Cross Encounter Measures Guide

Axiom Enterprise Decision Support

Version 2021.3

10 S. Wacker Dr
Suite 3375
Chicago, IL 60606
(847) 441-0022
www.syntellis.com
info@syntellis.com

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Contents

Defining encounters

In Axiom, you can define and gather encounters together to easily analyze episodes of care and returns so that your organization can address a wide variety of business questions or challenges. This allows you to look at a problem and identify the affected population. For example, you may want to evaluate the causes behind readmissions or find out what hip replacement patients are still experiencing joint pain more than three months after surgery.

By defining episodes and return population definitions in Axiom, you can gain insight across facilities, years, and patient care settings that are linked by a common ID with the flexibility to look at visits (and all of the associated visit data) for visits occurring before and after the index, anchor, or admission.

About episodes and returns

An episode is a series of medical encounters that address a specific medical condition or center around a specific set of medical services. Episodes have been used by organizations for some time, but until recently, they were of interest from a clinical or quality perspective. Episodes are now becoming more popular due to the potential of being a source of reimbursement.

Episodes are similar to and often synonymous with bundles, which is the process of bundling a set of services and paying one amount to allocate across providers. A bundled payment methodology involves combining the payments for a physician, hospital, and other health care provider services into a single bundled payment amount. This amount is calculated based on the expected costs of all items and services furnished to a beneficiary during an episode of care. Payment models that provide a single bundled payment to healthcare providers can motivate them to furnish services efficiently, to better coordinate care, and to improve the quality of care. Healthcare providers receiving a bundled payment may either realize a gain or loss, based on how successfully they manage resources and total costs throughout each episode of care. A bundled payment also creates an incentive for providers and suppliers to coordinate and deliver care more efficiently because a single bundled payment will often cover services furnished by various health care providers in multiple care delivery settings.

By defining an episode, you create or select a data filter, which narrows the scope of the Encounter table to match events to the criteria, called the anchor. After further configuration of an optional pre-anchor and post-anchor, you can process the definition, which generates records in the database for reporting purposes.

A return is an episode when a patient who visited a clinic or doctor's office, or was admitted to a hospital and then discharged, returns again after some time for the same reasons.

About encounter measure definitions

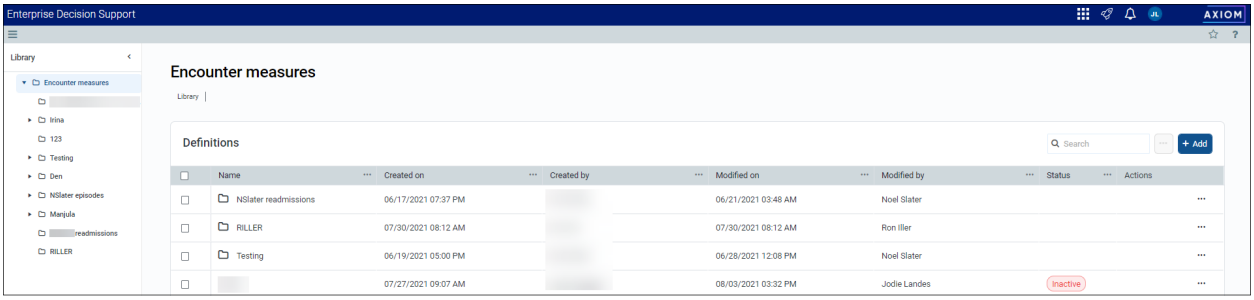
From the **Encounter measures** page, you can manage and process episode and return definitions. From this table, you can:

- View a list of all folders and definitions

- View the active status of definitions
- Add, edit, delete, or move folders
- Add, edit, delete, copy, or move definitions
- Process definitions

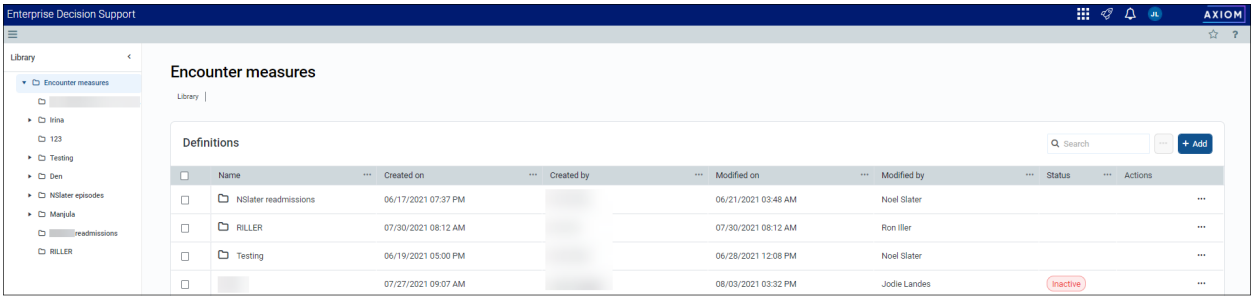
The **Library** side panel displays a hierarchical view of the folders. From this panel, you can easily navigate across the folders. To access the folder's content, click its name. The folder will open in a table format.

To search for a definition, you can use the search box in the upper right corner of the page. To filter the results in the table, click the ellipsis(**...**) in any of the available headings. To add a definition or folder, click **+ Add** in the upper right corner of the page.



Managing folders

In the definition table, you can create folders to organize multiple episode and readmission definitions in a way that makes sense to your organization. To filter the list, click the ellipsis (**...**) in any of the columns in which to filter. You can also search for a specific folder or definition by typing its name in the search box in the upper right corner of the page.



Accessing folders

From the Enterprise Decision Support home page, in the **Encounter analysis** section, click **Define encounter rules**.

Adding a folder

After creating a folder, it will display at the top of the table.

To add or edit a folder:

1. In the upper left corner of the page, click **+ Add**, and from the drop-down, select **Folder**.
2. In the **Add folder** dialog, type the folder name, and click **Add**.

> **NOTE:** The folder name must be unique.

Editing a folder name

To edit a folder name:

1. In the **Actions** column, click the ellipsis (**...**), and from the drop-down, select **Edit**.
2. In the **Folder details** panel, change the folder's name.
3. Click **Save**.

Adding, editing, or deleting definitions in a folder

To add or edit a definition in a folder:

1. In the **Name** column, click the folder name.

2. Do one of the following:
    - To add a definition, click **Add**, and from the drop-down select **Episode** or **Return**.
    - To edit a definition, click the ellipsis (**...**), and from the drop-down, select **Edit**.
3. Complete the definition by following the instructions in one of the following topics: Adding or editing an episode definition or Adding or editing a return definition

Moving a folder

Axiom allows you to move folders to organize the list the way it makes sense to your organization.

To move a folder

1. In the **Actions** column, click the ellipsis (**...**), and from the drop-down, select **Move**.
2. In the **Move** dialog, select a location, and click **Move**.

Deleting a folder

Folders that contain definitions cannot be deleted.

To delete a folder:

1. In the **Actions** column, click the ellipsis (**...**), and from the drop-down, select **Delete**.
2. At the confirmation prompt, click **OK**.

Adding or editing an episode definition

Episodes are organized around anchors.

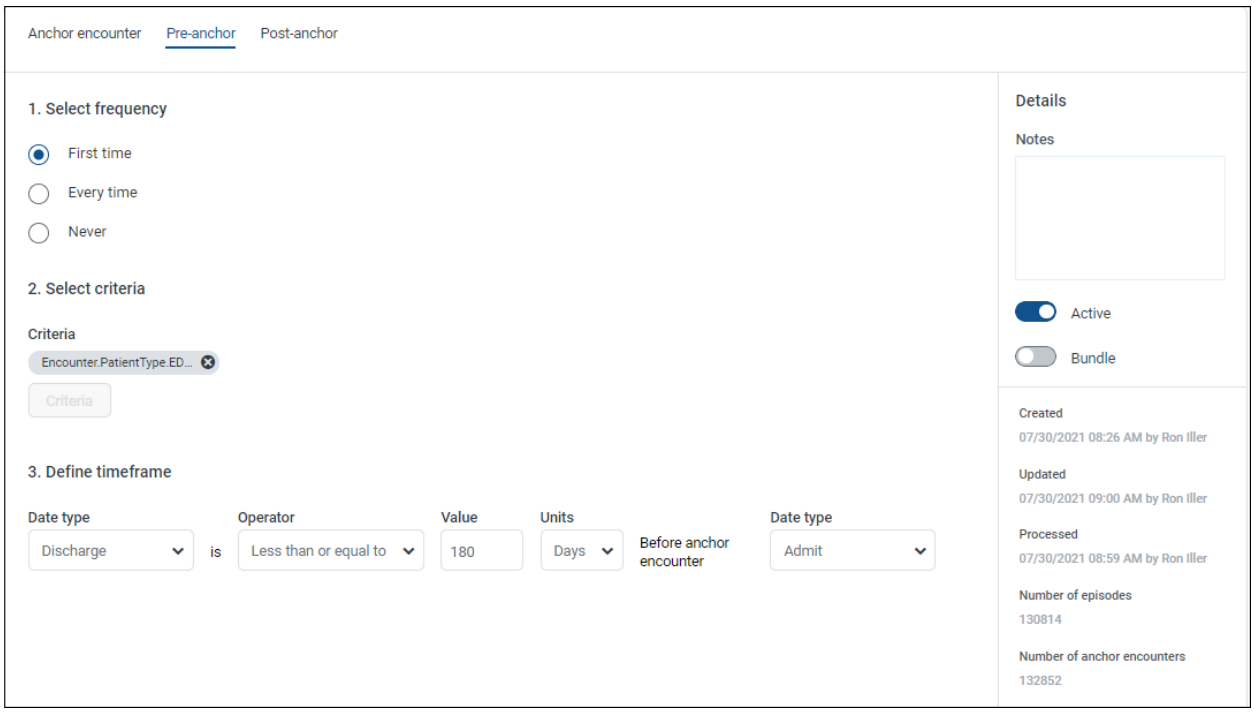
- **Anchor** - A key event in the patient's history that defines the activities related to the treatment. For example, childbirth, surgery, or doctor visit to address a specific issue.
- **Pre-anchor** - An activity that precedes the anchor event, usually related in preparation for the anchor event, such as preparing for surgery or childbirth.
- **Post-Anchor** - An activity that happens after the anchor event. For example, observation after surgery or a necessary check-up after childbirth.

NOTE: Not all the episodes include pre-anchor or post-anchor activities. For example, if a patient visits a doctor, recovers, and does not need an additional check-up, then this episode will not include either a pre-anchor or post-anchor.

To add or edit an episode definition:

1. From the Enterprise Decision Support home page, in the **Encounter analysis** section, click **Define encounter rules**.
2. To add or edit a definition in a folder, click the folder name.
3. Do one of the following:
    - To add a definition, click **+ Add**, and from the drop-down, select **Episode**.
    - To edit a definition, in the **Actions** column, click the ellipsis (**...**), and from the drop-down, select **Edit**.

Anchor encounter tab



4. At the top of the page, type a name for the definition.

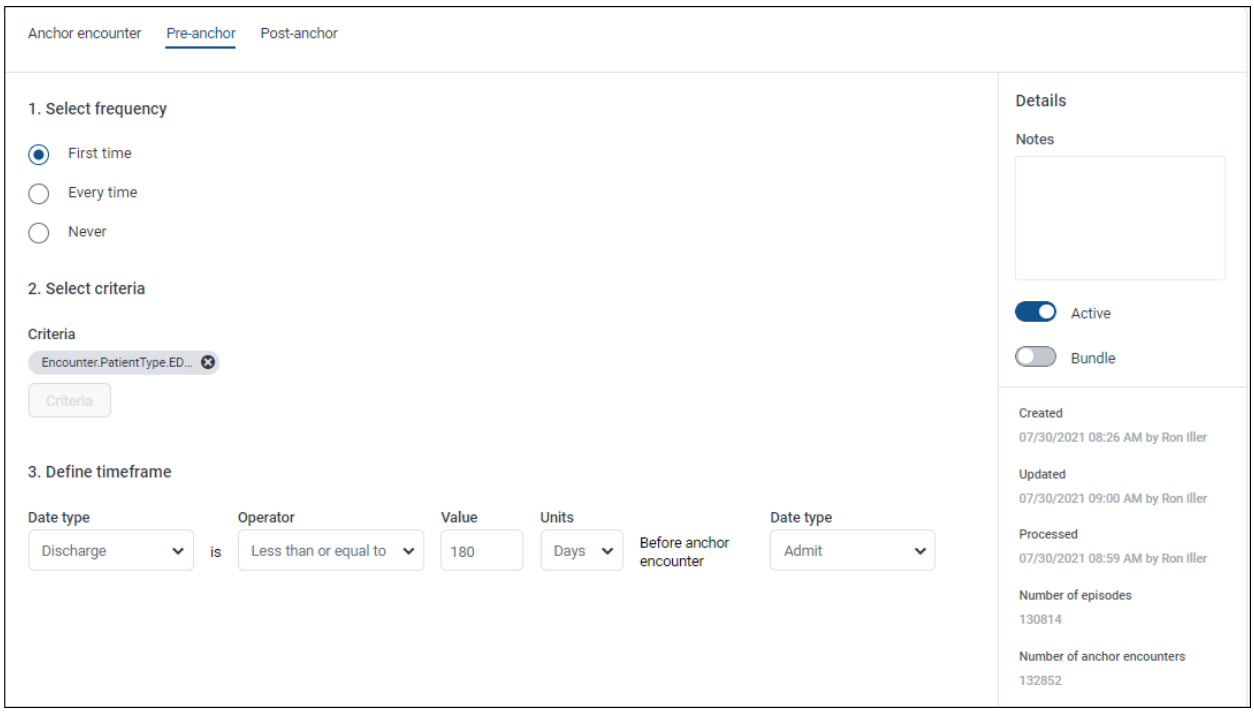
   NOTE: Although the forward slash is accepted, you should avoid it.

5. In the **1. Select date range** section, select **Admit** or **Discharge**.
6. In the **2. Select start and end dates** section, select the start and end dates of the encounters to evaluate.
7. In the **3. Select criteria** section, do any of the following:
   - To add a criterion, click **Criteria**. To identify the records in the database in which to identify the encounter, click **Criteria**. The Filter Wizard dialog displays, allowing you to select a specific attribute to define the record(s). For example, based on procedure code, diagnosis code, or any other attribute tied to the encounter. For instructions, see Using the Filter Wizard.
   - To edit a criterion, click the existing filter name.
   - To delete a criterion, click X next to the criterion name.
8. At the bottom of the page, select the following options, as needed:

Option	Description
Allow an encounter to be in multiple episodes	Select this option to allow an encounter to be in more than one episode. For example, an encounter may meet the criteria of the anchor and post-anchor encounters. This option would allow that encounter to be an anchor in one episode and a post-anchor in another episode within this definition.
Ignore time	Select this option if you do not want to consider the time when determining which encounters are eligible to be pre-anchor or post-anchor encounters. You may want to select this option if your encounter data does not have accurate timestamps on admit or discharge dates. **NOTE:** If selected, 'Hours' will not be available when you define the timeframe for pre- and post-anchor encounters.
Use secondary encounter identifier	By default, Axiom returns results that meet the filter criteria and groups them into episodes/returns based on patient ID only. However, you can optionally use a secondary identifier to fine pre- and post-anchor encounters that have the same or different values (from the anchor) for the following codes: • Principal diagnosis code (ICD-10-CM) • Principal procedure code (ICD-10-PCS) • APR-DRG code • MS-DRG code • CPT code For example, if you create an episode for heart attacks and choose a secondary identifier of 'Same MS-DRG code' for a given patient, only the post-anchor encounters that also have the same MS-DRG code as the anchor encounter will be included in the episode. Any post-anchor encounters for that patient with a different MS-DRG code will be excluded from that episode.

9. Click **Next** at the bottom of the page, or click **Step 2 Pre-anchor** at the top of the page. Complete the steps for these tabs using the instructions in the next section below.

Pre-anchor and Post-anchor tabs



The **Pre-Anchor** and **Post-Anchor** tabs work similarly in that they allow you to define any pre- or post-anchor events for the definition.

To define the Pre-anchor and Post-anchor tabs:

10. In the **1. Select frequency** section, select one of the following:
    - To include only the first pre- or post-anchor encounter related to the anchor encounter, select **First time**.
    - To include every pre- or post-anchor encounter related to the anchor, select **Every time**.
    - If you do not want to include any pre- or post-anchor encounters, select **Never**.
11. In the **2. Select criteria** section, do any of the following:
    - To add a criterion to identify the pre- or post-anchor activity, click **Criteria**. For instructions, see Using the Filter Wizard.
    - To edit a criterion, click the existing filter name.
    - To delete a criterion, click X next to the criterion name.
12. In the **3. Define timeframe** section, complete the following:

Field	Description
Date type	Select **Admit** or **Discharge**.
Operator	Select **Less than** or **Less than or equal to**.
Value	Type a value.
Units	Select a unit type.
Date type	Select **Admit** or **Discharge**.

For example, let's say that you need to find return episodes that occurred a week after the patient was discharged. In this case, you would you select the following:

- **Date type** - Admit (a date when patients were readmitted)
- **Operator** - Less than or equal to
- **Value** - 7
- **Units** - Days (this defines a week period)
- **Date type** - Discharged

Axiom will identify the episodes when a patient returned in a week or less after being discharged after the anchor encounter.

13. In the **Details** section on the right side of the page, complete the following:
    - **Notes**- (Optional) Type your own description to help you identify the definition.
    - **Active** - Click the toggle to activate or deactivate the definition. Only active definitions can be processed.
    - **Bundle** - Click the toggle to allow the episode to be grouped with other episodes as a bundle of services.
14. Click **Save**.
15. To process the definition now, click **Process**. Follow the instructions in Processing an episode or return definition.

> **NOTE:** You can process the definition later from the **Encounter measures** main page.

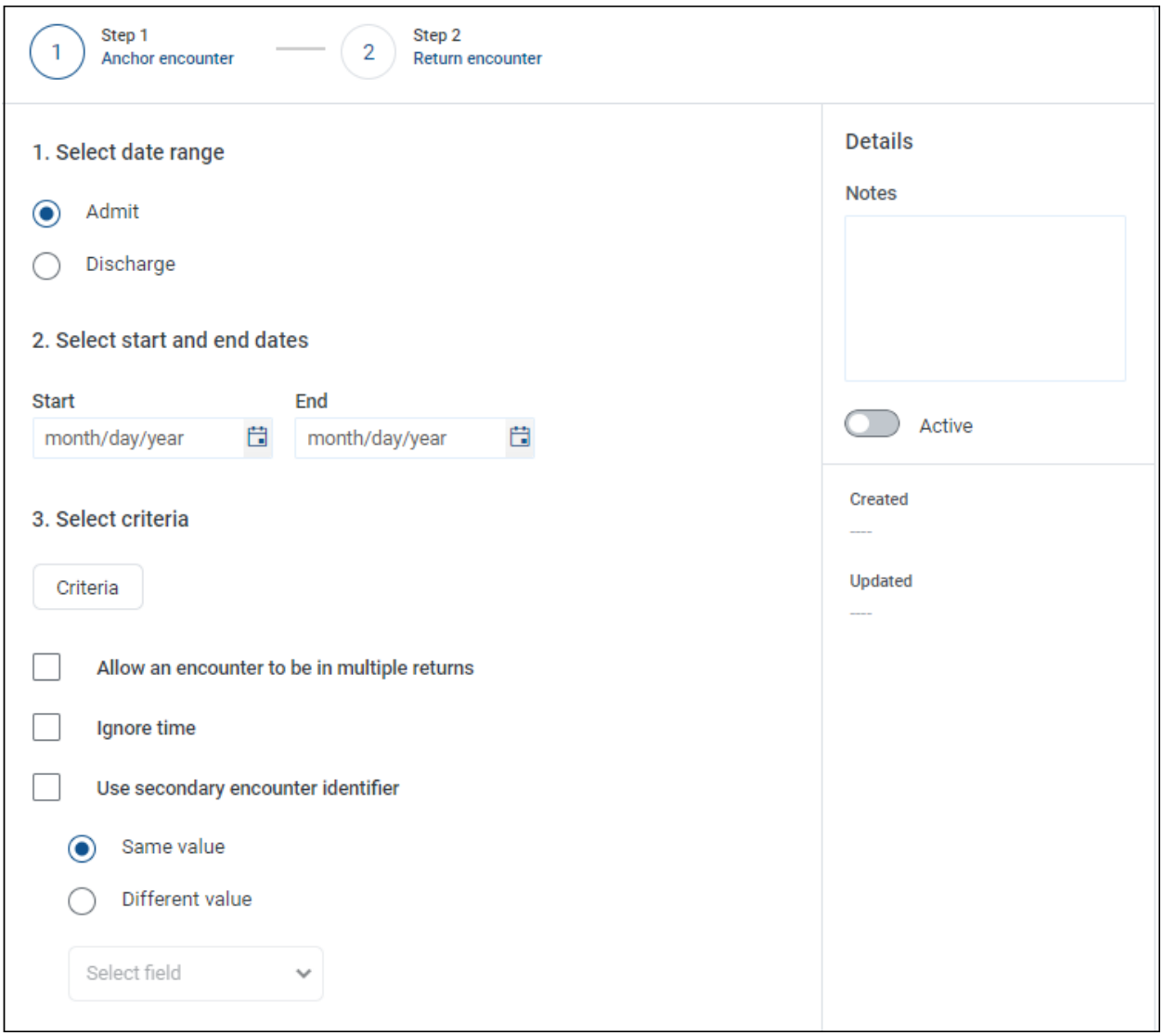
Adding or editing a return definition

A return is an episode when a patient who visited a clinic or doctor's office, or was admitted to a hospital and then discharged, returns after some time for the same reasons.

To add or edit a return definition:

1. From the Enterprise Decision Support home page, in the **Encounter analysis** section, click **Define encounter episodes**.
2. To add or edit a definition that is in a folder, click the folder name.
3. Do one of the following:
    - To add a definition, click **+ Add**, and from the drop-down, select **Return**.
    - To edit a definition, in the **Actions** column, click the ellipsis (**...**), and from the drop-down, select **Edit**.

Step 1 - Anchor encounter tab



4. At the top of the page, type a name for the definition.

   NOTE: Although the forward slash is accepted, you should avoid it.

5. In the **1. Select date range** section, select **Admit** or **Discharge**.
6. In the **2. Select start and end dates** section, select the start and end dates of the encounter to evaluate.
7. In the **3. Select criteria** section, do any of the following:

- To add a criterion, click **Criteria**. To identify the records in the database in which to identify the encounter, click **Criteria**. The Filter Wizard dialog displays, allowing you to select a specific attribute to define the record(s). For example, based on procedure code, diagnosis code, or any other attribute tied to the encounter. For instructions, see Using the Filter Wizard.
- To edit a criterion, click the existing filter name.
- To delete a criterion, click X next to the criterion name.

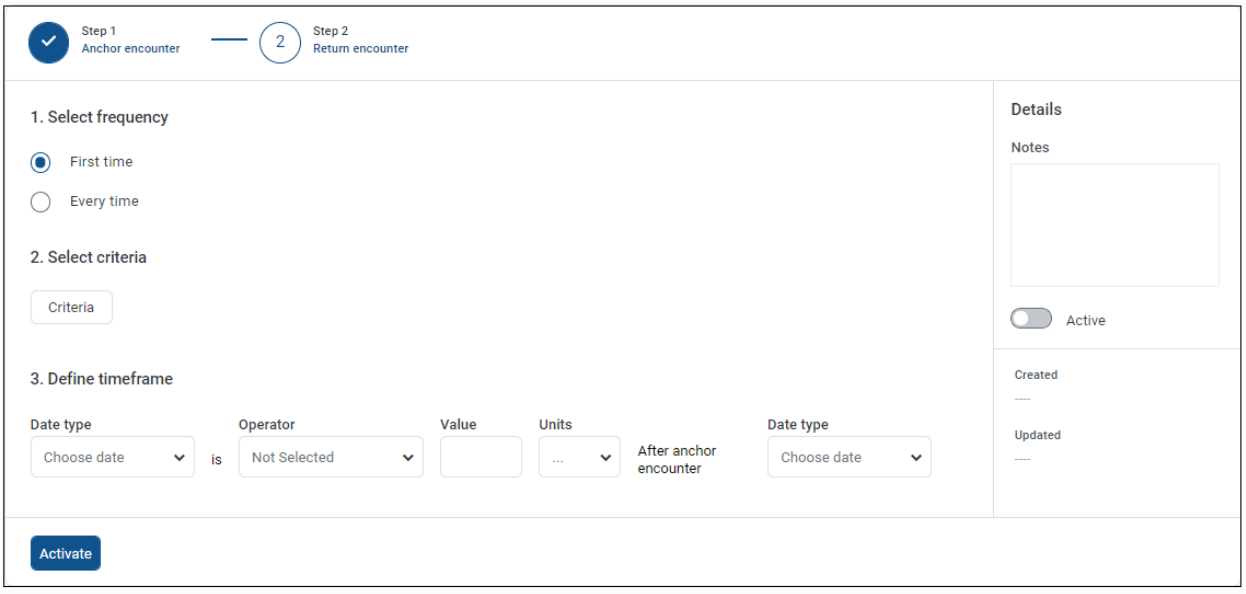
8. At the bottom of the page, select the following options, as needed:

Option	Description
Allow an encounter to be in multiple episodes	Select this option to allow an encounter to be in more than one episode. For example, an encounter may meet the criteria of the anchor and post-anchor encounters. This option would allow that encounter to be an anchor in one episode and a post-anchor in another episode within this definition.
Ignore time	Select this option if you do not want to consider the time when determining which encounters are eligible to be pre-anchor or post-anchor encounters. You may want to select this option if your encounter data does not have accurate timestamps on admit or discharge dates. **NOTE:** If selected, 'Hours' will not be available when you define the timeframe for pre- and post-anchor encounters.

Option	Description
Use secondary encounter identifier	By default, Axiom returns results that meet the filter criteria and groups them into episodes/returns based on patient ID only. However, you can optionally use a secondary identifier to fine pre- and post-anchor encounters that have the same or different values (from the anchor) for the following codes: • Principal diagnosis code (ICD-10-CM) • Principal procedure code (ICD-10-PCS) • APR-DRG code • MS-DRG code • CPT code For example, if you create an episode for heart attacks and choose a secondary identifier of 'Same MS-DRG code' for a given patient, only the post-anchor encounters that also have the same MS-DRG code as the anchor encounter will be included in the episode. Any post-anchor encounters for that patient with a different MS-DRG code will be excluded from that episode.

9. Click **Next** at the bottom of the page, or click **Step 2 Return encounter** at the top of the page. Complete the steps for this tab using the instructions in the next section below.

Step 2 - Return encounter tab



1. In the **1. Select frequency** section, select one of the following:
    - To obtain only pre- or post-anchors that take place only for the first time, select **First time**.
    - To obtain pre- or post-anchors that take place every time before/after the anchor, select **Every time**.
2. In the **2. Select criteria** section, do any of the following:
    - To add a criterion to identify the return activity, click **Criteria**. For instructions, see Using the Filter Wizard.
    - To edit a criterion, click the existing filter name.
    - To delete a criterion, click X next to the criterion name.
3. In the **3. Define timeframe** section, complete the following:

Field	Description
Date type	Select **Admit** or **Discharge**.
Operator	Select **Less than** or **Less than or equal to**.
Value	Type a value.
Units	Select a unit type.
Date type	Select **Admit** or **Discharge**.

    For example, let's say that you need to find return episodes that occurred a week after the patient was discharged. In this case, you would you select the following:
    - **Date type** - Admit (a date when patients were readmitted)
    - **Operator** - Less than or equal to
    - **Value** - 7
    - **Units** - Days (this defines a week period)
    - **Date type** - Discharged.

    Axiom will identify the episodes when a patient returned in a week or less after being discharged after the anchor encounter.
4. In the **Details** section on the right side of the page, complete the following:
    - **Notes**- (Optional) Type your own description to help you identify the definition.
    - **Active** - Click the toggle to activate or deactivate the definition. Only active definitions can be processed.
5. Click **Save**.

6. To process the definition now, click **Process**. Follow the instructions in Processing an episode or return definition.

> **NOTE:** You can process the definition later from the **Encounter measures** main page.

Activating or deactivating an episode or return definition

Activating a definition means the definition is complete and ready for Axiom processing. If you are not yet ready to process the definition, you can click the Activate toggle to deactivate it.

To activate or deactivate an episode or return definition:

1. From the Enterprise Decision Support home page, in the **Encounter analysis** section, click **Define encounter rules**.
2. In the **Actions** column of the definition, click the ellipsis (**...**), and click **Edit**.
3. In the **Details** section on the right side of the page, click the **Active** toggle.

   TIP: Axiom will check the definition once you activate and save it. Resolve all error messages and save before processing.

4. Click **Save**.
5. To process the definition now, click **Process**.

   NOTE: You can process the definition later from the **Encounter measures** page.

Deleting an episode or return definition

Instead of deleting a definition, you can deactivate so that it cannot be processed. For instructions, see Activating or deactivating an episode or return definition.

To delete an episode or return definition:

1. From the Enterprise Decision Support home page, in the **Encounter analysis** section, click **Define encounter episodes**.
2. In the **Actions** column of the definition to delete, click the ellipsis (**...**), and click **Delete**.
3. At the **Delete?** prompt, click **Delete**.

Processing an episode or return definition

NOTE: Only active definitions can be processed.

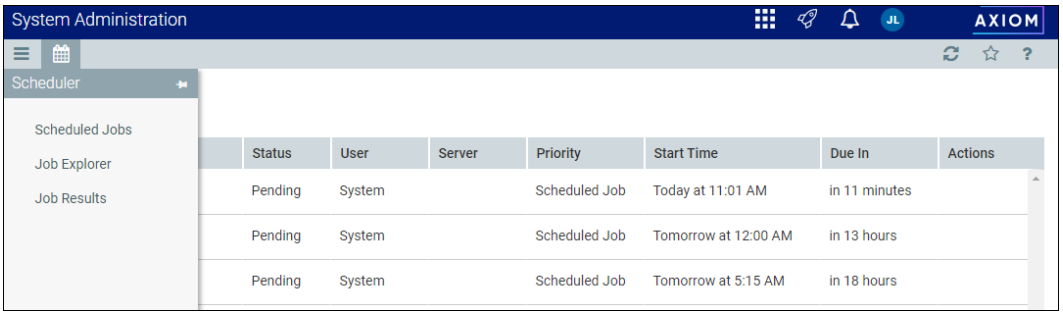
To process an episode or return definition:

1. From the Enterprise Decision Support home page, in the **Encounter analysis** section, click **Define encounter rules**.
2. In the **Actions** column for the definition to process, click **Process**.

   NOTE: A message displays at the top of the page that the definition will be processed as soon as possible. Also, if a definition is already scheduled for processing, the **Process** button will be grayed out (inactive). You can open and review the definition, but you will not be able to process or delete it.

3. To view the process status of definitions, do the following:
   a. Click the Area menu in the Global Navigation Bar, and click **System Administration**.
   b. Click the menu icon in the left side of the Task Bar , and select **Scheduler**.
   c. From the Navigation panel, select **Tools > Scheduler**.
   d. Click the calendar icon to display the Scheduler panel, and then select **Job Results**. To refresh the list, click the Refresh icon in the Task Bar.

   TIP: To keep the Scheduler panel open while you are working on the page, click the thumb tack icon.



Using the Filter Wizard

You can use or create your own filters to customize the data to view. The Filter Wizard walks you through the process of building complex limit query filters rather than having to construct them manually. You can create and save new filters for future use as well as use and edit existing filters.

Using an existing filter

To use an existing filter:

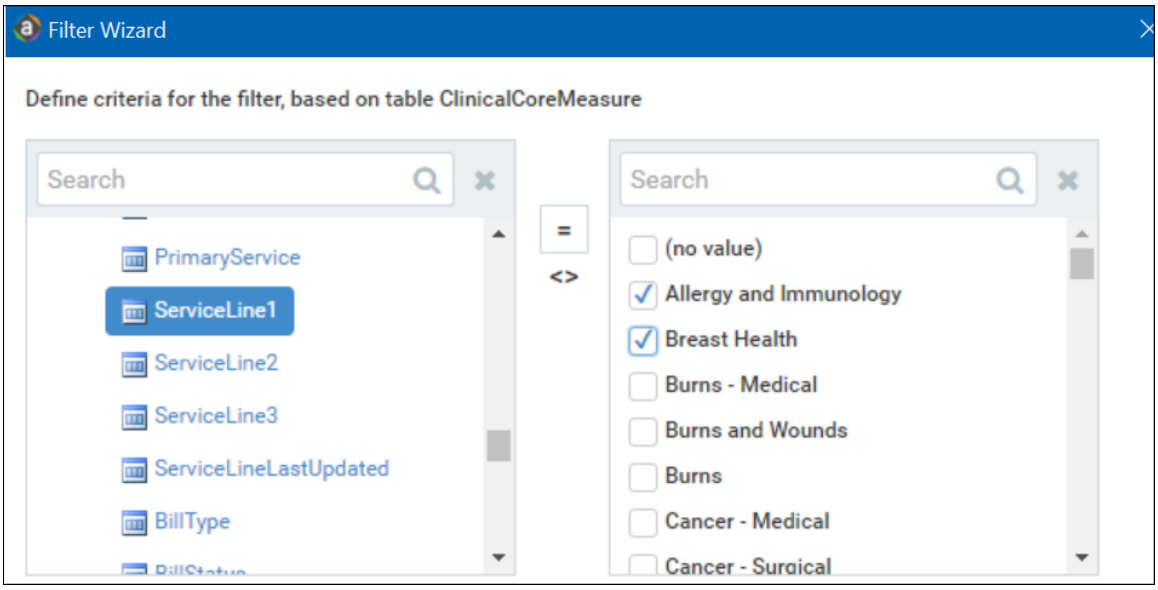
1. Next to the **Preview** field, click the folder icon.

2. In the **Filter Library** dialog, select the filter to use, and click **OK**.
3. In the **Filter Wizard** dialog, click **Apply**.
4. Click **OK**.

Creating a filter

TIP: You can create a new filter from an existing filter by selecting it from the folder icon in the **Preview** field, and then follow these steps to make the appropriate changes. Make sure to give the filter a new name so that you do not overwrite the existing filter.

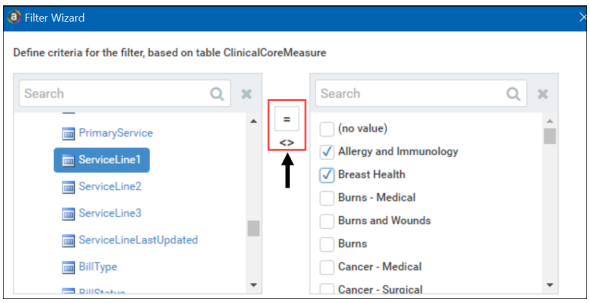
1. On the left side of the dialog, select the table column on which you want to base the filter. After you select a table column, the values in that column display in the right side of the dialog.



2. In the right side of the dialog, type or select the value on which to base the filter. You can type

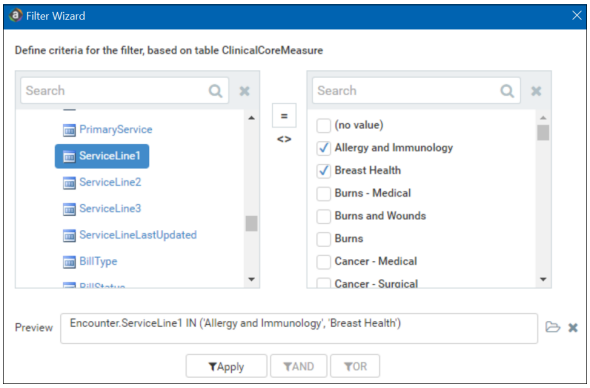
into the field above the list of values to filter the list or to specify a value. If one or more values are selected, then those items are used in the filter. Otherwise, whatever you type into the field is used by the filter.

3. In the space between the two selection boxes, select the operator to use for the filter criteria statement, such as equals, not equals, greater than, or less than.



4. Review the filter criteria statement in the **Preview** box to ensure that it is as intended. If you need to make changes, edit your selections made above.

NOTE: For instructions on writing filter syntax, see Filter criteria syntax.



5. Do one of the following:
   - If the filter criteria statement is finished, click **OK**. The Filter Wizard uses the statement in the Preview box (you do not have to click **Apply** in this case).
   - To create a compound filter, click **Apply** to move the current criteria statement into the **Filter** box. Then, repeat Steps a-d to create another criteria statement. When the next statement is complete, click **AND** or **OR** to join it to the prior statement.
6. In the **File name** field, type a name for the filter.
7. In the **Description** field, type a description of what the filter does.
8. Click **Save**.
9. In the Filter Wizard dialog, click **OK**.

Filter criteria syntax

Several areas of Axiom Enterprise Decision Support use criteria statements to define a set of data. The syntax for these criteria statement is as follows:

```
Table.Column='Value'
```

- *Table* is the name of the database table.
- *Column* is the name of the column in the database table.
- *Value* is the value in the column.

If the column is String, Date, or DateTime, the value must be placed in single quotation marks as shown above. If the column is Numeric, Integer (all types), Identity, or Boolean, then the quotation marks are omitted.

For example:

- To filter data by regions, the filter criteria statement might be: `DEPT.Region='North'`. This would limit data to only those departments that are assigned to region North in the Region column.
- To filter data by a single department, the filter criteria statement might be: `DEPT.Dept=100`. This would limit data to only department 100.

If the table portion of the syntax is omitted, then the table is assumed based on the current context. For example, if the filter is used in an Axiom query, then the primary table for the Axiom query is assumed. If the current context supports *column-only syntax*, and the specified column is a validated key column, then the lookup table is assumed.

Operators

The criteria statement operator can be one of the following: =, >,<,<>,<=,>=. Greater than or less than statements can only be used with numeric values. For example:

```
ACCT.Acct>1000
```

SQL IN and LIKE syntax can also be used. For example:

```
DEPT.Region IN ('North','South')
```

Compound criteria statements

You can use `AND` and `OR` to combine multiple criteria statements. If you are creating long compound criteria statements with multiple ANDs or ORs, you can use parentheses to group statements and eliminate ambiguity. For example:

```
(DEPT.Region='North' OR DEPT.Region='South') AND (ACCT.Acct=100 OR
ACCT.Acct=200)
```

NOTES:

- When filtering on multiple values in the same column, you must use OR to join the statements, not AND. In the example above, if the statement was instead `DEPT.Region='North' AND DEPT.Region='South'`, that statement would return no data because no single department belongs to both the North and South regions. When you use OR, the statement will return departments that belong to either the North or the South regions.
- Alternatively, you can use the SQL IN syntax to create a compound statement for values in the same column. For example, the statement `DEPT.Region='North' OR DEPT.Region='South'` can also be written as `DEPT.Region IN ('North','South')`. The Filter Wizard uses IN syntax by default.

Using criteria statements in functions

If you are using a criteria statement in a function, such as GetData, you must place the entire criteria statement in double quotation marks. For example:

```
=GetData("Bud1","DEPT.Region='North'","GL1")
```

You can also place the criteria statement in a cell and then use a cell reference in the function. In this case, you do not need to use double quotation marks in the function, unless you are concatenating text and cell reference contents within the function.

Referencing blank values in filters

If a string column contains a blank value, you may want to create a filter that includes or excludes records with these blank values. For SQL Server, the blank value is stored as an empty string. This empty string is indicated with empty quotation marks in the filter. For example: `ACCT.CMAssign=''` or `ACCT.CMAssign<>''`

If you use the Filter Wizard to construct the filter, it will automatically use the appropriate syntax.

Referencing values with apostrophes in filters

If a string column contains a value with an apostrophe (such as O'Connor), then that apostrophe must be escaped with another apostrophe so that it is not read as the closing apostrophe for the filter criteria statement. For example:

`Dept.VP='O'Connor'`

Invalid. This construction does not work because Axiom Enterprise Decision Support reads it as Dept.VP='O' and then does not know what to do with the rest of the text.

`Dept.VP='O''Connor'`

Valid. The extra apostrophe tells Axiom Enterprise Decision Support that the apostrophe is part of the string value and is not the closing apostrophe.

> **NOTE:** This syntax must use two apostrophe characters in sequence and *not* a double quotation mark. If you create the filter using the Filter Wizard, Axiom Enterprise Decision Support will construct the appropriate syntax for you.

Referencing Date or DateTime values in filters

If your locale uses a date format where the first value is the day, filters using that date or date-time value will not process correctly. Instead, the date or date-time value must be in standard format. Standard format is `YYYY-MM-DDTHH:MM:SS` for DateTime and `YYYY-MM-DD` for Date.

If you use the Filter Wizard to construct the filter, it will automatically convert the date or date-time value to the appropriate syntax.