph. (See the definition for **Graph Start Value**.)	Numeric and decimal entries. Must be greater than **Graph Start Value**.
High Range:*	This is a numeric value that represents the vertical limit for the data plot on you graph. It must be less than the **Graph End Value** so that the data plot displays below the top border of the graph. (See the definition for **Graph End Value**.)	Numeric and decimal entries. Must be less than **Graph End Value**.

Table 9-2 Field Descriptions for "Add Reading Configuration" screen (continued)

Field Name (* = Required)	**Purpose/Source**	**Acceptable Values**
Number of Graphed Reading*	If you refer to Figure 9-4, you will see ten diagonal dates that label the plots for ten separte Readings. Use this field to specify how many Readings will be plotted in a single graph.	Numeric value (1-99)
Graph Start Value:*	This is a numeric value that represents the bottom border (X axis) of your graph.	Numeric and decimal entries. (May start at 0). Must be less than **Low Range**.
Graph End Value:*	This is a numeric value that represents the top border of your graph.	Numeric and decimal entries. Must be greater than **High Range**.
Connector:*	Names the data connector that exchanges readings data between Extended Care and your organization's Readings data store. If your organization has multiple data stores, it will use a unique connectors for each. Get the exact name of the connector from your organization.	Must type the exact name of the connector.
Enable Graph Plotting:	This check box turns graph plotting on and off. • If unchecked, reading data will only display in table format. • If turned on, reading data will be plotted in graphical format and the following three fields will be activated so you can configure the graphing.	Check box.
Graph Type:*	If Enable Graph Plotting is checked, you use this drop-down to select either **Line** or **Bar** type.	Drop-down entry.
Graph X-Axis Label:*	Places a label below the **Graph Start Value** position.	Alpha/numeric.

Table 9-2 Field Descriptions for "Add Reading Configuration" screen (continued)

Field Name (* = Required)	Purpose/Source	Acceptable Values
Graph Y-Axis Label: *	Places a label to the left of the left border (Y axis) of your graph.	Alpha/numeric.
Enable Save Reading	This check box turns on the capability for patients to use their Extended Care Readings screen to input and save personal healthcare readings. When this field is checked, Extended Care display a text box on the screen. Patients may type in readings data they have collected for that Reading Type. If this field is left unchecked, then the only readings data that will be displayed for patients assigned to this Patient Group will be data that was downloaded from an external patient data store where your organization stores health readings.	Check box.

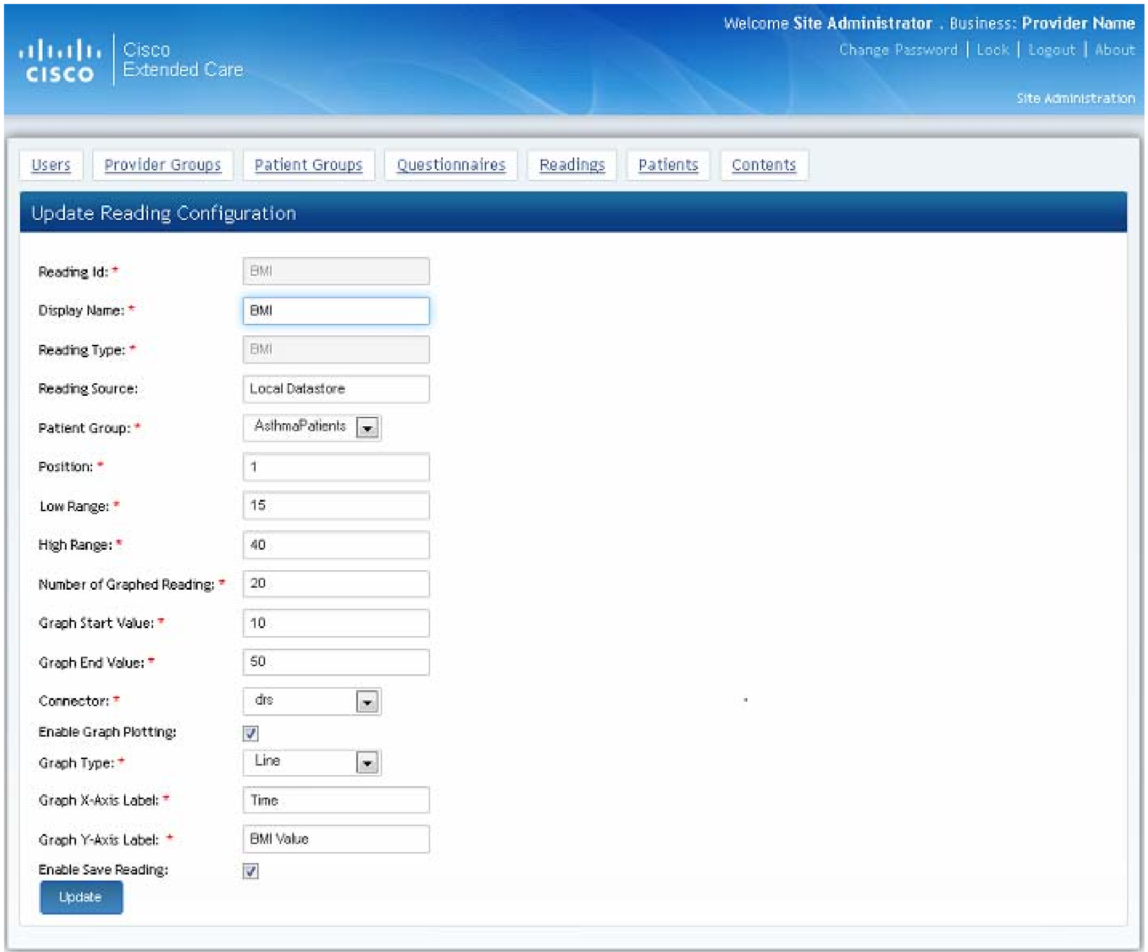
Updating Readings

To update a Reading, do the following:

Step 1 Click the **Readings** tab on the administrator task bar. The *Readings* screen displays as shown in Figure 9-5.

Step 2 On the *Readings* screen, click the **Reading ID** for the Reading you want to update. The *Update Reading Configuration* screen displays as shown in Figure 9-6.

Figure 9-6 Update Reading Configuration



Step 3 Make your required changes. For guidance on what to enter in each of the screen fields, see Table 9-2

Step 4 When you have finished, click **Update**.

Deleting Reading

To delete a Reading, do the following:

Step 1 Click the **Readings** tab on the administrator task bar. The *Readings* screen displays as shown in Figure 9-5.

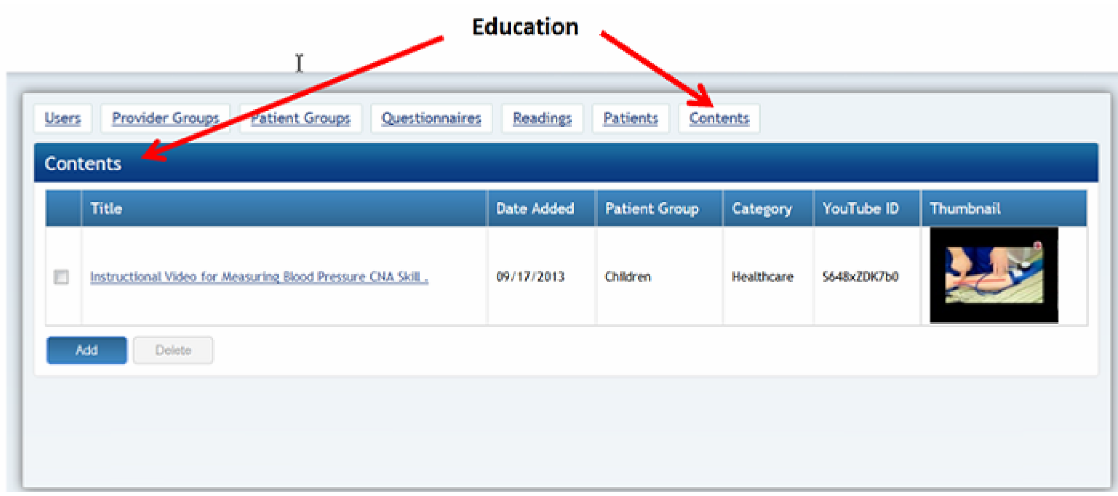
Step 2 Select the check box next to the relevant Reading ID and click **Delete**.

Step 3 When asked for confirmation, click **Yes.**

Health Education Video (Content)

General Comments

- The Extended Care sample portals refer to the health education video content as *Content*. For the Extended Care sample portals, this video content is restricted to YouTube content. This feature will only be available if your organization has configured the feature in your Extended Care installation.



Content Naming Considerations

Your naming strategy for content can help you organize your content and make it more meaningful for end users as well. Some possible considerations are described below:

- **Speciality**: If you are assigning Content to a Patient Group, then the Title name could indicate the the corresponding speciality group.
- **Geographic Location:** If you are assigning Content to Patient Group by the geographic location, then the Title could also indicate the geographic location.

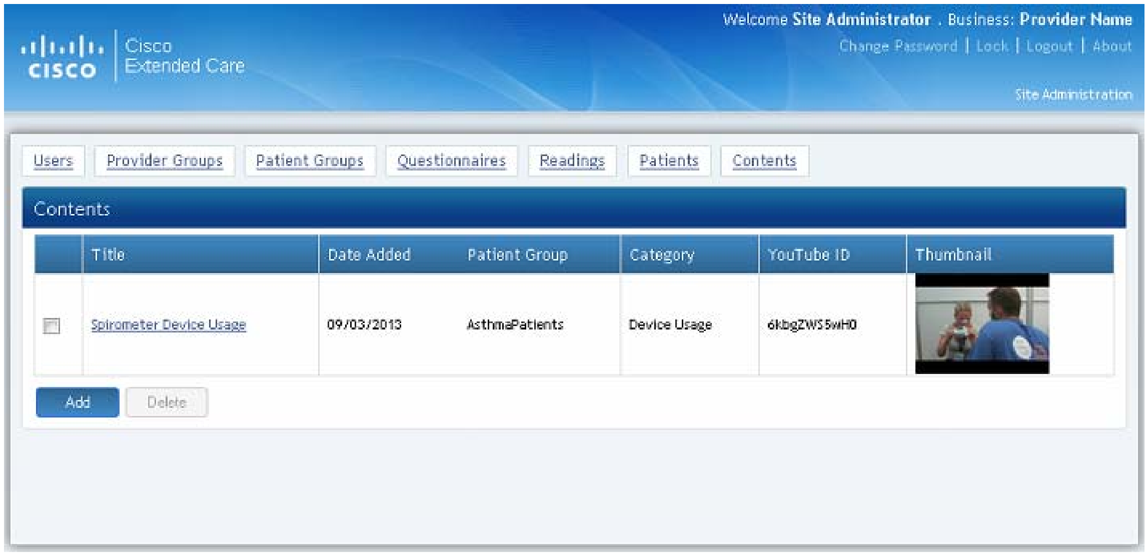
Adding Content

To add a new content to the application:

Step 1 Click the **Contents** link. The application displays the *Contents* window (see Figure 9-7).

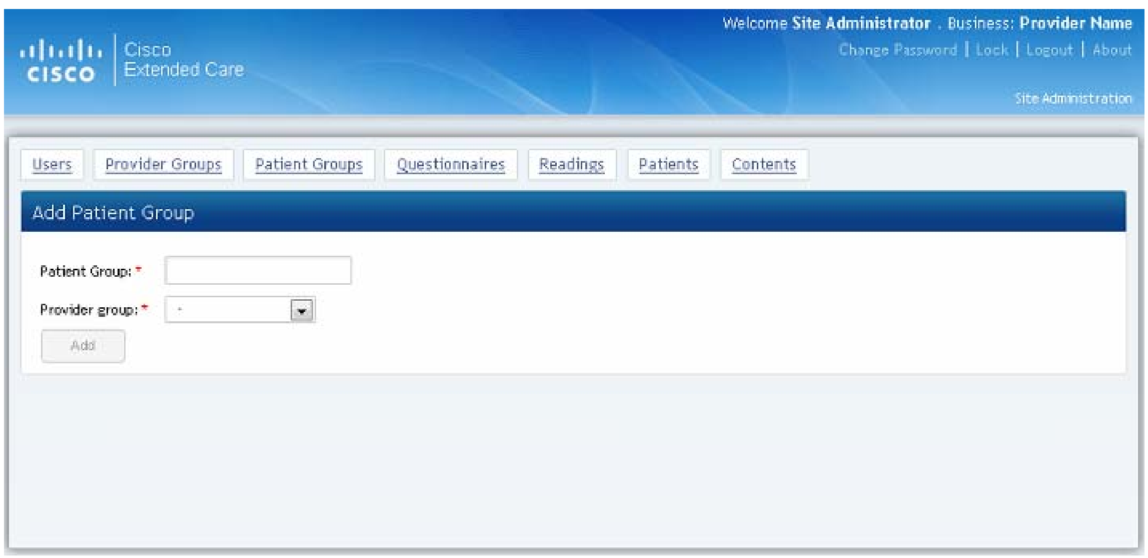
Note Click the Content thumbnail to view the video in a new browser tab.

Figure 9-7 Contents



Step 2 Click the **Add** button. The application displays the *Add Content* Window (see Figure 9-8).

Figure 9-8 Add Content



Step 3 Enter the Title, Category, Youtube ID, and the Description.

Step 4 Choose a Patient Group to which this Content will be assigned.

Step 5 When you have finished, click **Add**.

Step 6 If the server does not have Internet connectivity, an information dialog box appears as shown in Figure 9-9 on page 9-16 below. Click **OK** in the Information dialog box.

Figure 9-9 "Could Not Validate Content" warning

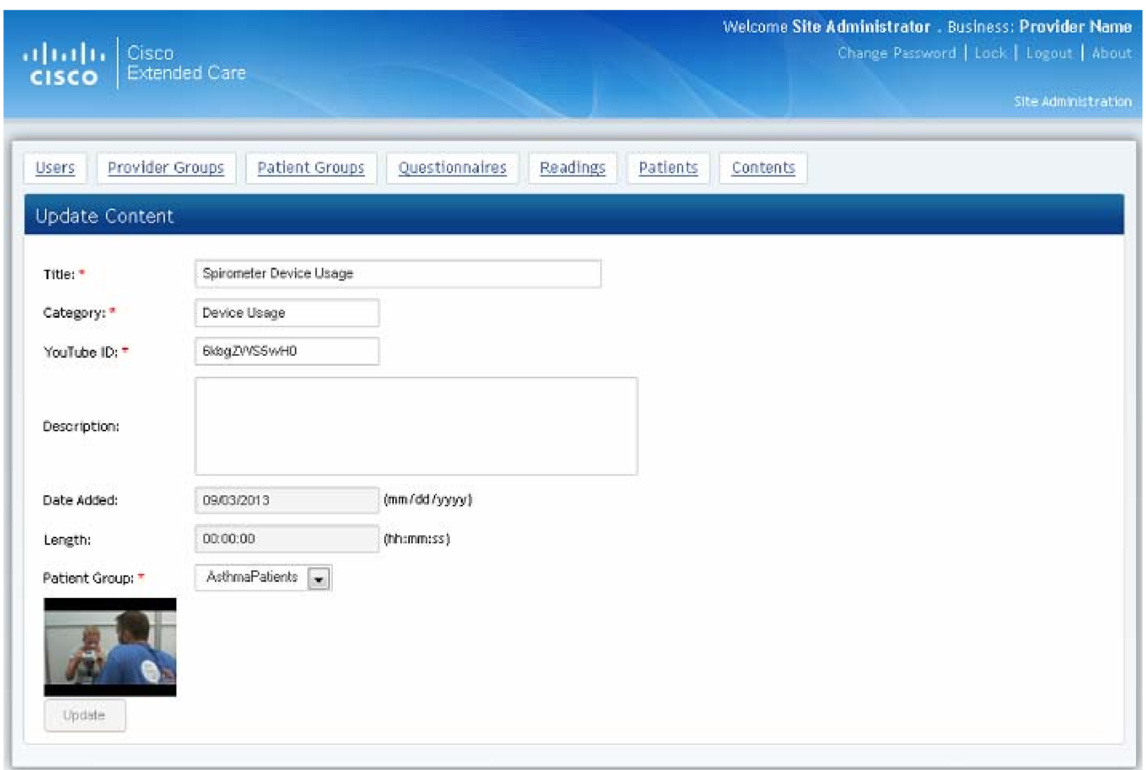
Updating Content

To update a Content, do the following:

Step 1 On the *Contents* window, click the Title of the content that you want to update.

The application displays the *Update Content* window (see Figure 9-10).

Figure 9-10 Update Content



Step 2 Make the required changes.

When you have finished, click **Update**.

Deleting Content

To delete a Content, do the following:

Step 1 On the *Contents* window, select the checkbox next to the Content Title and click **Delete** (see Figure 9-11).

Step 2 When asked for confirmation, click **Yes.**

Figure 9-11 Delete Content