Reportable Conditions Knowledge Management System

RCKMS AUTHORING TOOL USER GUIDE

Last Updated July 2025

For Jurisdiction Administrators

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Disclaimer: Images in this document may not be exact matches to the current version of the Authoring Tool based on release dates.

1 Introduction

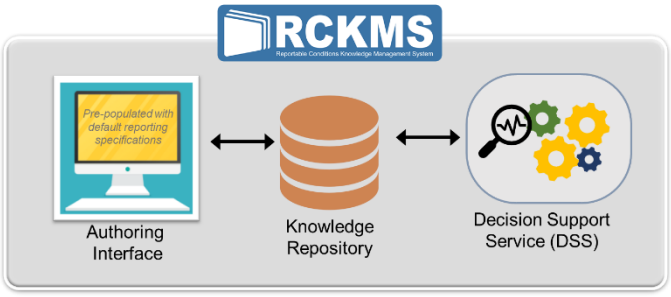
The user guide documents the procedures for using RCKMS. The intended audiences are Jurisdiction Administrators and other public health agency (PHA) stakeholders interested in working with the application. This user guide is intended to be used with the production account of the RCKMS Authoring Tool.

1.1 What is R-C-K-M-S?

The Reportable Conditions Knowledge Management System (RCKMS) is a tool developed to enhance surveillance by providing comprehensive information to clinicians, labs, and reporters about the "who, what, where, when, and how" of case reporting, with the aim of delivering information about potential cases from providers to state and local public health as a service of the broader infrastructure for electronic case reporting (eCR). RCKMS is designed to improve the timeliness and accuracy of case reports received by public health, reduce the burden of reporting on providers, and help facilitate a move toward eCR.

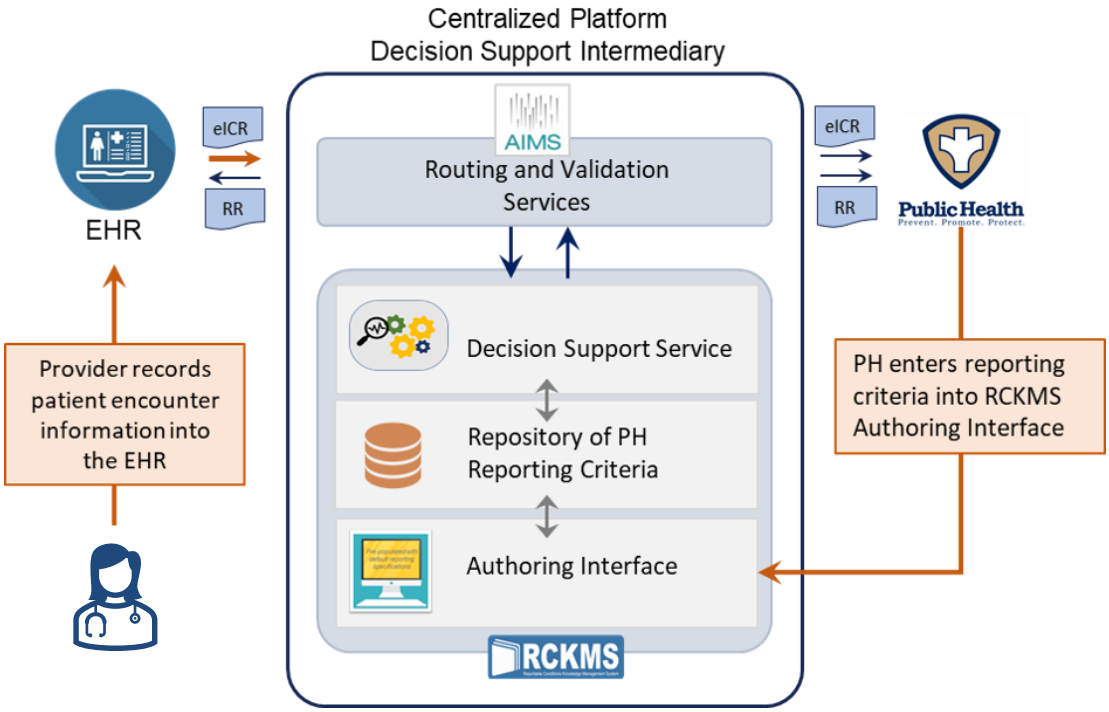
1.2 Components of RCKMS

RCKMS is made up of the Authoring Interface, Knowledge Repository, and Decision Support Service (DSS). At a very high level, these three components work together to transform the cumbersome workflow of manual case reporting to a more automated and efficient workflow.



RCKMS has three components, as follows:

Authoring Interface	The Authoring Interface, also referred to as the Authoring Tool, is the centralized web portal that PHAs use to input, edit, and manage reporting criteria for their jurisdiction. To ease the burden of entering the criteria, the Authoring Interface comes pre-populated with reporting specifications, also referred to as "default content." PHAs can either use these defaults, which are based on the CSTE position statements, or change them to meet their jurisdiction's reporting needs.
Knowledge Repository	The Knowledge Repository is a database containing all the data related to reporting specifications, both the default content and any customizations made by a PHA. When a PHA authors in the Authoring Interface, that information is stored here to be deployed to the Decision Support Service.
Decision Support Service	Providers can query the DSS to determine if a case should be reported and, if so, to which jurisdiction(s). It is linked to a provider's electronic health record (EHR). After the patient visits the provider, encounter information is recorded in the EHR. If the EHR detects information that suggests a potential case, the EHR will call the RCKMS DSS, which will then provide the determination of reportability.



The diagram above illustrates the flow of data from an EHR through RCKMS to the PHA. The steps are:

1. When information in a patient's record in the provider EHR matches a Reportable Conditions Trigger Code (RCTC), an electronic initial case report (eICR) is automatically generated to begin the process of reporting to public health.
2. The eICR is sent to the DSS to determine reportability. This is done in two steps:
   - The DSS validates the RCTC and examines jurisdiction-specific reporting specifications.
   - Then, the DSS examines **jurisdiction-specific** reporting specifications to determine reportability.
3. When a match is found, the APHL Informatics Messaging Service (AIMS) routes the eICR and a Reportability Response (RR) to the PHA or agencies of interest. The RR is also sent back to the EHR.

2 Getting Started With Authoring

Getting started with navigating RCKMS can be facilitated by reviewing some introductory information. Review this section for an overview of RCKMS, as well as directions on how to access, log in, and navigate through the RCKMS Authoring Interface.

2.1 Requesting Access

The first step to getting started is obtaining access to the RCKMS Authoring Tool. To obtain access to the RCKMS Authoring Tool, submit an AIMS Service Desk ticket under the category "eCR Reportability (RCKMS User Support)" to request an RCKMS user account. In the ticket details, provide the following for each new user:

- Full name
- Email address
- Public health jurisdiction
- RCKMS role (Administrator or Member)

New to eCR?

Contact the CDC eCR Team to get started. You'll need to have a Jurisdiction profile set up prior to requesting user access.

***Note:** In RCKMS, a user with full access is referred to as a Jurisdiction Administrator. In this role, the user can view, edit, and publish information for their assigned jurisdiction. A user with a role of Jurisdiction Member can perform many of the same functions as a Jurisdiction Administrator but cannot import or publish reporting specifications, enable/disable timeboxing, or configure overridable fields.*

You will first be given a login ID for an RCKMS training jurisdiction to allow you to gain familiarity with RCKMS authoring without any impact on production rules. Your Authoring Support Associate (ASA) will then schedule and provide new user training. After a training session, you'll receive a login ID for a user account with access to your jurisdiction's production Knowledge Repository.

Once each user account has been created for your jurisdiction, you will receive an email with your username and login instructions. You will have 48 hours to log in and create a new password.

User Access Tip

No word from RCKMS on your user credentials and login instructions? – Check your spam folder.

2.2 Supported Browsers

We recommend using Google Chrome or Mozilla Firefox to access RCKMS. Microsoft browsers like Internet Explorer and Microsoft Edge are not fully supported at this time.

2.3 RCKMS Authoring Accounts: : Training and Production

RCKMS users will have access to two different accounts:

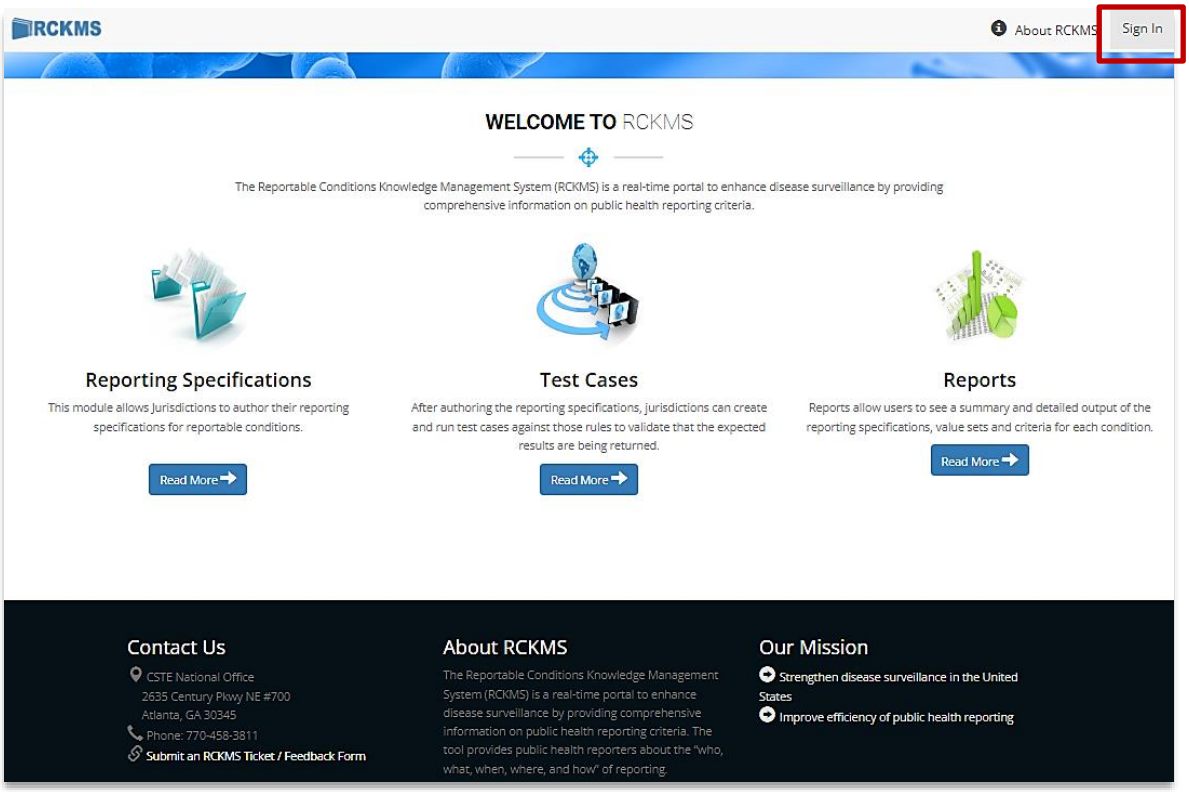
Training Account: Use the training account to log in to the training jurisdiction of the RCKMS Authoring Interface. Training account access is temporary and is used to familiarize yourself with the tool and the authoring process. Feel free to select a few conditions to author as practice. Anything done on your training account will have no effect on the reporting rules contained in the Knowledge Repository for your jurisdiction.

Production Account: Use the production account to author and test jurisdiction-specific reporting rules for conditions and publish them for eCR production use. The rules published while using your production account populate the Knowledge Repository for your jurisdiction, and therefore must reflect your PHA's reporting rules..

2.4 Signing in and Navigating the RCKMS Application

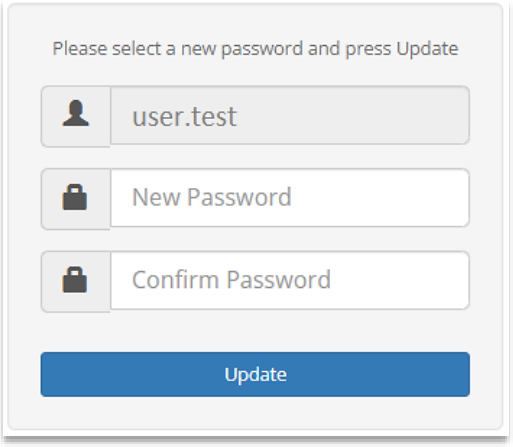
To access the RCKMS production account, visit https://rckms.aimsplatform.org/. You will see the *Welcome to RCKMS* page, as shown below.

The page displays links to pages with additional information about RCKMS and the *Sign In* page. To sign into the RCKMS application, select the **Sign In** link at the top right of the page.



After you select **Sign In**, you will be taken to the *Sign In* page. To sign in:

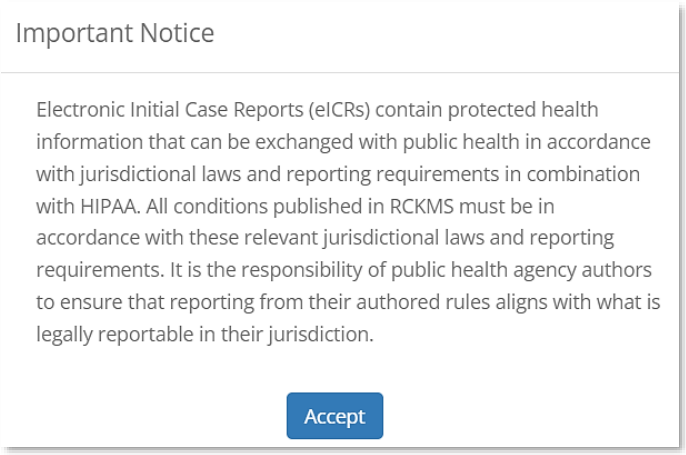
1. Enter the username provided to you by the RCKMS Administrator and your password. Select **Sign in**.
2. New user? The first time you sign in, you will be required to create a new password. RCKMS displays the Password Reset page. Enter your new password using the requirements below. Select **Update.**



Password must include:

- At least eight characters
- At least one uppercase letter (A-Z)
- At least one lowercase letter (a-z)
- At least one numeric digit (0-9)
- At least one special character

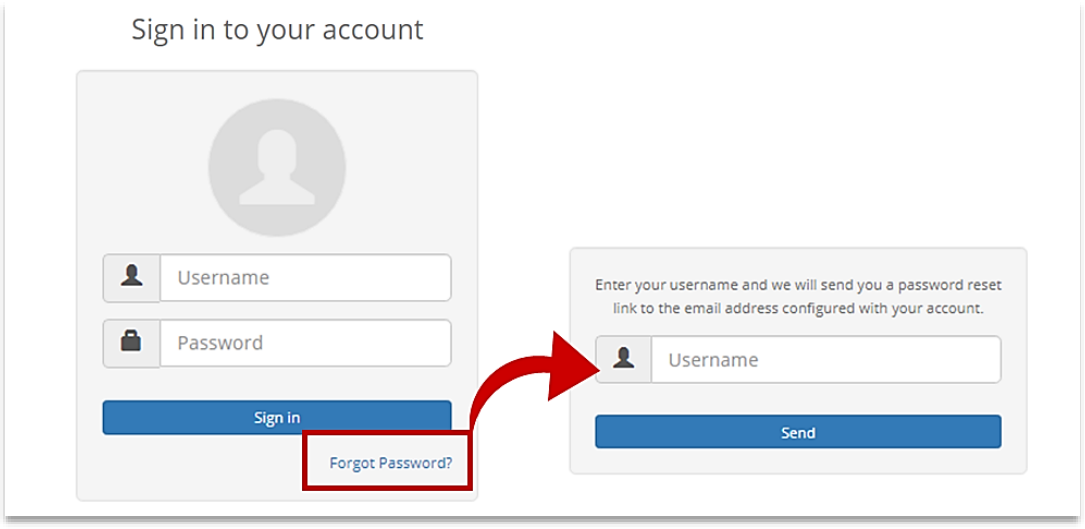
3. Once you successfully sign in to RCKMS, the *Home* page displays. Each time you log in, an Important Notice pop-up appears, reminding users that all conditions published in RCKMS must be in accordance with relevant jurisdictional laws and reporting requirements.
    a. Read the notice, then select **Accept** to acknowledge it.



2.4.1 Password Reset

If you forget your password, to set a new password:

1. Select the **Forgot Password?** link below the **Sign in** button on the *Sign In* page.
2. When prompted, enter your username and select **Send**.
3. RCKMS will send an email with a link and instructions to reset your password. You will have 48 hours to log in and create a new password before the reset link expires.

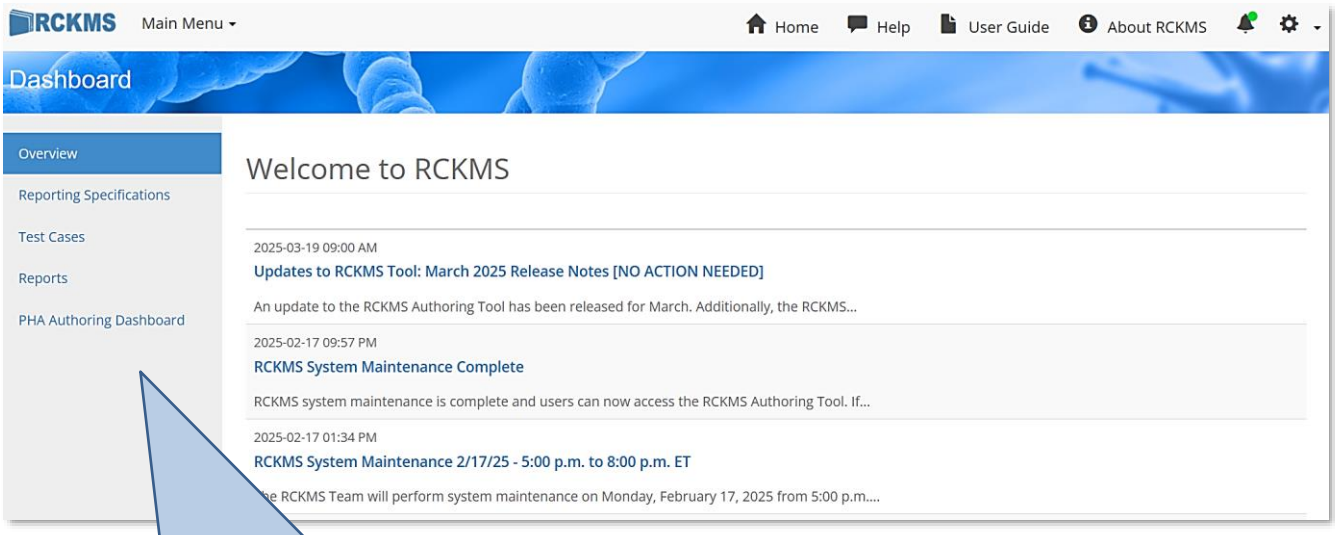


2.4.2 *Home* Page

The *Home* page, also referred to as the Dashboard, is the RCKMS landing page following successful sign in.

Use the *Home* page to:

- View notifications sent from the RCKMS Administrator
- Navigate to different modules in the RCKMS tool via the links in the side navigation menu.
- Access additional functionality by selecting options on the top navigation pane or the **Main Menu** drop-down.



The i options located on the page.

Item	
RCK	*me to RCKMS* page. This page contains a brief overview of the Reporting Specifications, Test Cases, and Reports modules, along with links to where you can find more information.
Main Menu	Drop-down that displays the options for Jurisdiction Administrator tasks.
Home	Select to be taken to the *Home* page.
Help	Select to open the Electronic Case Reporting (eCR) Shared Ticketing System to submit an RCKMS-related ticket.
User Guide	Select to open the RCKMS Authoring Tool User Guide.
About RCKMS	Select to display the *About RCKMS* page and general information about the RCKMS application.
Notification Bell	Select to display a detailed view of any messages from the RCKMS Administrator.
Cogwheel	Select to display information about the current session, view your user profile editor, change password, view jurisdiction inbox, and to sign out of the application.
Overview	Header for side navigation menu options.
Reporting Specifications	Select to display the *Reporting Specification* page.
Test Cases	Select to display the *Test Cases* page.
Reports	Select to display the *Reports* page.
PHA Authoring Dashboard	Select to display the *Public Health Agency Authoring Dashboard* page.

2.5 Submitting a Ticket

The RCKMS team is always available to provide support. Submit a ticket for any of the following:

- For general inquiries, feedback on the default content available in the Authoring Tool, or to request changes or additions to content before the next Content Release, submit an **eCR RCKMS Content** ticket.
- For new RCKMS user accounts, authoring training and authoring support, should you encounter any issues when working in the Authoring Tool, training lessons, or the RCKMS website, submit an **eCR Reportability** ticket.

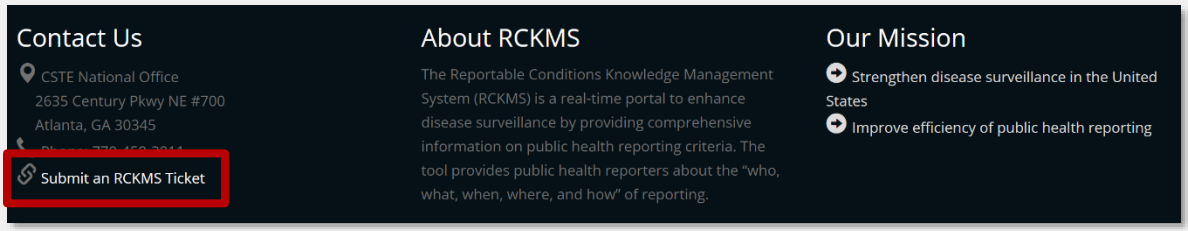
You can access this form in three ways:

1. Authoring Tool
(Bottom Navigation)

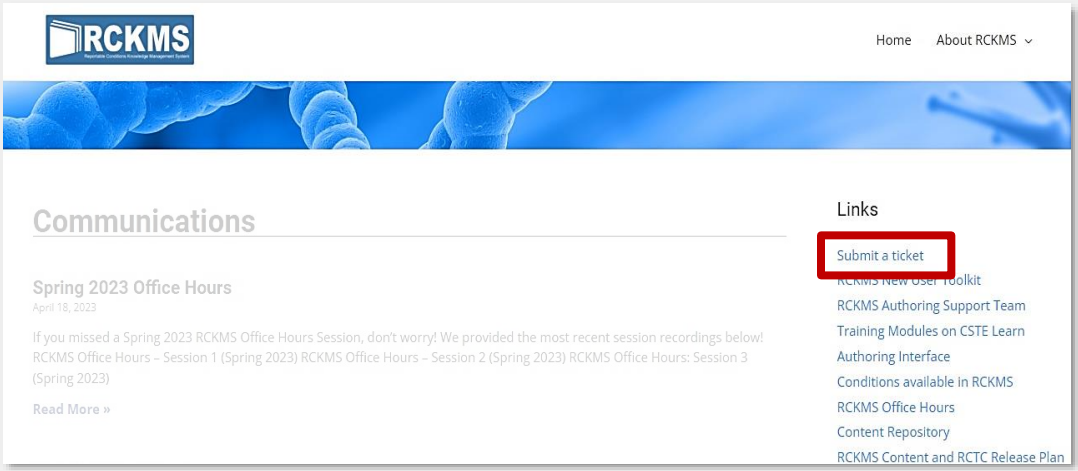
2. RCKMS Website
(www.rckms.org)

3. Ticketing Portal
(Website URL)

Authoring Tool: Locate and select the Feedback Form in the footer of the Authoring Tool.



RCKMS Website (www.rckms.org): Locate the **Submit a ticket** link on the Right side of the RCKMS website.



Ticketing Portal: Access the Electronic Case Reporting (eCR) Shared Ticketing System directly by entering the URL into your browser or by selecting on the link: https://aphlinformatics.atlassian.net/servicedesk/customer/portal/23/group/75.

***Note:** The Electronic Case Reporting (eCR) Shared Ticketing System allows PHAs to submit both RCKMS and eCR-related tickets. It allows the RCKMS and eCR teams to track and manage inquiries.*

3 Viewing and Editing Jurisdiction Information

Review this section to learn how to view, manage, and edit your jurisdiction's information using the *Jurisdictions* module. Information in this module generates the narrative in the RR, which is sent back to the reporter.

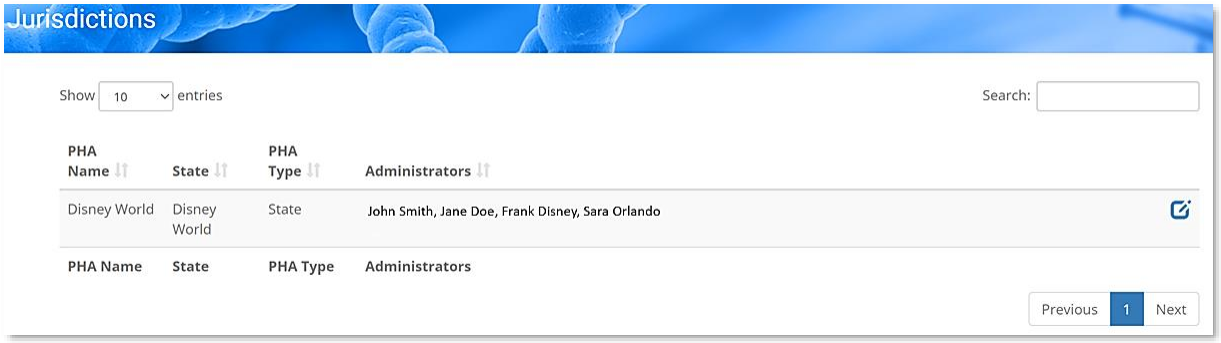
When you log into RCKMS for the first time, you should review and edit your jurisdiction information, as the information included here is important to ensuring that eICRs and RRs are routed correctly. In the *Jurisdictions* module, you can:

- Work with details and contact information for your PHA
- Review a list of RCKMS users within your jurisdiction
- View the status of authored conditions and reporting specifications for your jurisdiction
- View zip codes and users assigned to your jurisdiction

To access the *Jurisdictions* module, select **Main Menu** in the top navigation bar from any page and choose **Jurisdictions**.

3.1 *Jurisdictions* Page

The *Jurisdictions* page displays basic information about your jurisdiction. The screenshot below shows jurisdiction information for a user from the "Disney World" jurisdiction.



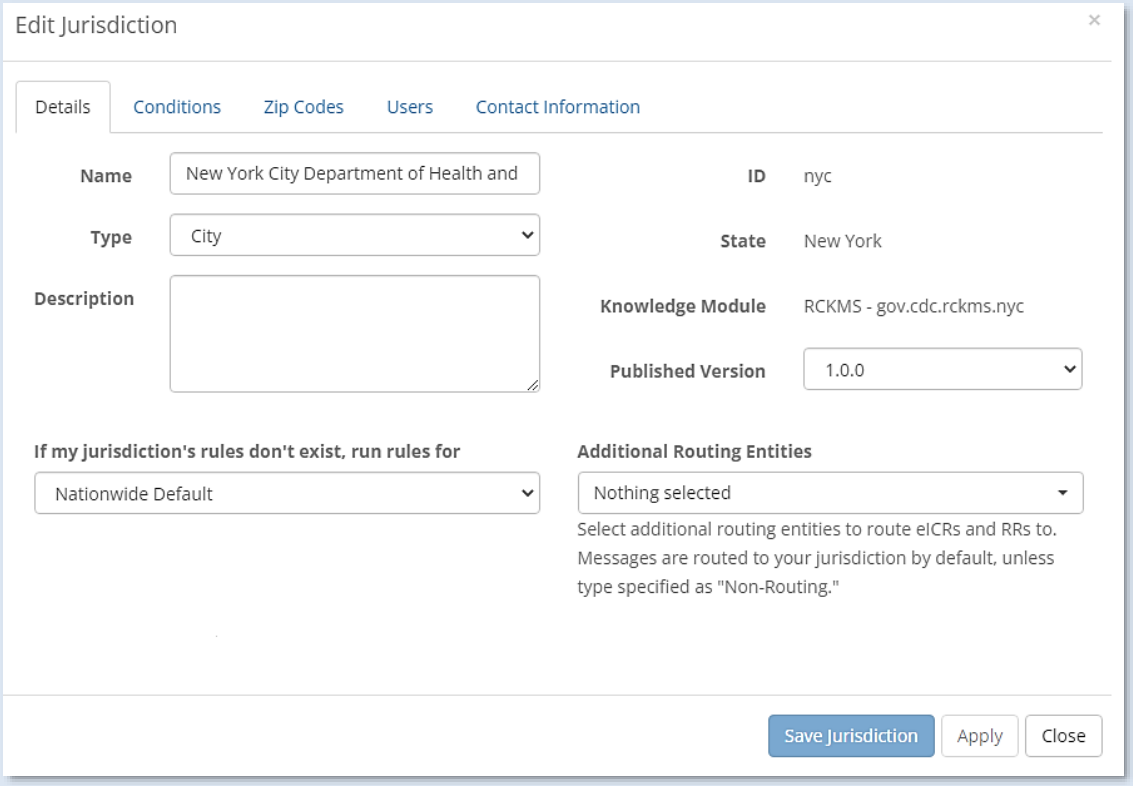
The following table details the options on the *Jurisdictions* page.

Item	Description
Show entries	Select drop-down and choose the number of items to display in the grid.
PHA Name	The formal name of the jurisdiction/PHA.
State	The state of the jurisdiction/PHA.
PHA Type	The type of PHA. Options include State, Parish, District, County, City, and Borough, Local Health Department Non-Routing, Routing Entity, State Non-Routing, Tribal, Freely associated state, Territory.
Administrators	The users' assigned Jurisdiction Administrator rights.
Edit	Select to view or edit jurisdiction information.
Previous	Select to navigate back through the list of items available.
Next	Select to navigate forward through the list of items available.
Sort	Select to sort the information in a column.

3.1.1 *Edit Jurisdiction* Window

To view and edit your jurisdiction information, complete the following:

1. Select the **Edit** icon next to your jurisdiction. RCKMS displays the *Edit Jurisdiction* window and the contents of the *Public Health Agency Details* tab.



From this window, you can work on any of the following:

Tab	Description
Public Health Agency Details	View and edit the PHA details. Options include PHA Name, Type (e.g., State, City, County, etc.), description, and version information, as well as options for running alternate rules in the event rules don't exist for a selected condition and options for alternate routing of eICR and RR information. ***Note:* Most of the fields on this screen will be populated for you by the RCKMS Administrator, but you should still review this tab for accuracy.**
Conditions	View the conditions associated with your jurisdiction, the name of the conditions, and the authoring status. While authoring reporting specifications occurs in a different module, this tab allows you to see a quick snapshot of all the conditions that your jurisdiction is working to author and their associated status. For more information on statuses, see *Section 4.6, Reporting Specification Details tab*.

Zip Codes	View or add zip codes included within your jurisdiction. Options include Zip Code, City, County, and State. This tab is especially important for jurisdictions whose zip codes may overlap with each other, such as a state and city PHA. *Section 3.1.2, Zip Codes,* provides additional details about populating this tab.
Users	View the users within your jurisdiction. This tab is for informational purposes only and provides a snapshot of the user name, role, and email addresses for users in your jurisdiction. If you need to edit the list of users in your jurisdiction, please contact the RCKMS Administrator.
Contact Information	Add contact information for your jurisdiction. The reporter and PHA will be notified with this contact information via the RR. *Section 3.1.3, Contact Information,* provides additional details about populating this tab.

2. After adding or editing information in any of the tabs in the *Edit Jurisdiction* window, do one of the following:
    - Select **Save Jurisdiction**. RCKMS displays the *Jurisdictions* page and the date and time of the last update.
    - Select **Apply**. RCKMS saves your changes and keeps the window open.
    - Select **Close** to close the page if you have not made any changes.

3.1.2 Zip Codes

For local PHAs, use the *Zip Codes* tab to add zip codes that are included in your jurisdiction. RCKMS uses zip codes to identify cities or local jurisdictions, and state codes to identify states to narrow down whose rules should be run. The *Zip Codes* tab provides additional detail for matching the address fields in an eICR and the address associated with a jurisdiction to determine which jurisdiction's rules to run. If no zip codes are entered or a zip code does not match, then the jurisdiction's state code will run. Therefore, local PHAs should consider authoring zip codes as an important step when authoring their rules. If a case is legally reportable to a local jurisdiction, but no zip codes were entered, then the state PHA's rules will be run.

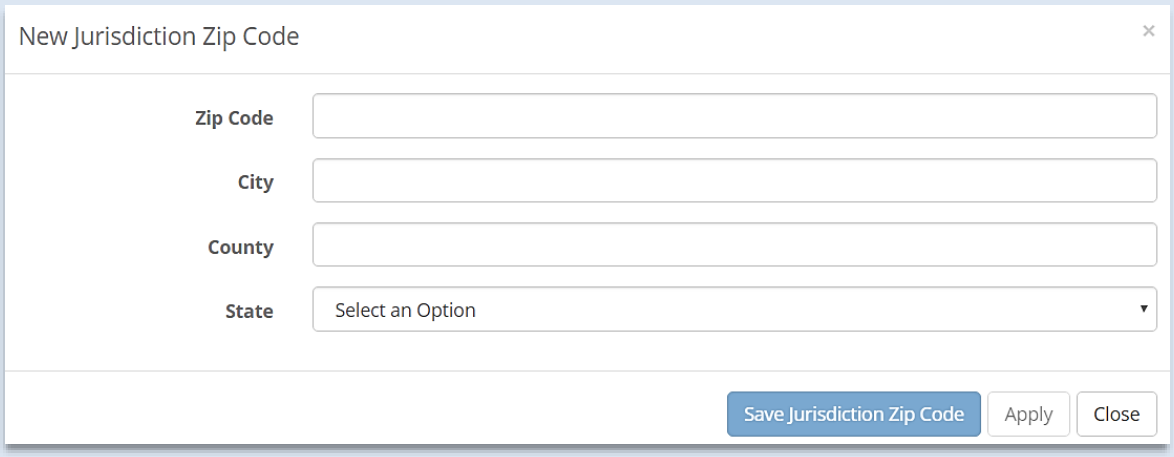
If states or other local jurisdictions also wish to have cases from those zip codes evaluated against their rules, they can list those zip codes in their respective PHA *Zip Codes* tab. Multiple jurisdictions can list the same zip code. The routing of the report to a jurisdiction is based on the Routing Entity defined in the *Public Health Agency Details* tab.

***Note:* In most cases, ONLY local jurisdictions will need to input their zip codes. State jurisdictions do not need to input all zip codes for their state. For zip codes that overlap in multiple jurisdictions (e.g., state and local, etc.), both jurisdictions should input the overlapping zip codes. To learn more about zip code use for your case, please *submit* a ticket.**

Disclaimer: ***RCKMS Administrators and the CSTE RCKMS team cannot advise on zip code determination. If applicable, consult your state/local laws and regulations to identify zip codes.***

To add a new zip code, complete the following:

1. From the *Zip Codes* tab, select the **Add Jurisdiction Zip Code** button. RCKMS displays the *New Jurisdiction Zip Code* window.



2. Enter the zip code, city, county, and state.
3. After entering information in each field, do one of the following:
    - Select **Save Jurisdiction Zip Code**. RCKMS displays the *Zip Codes* tab and the newly added zip code.
    - Select **Apply**. RCKMS saves your changes and keeps the window open.
    - Select **Close** to close the page if you have not made any changes.

The following table details the options in the *New Jurisdiction Zip Code* window.

Item	Description
Zip Code	Type the zip code for the designated area.
City	Enter a city for the selected zip code.
County	Enter a county for the selected zip code.
State	Select a state from the drop-down for the selected zip code.
Save Jurisdiction Zip Code	Select to save the jurisdiction zip code.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.

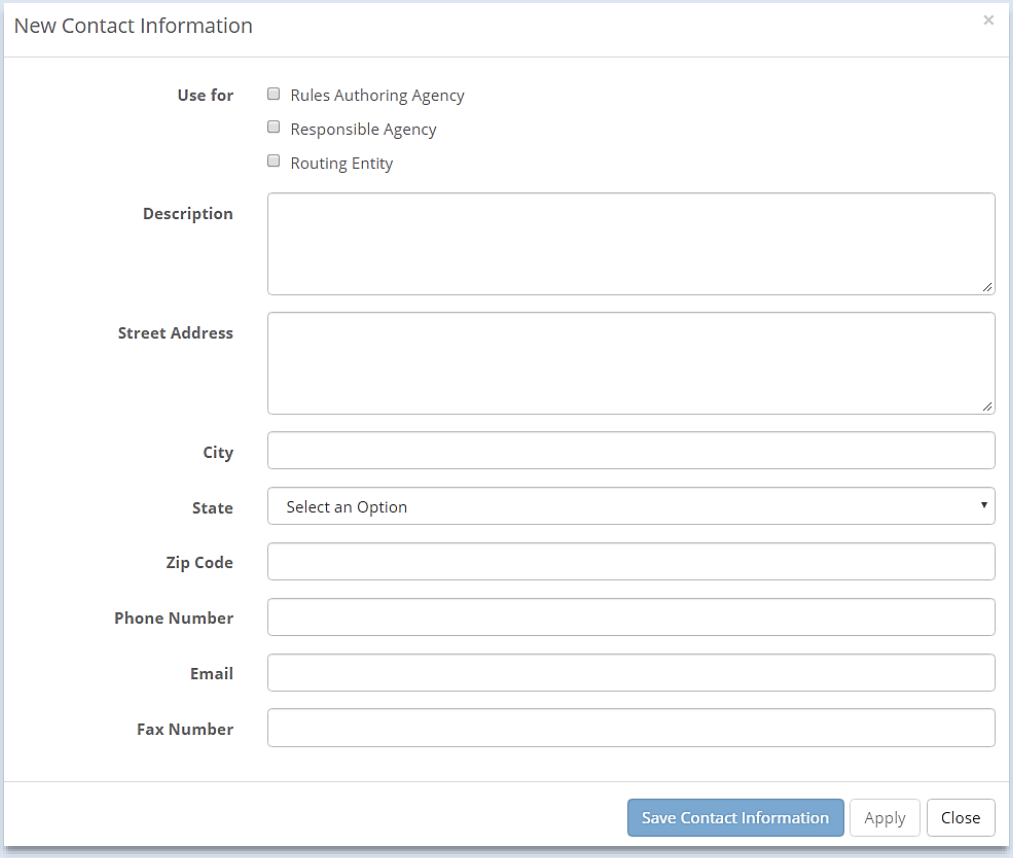
3.1.3 Contact Information

Use the Contact Information window to author contact information for your PHA. You can add information for the Rules Authoring Agency, the Responsible Agency, and/or the Routing Entity. The Contact Information is populated in the RR.

Rules Authoring Agency	PHA that enters the reporting rules into RCKMS. An Authoring Agency could author rules on behalf of another agency (e.g., a state authoring rules for a local agency).
Responsible Agency	PHA to which reporting is required based on the patient's address or where the care was provided.
Routing Entity	PHA that receives the eICR and RR. The Routing Entity is defined when you set up your PHA details on the *Edit Jurisdiction* page using the "Route eICR and Reportability Response to" field (see *Section 3.1.1, Edit Jurisdiction window*).

To add new contact information, complete the following:

1. From the *Contact Information* tab, select the **Add Contact Information** button. RCKMS displays the *New Contact Information* window.



2. Select which contact information you would like to add for the Rules Authoring Agency, the Responsible Agency, and/or the Routing Entity.

3. Enter a description of the agency, such as name or type.
4. Enter the street address, city, state, zip code, phone number, email, and/or fax number for the agency.
5. After entering information in each field, do one of the following:
    - Select **Save Contact Information**. RCKMS displays the *Contact Information* tab and the newly added contact information.
    - Select **Apply**. RCKMS saves your changes and keeps the window open.
    - Select **Close** to close the page if you have not made any changes.

The following table details the options in the *New Contact Information* window.

Item	Description
Use For	Select the box next to Rules Authoring Agency, Responsible Agency, and/or Routing Entity to assign contact information to that agency. The contact information can be assigned to one or more of these agencies.
Description	Type a description for the contact information.
Street Address	Enter the street address for the selected agency.
City	Enter a city for the selected agency.
State	Select a state from the drop-down for the selected agency.
Zip Code	Enter a zip code for the selected agency.
Phone Number	Enter a phone number for the selected agency.
Email	Enter an email address for the selected agency.
Fax Number	Enter a fax number for the selected agency.
Save Contact Information	Select to save the contact information.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.

4 Reporting Specifications

Review this section to learn how to import and author reporting specifications for your jurisdiction using the *Reporting Specifications* module. The information in this module is stored in the Knowledge Repository and used by the DSS to determine what is reportable in your jurisdiction.

The RCKMS tool is pre-populated with default reporting specifications. These are developed by the RCKMS Content Team, made up of experienced epidemiologists and terminologists, and are largely based on reporting criteria in the CSTE Position Statements. Jurisdictions may adopt a default reporting specification as-is or customize it to meet any of their unique reporting requirements.

The RCKMS Content Team works with the RCKMS Administrators to release new conditions for authoring in the tool, or update existing conditions with new content. As you prepare to author reporting specifications, you may want to review the documents supporting the current content release. These can be found in the RCKMS Content Repository, a collection of condition-specific reference materials for the conditions you may be authoring. The Content Repository includes default reporting specification documents, value sets, and a link to the RCTC.

When a jurisdiction publishes reporting specifications in the Authoring Interface, that information is stored in the Knowledge Repository. When an eICR is received, the DSS examines the jurisdiction-specific rules in the Knowledge Repository to determine if the case is reportable.

4.1 Working With Reporting Specifications

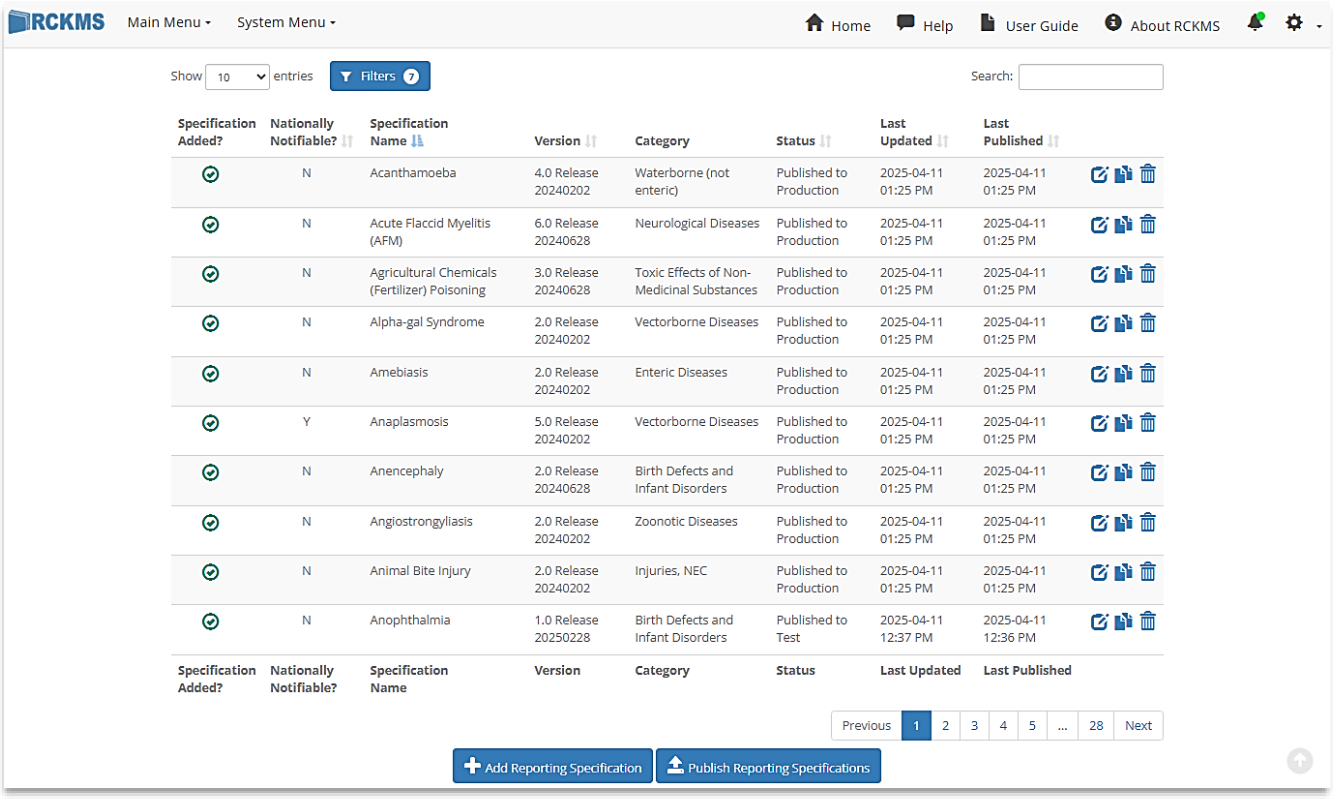
You can manage the set of reporting specifications for the conditions supported in your jurisdiction using the *Reporting Specifications* module.

In the *Reporting Specifications* module, you can:

- Search for and display reporting specifications
- Import and edit reporting specifications, including:
  - Details about the condition
  - Reporting criteria, logic set information, timeboxing, and reporting time frame information
  - Internal links and reference information
  - External reference information
- Delete an existing reporting specification
- Save changes to reporting specifications
- Publish reporting specifications

4.2 Searching for Reporting Specifications

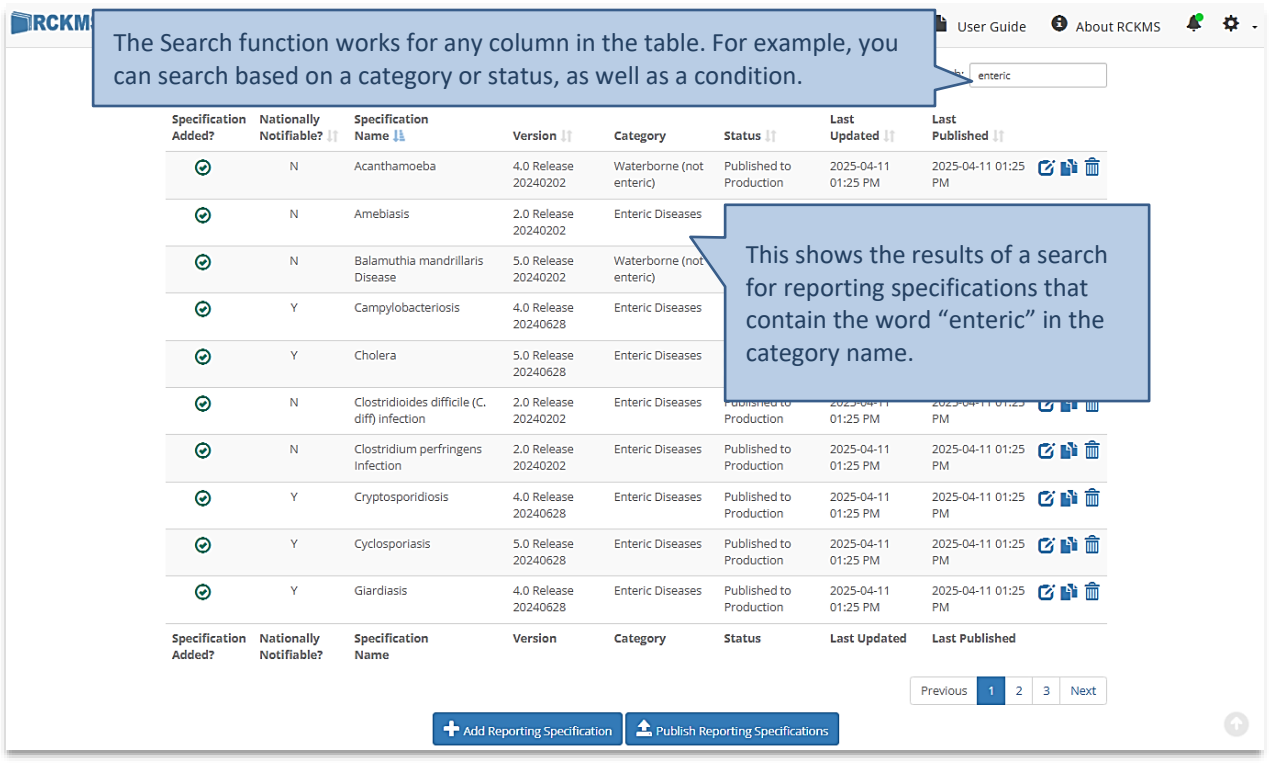
The *Reporting Specification* page displays all conditions imported by your PHA.



To view and search for an already imported reporting specification, perform the following steps:

1. Do one of the following:
   - Select **Reporting Specifications** in the left navigation menu on the *Home* page. The *Reporting Specification* page displays all conditions identified as reportable by your PHA.
   - Select **Main Menu** in the menu bar at the top of the page and choose **Reporting Specifications**. The *Reporting Specification* page displays all conditions identified as reportable by your PHA.

2. Select **Search** and type the text you want. As you enter text in the **Search** box, the table updates to display items matching your query. You can also clear any existing text in the *Search* text box to reset the search results and run your search again.



The following table details the options on the *Reporting Specification* page.

Item	Description
Show entries	Select drop-down and choose the number of items to display in the grid.
Filters	Select to filter the list of reporting specifications by status or whether the condition is nationally notifiable. By default, reporting specifications with a status of In Progress, Ready for Test, Published to Test, Ready to Retire from Test, Ready for Production Use, Published to Production, and Ready to Retire from Production are visible.
Search	Type the text you want and the search results display in the table. Clear existing text to reset the search results.
Specification Added?	Indicates if the reporting specification logic sets and criteria have been added for the condition.
Nationally Notifiable?	Indicates whether the condition is nationally notifiable.
Specification Name	The name of the reporting specification.
Version	The version of the reporting specification.
Category	The disease category organizing the condition options. Options include Birth Defects and Infant Disorders , Bloodborne Diseases, Cancer, Enteric Diseases, Healthcare-Associated Events, Injuries NEC, Neurological Diseases, Parasitic Diseases, Respiratory Conditions (infectious), Respiratory Conditions (non-infectious), Sexually Transmitted Diseases, Streptococcal Diseases, Systemic Conditions, Toxic Effects of Non-Medicinal Substances, Vaccine Preventable Diseases, Vectorborne Diseases, Waterborne (not enteric), and Zoonotic Diseases.

Item	Description
Status	The status of the reporting specification for the selected condition. Options include: Condition Details Only, In Progress, Assigned for Review, Ready for Test, Published to Test, Ready to Retire from Test, Retired from Test, Ready for Production Use, Published to Production, Ready to Retire from Production, and Retired from Production.
Last Updated	The last update date indicating the date and time the item was last saved.
Last Published	The last published date indicating the date and time the item was last published to either test or production.
Edit	Select to edit the selected item.
View	Indicates that the selected item has been published to production or retired from production and is in View-Only Mode.
Delete	Select to delete the selected item.
Clone Specification	Select to clone the selected item.
Sort	Select to sort the information in each column.
Add Reporting Specification	Select to display the *Details* tab on the *New Reporting Specification* page and add a reporting specification.
Publish Reporting Specification	Select to publish the reporting specification and make it "live" and available to engage provider data and decision support logic for delivery of RRs. You can publish to Test or Production.
Previous	Select to navigate back through the list of items available.
Next	Select to navigate forward through the list of items available.

From here, you can add a new reporting specification, clone a reporting specification, edit an existing reporting specification, or delete the specification you want.

- To add a new reporting specification, refer to *Section 4.3, Adding Reporting Specifications*.
- To clone a reporting specification, refer to *Section 4.4, Cloning Reporting Specifications*.
- To delete a reporting specification, refer to *Section 4.5, Deleting Reporting Specifications*.
- To edit an existing reporting specification, refer to *Section 4.6, Reporting Specification Details tab*.

4.3 Adding Reporting Specifications

You can import a reporting specification for a new condition, or for a new version of a condition that you have already authored.

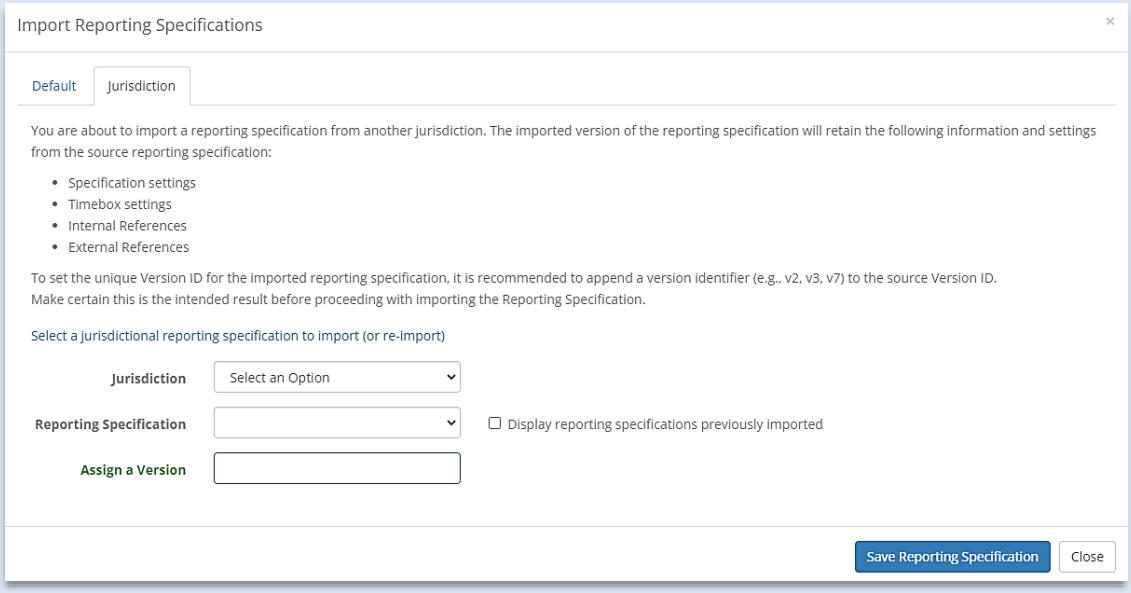
Use the **Add Reporting Specification** button under the table of search results in the *Reporting Specification* page to add a reporting specification for the condition you want.

Authoring Tip

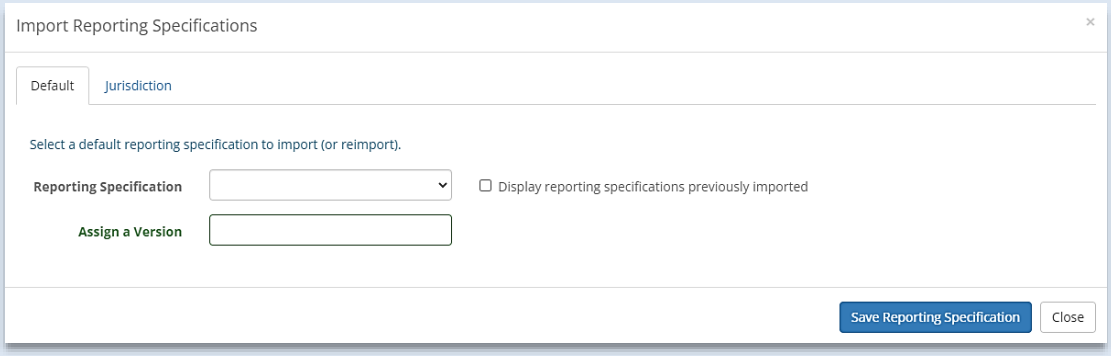
Some Content Releases include new content for existing conditions. To utilize this new content, you will need to import the new version of the reporting specification.

To import a new reporting specification, perform the following steps:

1. Do one of the following:
   - Select **Reporting Specifications** in the left navigation menu on the *Home* page. The *Reporting Specification* page displays.
   - Select **Main Menu** in the menu bar at the top of the page and choose **Reporting Specifications**. The *Reporting Specification* page will display.
2. Select the **Add Reporting Specification** button. RCKMS displays the *Import Reporting Specifications* pane.
3. Do one of the following:
   a. Remain on the *Default* tab to import a default reporting specification.
   b. Select the *Jurisdiction* tab to import a reporting specification from another jurisdiction.
4. (On the *Jurisdiction* tab only) Select **Jurisdiction** and choose the jurisdiction whose reporting specification you want to import.



5. Select the "**Display reporting specifications previously imported**" checkbox.
6. Select **Reporting Specification** and choose the reporting specification that you want.
   a. On the *Default* tab, all reporting specifications, including those that have already been imported, populate.
   b. On the *Jurisdiction* tab, reporting specifications that have been Published to Test or Published to Production populate.
7. The **Assign a Version** field automatically populates with the release version and date of the reporting specification. You may edit this field with a version number defined by your jurisdiction. The version number must be unique.



8. Select **Save Reporting Specification** and the *Details* tab of the *Edit Reporting Specification* page will display.

4.4 Cloning Reporting Specifications

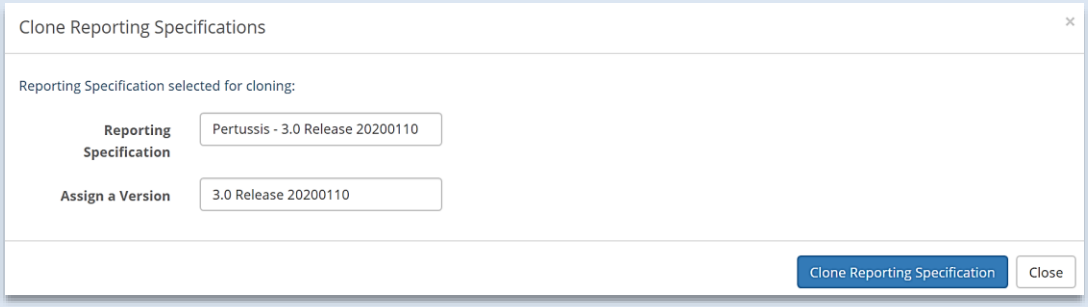
You can create a new version of an existing reporting specification using the **Clone** button. This clone will be an exact copy of the reporting specification that was previously authored. Cloning can also be used to make updates to reporting specifications that are in view-only mode (i.e., they have been published to production or retired from production).

Authoring Tip

Cloning can be helpful if you already have a reporting specification published to production but want to work with rules (such as to test) without disturbing the eCR workflow or without committing to the changes.

To clone a reporting specification, perform the following steps:

1. Select the **Clone** button next to the reporting specification that you would like to clone. The *Clone Reporting Specifications* window will appear.



2. **Reporting Specification** is populated during the cloning process and is not editable. It consists of the name of the reporting specification and the original version number.
3. The **Assign a Version** field is editable and can be changed to adhere to the naming convention defined by your jurisdiction to track new versions of reporting specifications. Each version number for a reporting specification must be unique.
4. Select **Clone Reporting Specification**. The new copy of the reporting specification will be saved to your condition list.

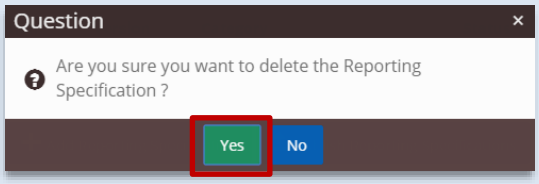
Authoring Tip

Only one version of a given reporting specification can be published to production at a time. When a new version is published to production, the previous version will be automatically retired.

4.5 Deleting Reporting Specifications

To delete an existing reporting specification, perform the following steps:

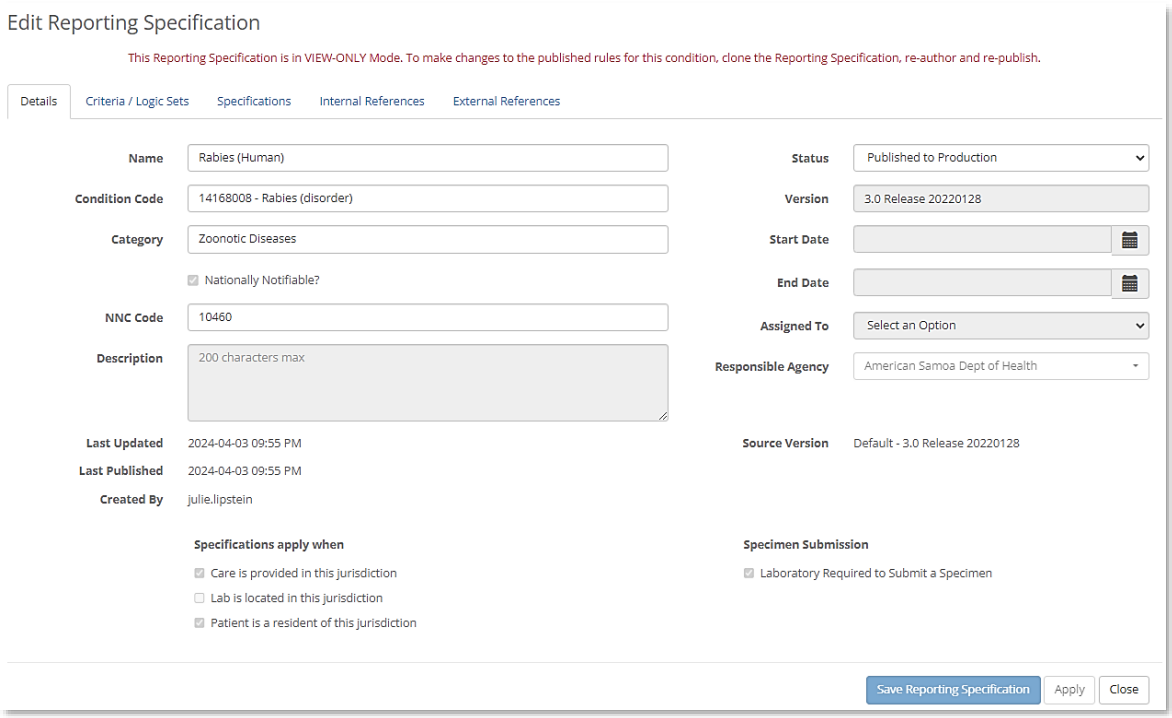
1. Do one of the following:
   - Select **Reporting Specifications** in the left navigation menu on the *Home* page. The *Reporting Specification* page displays.
   - Select **Main Menu** in the menu bar at the top of the page and choose **Reporting Specifications**. The *Reporting Specification* page displays.
2. Select the **Delete** icon for the item you want. The application deletes the selected item and displays a confirmation message.
3. Select **Yes** when the display question appears "Are you sure you want to delete the Reporting Specification?" The application deletes the selected item and displays a confirmation message.



Once you delete the reporting specification, the item is permanently removed and cannot be restored without re-importing.

4.6 Reporting Specification *Details* Tab

The *Details* tab displays basic information about the reporting specification for the selected condition. If the reporting specification has been published to production or retired from production, there will be a note at the top of this page that the reporting specification is in view-only mode, as shown in the screenshot below.



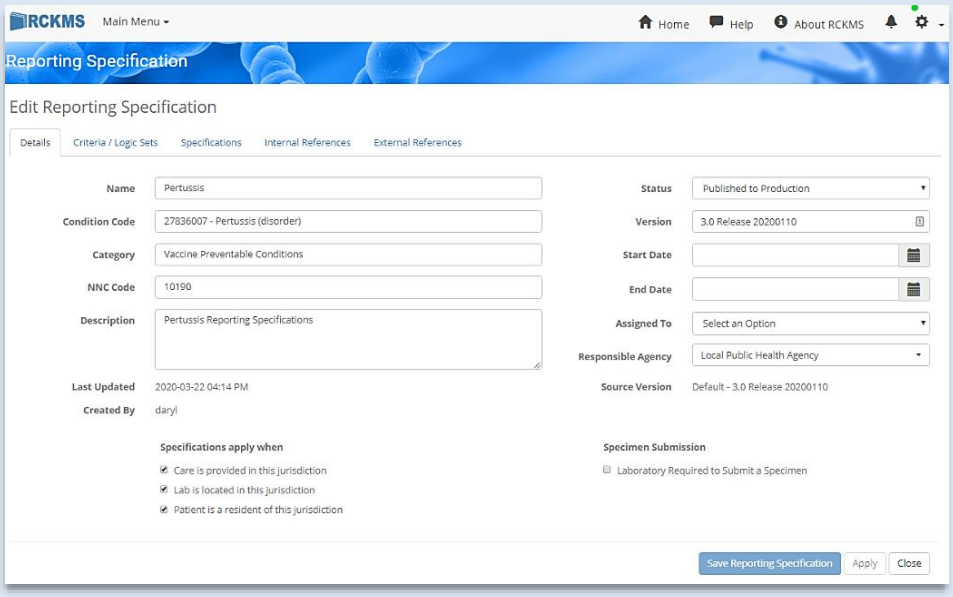
The following table details the options on the *Details* tab.

Item Name	Description
Name	The descriptive name of the condition.
Condition Code	The SNOMED code and name pertaining to the condition.
Category	The disease category organizing the condition options. Options include Birth Defects and Infant Disorders , Bloodborne Diseases, Cancer, Enteric Diseases, Healthcare-Associated Events, Injuries NEC, Neurological Diseases, Parasitic Diseases, Respiratory Conditions (infectious), Respiratory Conditions (non-infectious), Sexually Transmitted Diseases, Streptococcal Diseases, Systemic Conditions, Toxic Effects of Non-Medicinal Substances, Vaccine Preventable Diseases, Vectorborne Diseases, Waterborne (not enteric), and Zoonotic Diseases.
Nationally Notifiable?	A checkbox that indicates whether a condition is nationally notifiable.
NNC Code	The nationally notifiable event code associated with the condition. This is applicable only if the condition is nationally notifiable.
Description	The description of the reporting specification for the selected condition. This is an internal field for PHA use and will also show in the Condition Details report.
Status	The status of the reporting specification for the selected condition. Options include: Conditions Details Only, In Progress, Assigned for Review, Ready for Test, Published to Test, Ready to Retire from Test, Retired from Test, Ready for Production Use, Published to Production, Ready to Retire from Production, and Retired from Production
Version	The version number assigned to the reporting specification.

Item Name	Description
Start Date	The start date on which the reporting specification for the selected condition is in effect. Select the **Calendar** button to display a calendar and choose the date you want.
End Date	The end date on which the reporting specification for the selected condition is in effect. Select the **Calendar** button to display a calendar and choose the date you want.
Assigned To	The jurisdictional author to whom the reporting specification for the selected condition is assigned for review. This is optional.
Responsible Agency	Responsible Agency is the PHA to which reporting is ***legally required*** based on the patient's residence or where care was delivered.
Last Updated	Date of last save.
Last Published	Date of last publication.
Created By	User name of reporting specification creator.
Source Version	The version of the source of the reporting specification. The source can be default or another jurisdiction.
Cloned From	The jurisdiction and version that the reporting specification was cloned from. This field is only visible if the reporting specification is a clone of another.
Specifications apply when	**Care provided in this jurisdiction** Select to receive report for events where care is provided in your jurisdiction.
	Lab is located in this jurisdiction Select to receive report for events where laboratory testing is performed in your jurisdiction.
	Patient resident of this jurisdiction Select to receive report for events where the patient resides in your jurisdiction.
Specimen Submission	**Laboratory required to submit a specimen** Select to indicate the laboratory is required to submit a specimen.
Save Reporting Specification	Select to save the reporting specification and display the previous page.
Apply	Select to save your changes and keep the window open.
Close	Select to close and display the previous page.

To view and edit details about the condition, perform the following steps:

1. Select the **Edit** icon for the reporting specification that you wish to view or edit. The *Details* tab of the *Edit Reporting Specification* window appears.



The **Name**, **Condition Code**, **Category,** and **NNC Code** fields are defined by the RCKMS Team and are automatically populated during the import process.

2. Select **Description** and type the description you want. This field is for internal PHA use and will also show in the Condition Details report.
3. For the **Specifications Apply When** field, do one or more of the following, depending on your PHA's reporting requirements:

Care is provided in this jurisdiction	Select to receive reports for events where care is provided in your jurisdiction. This means that if the facility address in the eICR matches your PHA's jurisdiction, and your rules are met, then you will receive the report.
Lab is located in this jurisdiction	Select to receive reports for events where laboratory testing is performed in your jurisdiction. This is currently not implemented, as the laboratory address is not included in the eICR.
Patient is a resident of this jurisdiction	Select to receive reports for events where the patient resides in your jurisdiction. This means that if the patient address in the eICR matches your PHA's jurisdiction, and your rules are met, then you will receive the report.

DID YOU KNOW?

When an eICR is received, the DSS searches the Knowledge Repository for an address match by:

- Checking the eICR to see if the zip code in the patient address field or the facility address field matches a zip code associated with a PHA in RCKMS. If one is found, it runs that PHA's rules. If more than one PHA have the same zip code associated, then rules for all PHAs that are found will be run. If the zip code does not match, then the eICR will be checked for the state code.
- If the state code in the patient address field or the facility address field matches the state code associated with a PHA in RCKMS, then that PHA's rules will be run.

4. Select **Status** and choose the option you want. When a condition is imported, the default Status is "In Progress," meaning authoring of the condition is in progress. The status options are dependent upon where the reporting specification is in the workflow. The table below shows the available statuses and their descriptions:

Status	Description
New reporting specifications	
In Progress	The default status upon importing a new reporting specification.
Assigned for Review	Used to indicate when a condition is under review before publishing to the next step. This status is for internal jurisdiction reference only and the user will not be notified of their assignment.
Ready for Test	Use this status to designate that the reporting specification is ready to be published to test.
Retired from Test	This status is automatically applied when a newer version of the reporting specification is imported.
Reporting specifications that have been published to test	
Published to Test	This is the default status upon publishing to test.
Ready for Production	Use this status to designate that the reporting specification is ready to be published to production.
Retired from Test	This status is automatically applied when a newer version of the reporting specification is imported.
Reporting specifications that have been published to production	
Published to Production	This is the default status upon publishing to production.
Retired from Production	This status is automatically applied when a newer version of the reporting specification is imported.

5. Select **Version** to change the version number. The initial version number is defined by the RCKMS Administrator, but you can change this to follow your jurisdiction's naming convention.
6. Select **Start Date** and type the date you want. Note that the *Start Date* must be greater than the date the condition is published.
7. Select **End Date** and type the date you want.
8. Select **Assigned To** and choose the option you want.
9. Select **Responsible Agency** and choose the PHA that you want. It defaults to your jurisdiction. The Responsible Agency is the PHA to which reporting is ***legally required*** based on the patient's residence or where care was provided. The Responsible Agency is included in the RR. If the jurisdiction selects "Local Agency" as the Responsible Agency, this indicates that reporting to the Local Agency is required to meet legal mandates for reporting. RCKMS will include "Local Agency" in the RR, but derivation of the Local Agency is outside the scope of the RCKMS tool.

Authoring Tip

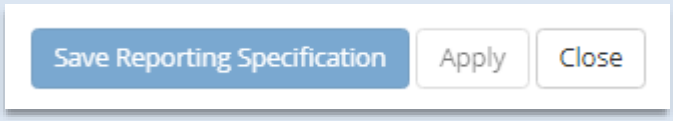
The Start Date and End Date fields are optional and for informational use only. Jurisdictions may use these fields to convey information about the reporting specification to other authors.

Assigned To fields are optional and for internal use only. Users will not be automatically notified when they are assigned to a condition.

10. Select **Laboratory Required to Submit a Specimen** to indicate the laboratory is required to submit specimen information. Currently, this feature is purely informational. When selected, an External Reference should be included to provider reporters with specimen submission instructions for their laboratories. The reference will be included in the RR.
11. To continue authoring the reporting specification, do one of the following:
    a. Select the **Criteria/Logic Sets** tab to edit and add logic set and criteria information. To work with criteria and logic set information, refer to *Section 4.8, Adding and Editing Logic Set Information* and *Section 4.9, Activating and Inactivating Criteria Information*.
    b. Select the **Specifications** tab to edit and add reporting time frame and reporting criteria information. To work with reporting time frame and decision logic information, refer to *Section 4.7, Adding and Editing Specification Information*.
    c. Select the **Internal References** tab to edit and add internal links and reference information. To work with internal reference information, refer to *Section 4.10, Internal References tab*.
    d. Select the **External References** tab to edit and add external links and reference information. To work with external reference information, refer to *Section 4.11, External References tab*.

> **Authoring Tip**
>
> Once you have entered the information in the *Details tab*, you can work through the remaining tabs on the *Reporting Specification* page and enter criteria and logic set information, as well as any internal and external references you want.

12. Do one of the following:
    a. Select **Save Reporting Specification**. RCKMS displays the *Reporting Specification* page and the date and time of the last update.
    b. Select **Apply**. RCKMS saves your changes and keeps the window open.
    c. Select **Close** to close the page if you have made no changes.



4.7 Adding and Editing Specification Information

The *Specifications* tab displays the criteria and logic sets rendered as a grid. The grid follows a similar format to the snapshot of logic translated from the reporting specifications Word document and the CSTE Position Statements, with rows for criteria and columns for logic sets. Use the *Specifications* tab of the *Edit Reporting Specification* page to add and edit the reporting time frame for each logic set and indicate if the criteria in a logic set are Sufficient, Necessary, or Optional for reporting to your jurisdiction.

The reporting rules indicate the following:

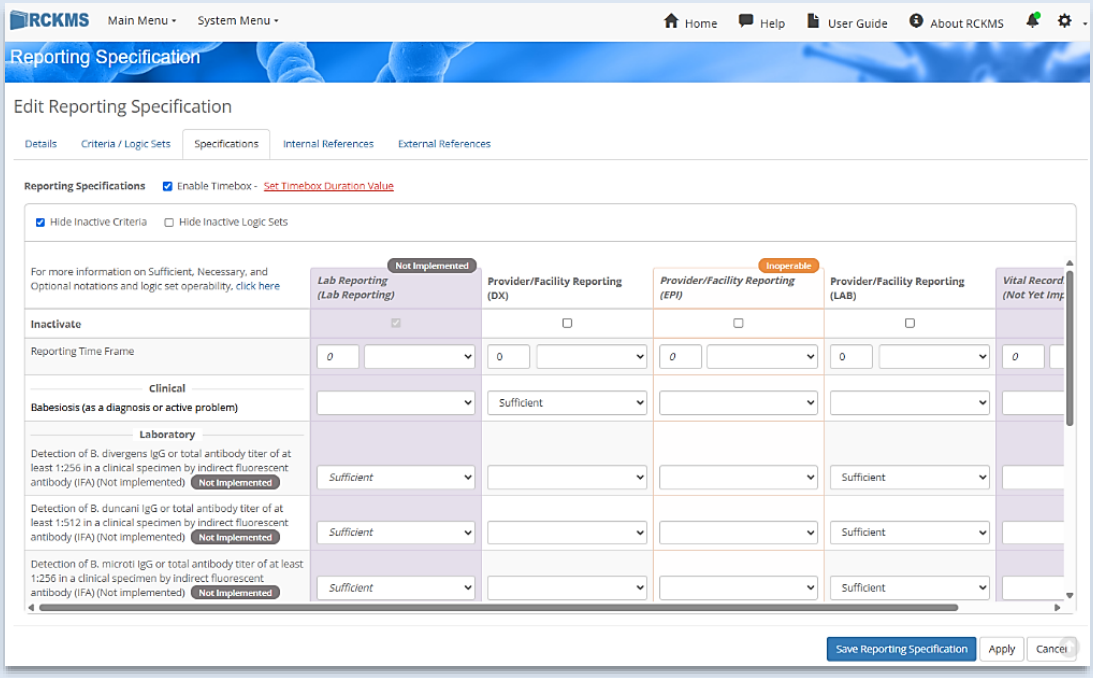
Notation	Description	Example
Sufficient "S"	Presence of this criterion alone indicates sufficient requirement for reporting.	Three criteria each indicate *Sufficient*. If any one of the three criteria is met, then the provider/facility must report.

Notation	Description	Example
Necessary "N"	Presence of this criterion with other criteria (either *Necessary* or *Optional*) is needed to meet the requirement for reporting.	Three criteria each indicate *Necessary*. If all three criteria are met, then the provider/facility must report. If only one or two criteria are met, then the provider/facility does not report.
Optional "O"	Presence of one or more *Optional* criteria within a category (e.g., Clinical, Laboratory, Epidemiologic) paired with a *Necessary* criterion is needed to meet the requirement for reporting.	Criterion 1 is a *Necessary* Clinical criterion and criteria 2 and 3 are *Optional* Epidemiologic criteria. If criterion 1 is met, AND either criterion 2 or 3 (or both) is met, then the provider/facility must report. If only criteria 2 and 3 are met, then the provider/facility does not report.

In short, *Sufficient* means that the criterion alone makes this reportable to the PHA. *Necessary* and *Optional* typically work together, in most instances with all *Necessary* criteria in addition to at least one *Optional* criterion within a category required for reporting.

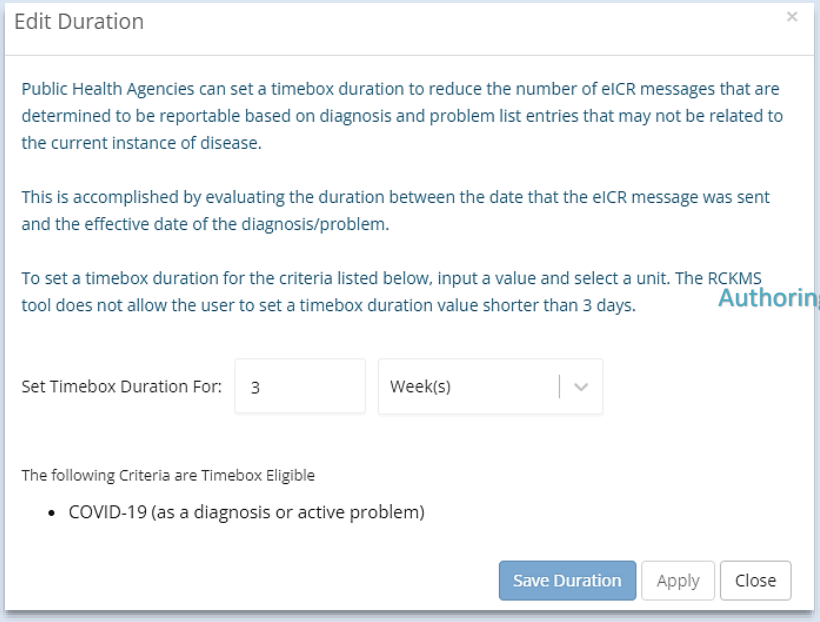
Perform the following steps to add or edit specification information:

1. Select the **Specifications** tab in the *Edit Reporting Specification* page. RCKMS displays the contents of the *Specifications* tab.



2. Select the **Hide Inactive Criteria** button to hide criteria (rows) that have been marked as Inactive. You can select the checkbox next to each criterion to inactivate it directly from the specification grid. To learn more about activating and inactivating criteria, refer to *Section 4.9, Activating and Inactivating Criteria Information*.
3. Select the **Hide Inactive Logic Sets** to hide logic sets (columns) that have been marked as Inactive. You can select the checkbox under the name of each logic set to inactivate it directly from the specification grid. Any logic set marked as Inactive will not be used in the determination of reportability.

4. If available, select the **Enable Timebox** button to enable timeboxing for the relevant criteria.
    a. Select the red text to open the *Edit Duration* window.
    b. Enter the desired timebox duration and select **Save Duration**. RCKMS saves the timebox duration information and displays the *Edit Reporting Specification* page.



Authoring Tip

For more information and educational materials about Timeboxing, please visit https://www.rckms.org/rckms-timeboxing/.

5. Enter the Reporting Time Frame as defined by your jurisdiction's reporting rules. This field is informational only and is included in the reportability response back to providers. If you leave the reporting time frame blank, it will default to "immediate".
    a. Select the *number* text box and type or choose the number you want for the logic set you want.
    b. Select the *unit* text box and choose the option you want from the drop-down.

6. For each logic set, select the appropriate reporting rules option for each criterion. When you import a reporting specification, the criteria and logic sets will be populated based on the default reporting specification. You may edit these if they differ from your jurisdiction's reporting rules.
    a. Select the drop-down corresponding to the criterion and logic set you want and choose the option you want: *Sufficient*, *Necessary,* or *Optional*.
7. Certain logic sets will be marked as "Not Implemented" and shaded as purple, or "Inoperable" and outlined in orange.
    a. Logic sets that are marked as "Not Implemented" represent reporter types that are not yet functional within RCKMS, such as laboratory reporting or vital records. Currently, only provider/facility reporting is implementable in RCKMS.
    b. Logic sets that are marked as "Inoperable" require the presence of one or more criteria that are not yet implementable, and therefore the logic set will be unable to return any eICRs. Criteria may be not yet implementable because there is a lack of codes available for the concept, or because the information is not currently formatted in a machine processible way in eICRs (e.g., imaging results, epidemiologic criteria).

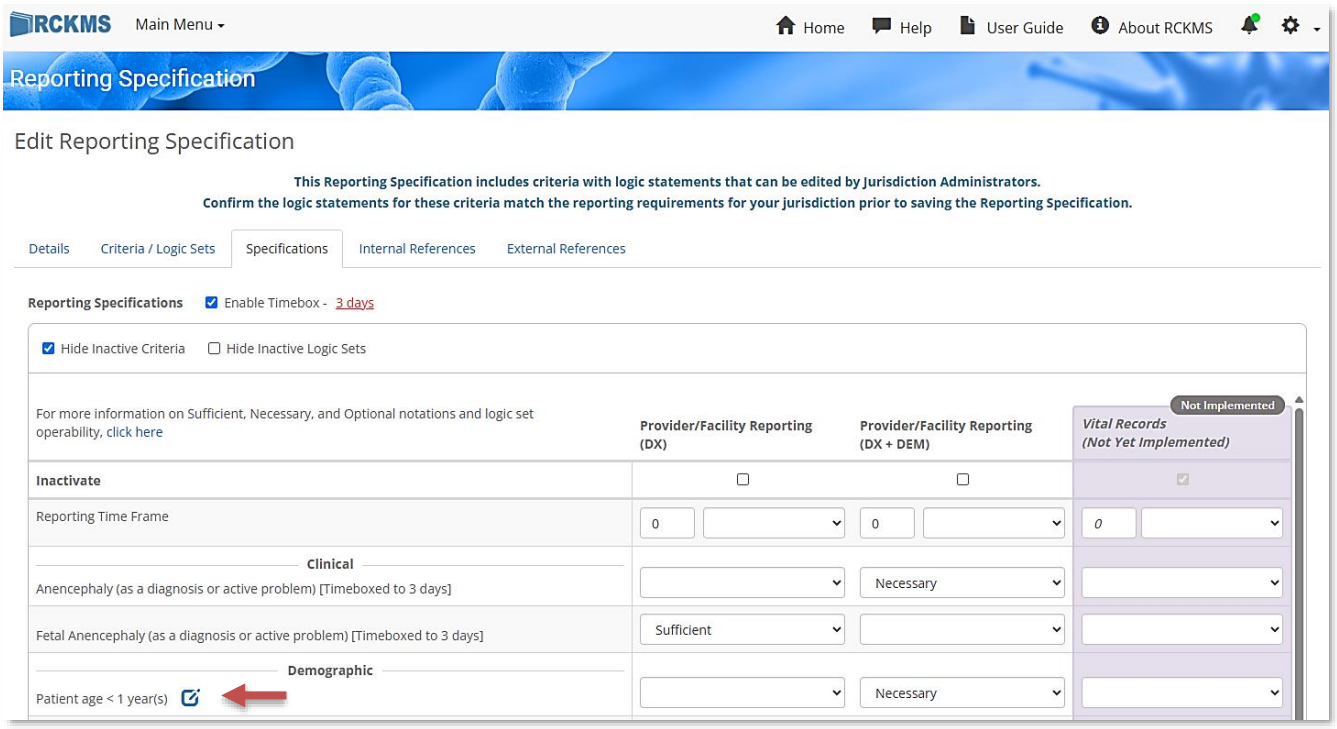
The following table details the options on the *Specifications* tab.

Item	Description
Criteria	On the left-hand side of the window, the criteria needed for reporting are arranged by category, such as Clinical and Laboratory. The criteria represent the narrative descriptions determining whether a case should be reported to public health.
Logic Sets	On the right are the logic set columns indicating when the indicated type of reporter, such as a lab or provider, would report and what is required for reporting using the Sufficient, Necessary, and Optional notations.
Enable Timebox	Select the checkbox to enable timeboxing for the specified criteria.
Hide Inactive Criteria	Select the checkbox to hide any inactive criteria in the specifications grid.
Hide Inactive Logic Sets	Select the checkbox to hide any inactive logic sets in the specifications grid.
Reporting Time Frame	The time required for reporting. If you leave this field blank, it will default to “immediate”. Select the *number* text box and type or choose the number you want for the logic set you want. Select the *unit* text box and choose the option you want. Number refers to the count and unit refers to the time element, such as days, weeks etc.
Reporting Rules	Select the reporting rules drop-down corresponding to the criterion and logic set you want and choose the option you want. You can choose Sufficient, Necessary, or Optional.
Save Reporting Specification	Select to save the reporting specification and display the previous page.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.

4.7.1 User-Defined Patient Age

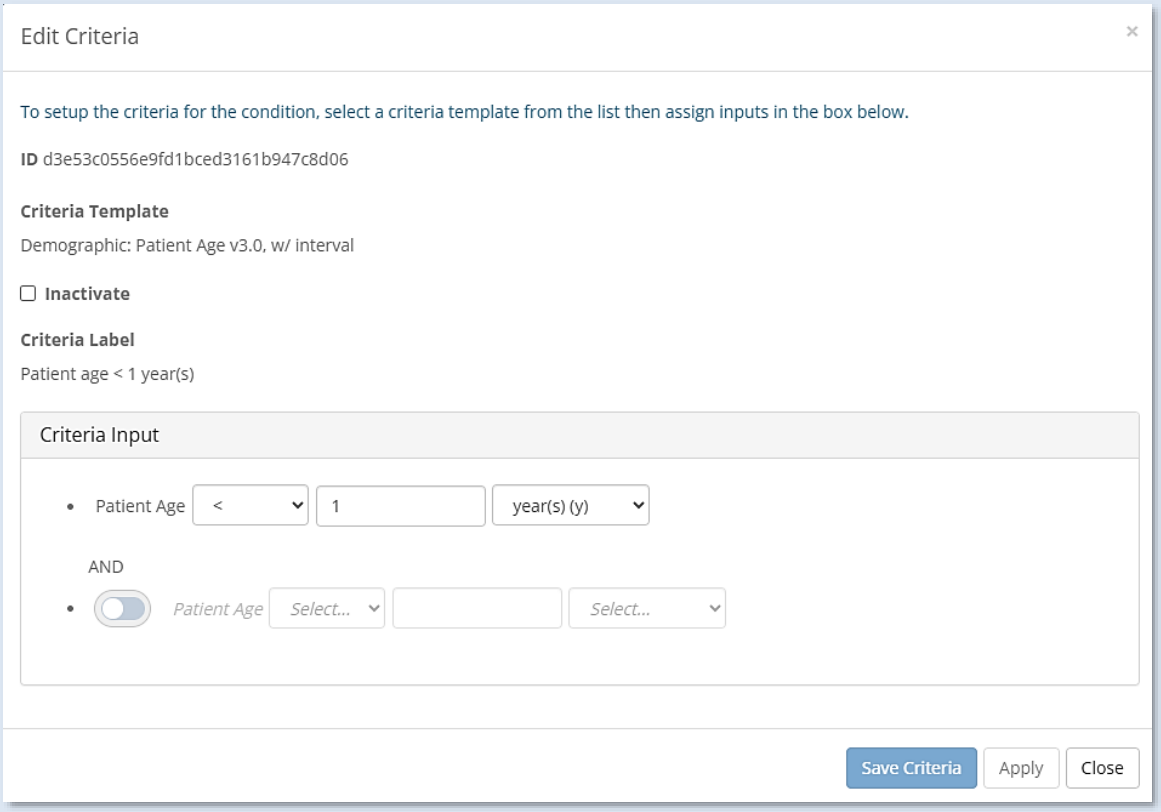
You can define the patient age criteria parameters for certain conditions that utilize patient age criteria. This allows additional flexibility in specifying patient age values that align with your jurisdiction’s reporting rules and regulations.

If the reporting specification includes support for user-defined patient age, there will be a note at the top of the page that it includes criteria with logic statements that can be edited by Jurisdiction Administrators. In the *Specifications* tab, criteria that support user-defined patient age are indicated by an **Edit** button to the right of the criteria label, as shown in the screenshot below.



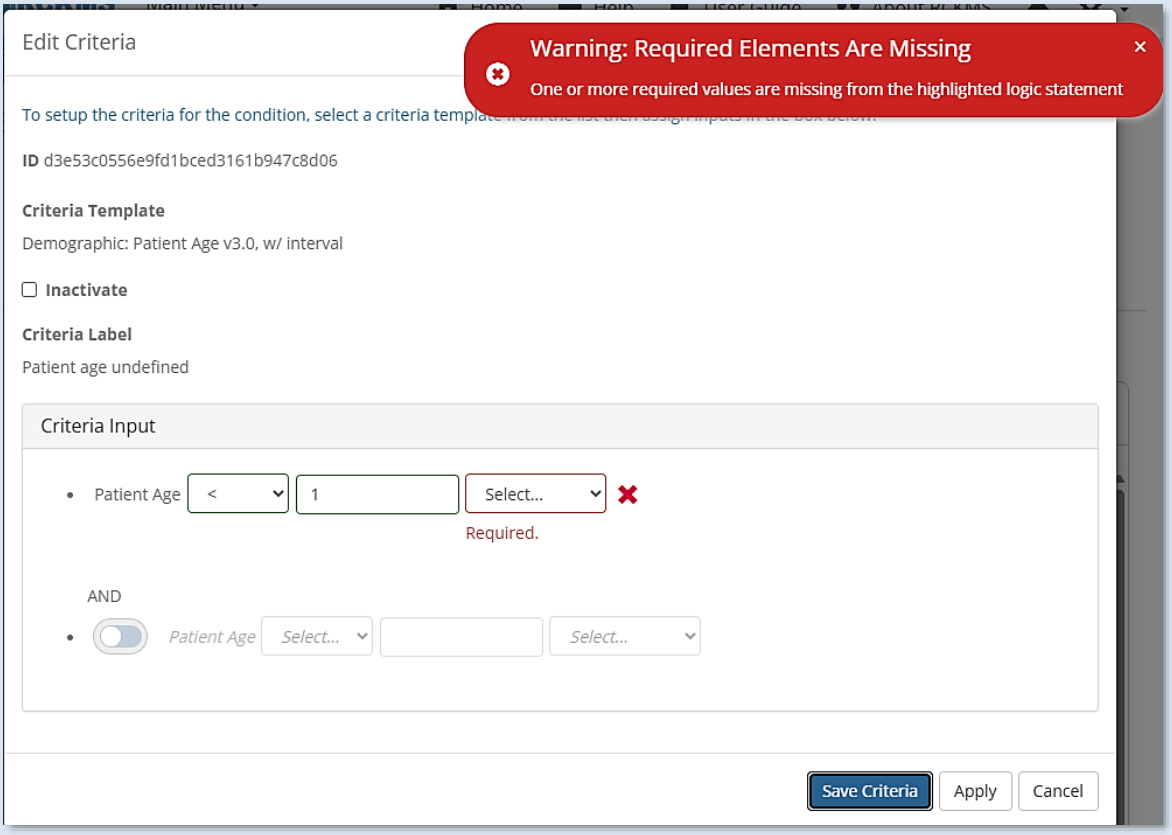
Perform the following steps to edit user-defined patient age criteria:

1. Select the **Edit** button to the right of the criteria label. This opens the *Edit Criteria* window.



2. Enter the patient age as defined by your jurisdiction's reporting rules. The Criteria Label field will update based on your selections. This label is sent back to the provider in the Reportability Response.
    a. Select the *operator* text box and type or choose the option you want from the drop-down.
    b. Select the *number* text box and type the number you want.
    c. Select the *units* text box and type or choose the option you want from the drop-down.
    d. Optional - Select the **slider** icon to activate the second predicate to implement an interval (e.g., Patient age is >= 1 years AND Patient age is <= 5 years).
3. Do one of the following:
    a. Select **Save Criteria**. RCKMS displays the *Edit Reporting Specification* page.
    b. Select **Apply**. RCKMS saves your changes and keeps the window open.
    c. Select **Close** to close the page without saving your changes.

***Note*:** The operator, number, and units elements are all required and must be populated. If you attempt to save an invalid patient age, an error pop-up appears, as shown in the screenshot below, indicating that one or more required elements are missing.



4.8 Adding and Editing Logic Set Information

You can add and edit the reporting specification's logic set and criteria information using the *Criteria/Logic Sets* tab in the *Edit Reporting Specification* page.

Logic sets are sets of statements that indicate:

- The type of reporter, such as a lab or provider

- When the reporter is expected to report
- What is required of them for reporting

A logic set is translated into rules logic for use in determining reportability. Used in combination with reporting criteria, logic sets express logical statements in machine-processable language following the S, N, O notation used in the Position Statements:

"S" indicates the criterion is SUFFICIENT by itself to qualify the case for reporting

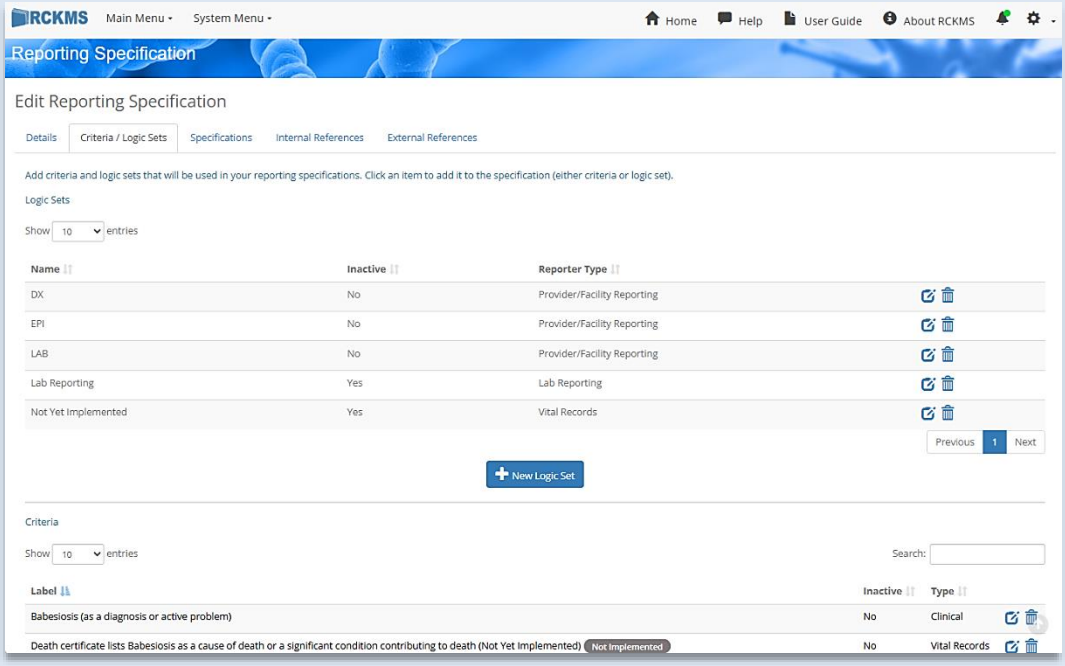
"N" indicates that all "N" criteria in the same column are NECESSARY to report a case

"O" indicates that presence of one or more "O" criteria in a category paired with a "N" criterion is needed to meet the requirement for reporting

For more information on the S, N, O notation, refer to *Section 4.7, Adding and Editing Specification Information*. For more information on reporting criteria, refer to *Section 4.9, Activating and Inactivating Criteria Information*.

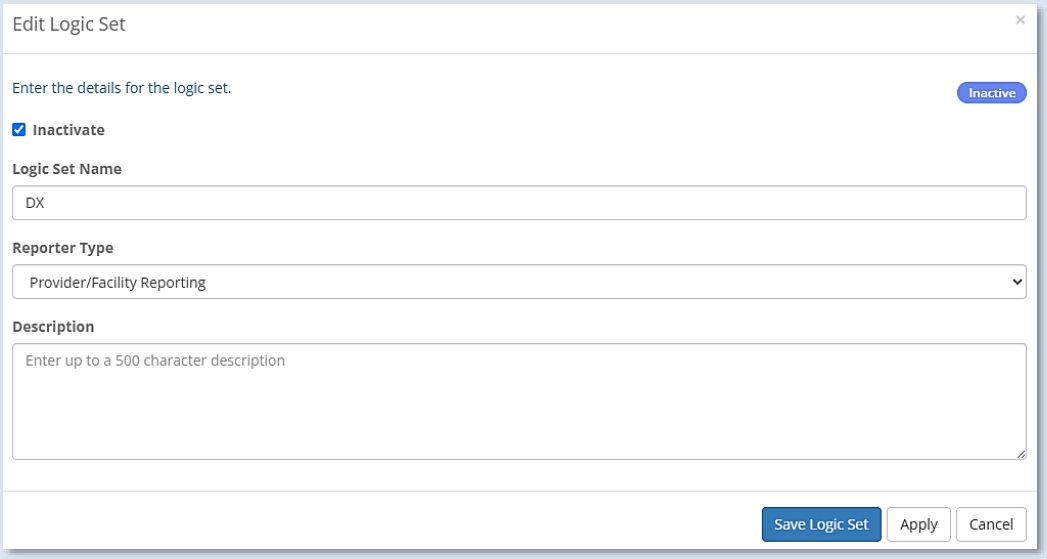
To add or edit criteria and logic sets, perform the following steps:

1. Select the **Criteria/Logic Sets** tab in the *Edit Reporting Specification* page. RCKMS displays the contents of the *Criteria/Logic Sets* tab.

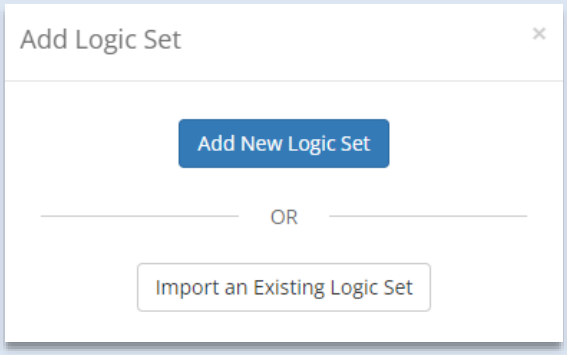


2. To edit a logic set's name, reporter type, or description, select the **Edit** icon for the logic set you want in the *Logic Sets* section. RCKMS displays the *Edit Logic Set* window.
    a. Select **Logic Set Name** and type the name you want.
    b. Select **Reporter Type** and choose the reporter type you want.
    c. Select **Description** and type the description you want for your own internal use.

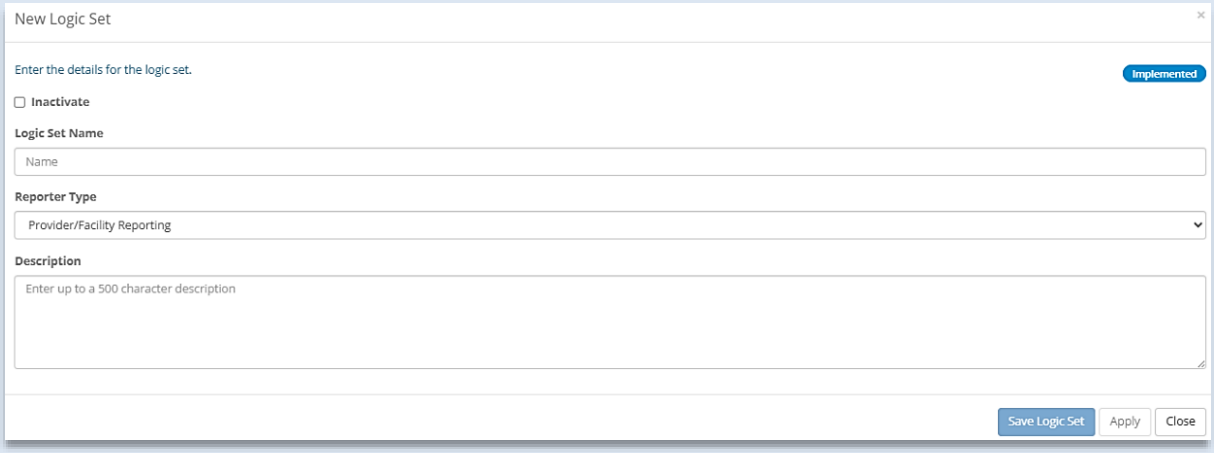
d. To inactivate a logic set in the Reporting Specifications grid and ensure it is not being used to determine reportability, check the box for "Inactivate." When you inactivate a logic set, the pill to the right will update to "Inactive," as shown in the screenshot below.
e. Select the **Save Logic Set** button. RCKMS saves the logic set information and displays the *Logic Sets* section of the *Criteria/Logic Set* tab.



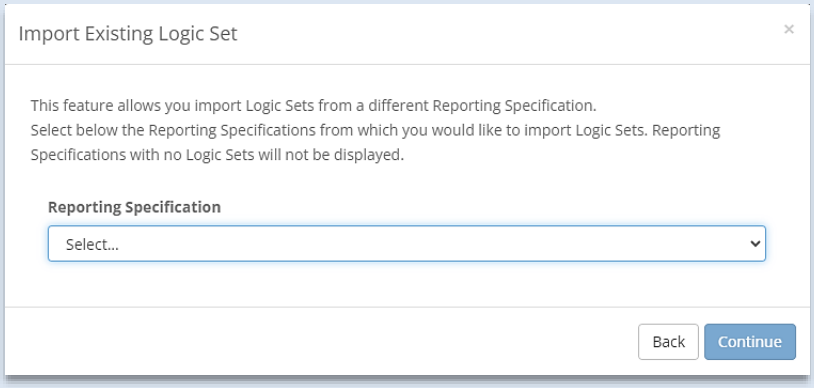
3. To add a logic set, select the **New Logic Set** button in the *Logic Sets* section. RCKMS displays the *Add Logic Set* window. Do one of the following:



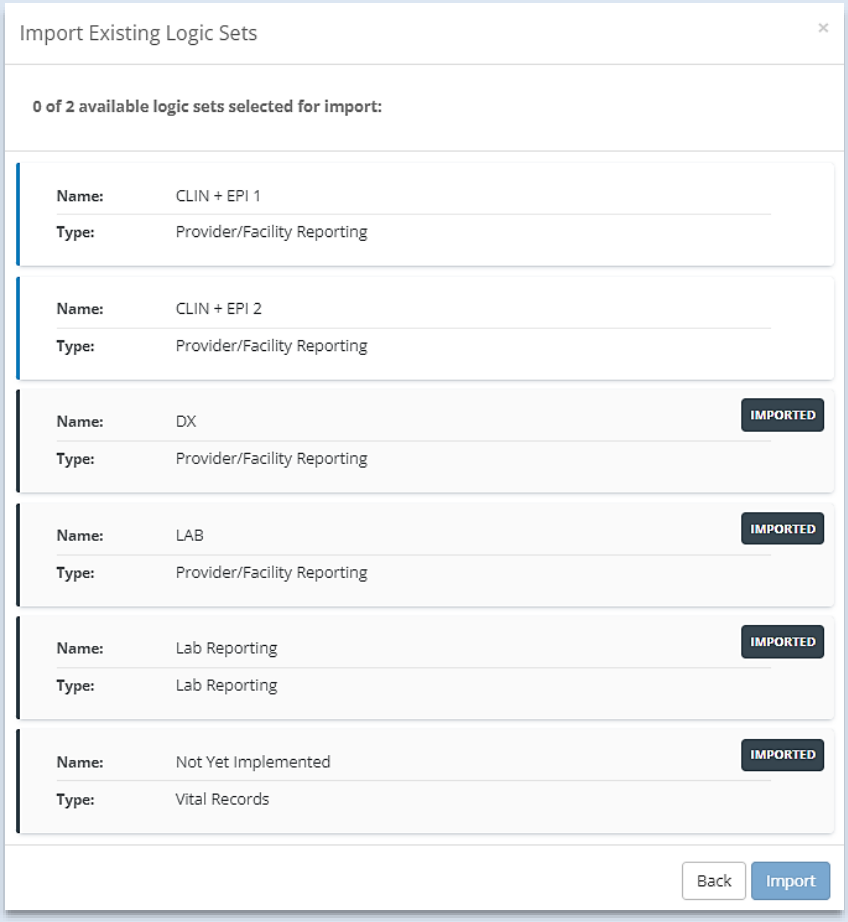
a. Select the **Add New Logic Set** button to add a new logic set. You may want to add a new logic set if your jurisdiction's reporting rules are different from the default.
    i. Select **Logic Set Name** and type the name you want.
    ii. Select **Reporter Type** and choose the reporter type you want.
    iii. Select **Description** and type the description you want for your own internal use.
    iv. To inactivate this logic set in the Reporting Specifications grid and ensure it is not being used to determine reportability, check the box for "Inactivate".
    v. Select the **Save Logic Set** button. RCKMS saves the logic set information and displays the *Logic Sets* section of the *Criteria/Logic Set* tab.



b. Select the **Import an Existing Logic Set** button to import a logic set from a different reporting specification.



i. Select a reporting specification from the drop-down and select **Continue**. RCKMS displays the logic sets available for import.



ii. Select the logic set(s) you wish to import and select the **Import** button. RCKMS saves the logic set information and displays the *Logic Sets* section of the *Criteria/Logic Set* tab.

You can also delete a logic set by selecting the **Delete** icon for the logic set you want. When you delete a logic set, the logic set and the criteria it organizes no longer display in the *Specifications* tab.

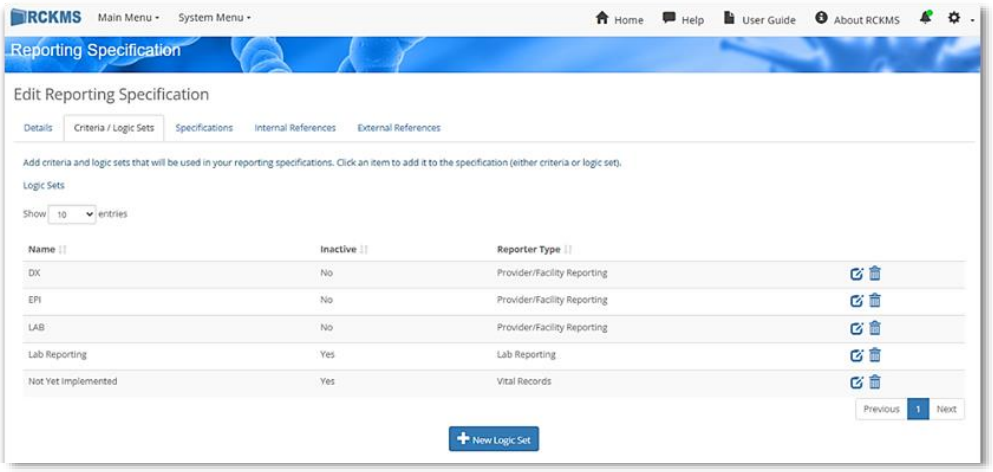
Authoring Tip

As you add, edit, and delete logic set information on the *Criteria/Logic Sets* tab, that information is updated in the *Specifications* tab. To work with logic sets and criteria in the *Specifications* tab, refer to *Section 4.7, Adding and Editing Specification Information*.

Once you delete a logic set, it cannot be recovered.

4.8.1 *Criteria/Logic Sets* Tab – Logic Sets Section

The *Logic Sets* section in the *Criteria/Logic Sets* tab in the *Reporting Specification* page displays the reporting specification's logic set information.

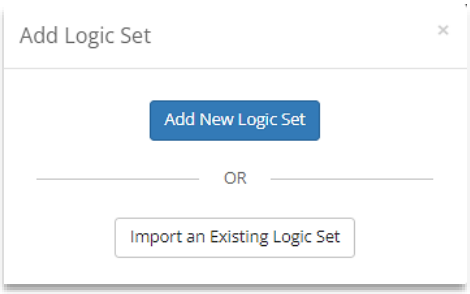


The following table details the logic set options on the *Criteria/Logic Sets* tab.

Item	Description
Show entries	Select drop-down and choose the number of items to display in the grid.
Name	The logic set name.
Inactive	The status of the logic set. "No" means the logic set is active and "yes" means the logic set is inactive.
Reporter Type	The reporter type associated with the logic set.
Edit	Select to edit the selected item.
Delete	Select to delete the selected item.
Previous	Select to navigate back through the list of items available.
Next	Select to navigate forward through the list of items available.
New Logic Set	Select to add a new logic set and display the *Add Logic Set* window.
Sort	Select to sort the information in each column.

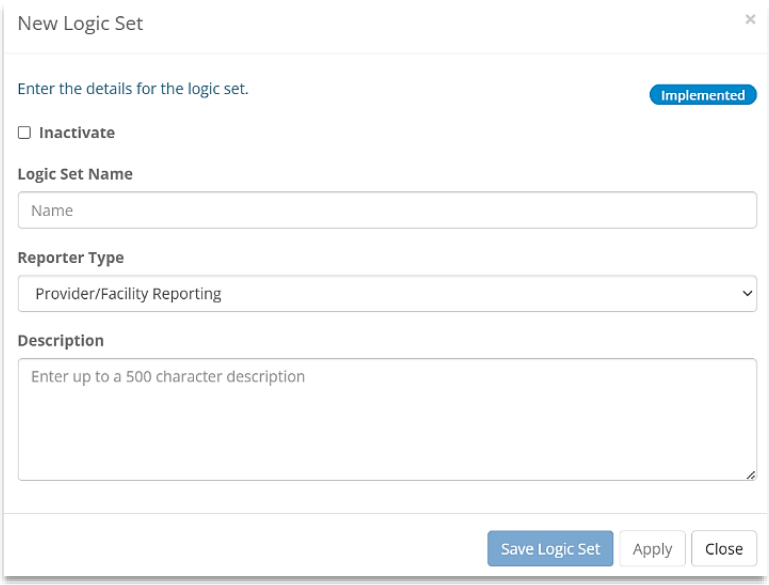
4.8.2 *Add Logic Set* Window

The *Add Logic Set* window displays two options for adding a new logic set. You can add a new logic set from scratch or import an existing logic set from a different reporting specification.



4.8.3 *New Logic Set* Window

The *New Logic Set* window displays the options for adding and editing logic set information. You can add new logic sets or edit existing logic sets. For example, if your jurisdiction's reporting rules differ from the default, you may want to add a new logic set.

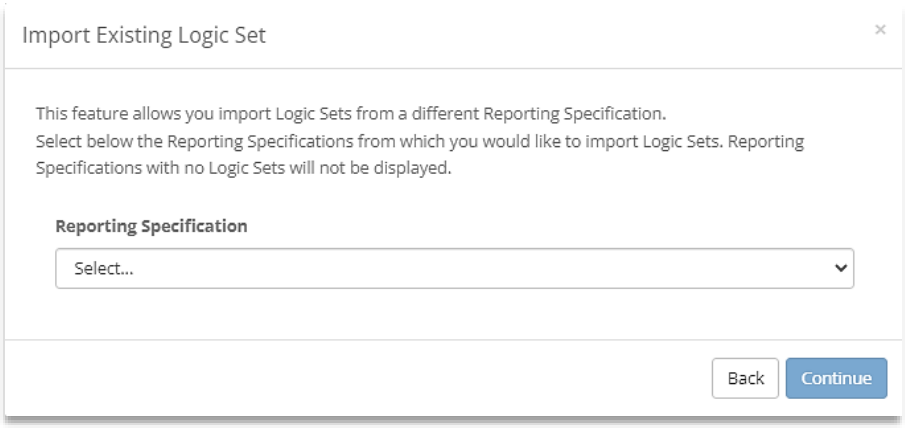


The following table details the options on the *New Logic Set* window.

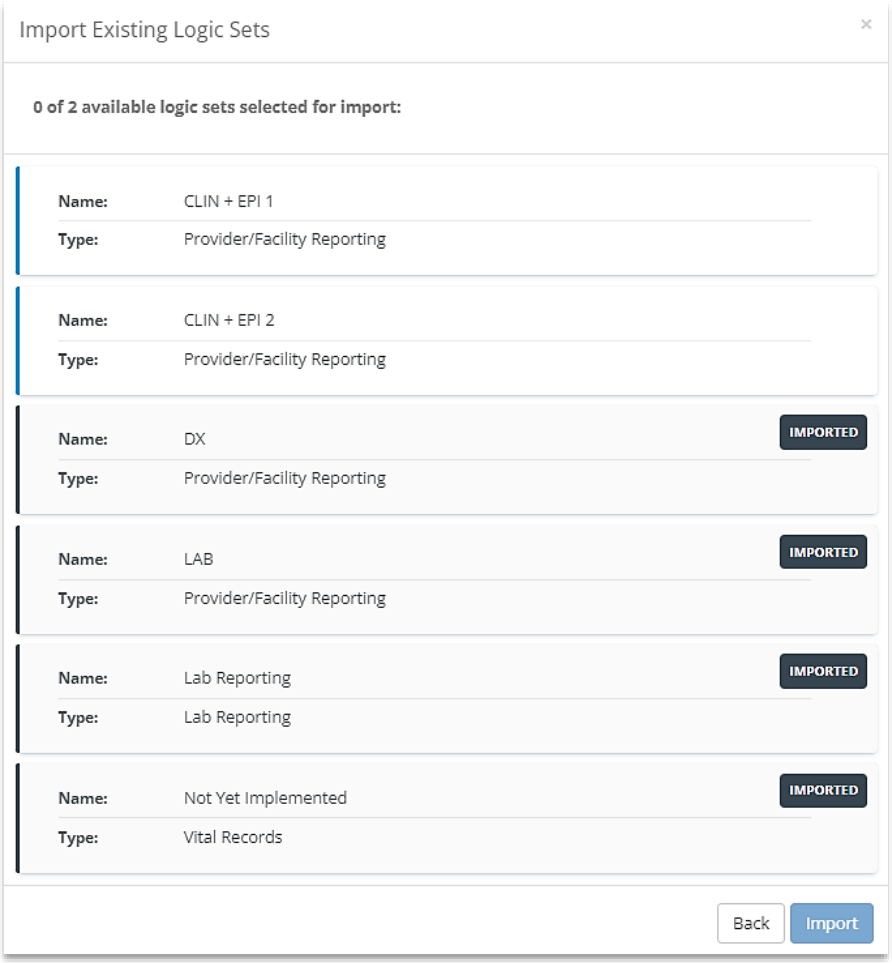
Item	Description
Inactivate	Check this box to inactivate the logic set. This means the logic set will not be used in the determination of reportability.
Logic Set Name	The logic set name. This should be descriptive of the criteria that are included in the logic set. For example, a logic set that contains both Clinical and Epidemiologic criteria may be named "CLIN+EPI."
Reporter Type	The reporter type associated with the logic set. There are numerous options for potential reporter types identified across reporting specifications, but **currently only Provider/Facility Reporting is functional**. • Provider/Facility Reporting refers to information received from lab tests or results from hospitals or doctors' offices. RCKMS will receive information from Provider/Facility EHRs and will run the rules authored under this Reporter Type to determine if a case is reportable to your jurisdiction.
Description	The description of the logic set. This is for internal PHA use only.
Save Logic Set	Select to save the logic set.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.

4.8.4 *Import Existing Logic Set* Window

The *Import Existing Logic Set* window displays a drop-down to select a different reporting specification from which to import one or more logic sets.



Selecting a reporting specification from the drop-down displays a list of the logic sets available for import.



4.9 Activating and Inactivating Criteria Information

The *Criteria* section of the *Criteria/Logic Sets* tab shows all criteria associated with a reportable condition, as defined by the CSTE Position Statement and the default reporting specification. Any criteria set to active will be displayed in the *Specifications* tab.

You can activate and inactivate criteria information using the *Criteria* section of the *Criteria/Logic Sets* tab in the *Edit Reporting Specification* page. As you activate and inactivate criteria information on the *Criteria/Logic Sets* tab, that information is updated in the *Specifications* tab. If you do not use certain criteria in your jurisdiction, you may want to inactivate those criteria, making the list of criteria in the *Specifications* tab more manageable and relevant to your jurisdiction. To work with criteria and logic sets in the *Specifications* tab, refer to *Section 4.7, Adding and Editing Specification Information*.

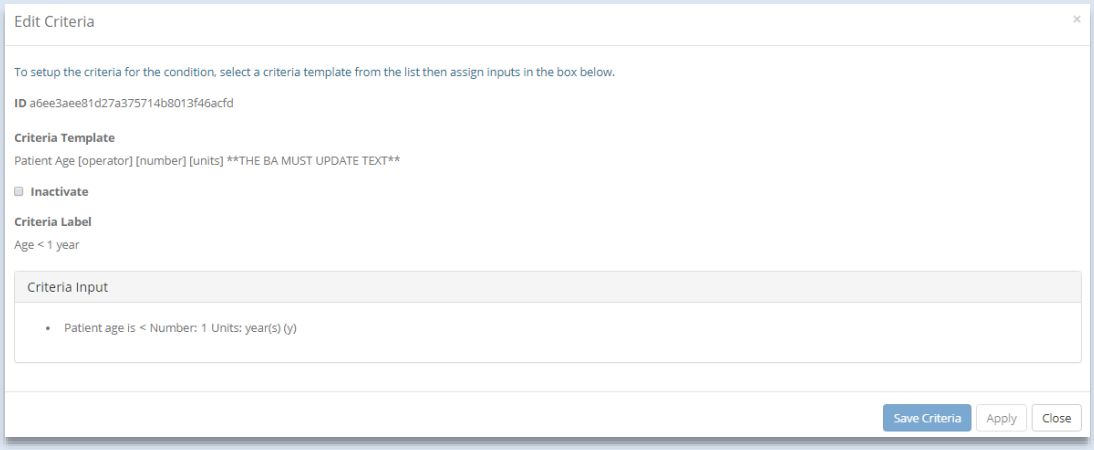
Criteria capture condition-related patient medical information, such as a diagnosis, that can be identified from a person's medical record. Each criterion is tied to logic that is supported by value sets. These are represented by means of criteria templates that are machine-processible logic statements. For more detail on logic sets, refer to *Section 4.8, Adding and Editing Logic Set Information*.

Authoring Tip

To request a new criterion for a particular condition, submit a ticket.

To activate or inactivate criteria, perform the following steps:

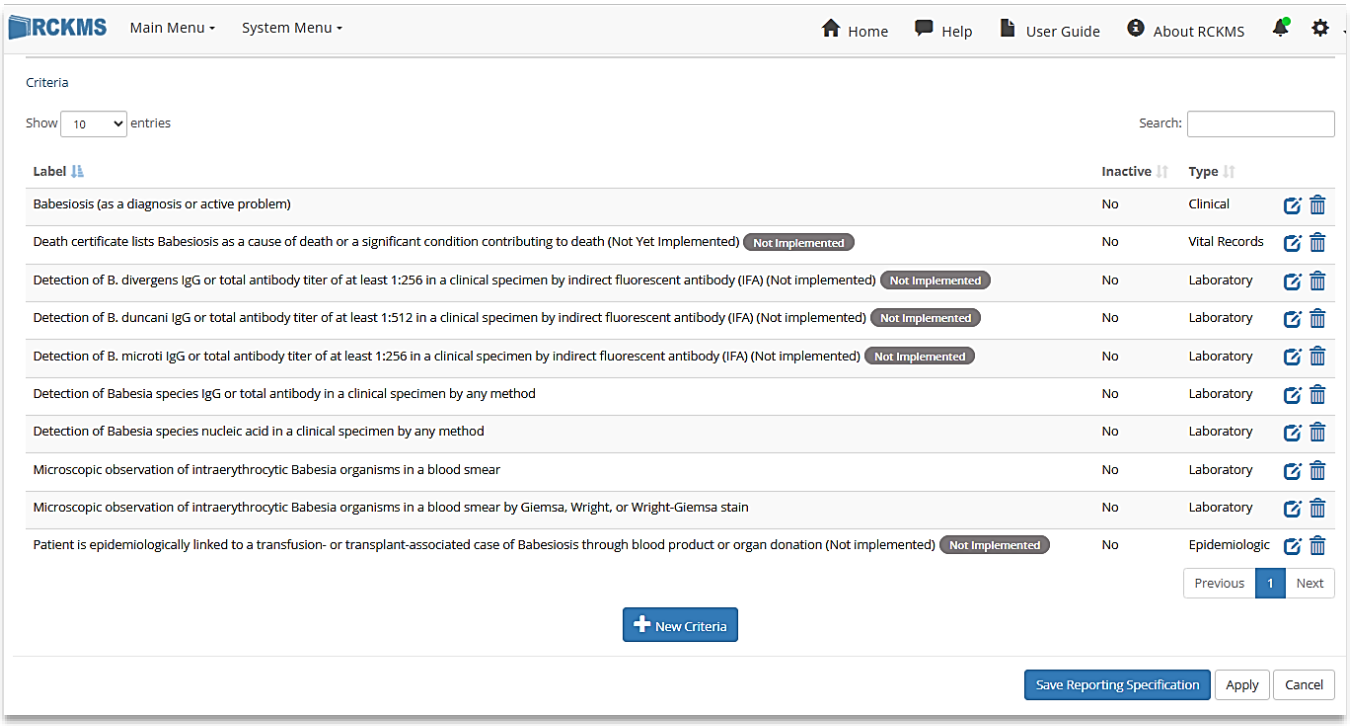
1. Scroll down in the *Criteria/Logic Sets* tab in the *Reporting Specification* page to display the *Criteria* section.
2. Select the **Edit** icon for the criterion you wish to activate or inactivate. The *Edit Criteria* window appears.



3. Select the **Inactivate** checkbox to inactivate the criterion. Inactivating removes criteria from display in the *Specifications* tab, while keeping the information in the *Criteria/Logic Sets* tab for you to restore later. You can select the **Show Inactive Criteria** button in the *Specifications* tab to show any previously inactivated criteria.
4. Select the **Save Criteria** button. RCKMS saves the criterion information and displays the *Criteria* section of the *Criteria/Logic Sets* tab in the *Reporting Specification* page.

4.9.1 *Criteria/Logic Sets* Tab – Criteria Section

The *Criteria* section in the *Criteria/Logic Sets* tab in the *Edit Reporting Specification* page displays the reporting specification's criteria information.

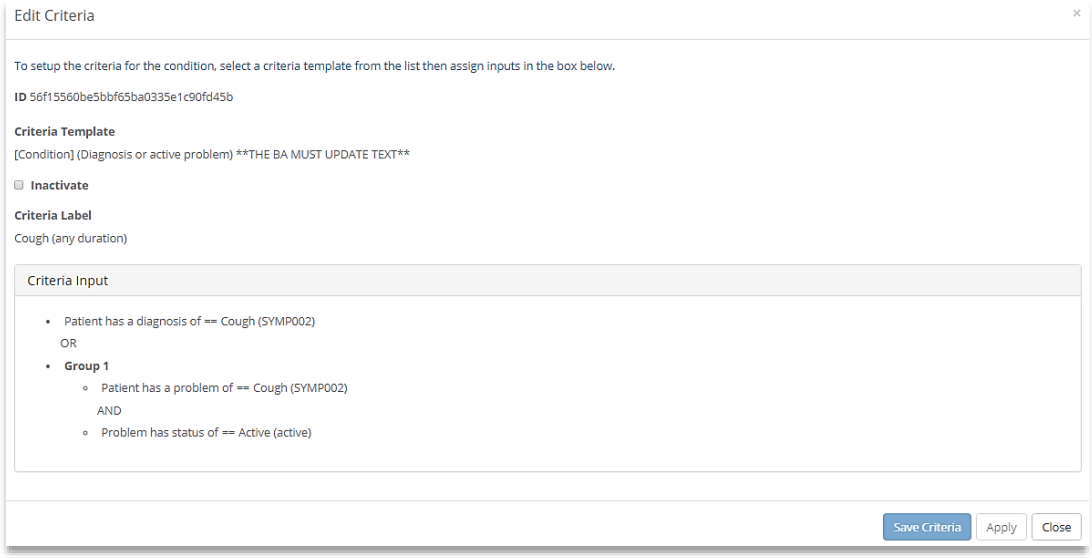


The following table details the criteria options on the *Criteria label* page.

Item	Description
Show entries	Select drop-down and choose the number of items to display in the grid.
Label	The criteria label.
Inactive	The status of the criterion. "No" means the criterion is active and "yes" means the criterion is inactive.
Type	The criteria type. Options include Laboratory, Clinical, Epidemiologic, and Demographic.
Inactivate	Indicates if the criteria are active or inactive.
Edit	Select to edit the selected item.
Previous	Select to navigate back through the list of items available.
Next	Select to navigate forward through the list of items available.
Save Reporting Specification	Select to save the reporting specification.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.
Sort	Select to sort the information in each column.

4.9.2 *Criteria* Window

The *Criteria* window displays the options for activating and inactivating reporting criteria information.



The following table details the options on the *Edit Criteria* window.

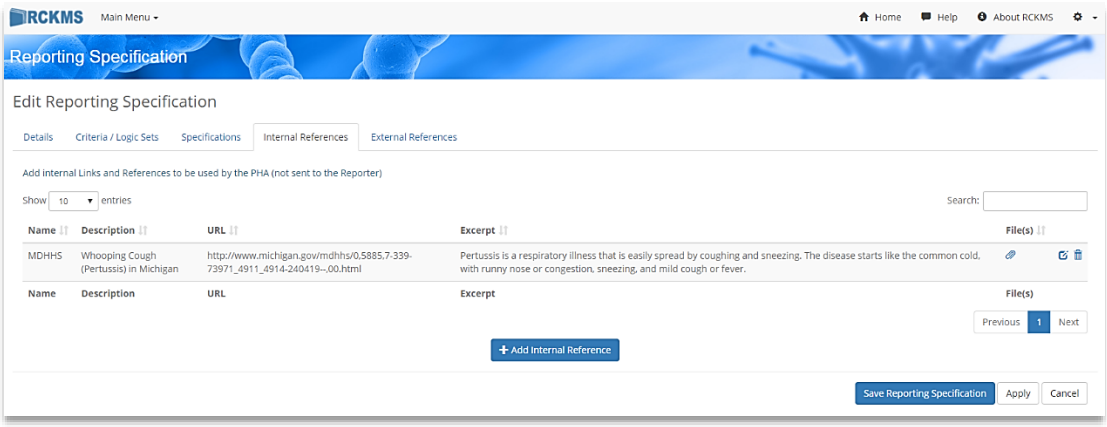
Item	Description
ID	A system-assigned unique identifier for the criterion. This field is read-only.
Criteria Template	The machine-processible logic template upon which the criterion is based. The *Criteria Template* options are *read-only* when you are signed in as a Jurisdiction Administrator or when editing existing criteria.
Inactivate	Select to inactivate the selected criterion.
Criteria Label	The label identifying the criterion name. The *Criteria Label* options are *read-only* when you are signed in as a Jurisdiction Administrator.
Criteria Input	The values, standard codes, and operators comprising the logic for the criterion. The *Criteria Input* options are **read-only** when you are signed in as a Jurisdiction Administrator except when editing a user-defined patient age criterion.
Save Criteria	Select to save criteria information.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.

Authoring Tip

4.10 *Internal References* Tab

The *Internal References* tab displays information, such as text, links to websites, documents, and other modes of information for use by the PHA. This could be used to share specific information with an internal department within the PHA, such as the HIV department or Infectious Diseases team.

Internal References are not sent to the reporter in the RR.

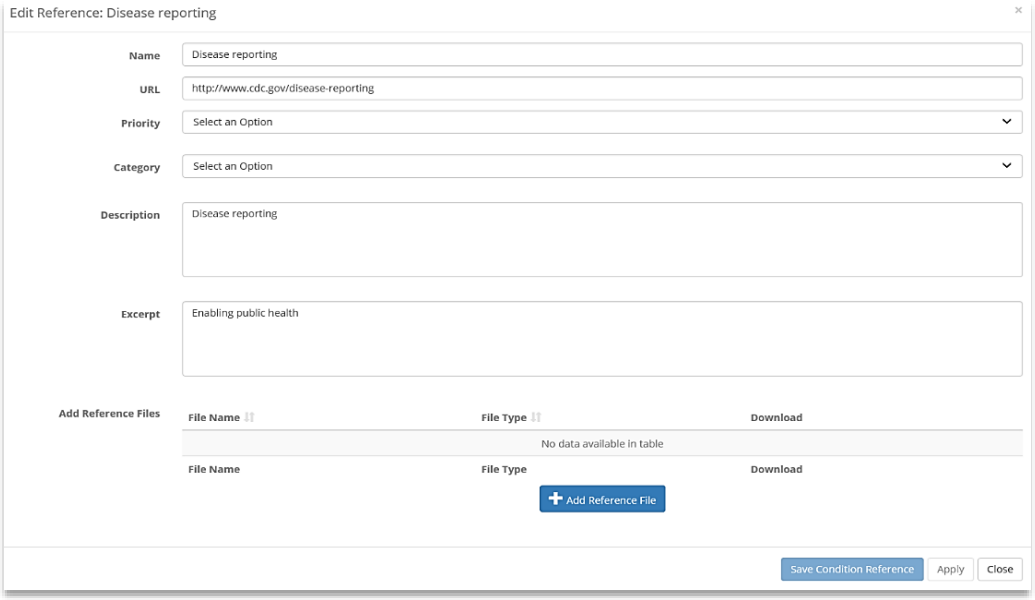


The following table details the options on the *Internal References* page.

Item	Description
Show entries	Select drop-down and choose the number of items to display in the grid.
Search	Type the text you want and the search results display in the table. Clear existing text to reset the search results.
Name	The name of the internal reference.
Description	The description of the internal reference. This will display in the Reportability Response.
URL	The URL for the internal reference.
Excerpt	An excerpt from the internal reference. This is for internal PHA use and will not display in the Reportability Response.
Files	The “paperclip” icon indicates a file is attached to the internal reference. It can be downloaded from the Edit Internal Reference screen.
Edit	Select to edit the selected item.
Delete	Select to delete the selected item.
Previous	Select to navigate back through the list of items available.
Next	Select to navigate forward through the list of items available.
Add Internal Reference	Select to add a new internal reference and display the *New Reference* window.
Save Reporting Specification	Select to save the reference information and return to previous page.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.
Sort	Select to sort the information in each column.

4.10.1 *Edit Reference* Window

The *Edit Reference* window displays the details of the selected reference item, including name, URL, priority, and category. You use the *Edit Reference* window to add and edit reference information.



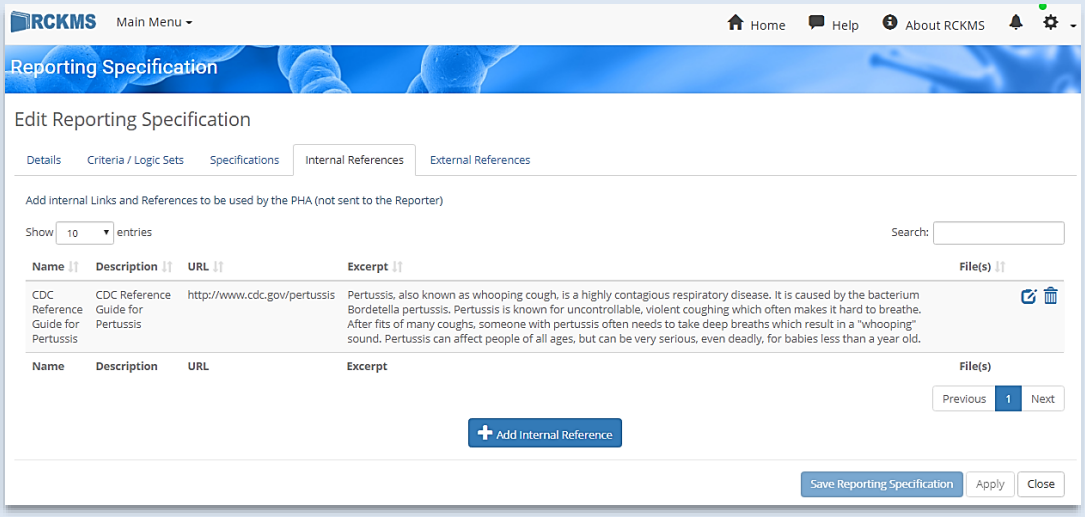
The following table details the options on the *Edit Reference* window.

Item	Description
Name	The name of the reference.
URL	The URL for the reference.
Priority	The priority of the internal reference. Options include Immediate action required, Immediate action requested, Action required, Action requested, Information only.
Category	The category of the reference. Options include Outbreak- or Cluster related, Additional reporting needs, Additional detection and/or laboratory testing needs, Treatment and/or prevention, PHA Contact Information, Additional Resources.
Description	The description of the reference. This will display in the Reportability Response.
Excerpt	An excerpt from the reference. This is for internal PHA use and will not display in the Reportability Response.
Add Reference Files	The fields related to an internal reference file.
File Name	The name of the reference file attached.
File Type	The format of the reference file attached.
Download	The arrow icon can be selected to download the attached reference file.
Edit	Select to edit the selected item.
Delete	Select to delete the selected item.
Add Reference File	The button used to add additional internal reference files.
Save Condition Reference	Select to save the reference information.
Apply	Select to save your changes and keep the window open.
Cancel/Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.

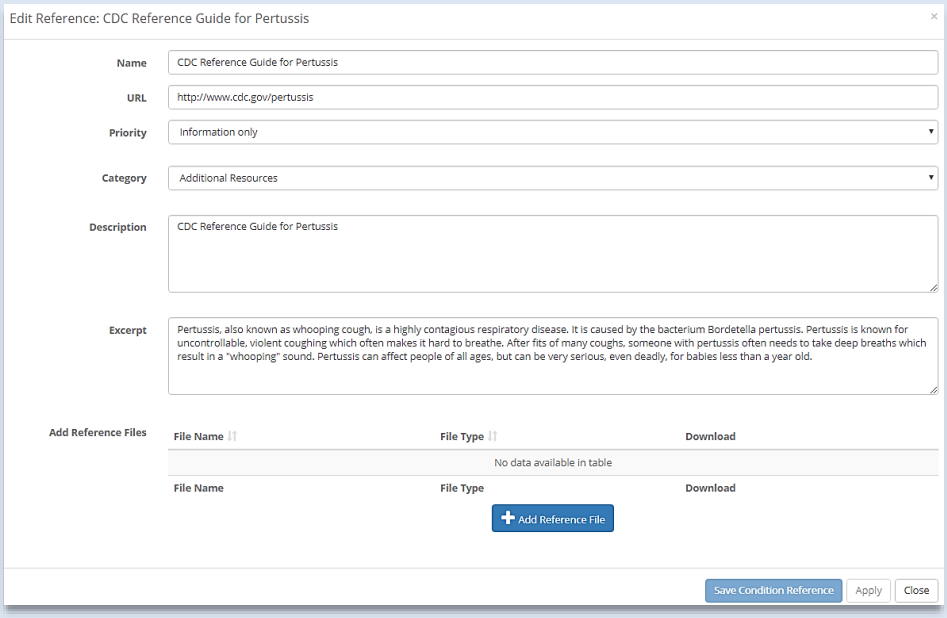
4.10.2 Adding and Editing Internal References

To add and edit Internal References, perform the following steps:

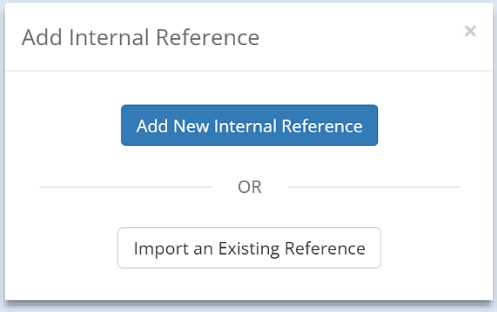
1. Select the **Internal References** tab in the *Edit Reporting Specification* page. RCKMS displays the contents of the *Internal References* tab.



2. To edit existing internal reference information, select the **Edit** icon for the item you want. RCKMS displays the *Edit Reference* window.
    a. Select **Name** and type the name you want.
    b. Select **URL** and type the URL you want.
    c. Select **Priority** and choose the option you want from the drop-down list.
    d. Select **Category** and choose the option you want from the drop-down list.
    e. Select **Description** and type the description you want. This will appear in the Reportability Response.
    f. Select **Excerpt** and type the excerpt you want. This is for internal PHA use only.
    g. Optional – Select **Add Reference File** and use **Chose File** button to upload a New Reference File. Select the **Save Reference File** button to return to the previous screen. Or use **Apply** to stay on the New Reference File screen.
    h. Select the **Save Condition Reference** button. RCKMS saves your changes and displays the *Internal References* tab. Or select **Apply** and remain on the Edit Reference screen.



3. To add new internal reference information, select **Add Internal Reference** button. RCKMS displays the *Add Internal Reference* window. Do one of the following:

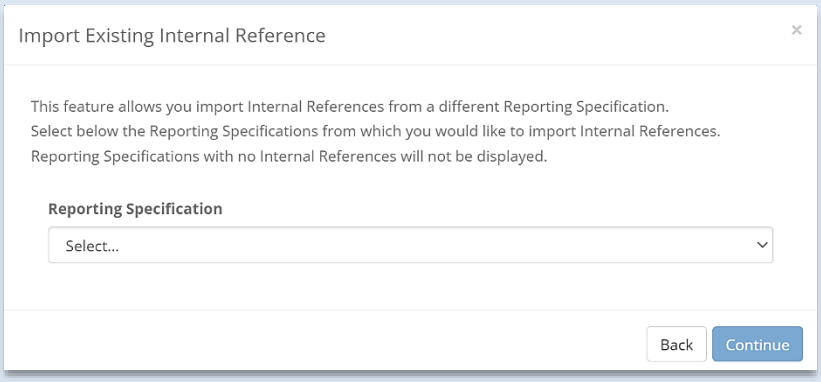


   a. Select the **Add New Internal Reference** button to add a new internal reference. This opens the *New Reference* window, which has the same fields as the *Edit Reference* window described above.
      i. Select **Name** and type the name you want.
      ii. Select **URL** and type the URL you want.
      iii. Select **Priority** and choose the option you want from the drop-down list.
      iv. Select **Category** and choose the option you want from the drop-down list.
      v. Select **Description** and type the description you want. This will appear in the Reportability Response.
      vi. Select **Excerpt** and type the excerpt you want. This is for internal PHA use only.
      vii. Optional – Select **Add Reference File** and use **Chose File** button to upload a New Reference File. Select the **Save Reference File** button to return to the previous screen. Or use **Apply** to stay on the New Reference File screen.

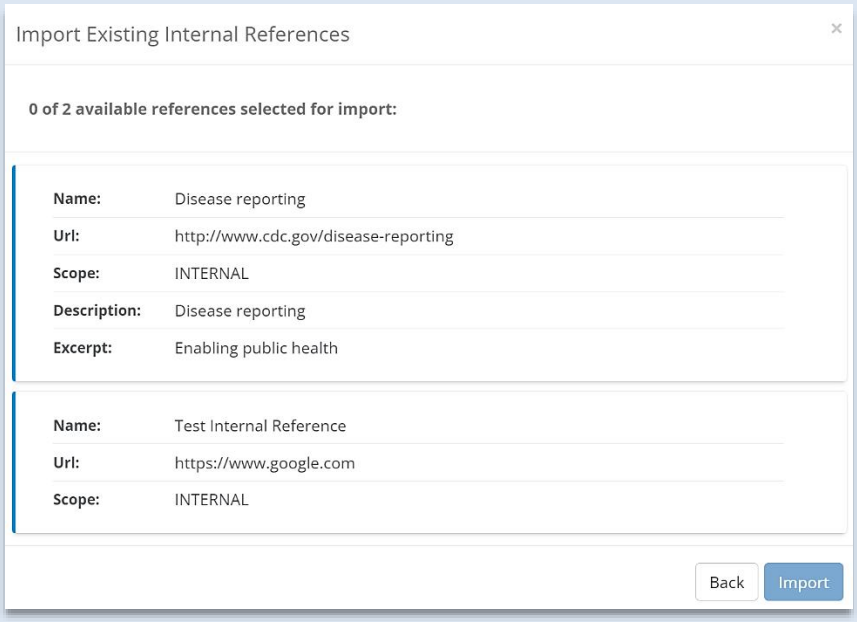
Internal reference items should be unique within the reporting specification.

viii. Select the **Save Condition Reference** button. RCKMS saves your changes and displays the *Internal References* tab. Or select **Apply** and remain on the Edit Reference screen.

b. Select the **Import an Existing Reference** button to import an existing internal reference from a different reporting specification. This opens the *Import Existing Internal Reference* window.



i. Select a reporting specification from the drop-down and select **Continue**. RCKMS displays the internal references available for import.



ii. Select the internal reference(s) you wish to import and select the **Import** button. RCKMS saves the internal references and displays the *Internal References* tab.

You can also delete an internal reference by selecting the **Delete** icon for the internal reference you want to delete.

4.11 *External References* Tab

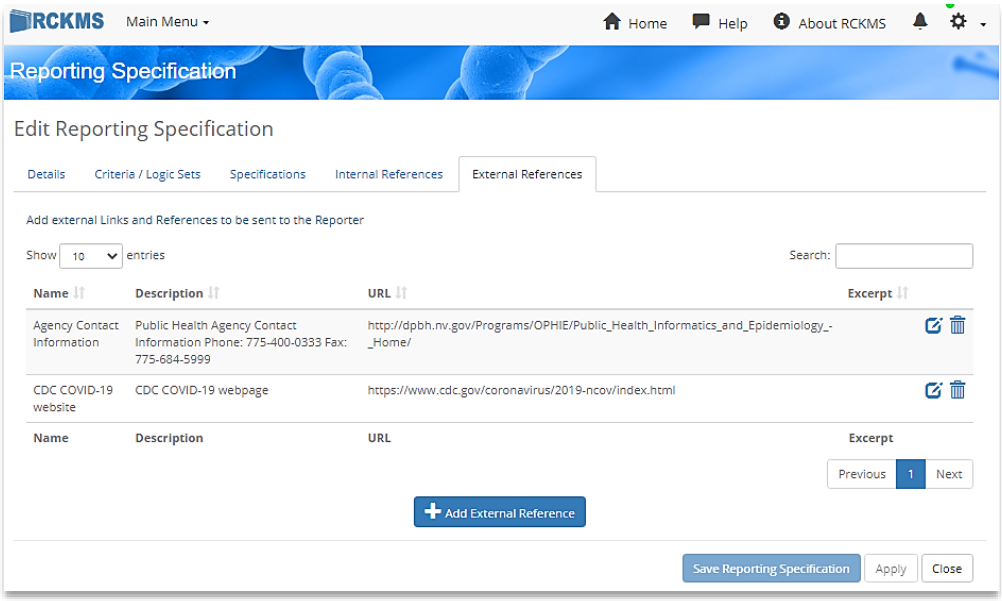
The *External References* tab displays information, such as text, links to web sites, documents, and other modes of information that the PHA wants available to reporters. For example, in the screenshot below, the author has included contact information for the public health agency along with a link to the COVID-19 page on the CDC website. Some common uses for External References are:

Authoring Tip

External references are sent back to the reporter in the RR.

At a minimum, jurisdictions should add condition-specific contact information

- Links to the condition on the CDC website or on the PHA website
- Contact information for the PHA
- Treatment recommendations
- Additional reporting requirements to local health departments



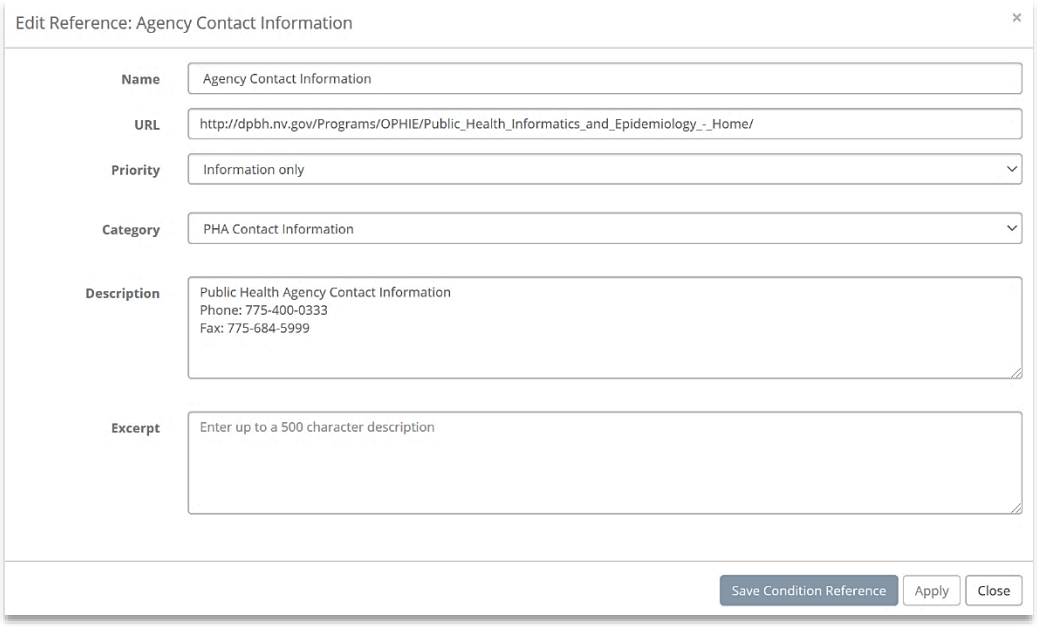
The following table details the options on the *External References* tab.

Item	Description
Show entries	Select drop-down and choose the number of items to display in the grid.
Search	Type the text you want and the search results display in the table. Clear existing text to reset the search results.
Name	The name of the external reference.
Description	The description of the external reference.
URL	The URL for the external reference.
Excerpt	An excerpt from the external reference.
Edit	Select to edit the selected item.
Delete	Select to delete the selected item.
Previous	Select to navigate back through the list of items available.
Next	Select to navigate forward through the list of items available.
Add External Reference	Select to add a new external reference and display the *New Reference* window.

Item	Description
Save Reporting Specification	Select to save the reporting specification.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.
Sort	Select to sort the information in each column.

4.11.1 *Edit Reference* Window

The *Edit Reference* window displays the details of the selected reference item, including name, description, and URL. Use the *Reference* window to add and edit reference information, which is sent back to the reporter in the RR.



The following table details the options on the *Edit Reference* window.

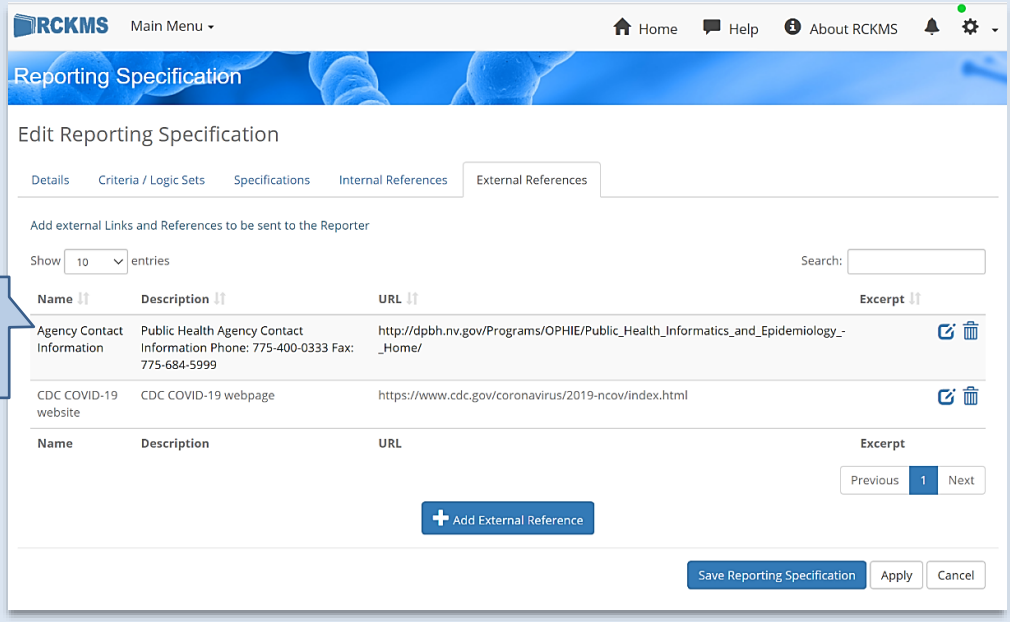
Item	Description
Name	The name of the reference.
URL	The URL for the reference.
Priority	The priority of the URL for the reference. Options include Immediate Action Required, Immediate Action Requested, Action Required, Action Requested, Information Only.
Category	The category organizing the reference. Options include Outbreak- or Cluster related, Additional reporting needs, Additional detection and/or laboratory testing needs, Treatment and/or prevention, PHA Contact Information, and Additional Resources. The *Category* option orders the display of reference information in the RR.
Description	The description of the reference.
Excerpt	An excerpt from the reference. Excerpts are not included in the RR.

Item	Description
Save Condition Reference	Select to save the reference information.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.

4.11.2 Adding and Editing External Reference Information

To add or edit an External Reference, perform the following steps:

1. Select the **External References** tab in the *Edit Reporting Specification* page. RCKMS displays the contents of the *External References* tab.



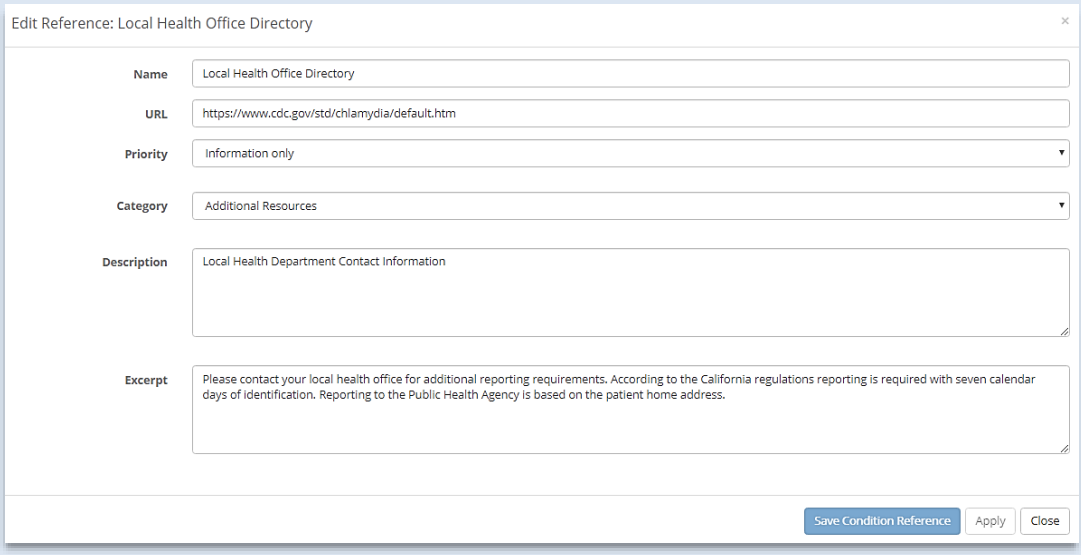
PHA Contact information

2. To edit existing external reference information, select the **Edit** icon for the item you want. RCKMS displays the *Edit Reference* window.
   a. Select **Name** and type the name you want.
   b. Select **URL** and type the URL you want.
   c. Select **Priority** and choose the option you want. The Priority options indicate the urgency of the information or any expected actions.
   d. Select **Category** and choose the option you want. The Category option orders the display of reference information on the RR.
   e. Select **Description** and type the description you want.
   f. Select **Excerpt** and type the excerpt you want.

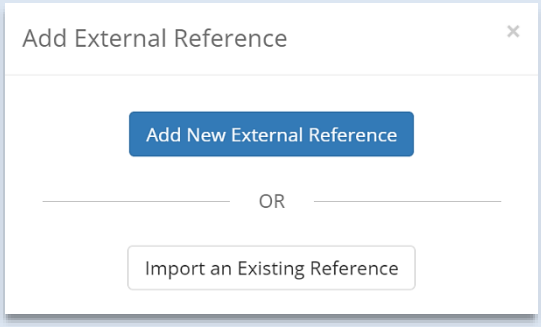
Authoring Tip

External reference items should be unique within the reporting specification.

g. Select the **Save Condition Reference** button. RCKMS saves your changes and the *External References* tab.

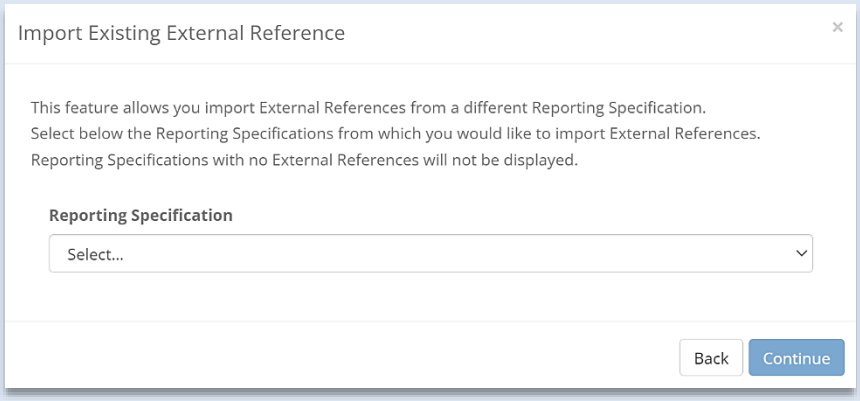


3. To add new external reference information, select **Add External Reference** button. RCKMS displays the *Add External Reference* window. Do one of the following:

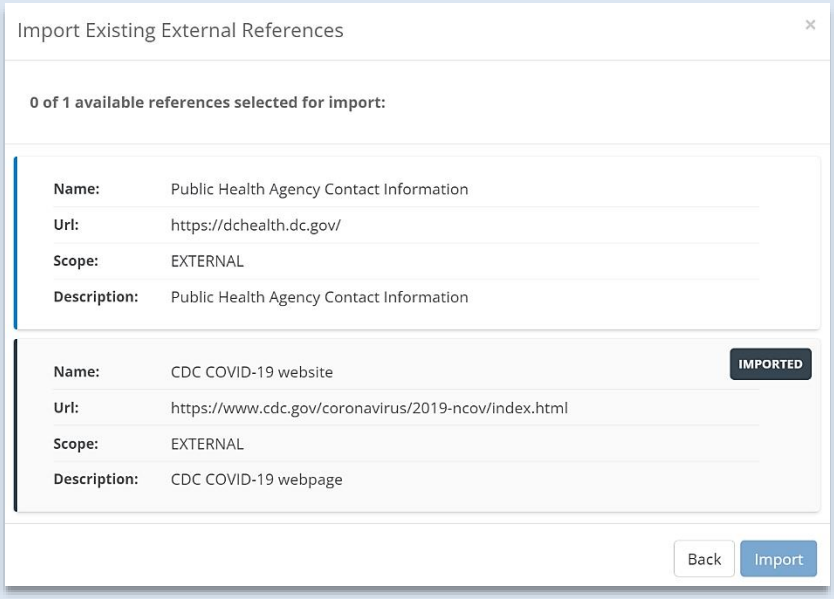


a. Select the **Add New External Reference** button to add a new external reference. This opens the *New Reference* window, which has the same fields as the *Edit Reference* window described above.
   i. Select **Name** and type the name you want.
   ii. Select **URL** and type the URL you want.
   iii. Select **Priority** and choose the option you want. The Priority options indicate the urgency of the information or any expected actions.
   iv. Select **Category** and choose the option you want. The Category option orders the display of reference information on the RR.
   v. Select **Description** and type the description you want.
   vi. Select **Excerpt** and type the excerpt you want.
   vii. Select the **Save Condition Reference** button. RCKMS saves your changes and the *External References* tab.

b. Select the **Import an Existing Reference** button to import an existing external reference from a different reporting specification. This opens the *Import Existing External Reference* window.



i. Select a reporting specification from the drop-down and select **Continue**. RCKMS displays the external references available for import.



ii. Select the external reference(s) you wish to import and select the **Import** button. RCKMS saves the external references and displays the *External References* tab.

You can also delete an external reference by selecting the **Delete** icon for the external reference you want to delete.

4.12 Saving Changes to the Reporting Specification

Although RCKMS saves your changes within a working session, to save information permanently and update the database, you must save the entire reporting specification. To do so:

1. When you are finished entering reporting specification information in the various tabs, select the **Save Reporting Specification** button.
2. RCKMS saves your changes. You will see the *Reporting Specification* page with the date and time of the last update.

***Note:* RCKMS displays unsaved information using red text to indicate that you must save the reporting specification to preserve your changes.**

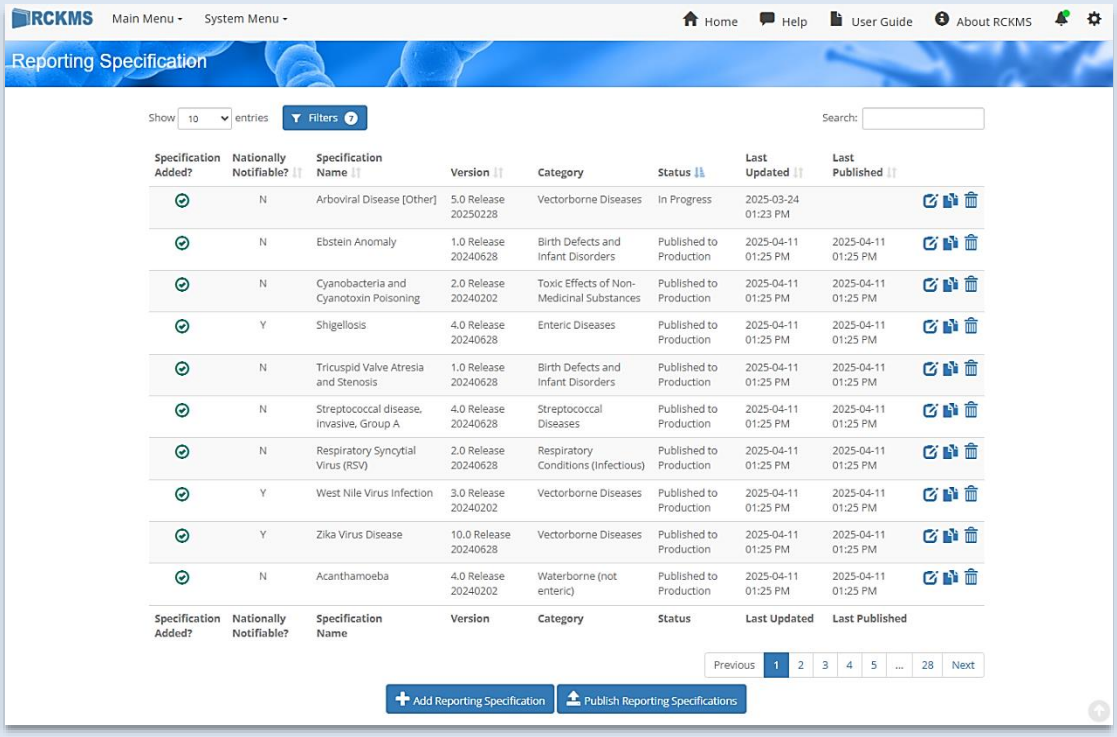
4.13 Publishing the Reporting Specification

Once you finalize and save your work on the reporting specification, you must publish it to the DSS rules engine for RCKMS to run the reporting specifications rules logic and respond on receipt of a record if it is reportable. Authoring rules to final production status is a two-step process. After the rules have been authored for a condition, the tool requires the rules to be first published to the testing environment and then to production status. Publishing to test is a necessary step even if you decide not to test your authored condition.

4.13.1 Steps to Publish to Test

To publish to test, complete the following steps:

1. Do one of the following:
   - From the *Home* page, select **Reporting Specifications** in the left navigation menu. The *Reporting Specification* page displays.
   - From any page in the tool, select **Main Menu** in the menu bar at the top of the page and choose **Reporting Specifications**. The *Reporting Specification* page displays.



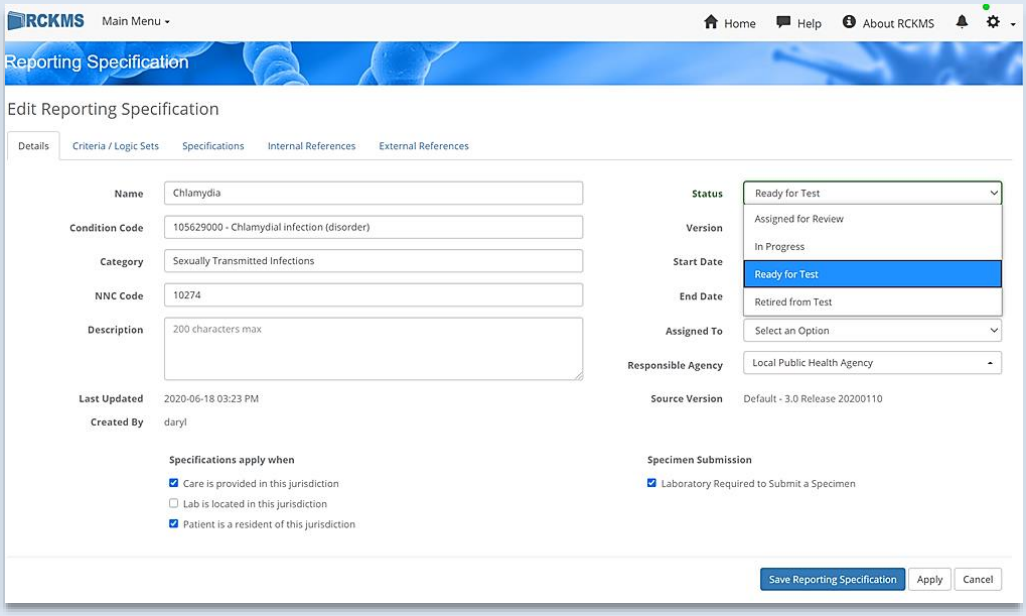
2. Select the **Edit** icon for the condition you want to publish on the *Reporting Specification* page. RCKMS displays the *Edit Reporting Specification* page and the contents of the *Details* tab.
3. This is a good time to review all tabs for completeness and accuracy. Select through the tabs to verify the following:
    - Select **Criteria/Logic Sets** to edit and add logic set and criteria information. For more information, refer to *Section 4.8, Adding and Editing Logic Set Information* and *Section 4.9, Activating and Inactivating Criteria Information*.
    - Select **Specifications** to edit and add reporting time frame and decision logic information. For more information, refer to *Section 4.7, Adding and Editing Specification Information*.
    - Select **Internal References** to edit and add internal links and reference information. For more information, refer to *Section 4.10, Internal References tab*.
    - Select **External References** to edit and add external links and reference information. For more information, refer to *Section 4.11, External References tab*.
    - Select **Details** to edit and add reporting specification detail information. For more information, refer to *Section 4.6, Reporting Specification Details tab*.

Authoring Tip

Publishing to test allows users to run test cases against their authored rules to verify that test cases return the expected results before publishing to production.

4. Select the **Status** drop-down in the *Details* tab and choose **Ready for Test**.

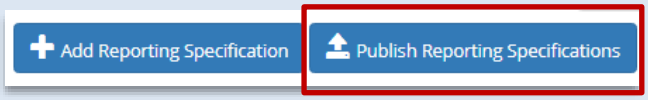
***Note:** You can change the status to Assigned for Review prior to publishing to test to indicate that the condition needs further review before publishing to the next step. This status is for internal jurisdiction reference only.*



5. Select **Save Reporting Specification**. RCKMS displays the *Reporting Specification* page and the date and time of the last update. The status is also updated to **Ready for Test**.

   Note: ***Keep in mind that for your changes to take effect, you must still publish the reporting specification.***

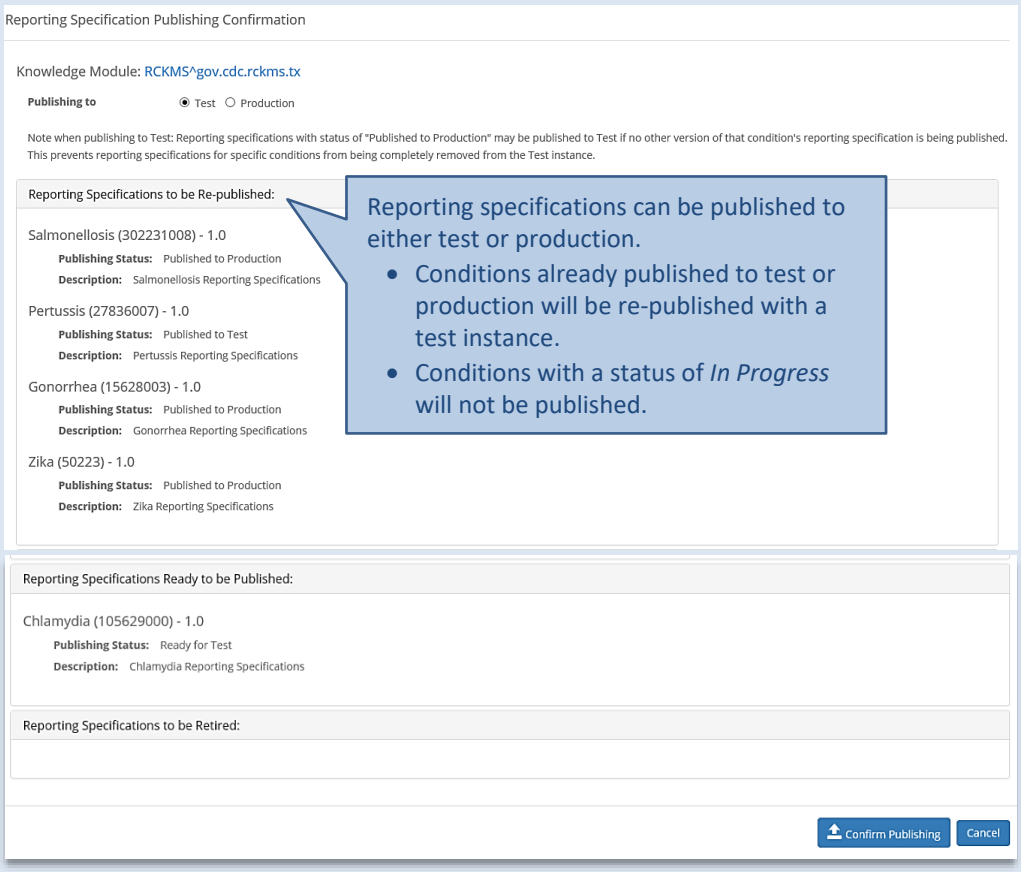
6. Select the **Publish Reporting Specifications** button. RCKMS displays the *Reporting Specification Publishing Confirmation* window.



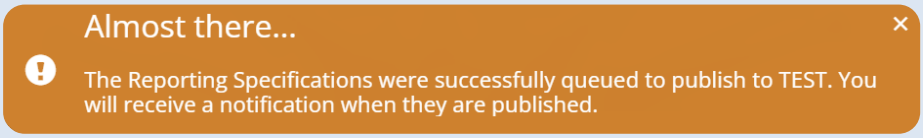
7. Select the **Test** radio button. There will be three sections to review in the confirmation window:
   - Reporting Specifications to be Re-published
   - Reporting Specifications Ready to be Published
   - Reporting Specifications to be Retired

   Please review all three sections to confirm the reporting specifications that will be Re-published, Published, and Retired.

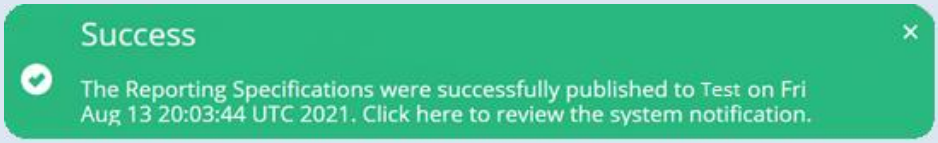
   Note: ***Any specification in a "Published" status will also be "Re-published" during the publishing to test process, unless there is a new version of a specification that is already published to test.***



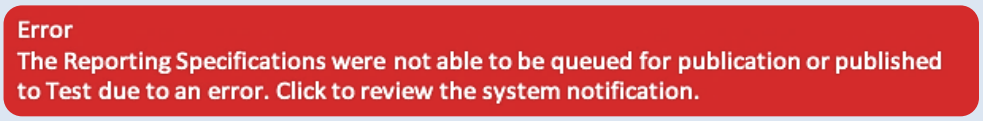
8. Select the **Confirm Publishing** button to publish all listed reporting specifications.
    - When you select on the **Confirm Publishing** button, you will be returned to the *Reporting Specification* page. You will see an orange pop-up indicating that your reporting specification has been queued for publishing. You may remain here, exit, or continue working in the tool while the reporting specification is being published.



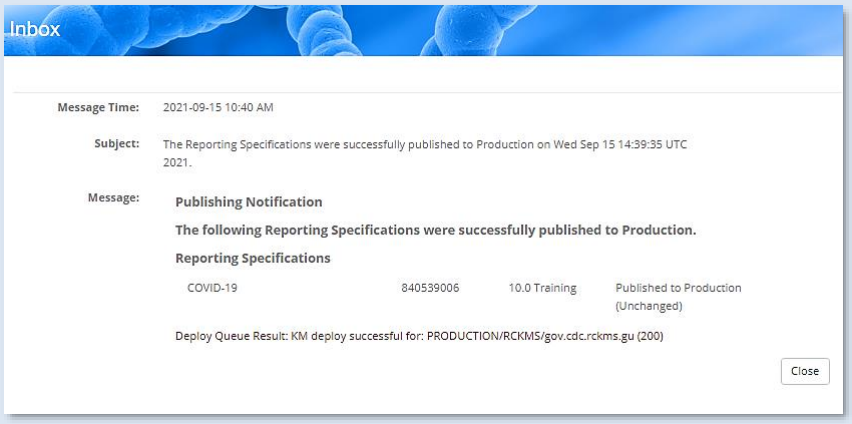
    - A green pop-up appears when the reporting specification has finished publishing and you refresh the page or move to another screen. You will also see that the Status has changed to "Published to Test."



- In rare instances, you may see a red pop-up, like the one shown below, indicating that the reporting specification could not be queued for publication or could not be published. You can select on the error to see additional details. If you encounter this error when working in the tool, submit a ticket to the RCKMS team with a screenshot of the detailed error message.



9. Confirm that the reporting specification has finished publishing by selecting the **Notification Bell** icon at the top right of the screen. This will take you to your Inbox where you will have a message with a subject line "The Reporting Specifications were successfully published to Test on *(date)*."
    - Select the **Edit** icon to view a detailed list of the Condition Name, Condition Code, Version, and Status Update for the condition(s) that were published.



***Note:** Refer to Section 5, Testing Options for an overview of testing options and instructions on how to test your published reporting specifications.*

4.13.2 Steps to Publish to Production

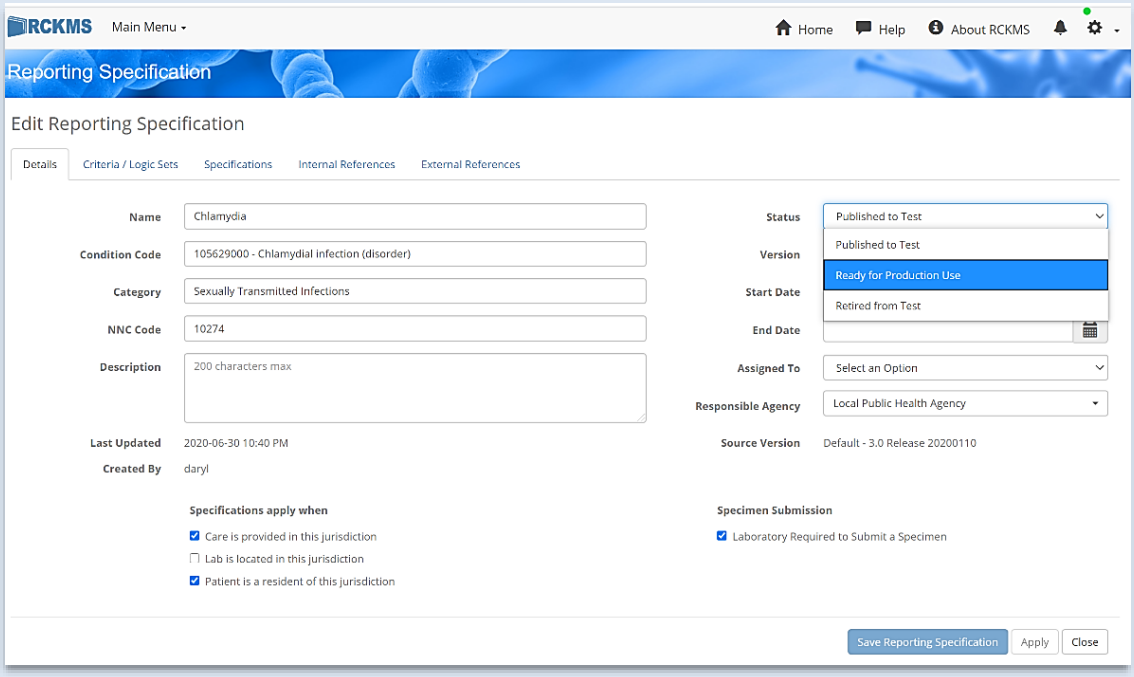
To publish to production, complete the following steps:

1. To start to navigate to publish to production, you need to access the *Reporting Specification* page. If you have just published reporting specifications to test, you are already in the correct place. If not, you can do so via either of these two options:
    - From the *Home* page, select **Reporting Specifications** in the left navigation menu. The *Reporting Specification* page displays.
    - From any page in the tool, select **Main Menu** in the menu bar at the top of the page and choose **Reporting Specifications**. The *Reporting Specification* page displays.
2. Select the **Edit** icon for the condition you want on the *Reporting Specification* page. RCKMS displays the *Edit Reporting Specification* page and the contents of the *Details* tab.

3. If you have not done so already, this is a good time to review all tabs for completeness and accuracy. Select through the tabs to verify the following:

    - Select **Criteria/Logic Sets** to edit and add logic set and criteria information. For more information, refer to *Section 4.8, Adding and Editing Logic Set Information* and *Section 4.9, Activating and Inactivating Criteria Information*.
    - Select **Specifications** to edit and add reporting time frame and decision logic information. For more information, refer to *Section 4.7, Adding and Editing Specification Information*.
    - Select **Internal References** to edit and add internal links and reference information. For more information, refer to *Section 4.10, Internal References tab*.
    - Select **External References** to edit and add external links and reference information. For more information, refer to *Section 4.11, External References tab*.
    - Select **Details** to edit and add reporting specification detail information. For more information, refer to *Section 4.6, Reporting Specification Details tab*.

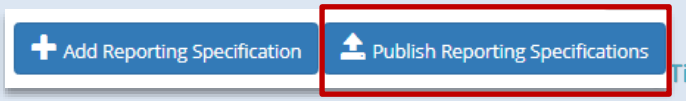
4. Select the **Status** drop-down in the *Details* tab and choose Ready for Production Use. This option will be available only after you have published the reporting specification to test.



5. Select **Save Reporting Specification**. RCKMS displays the *Reporting Specification* page and the date and time of the last update. The status will be updated to Ready for Production Use.

    ***Note:** Keep in mind that for your changes to take effect, you must still publish the reporting specification.*

6. Select the **Publish Reporting Specifications** button. RCKMS prompts you to confirm the publishing. There will be three sections on this confirmation:
    - Reporting Specifications to be Re-published
    - Reporting Specifications Ready to be Published
    - Reporting Specifications to be Retired

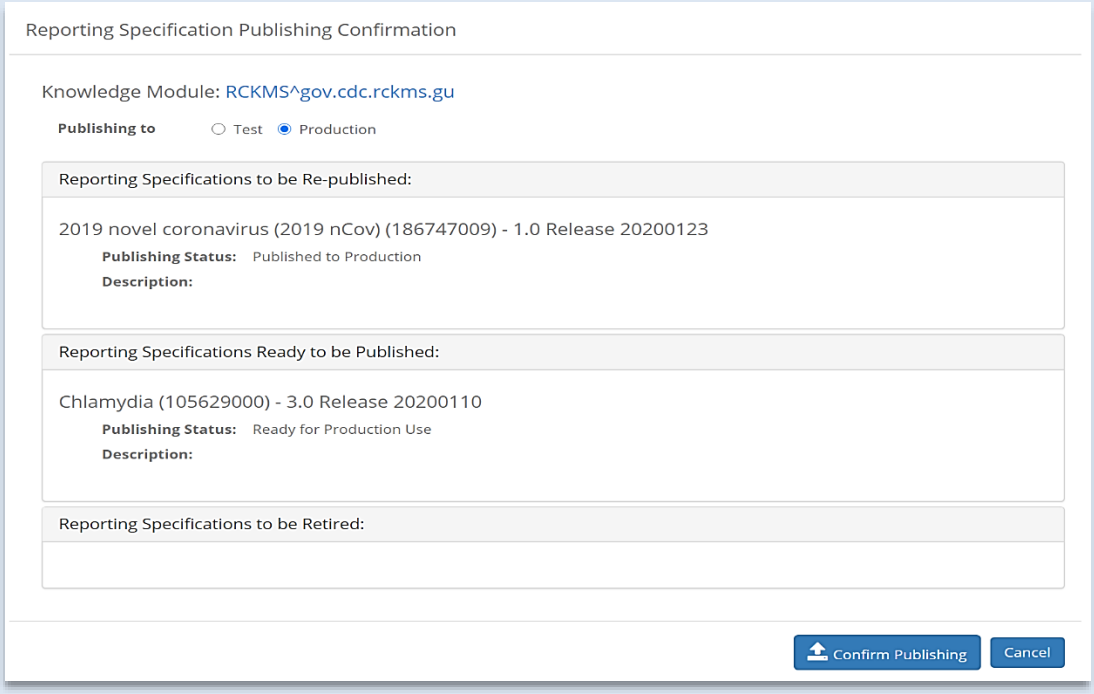


Tip

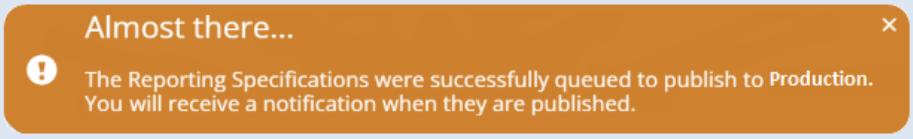
Reporting specifications can be published either to test or production. Conditions with a status of *Ready for Production Use* should be published to production. This signifies the readiness of your reporting specifications to be used for eCR activities.

7. Select the **Production** radio button. Please review all three sections to confirm the reporting specifications that will be Re-published, Published, and Retired.

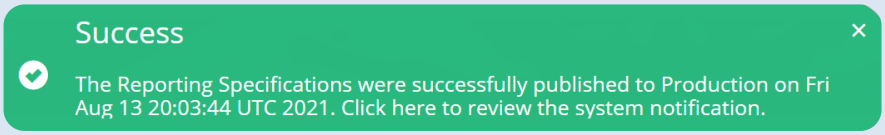
***Note:* Any specification in a "Published" status that may have been modified will be "Re-published" with the new changes during the publishing process.**



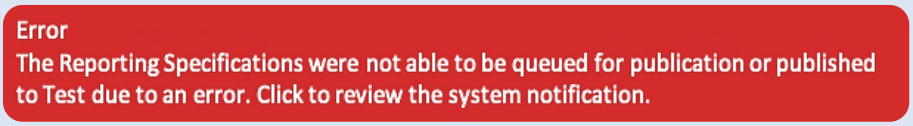
8. Select the **Confirm Publishing** button to publish all listed reporting specifications.
    - When you select on the **Confirm Publishing** button, you will be returned to the *Reporting Specification* page. You will see an orange pop-up indicating that your reporting specification has been queued for publishing. You may remain here, exit, or continue working in the tool while the reporting specification is being published.



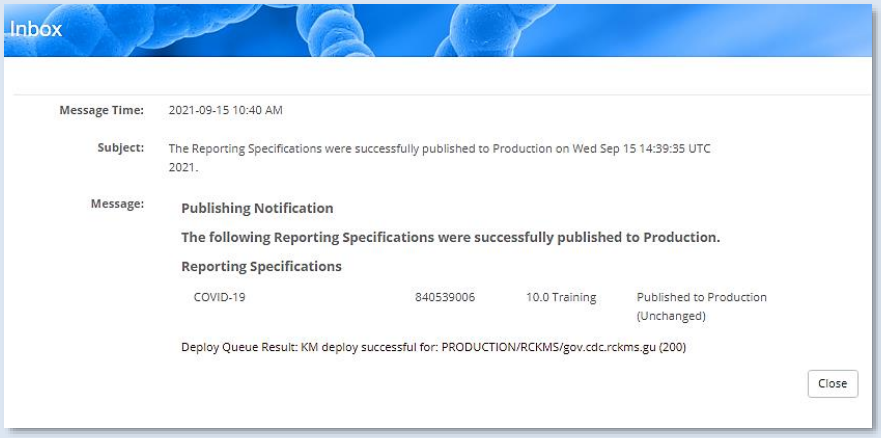
- A green pop-up appears when the reporting specification has finished publishing and you refresh the page or move to another screen. You will also see that the Status has changed to "Published to Production."



- In rare instances, you may see a red pop-up, like the one shown below, indicating that the reporting specification could not be queued for publication or could not be published. You can select on the error to see additional details. If you encounter this error when working in the tool, submit a ticket to the RCKMS team with a screenshot of the detailed error message.



9. Confirm that the reporting specification has finished publishing by selecting the **Notification Bell** icon at the top right of the screen.
    - Select the **Edit** icon to view a detailed list of the Condition Name, Condition Code, Version, and Status Update for the conditions that were published.



Once you save and publish the reporting specification, you can work with the following modules:

- Use one of the available testing options to run test cases and validate the criteria and rules logic. For details, refer to *Section 5, Testing Options*.
- Use the *Reports* module to run queries and display informational reports. For details, refer to *Section 6, Reports Module*.
- Manage jurisdiction detail information using the *Jurisdictions* module. For details, refer to *Section 3, Viewing and Editing Jurisdiction Information*.

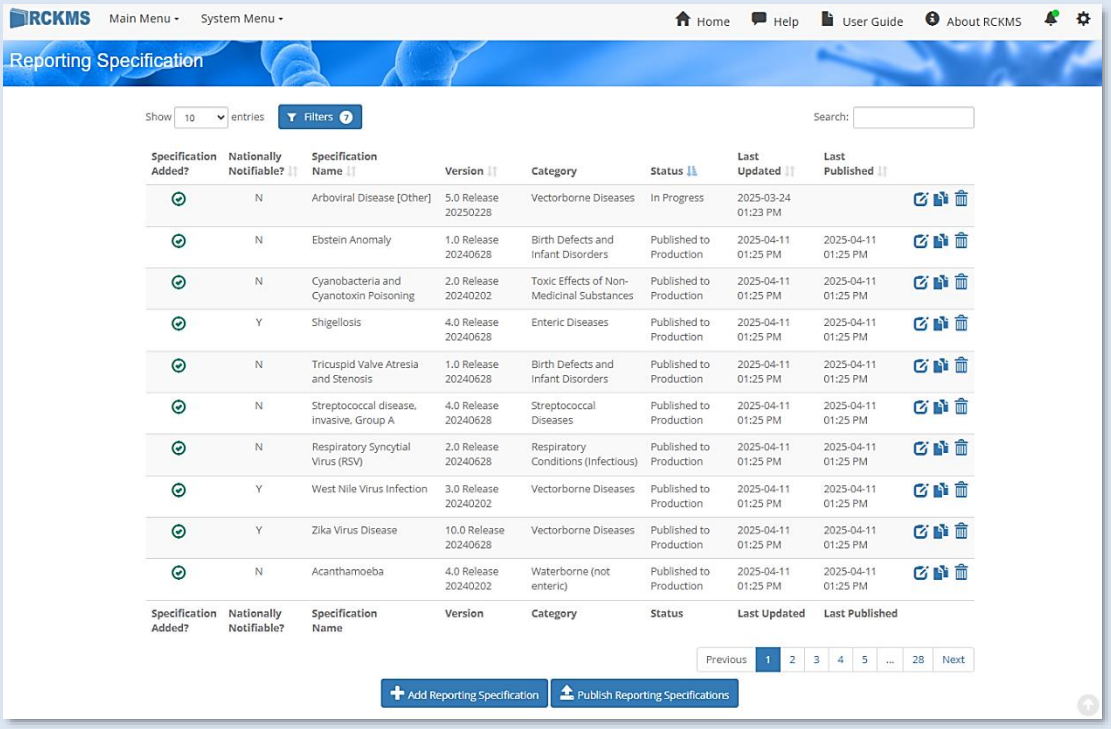
4.14 Retiring Reporting Specifications

Only one version of a given reporting specification can be published to production at a time. When a new version is published to production, the previous version will be automatically retired. In some rare cases, the SNOMED condition code for a condition may change, either due to a better match being found or because the condition itself changed. In these cases, the older condition must be manually retired prior to publishing the newer version. You may also want to manually retire a reporting specification if the condition is no longer reportable in your jurisdiction.

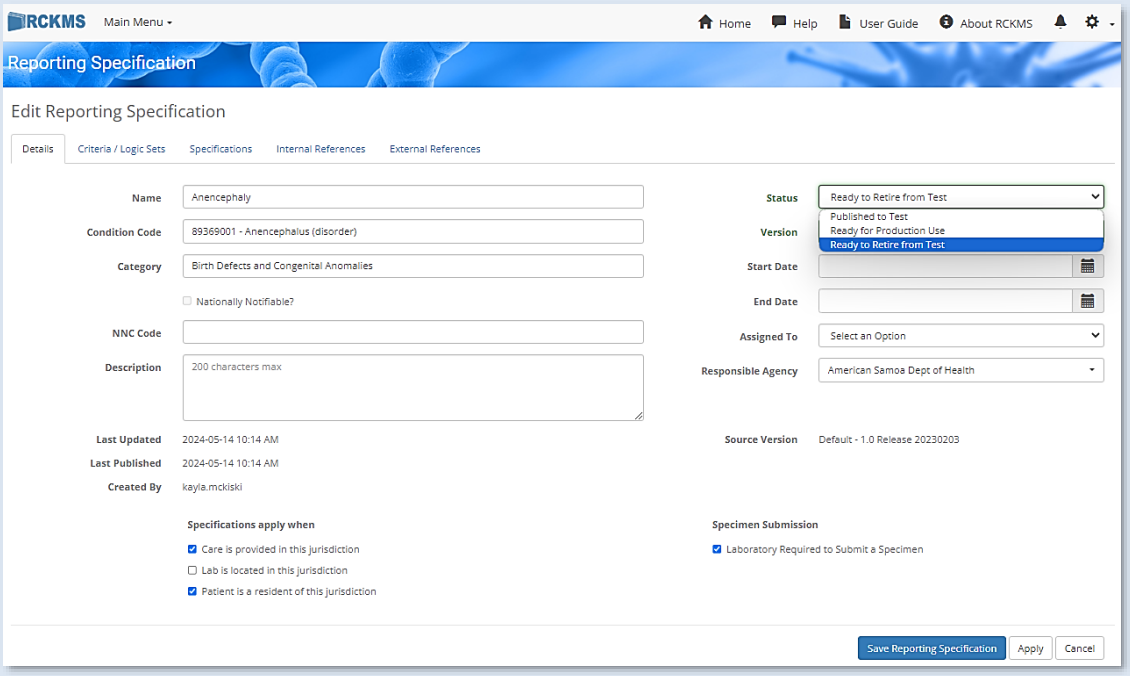
4.14.1 Steps to Retire from Test

To retire from test, complete the following steps:

1. Do one of the following:
   - From the *Home* page, select **Reporting Specifications** in the left navigation menu. The *Reporting Specification* page displays.
   - From any page in the tool, select **Main Menu** in the menu bar at the top of the page and choose **Reporting Specifications**. The *Reporting Specification* page displays.
2. Select the **Edit** icon for the condition you want to retire on the *Reporting Specification* page. RCKMS displays the *Edit Reporting Specification* page and the contents of the *Details* tab.



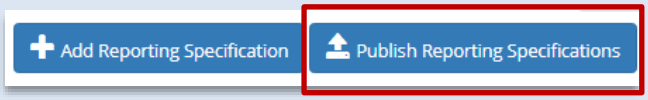
3. Select the **Status** drop-down in the *Details* tab and choose **Ready to Retire from Test**.



4. Select **Save Reporting Specification**. RCKMS displays the *Reporting Specification* page and the date and time of the last update. The status is also updated to **Ready to Retire from Test**.

   ***Note:** Keep in mind that for your changes to take effect, you must still publish the reporting specification.*

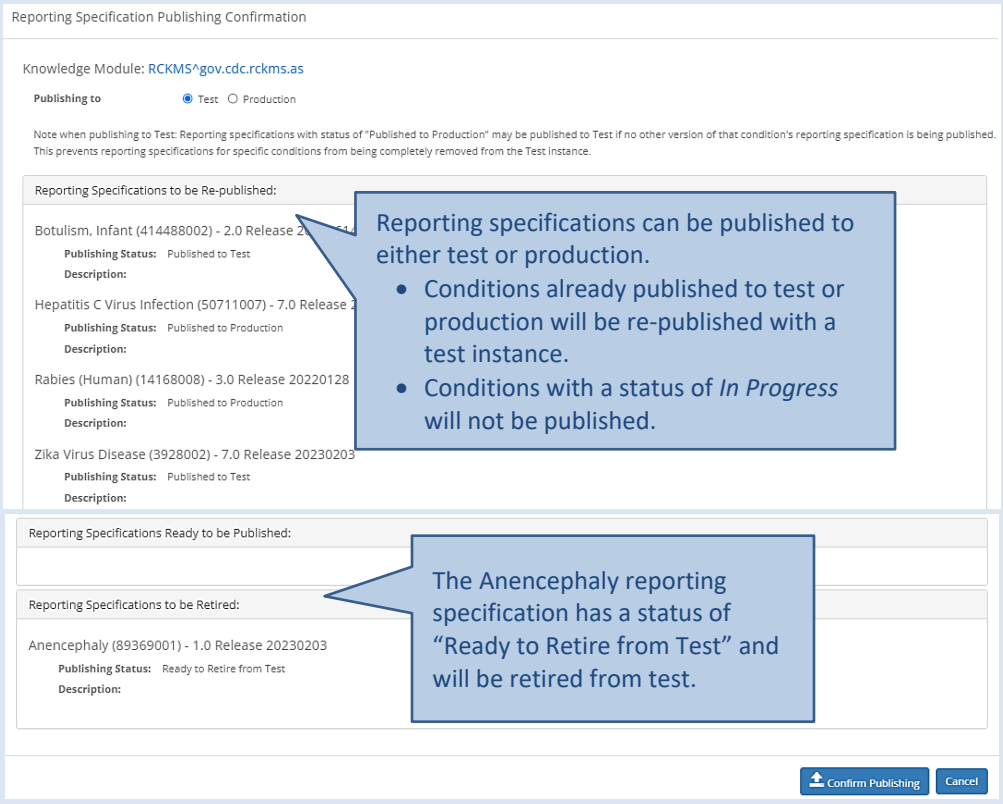
5. Select the **Publish Reporting Specifications** button. RCKMS displays the *Reporting Specification Publishing Confirmation* window.



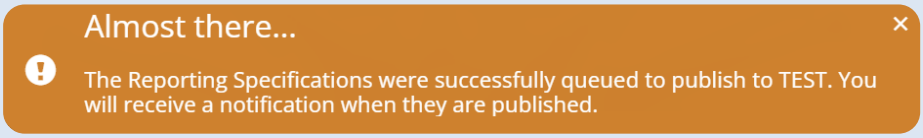
6. Select the **Test** radio button. There will be three sections to review in the confirmation window:
   - Reporting Specifications to be Re-published
   - Reporting Specifications Ready to be Published
   - Reporting Specifications to be Retired

   Please review all three sections to confirm the reporting specifications that will be Re-published, Published, and Retired.

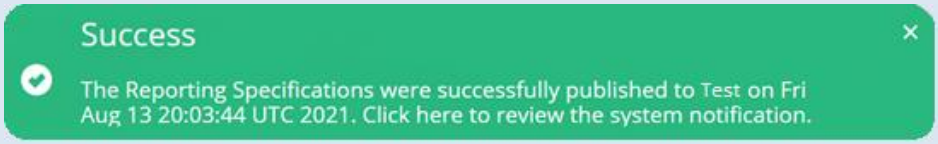
   ***Note:** Any specification in a "Published" status will also be "Re-published" during the publishing to test process, unless there is a new version of a specification that is already published to test.*



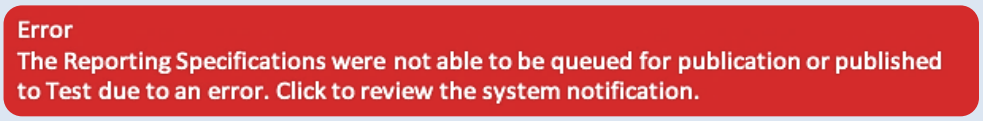
7. Select the **Confirm Publishing** button to publish all listed reporting specifications.
    - When you select on the **Confirm Publishing** button, you will be returned to the *Reporting Specification* page. You will see an orange pop-up indicating that your reporting specification has been queued for publishing. You may remain here, exit, or continue working in the tool while the reporting specification is being published.



    - A green pop-up appears when the reporting specification has finished publishing and you refresh the page or move to another screen. You will also see that the Status has changed to "Retired from Test."



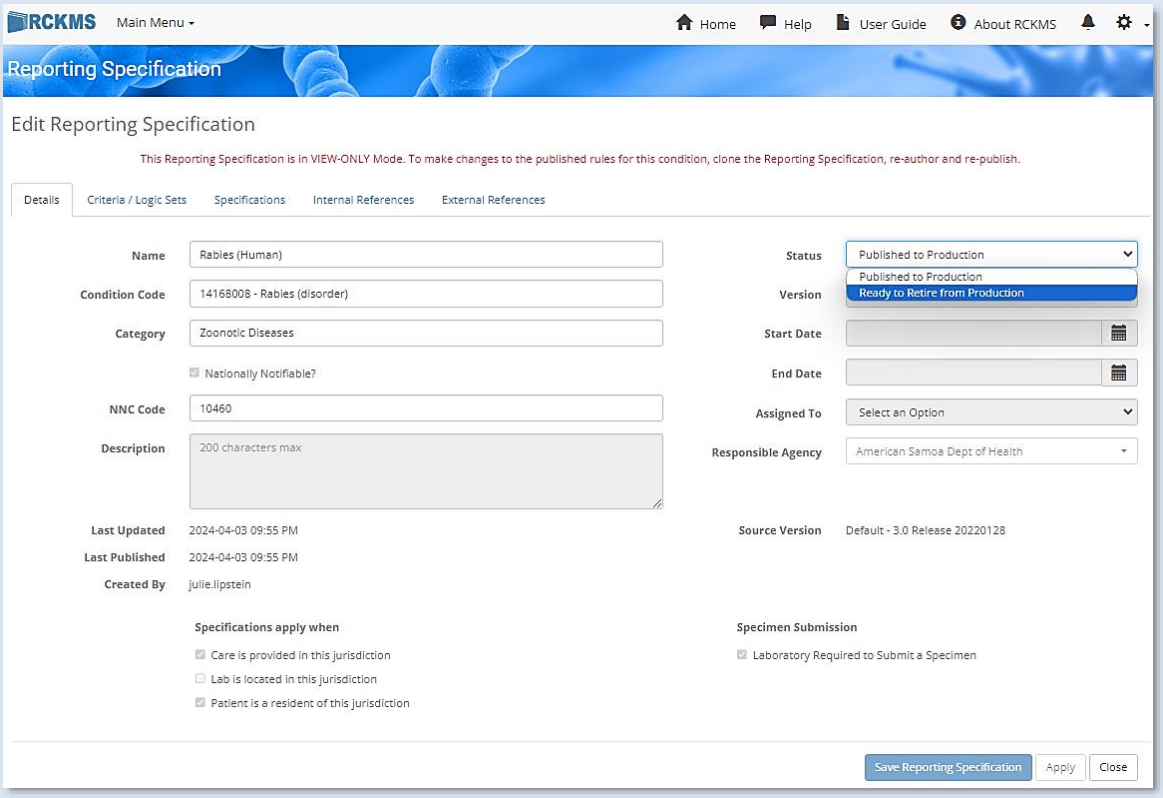
- In rare instances, you may see a red pop-up, like the one shown below, indicating that the reporting specification could not be queued for publication or could not be published. You can select on the error to see additional details. If you encounter this error when working in the tool, submit a ticket to the RCKMS team with a screenshot of the detailed error message.



4.14.2 Steps to Retire from Production

To retire from production, complete the following steps:

1. Do one of the following:
   - From the *Home* page, select **Reporting Specifications** in the left navigation menu. The *Reporting Specification* page displays.
   - From any page in the tool, select **Main Menu** in the menu bar at the top of the page and choose **Reporting Specifications**. The *Reporting Specification* page displays.
2. Select the **View** icon for the condition you want on the *Reporting Specification* page. RCKMS displays the *Edit Reporting Specification* page and the contents of the *Details* tab.

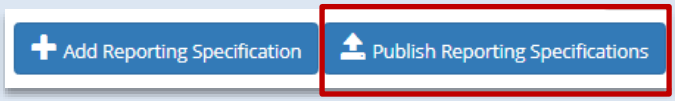


3. Select the **Status** drop-down in the *Details* tab and choose Ready to Retire from Production. This option will be available only after you have published the reporting specification to production.

4. Select **Save Reporting Specification**. RCKMS displays the *Reporting Specification* page and the date and time of the last update. The status will be updated to Ready to Retire from Production.

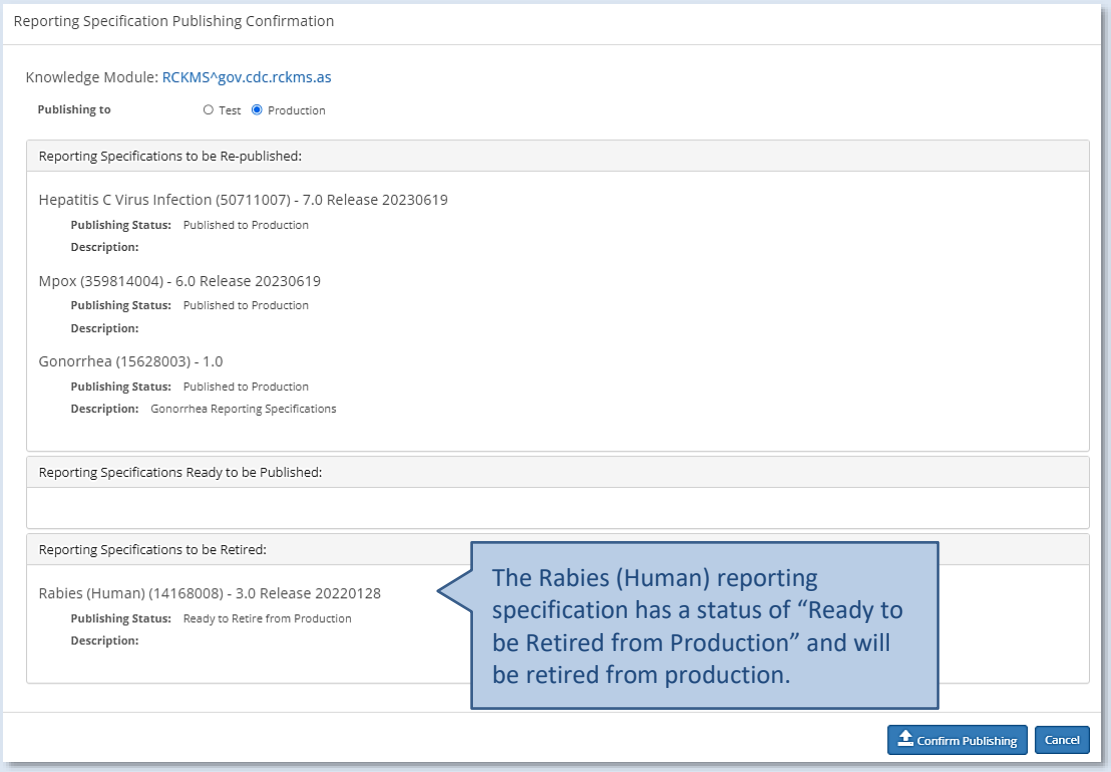
   ***Note:* Keep in mind that for your changes to take effect, you must still publish the reporting specification.**

5. Select the **Publish Reporting Specifications** button. RCKMS prompts you to confirm the publishing. There will be three sections on this confirmation:
   - Reporting Specifications to be Re-published
   - Reporting Specifications Ready to be Published
   - Reporting Specifications to be Retired

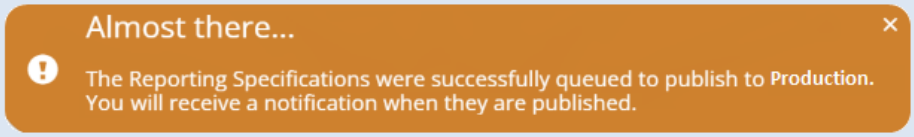


6. Select the **Production** radio button. Please review all three sections to confirm the reporting specifications that will be Re-published, Published, and Retired.

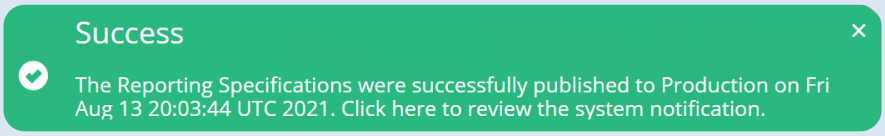
   ***Note:* Any specification in a "Published" status that may have been modified will be "Re-published" with the new changes during the publishing process.**



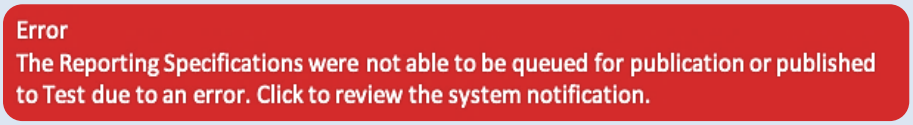
7. Select the **Confirm Publishing** button to publish all listed reporting specifications.
    - When you select on the **Confirm Publishing** button, you will be returned to the *Reporting Specification* page. You will see an orange pop-up indicating that your reporting specification has been queued for publishing. You may remain here, exit, or continue working in the tool while the reporting specification is being published.



    - A green pop-up appears when the reporting specification has finished publishing and you refresh the page or move to another screen. You will also see that the Status has changed to "Published to Production."



    - In rare instances, you may see a red pop-up, like the one shown below, indicating that the reporting specification could not be queued for publication or could not be published. You can select on the error to see additional details. If you encounter this error when working in the tool, submit a ticket to the RCKMS team with a screenshot of the detailed error message.



5 Testing Options

There are two tools available in RCKMS for testing your reporting rules: The Test Case Manager and the Shared Service Submission Tool. Review this section to learn about the differences between the tools, how to add and edit test cases in each tool, and how to run test cases and interpret results in each tool.

You can use both the Test Case Manager and Shared Service Submission Tool as a quality assurance measure to verify that your authored rules are working correctly and that RCKMS returns the expected reportability outcome. There are, however, several important differences between these two tools, as described below. An example follows for additional context.

Testing Tip

It is best practice to test your rules before publishing to production. However, if you publish your rules and later need to test, you can do so in the production instance.

Test Case Manager

- Tests rules logic only for your jurisdiction. Does not test which jurisdiction's rules are being used.
- Supports both criteria-based test cases and eICR files.
- Test cases are saved, creating a test case bank that can be rerun over time.

Shared Service Submission Tool

- Tests rules logic and will determine which jurisdiction's rules should be used, based on address.
- Supports eICR files.
- Test cases are not saved.

5.1 Test Case Manager

You can run a test case and view its results using the *Test Cases* page. Keep in mind the following:

What are test cases?

A set of scripted instructions made-up of a combination of various scenarios (or criteria and logic rules) that, when executed, verify expected results.

- The test cases defined here are saved for reuse. However, the results of the testing are not saved within RCKMS.
- Test cases are attached to a specific condition and version. When a condition is updated to a new version, test cases from previous versions do not carry over.
- When you run a test case, the application simulates receipt of a report and moves that information through the logic chain defined for your jurisdiction reporting specification's criteria, logic sets, and rules options. For more detail on reporting criteria, refer to *Section 4.9, Activating and Inactivating Criteria Information*.
- A successful test case provides you with confirmation that the criteria authored as Sufficient, Necessary, and Optional and the rules for a given reporter type provide the expected results. For more details on the Sufficient, Necessary, and Optional notations, refer to *Section 4.7, Adding and Editing Specification Information*.
- Test cases run through the Test Case Manager always execute against your jurisdiction's reporting specifications, regardless of the patient or provider address.

You can use the Test Case Manager to test specific criterion, such as diagnosis or positive lab results, or whole files, such as a sample eICR or Virtual Medical Record (vMR) file.

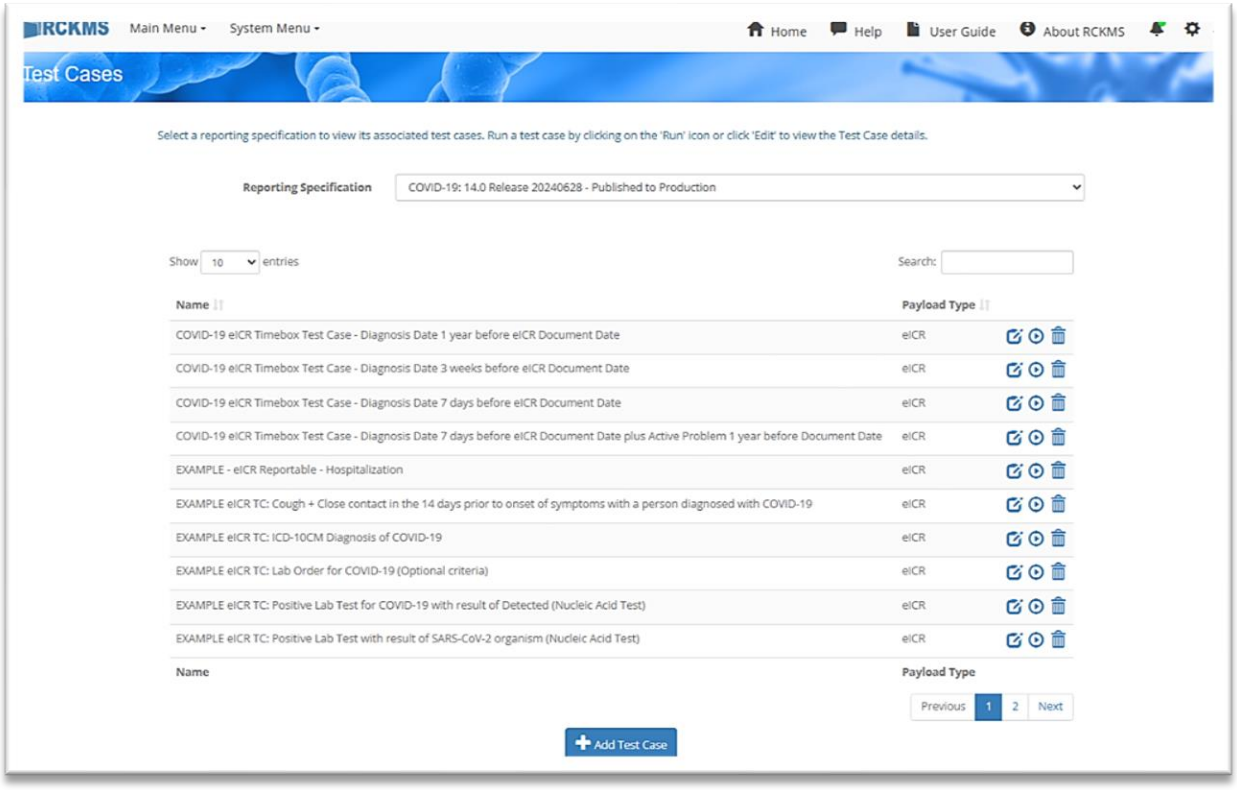
To learn how to add new test cases, see *Section 5.3, Adding and Editing Test Cases in Test Case Manager*.

Note: ***For some conditions, the RCKMS tool has pre-populated test cases. Some of the default test cases may be out of date due to reporting specification version updates. You can still run these test cases, but the reportability outcome may vary. Default test cases can be executed as-is or customized to account for any jurisdiction-specific reporting requirements.***

Testing Tip

5.1.1 *Test Cases* Page

The *Test Cases* page shows the list of available test cases for a given reporting specification. The Test Case Manager comes pre-populated with default test cases for some conditions. Any customized test cases that you have created can also be found on the *Test Cases* page.



Note: Reporting specifications must have a status of Published to Test or Published to Production to run test cases.

The following table details the options on the *Test Cases* page.

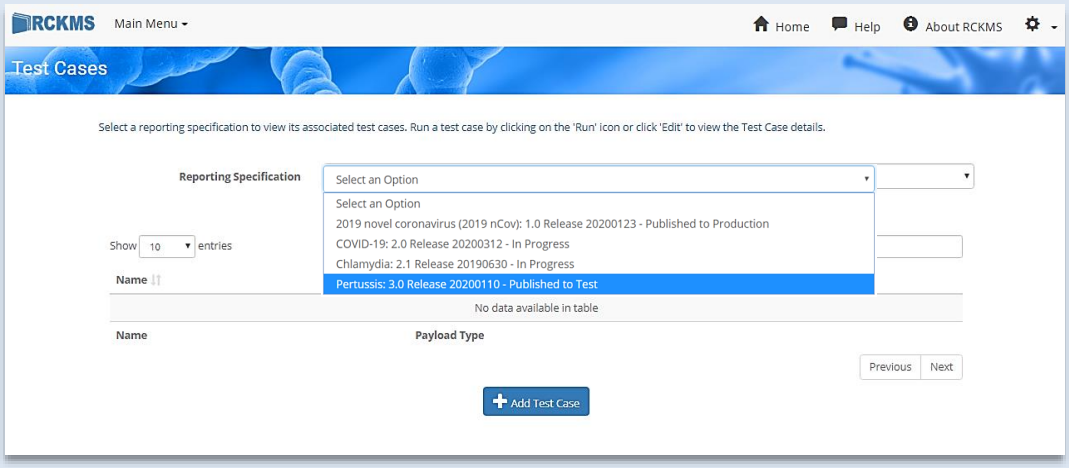
Item	Description
Show entries	Select drop-down and choose the number of items to display in the grid.
Name	The name of the test case.
Payload Type	The type of test file used. If Payload Type is blank, there is no eICR or vMR test file associated with the test case.
Edit	Select to edit the selected test case.
Delete	Select to delete the selected test case.
Run Test	Select to run the test case as-is. This button is disabled if the selected reporting specification is not in a published status.
Previous	Select to navigate back through the list of items available.
Next	Select to navigate forward through the list of items available.
Sort	Select to sort the information in each column.

5.2 Running a Default Test Case in Test Case Manager

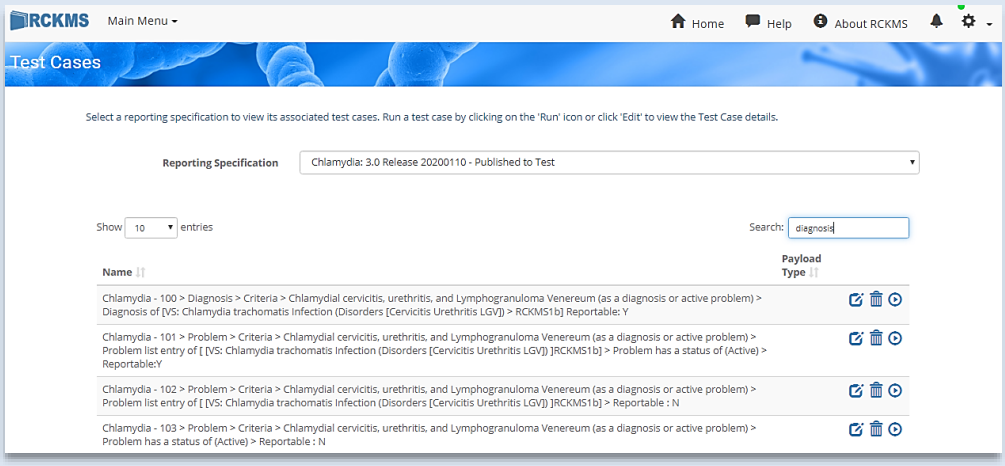
To run a test case and view the results, perform the following steps:

1. Access the *Test Cases* module via one of the following:
   - From the *Home* page, select **Test Cases** in the left navigation menu. RCKMS displays the *Test Cases* page.
   - From any page in the tool, select **Main Menu** in the menu bar at the top of the page and choose **Test Cases**. RCKMS displays the *Test Cases* page.

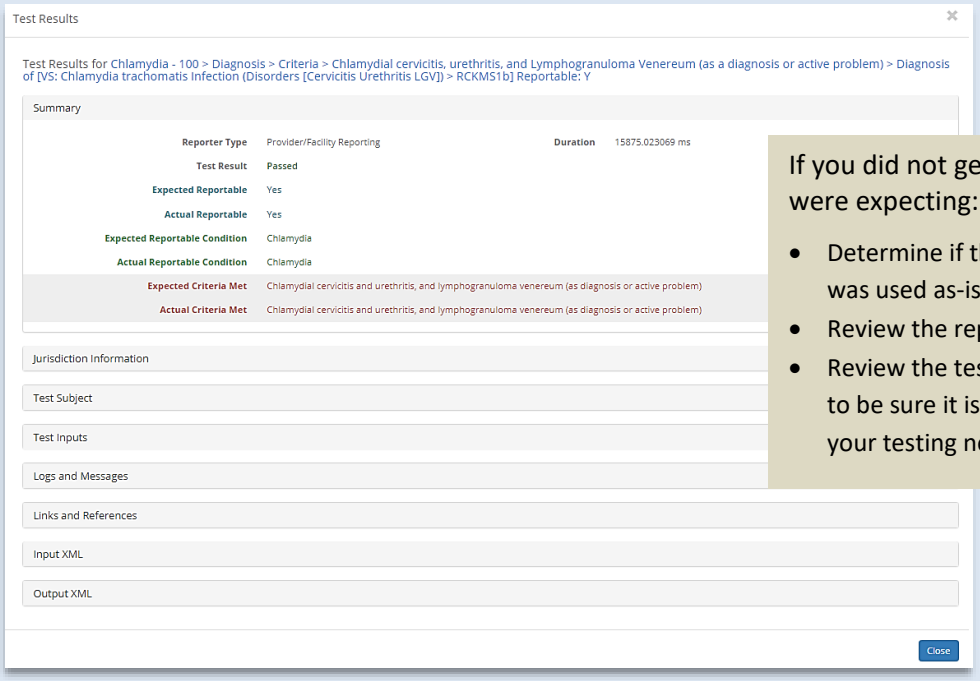
2. Select the **Reporting Specification** drop-down and choose the condition you want to test. The reporting specification for the condition you want to test must have a status of "Published to Test" or "Published to Production". RCKMS displays a list of the available test cases, if any. See *Section 5.3, Adding and Editing Test Cases in Test Case Manager* for instructions on adding new test cases.



Note: ***You can use the Search text box in the Test Cases page to search for the test case you want. Select Search and type the text you want. The search results display in the table. You can also clear any existing text in the Search text box to reset the search results and run your search again.***



3. Select the **Run Test** icon for the test case you want to run. RCKMS runs the test case and displays the *Test Results* page, with the summary results at the top of the page.
4. Optionally, review the results in the *Test Results* page by selecting the links for the test result detail information you want. These include *Jurisdiction Information*, *Test Subject*, *Test Inputs*, *Logs and Messages*, *Links and References*, *Input* XML, and *Output XML*.



If you did not get the result you were expecting:

- Determine if the default content was used as-is or customized
- Review the reporting specification
- Review the test case you selected to be sure it is the best option for your testing needs

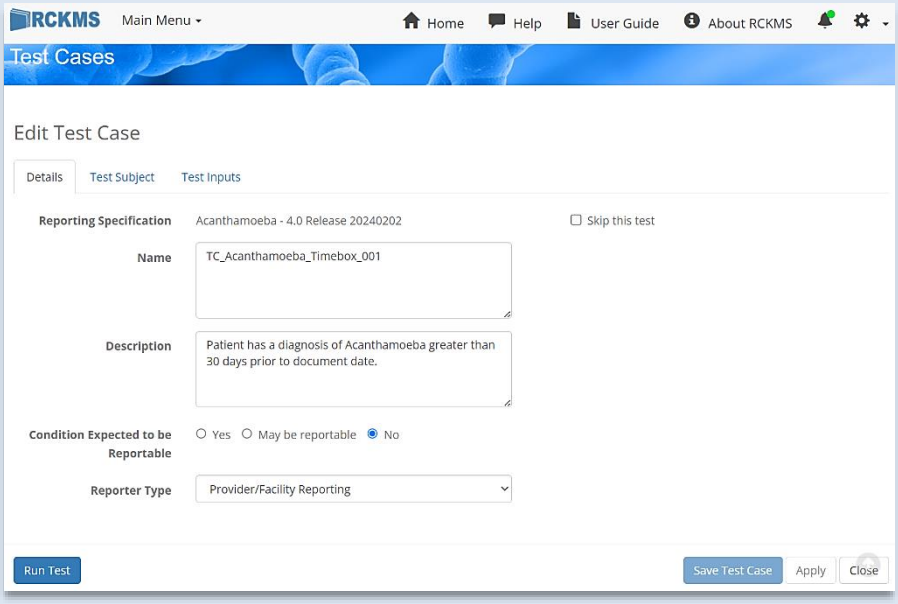
5. When you are finished reviewing the results, select the **Close** button. RCKMS returns to the *Test Cases* page.

5.3 Adding and Editing Test Cases in Test Case Manager

If the pre-populated test cases do not meet your needs, you may add a new test case or edit an existing one. This section describes the steps necessary for adding and editing test cases.

To add new test cases and edit existing test cases, perform the following steps:

1. Add or edit test case details information.
    a. Do one of the following:
        - Select the **Edit** icon for the test case you want to edit. RCKMS displays the *Edit Test Case* page and the contents of the *Details* tab.
        - Select the **Add Test Case** button to add a new test case. RCKMS displays the *New Test Case* page and the contents of the *Details* tab.

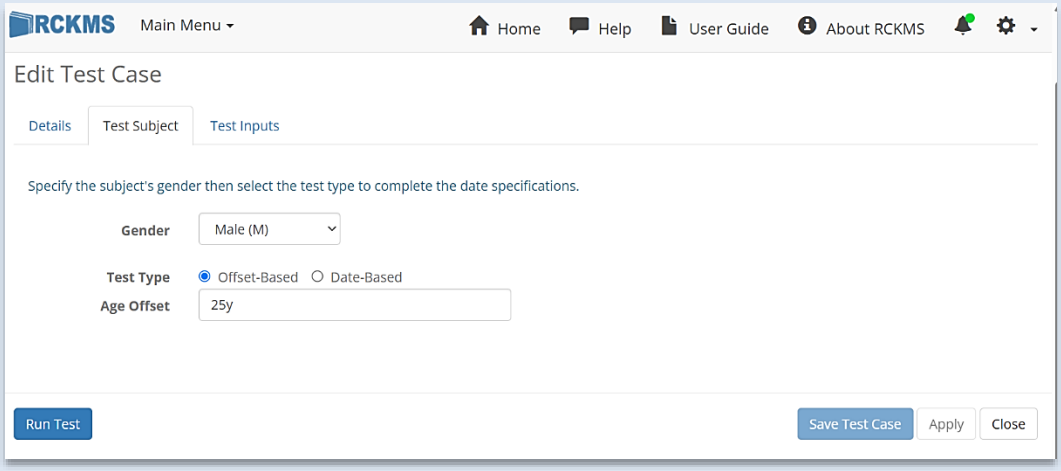


b. Select **Reporting Specifications** and choose the condition you want. The reporting specification for the condition you want to test must have a status of "Published to Test" or "Published to Production". Note that the *Reporting Specification* field is active only when you create a new test case. This field is read-only when editing an existing test case.
c. Select **Name** and type the name you want. This should follow naming conventions established by your organization for new test cases. For example, you may want to include the condition name, test case number, criteria being tested and the expected outcome.
d. Select **Description** and type the description you want.
e. Select a **Condition Expected to be Reportable** radio button to indicate that the test case is expected to return one of the following results:
    - Reportable – **Yes** radio button
    - May be Reportable – **May be reportable** radio button
    - Not Reportable – **No** radio button
f. Select **Reporter Type** and choose the reporter type that matches the criteria you want to test. For example, if you are testing a diagnosis, the Reporter Type would be Provider/Facility Reporting. For lab criteria, the Reporter Type would be Lab Reporting.
g. Select the **Skip this test** checkbox to skip the test case execution.
    Note:* *This checkbox is not functional at this time.

Testing Tip

May be reportable refers to age-related cases where the age criterion is missing. Without the age information, RCKMS cannot determine whether the case is reportable or not, so it returns a "May be Reportable" response with the reason included.

2. Add or edit Test Subject information.
    a. Select the **Test Subject** tab. RCKMS displays the contents of the *Test Subject* tab.



b. Select **Gender** and choose the gender you want. Options include male, female, and undifferentiated.

c. Do one of the following:

- Select the **Offset-Based** radio button to indicate the age offset information. RCKMS displays the *Age Offset* field. Then, type the offset you want in years, months, or days. The format for the age offset must be a number followed by a unit of y for years, m for months, w for weeks, or d for days, with no space between the number and unit.
- Select the **Date-Based** radio button to enter birthdate and execution date information. You can select **Date of Birth** and type or choose the date you want. Select **Execution Date** and type or choose the date you want. The *Age at Execution* option is read-only and updates based on your entry.

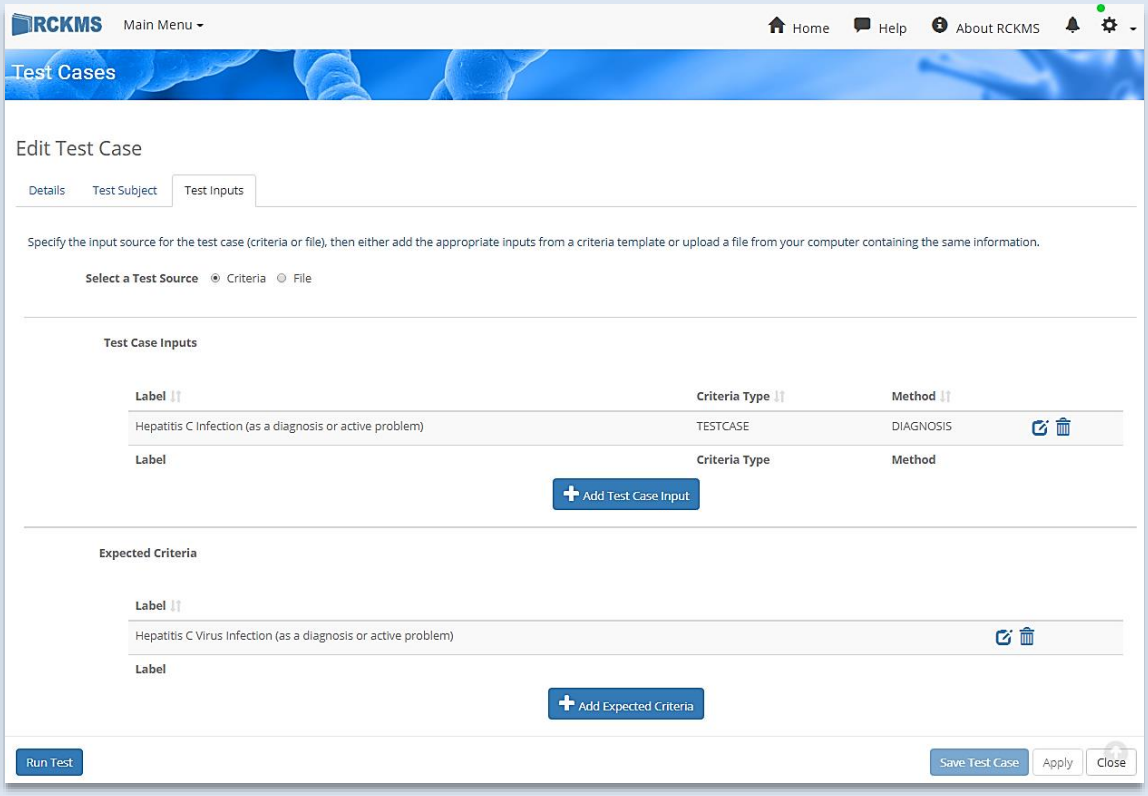
Testing Tip

Offset-based: Allows you to enter an exact age for the test subject.

Date-based: Calculates the subject age based on the date of birth and the date the test case is executed.

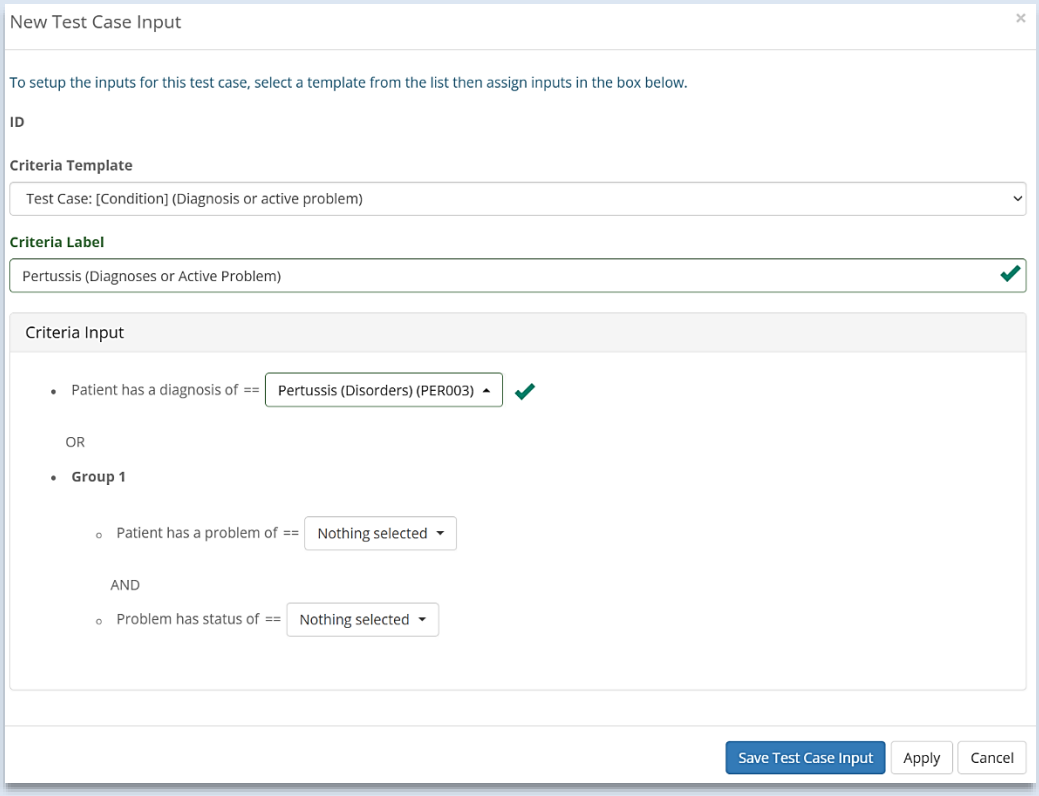
3. Add or edit Test Inputs information.
   a. Select the **Test Inputs** tab. RCKMS displays the contents of the *Test Inputs* tab. There are two types of test inputs: Criteria-based and file-based.
      - Criteria-based: Tests a specific criterion or multiple criteria that you authored in the reporting specification.
      - File-based: If you have a sample eICR with the information that you want to test, you can upload it using the file-based option.

   b. To work with *criteria-based* test case inputs, do the following:
      i. Select the **Criteria** radio button to specify the input source for the test case as criteria-based. RCKMS displays the criteria options in the *Test Case Inputs* section.



ii. Complete one of the following:

1. To edit criteria-based test case input, select the **Edit** icon for the criterion you want in the *Test Case Inputs* section. RCKMS displays the *Edit Criteria* window.
2. To add a new criterion, select the **Add Test Case Input button** in the *Test Case Inputs* section. RCKMS displays the *New Test Case Input* page.



iii. Select **Criteria Template** and choose the option you want. RCKMS displays the *Criteria Input* options at the bottom of the window. The Criteria Template refers to the type of criteria you are intending to test (e.g., Diagnosis, Lab Test Results). Note that the Criteria Template options are read-only when editing existing criteria.

iv. Select **Criteria Label** and type the label you want. Note that, on selection of the *Criteria Template* option, RCKMS displays sample text in the *Criteria Label* field. The label will be used in the Test Results window.

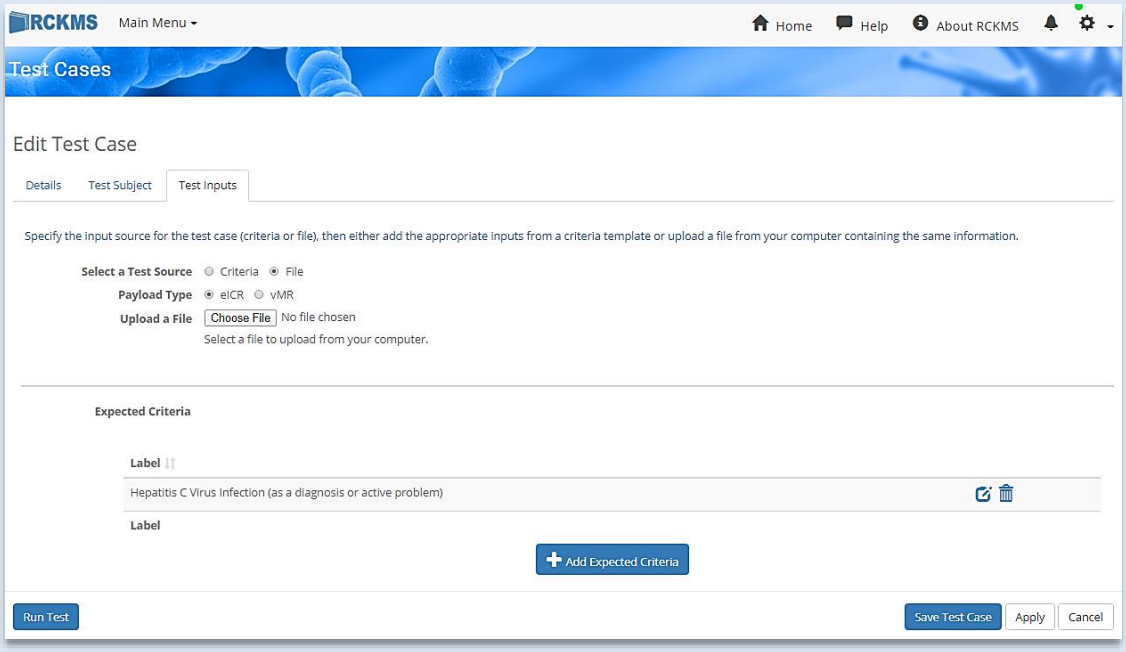
v. Add or edit the *Criteria Input* information you want.

1. To add or edit *Criteria Input* information, select the drop-down for the criteria input (also known as "criteria predicates") you want and choose the option you want.
2. You can also type the name you want in the text box to display and choose the input information.

vi. Select the **Save Test Case Input** button. RCKMS saves the criteria information and displays the *Test Case Inputs* section of the *Test Inputs* tab.

c. To work with *file-based* test case input, do the following:

i. Select the **File** radio button to specify the input source for the test as file-based. RCKMS displays *Payload Type* options.



ii. Select the **eICR** radio button to work with an eICR file-based input.

iii. Select the **vMR** radio button to work with a vMR file-based input.

iv. Select the **Choose File** button and choose the file you want to upload from your computer.

> **Testing Tip**
>
> For file options, we recommend that users test with eICR files. If you are interested in learning more about vMR testing tools, please submit a ticket.

d. Optionally, add or edit *Expected Criteria* information. The *Expected Criteria* are those criteria expected to yield a reportable result based on your reporting rules. They do no impact the outcome of the test case, but can be used to double check that the test case passes based on the criteria that you expect.

i. Do one of the following:

- To edit expected criteria, select the **Edit** icon for the criterion you want in the *Expected Criteria* section. RCKMS displays the *Edit Expected Criteria* window.
- To add a new expected criterion, select the **New Expected Criteria** button in the *Expected Criteria* section. RCKMS displays the *New Expected Criteria* window.

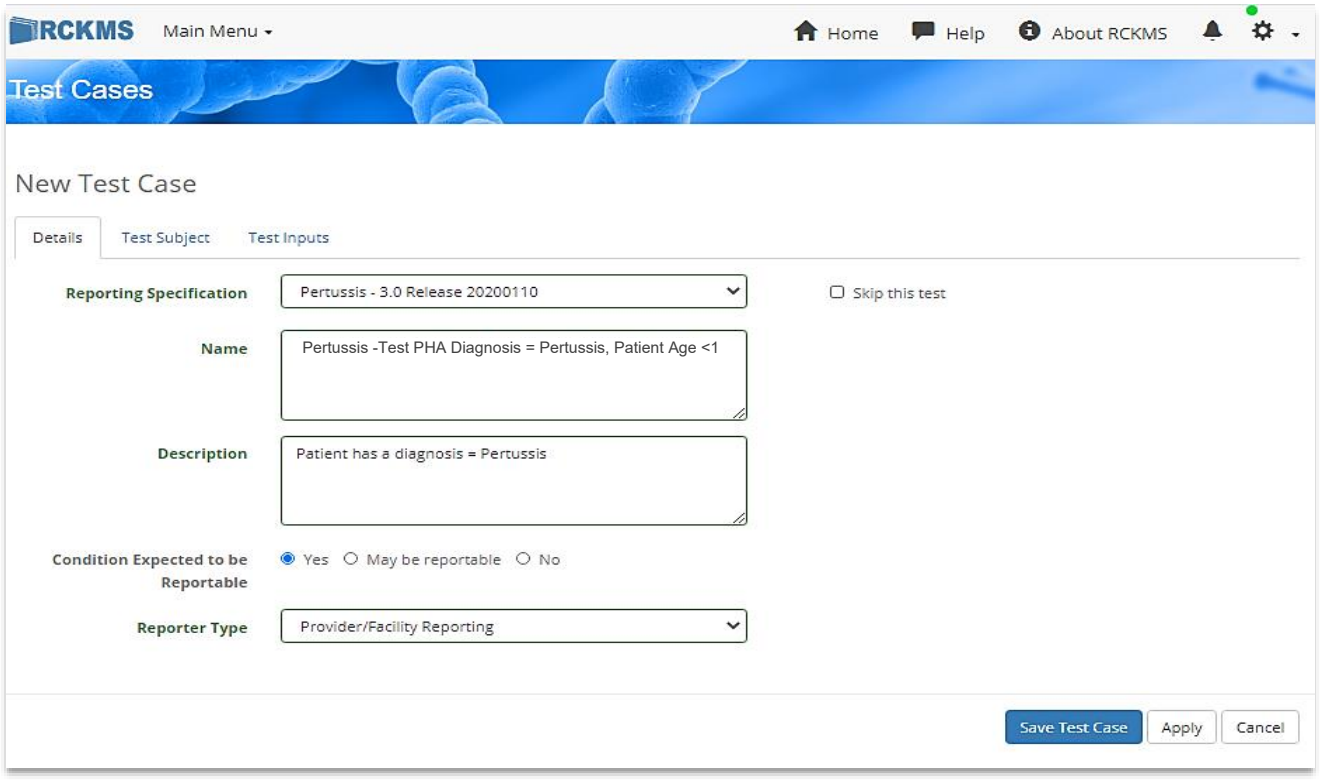
ii. Select *Criteria Template* and choose the option you want.

iii. Select **Save Expected Criteria**. RCKMS saves the expected criteria and displays the *Expected Criteria* section on the *Test Inputs* tab.

e. Select the **Save Test Case** button. RCKMS saves the test case and displays the *Test Cases* page.

5.3.1 *Details* Tab

The *Details* tab of the *New Test Case* page is where you add or edit basic details about the test case.

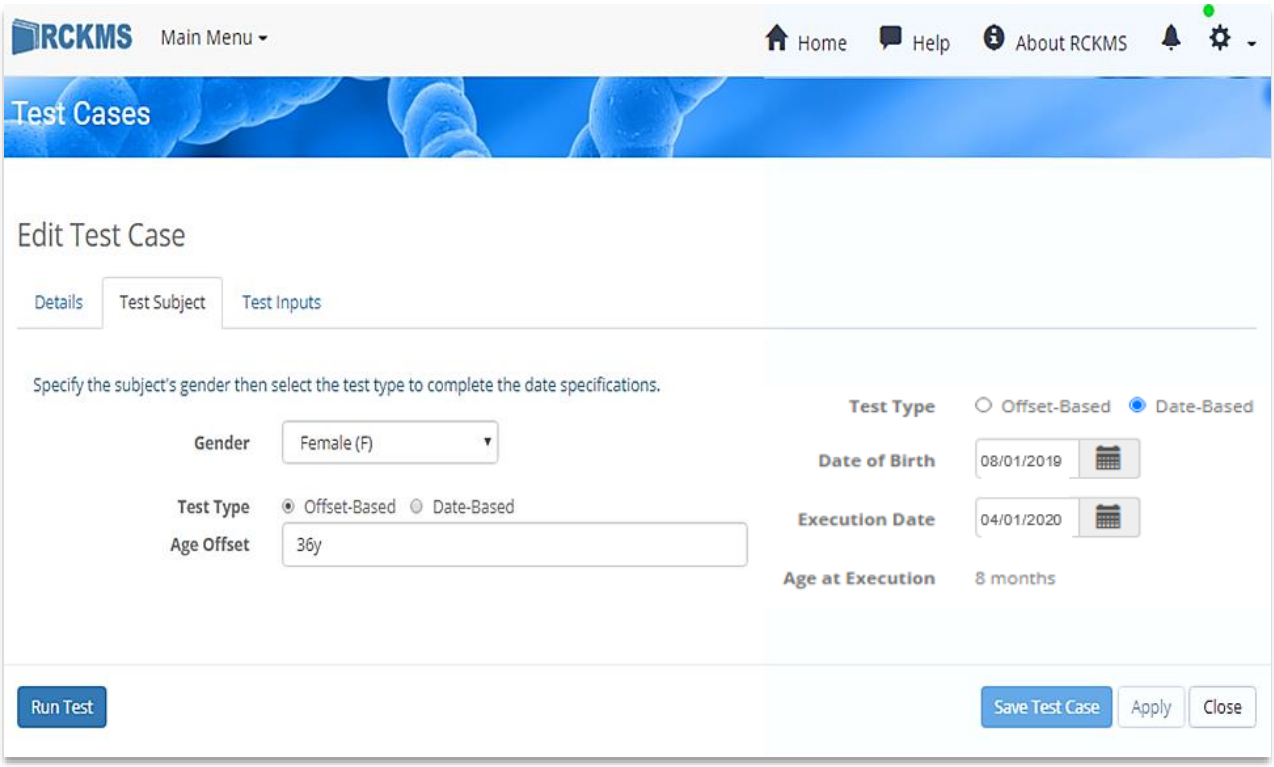


The following table details the options on the *Details* tab.

Item	Description
Reporting Specification	The reporting specification for the condition you want to test. The reporting specification must have a status of “Published to Test” or “Published to Production”.
Name	The name of the test case.
Description	The description and details of the test case.
Condition Expected to be Reportable	The reportability outcome for the customized test case.
Reporter Type	The type of reporter the test case applies to.
Skip this test	This button is not functional at this time.
Save Test Case	Select to save the test case information.
Apply	Select to save your changes and keep the window open.
Cancel	Select to cancel your changes, or close if you have not made any changes and display the previous page.

5.3.2 *Test Subject* Tab

The *Test Subject* tab is where you specify test subject information, including gender and age.

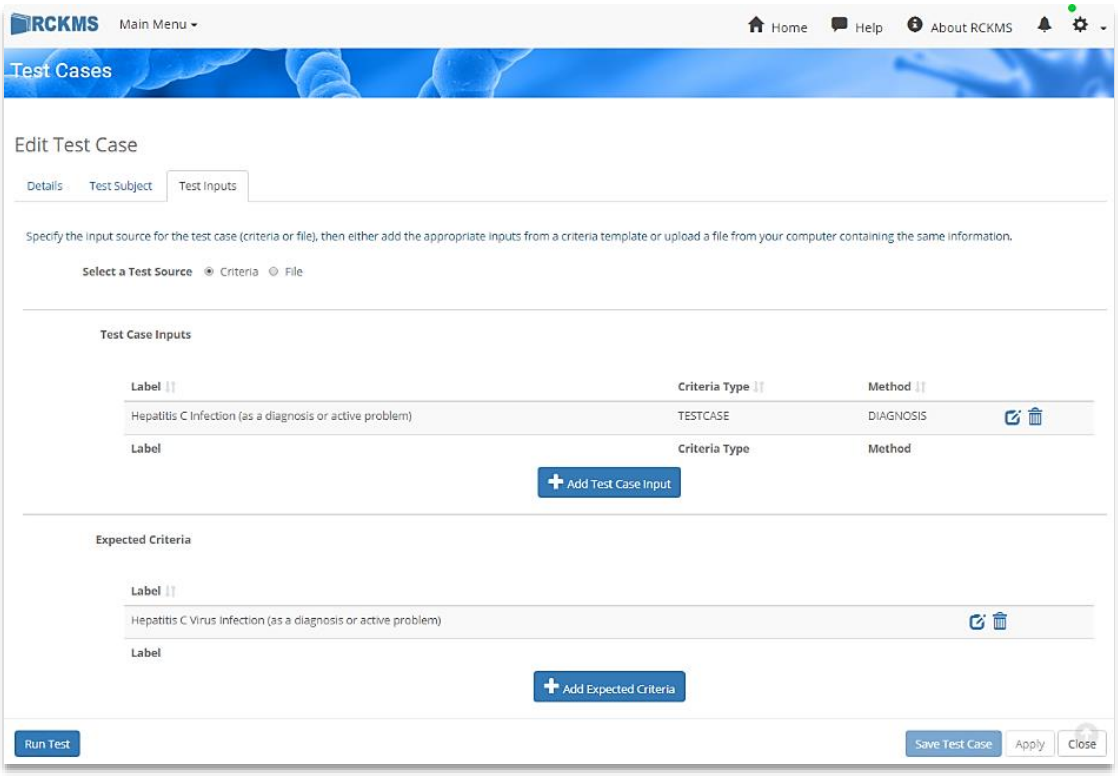


The following table details the options on the *Test Subject* tab.

Item	Description
Gender	The gender of the test subject.
Test Type	The type of the test, either offset-based or date-based.
Age Offset	The exact age of the test subject.
Date of Birth	The date of birth of the test subject.
Execution Date	The date the test case is executed.
Age at Execution	The age of the test subject at the date of execution. This is calculated based on the Date of Birth and the Execution Date.
Save Test Case	Select to save the test case information.
Apply	Select to save your changes and keep the window open.
Cancel	Select to cancel your changes, or close if you have not made any changes and display the previous page.

5.3.3 *Test Inputs* Tab – Criteria Test Source

The *Test Inputs* tab is where you specify the test source of interest, either criteria-based or file-based.

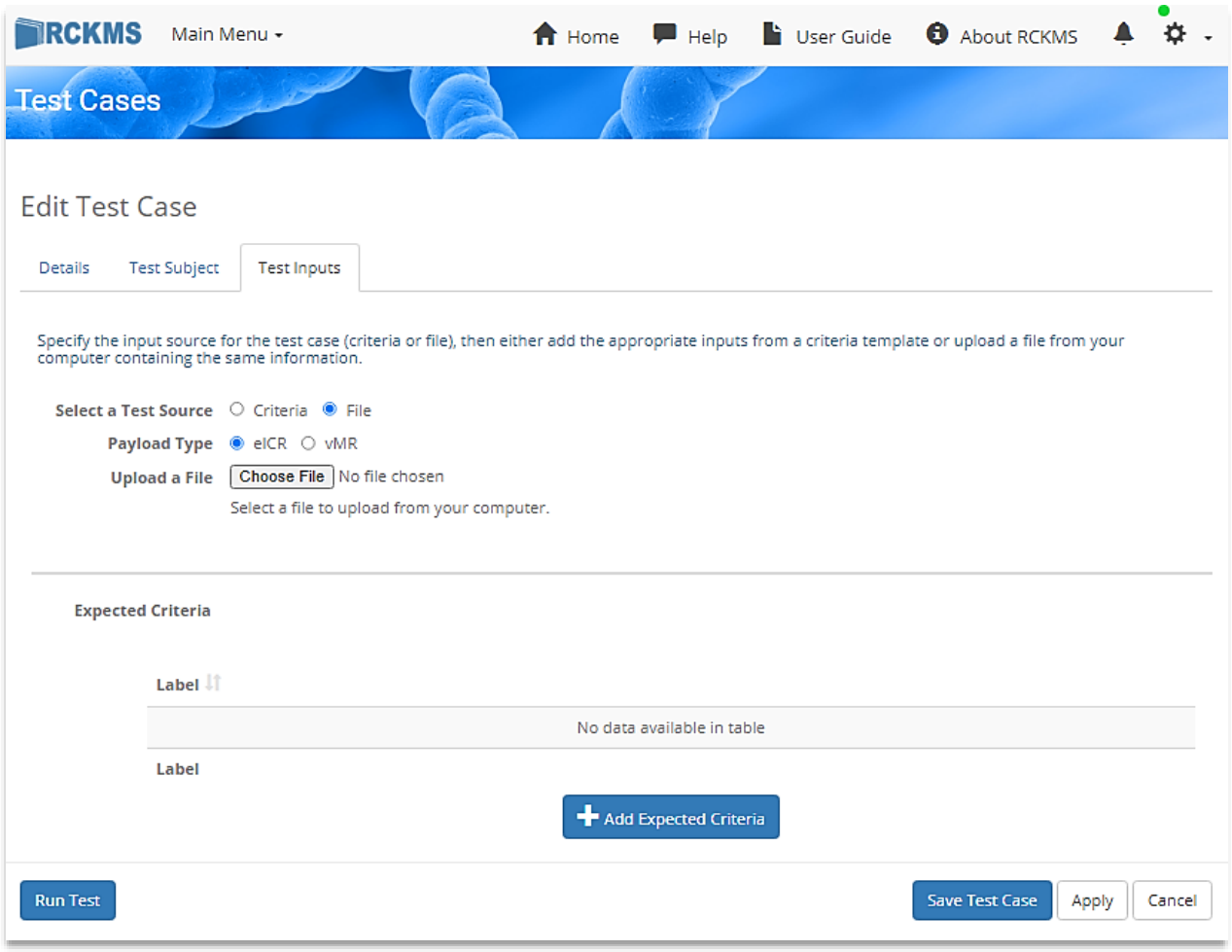


The following table details the options on the *Test Inputs* tab for a criteria-based test case.

Item	Description
Select a Test Source	The source of the test, either criteria-based or file-based.
Test Case Inputs	A summary of the test case inputs for the test case, with the label, criteria type, and method of each input. You can add a new test case input, or edit or delete an existing test case input.
Add Test Case Input	Select to open the *Test Case Input* window.
Expected Criteria	Those criteria that are expected to yield a reportable result based on the reporting rules. You can add, edit or delete expected criteria.
Edit	Select to edit the selected test case input or expected criterion.
Delete	Select to delete the selected test case input or expected criterion.
Add Expected Criteria	Select to open the *Expected Criteria* window.
Run Test	Select to run the test case using the inputs you have entered.
Save Test Case	Select to save the test case information.
Apply	Select to save your changes and keep the window open.
Cancel	Select to cancel your changes, or close if you have not made any changes and display the previous page.

5.3.4 Test Inputs Tab – File Test Source

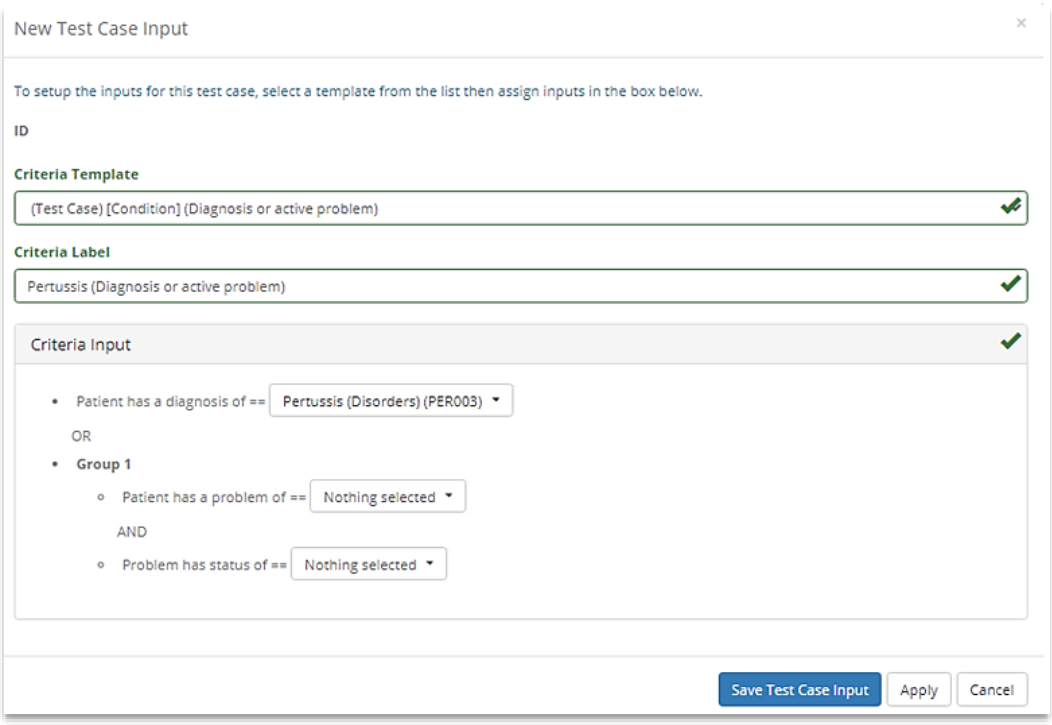
The options for editing test inputs are slightly different if you select File as the Test Source. Instead of the Test Case Inputs section, you now have the option to select a Payload Type and Upload a File.



The following table details the options on the *Test Inputs* tab for a file-based test case.

Item	Description
Select a Test Source	The source of the test, either criteria-based or file-based.
Payload Type	The type of file you will upload. Options are eICR or vMR.
Upload a File	Select **Choose File** to navigate to the test file on your computer.
Expected Criteria	Those criteria that are expected to yield a reportable result based on the reporting rules. You can add, edit, or delete expected criteria.
Add Expected Criteria	Select to open the *Expected Criteria* window.
Run Test	Select to run the test case using the inputs you have entered.
Save Test Case	Select to save the test case information.
Apply	Select to save your changes and keep the window open.
Cancel	Select to cancel your changes, or close if you have not made any changes and display the previous page.

5.3.5 *Test Case Input* Window



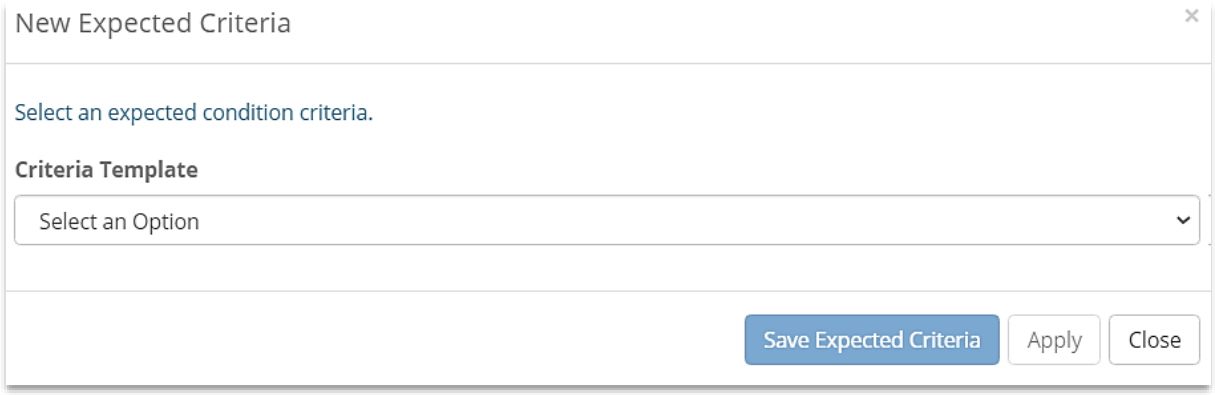
The *Test Case Input* window opens when you select the **Add New Test Case Input** button or the **Edit** button for an existing input. Use this window to add or edit the reporting criteria information that you want to test.

The following table details the options in the *Test Case Input* window.

Item	Description
ID	An auto-generated ID for the test case input. This field will be blank if you are adding a new test case input, as the ID is assigned when you save the test case.
Criteria Template	A drop-down list of the available criteria templates for the given condition.
Criteria Label	Auto-populated with the text from the criteria template. Update the criteria label to specify what you are testing.
Criteria Input	Displays the criteria as logic statements. Populate the statements with the criteria you are testing.
Save Test Case Input	Select to save the test case input information.
Apply	Select to save your changes and keep the window open.
Cancel	Select to cancel your changes, or close if you have not made any changes and display the previous page.

5.3.6 *Expected Criteria* Window

The *Expected Criteria* window opens when you select the **Add Expected Criteria** button or the **Edit** button for an existing criterion. The Expected Criteria are those criteria that are expected to yield a reportable result based on the reporting rules.



The following table details the options in the *Expected Criteria* window.

Item	Description
Criteria Template	A drop-down list of the available criteria templates for the given condition.
Save Expected Criteria	Select to save the expected criteria information.
Apply	Select to save your changes and keep the window open.
Close	Select to cancel your changes, or close if you have not made any changes and display the previous page.

5.3.7 *Test Results* Page

The *Test Results* page:

- Displays a summary of result information at the top of the page, followed by details on *Jurisdiction Information*, *Test Subject* and *Inputs, Logs and Messages*, and *Links and References* information. You can select any of these options for more details.
- Provides options for viewing and downloading the input and output XML files structuring the input and output data. You can select the link to expand the section you want and view its details. Select **Close** to close the *Test Results* page.

The test results display what you chose as the criteria expected to be reportable and the criteria that is found to actually be reportable*:*

- You indicate the *Expected Reportable* information using the *Condition Expected to be Reportable* options in the test case.
- The *Actual Reportable* information indicates if the test case resulted in a determination of reportability.

The results also display the:

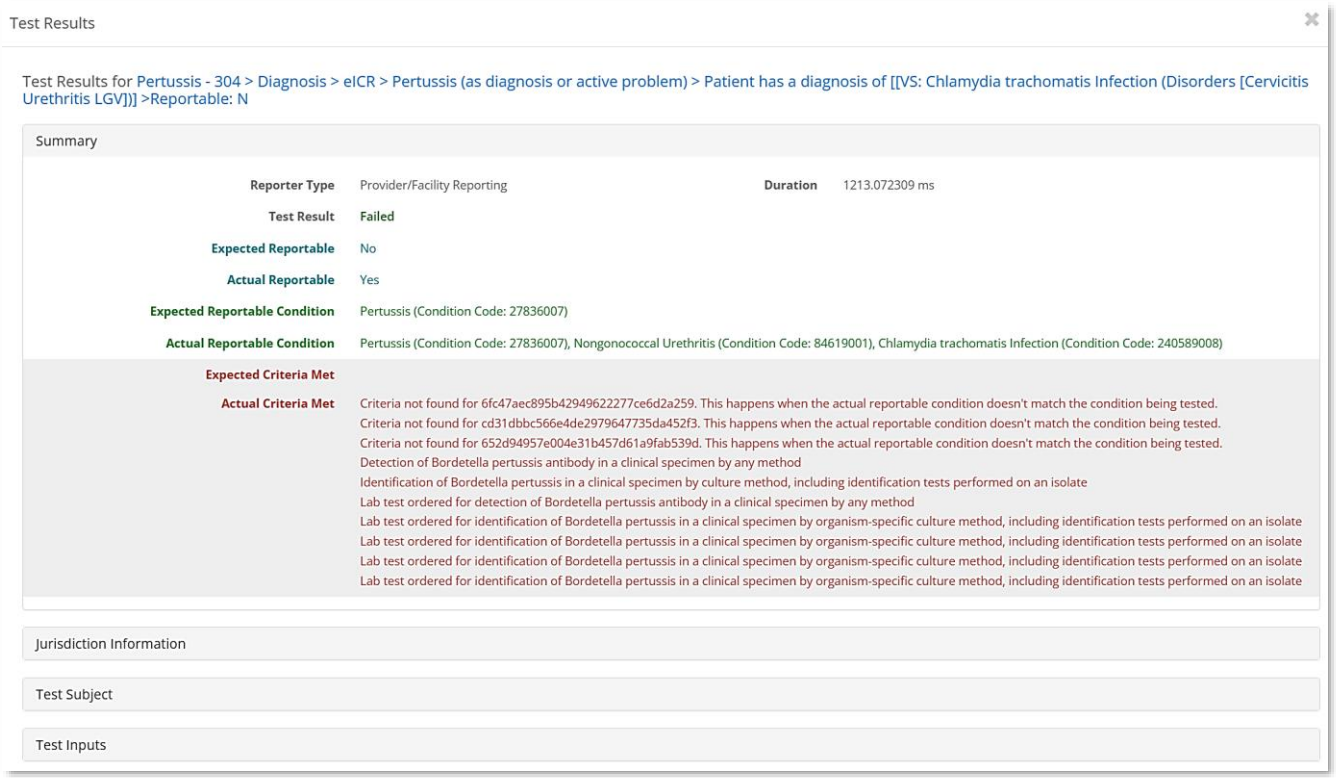
- *Expected Reportable Condition*, which is set by selecting a condition under the *Reporting Specification* field in the test case.
- The results return the *Actual Reportable Conditions*, representing one or more conditions that are found to be reportable based on running the test input through all of a PHA's reporting specifications. For any condition(s) found to be reportable, both the condition name and condition code will be displayed.

In addition, the test results display the:

- *Expected Criteria Met*, which are set by selecting one or more criteria under *Expected Criteria* in the test case.
- The *Actual Criteria Met* represents one or more criteria that are met based on running the test input through all of a PHA's reporting specifications. It may or may not match the criteria *Expected to be met.* If the *expected and actual* do not match, then the reporting specifications should be examined to determine the reason for the mismatch and if the mismatch can be explained. Note that if more than one condition is found to be reportable, you may see a “criteria not found” message. This happens when the actual reportable condition doesn’t match the condition being tested.

Testing Tip

The *Expected Criteria Met* and the *Actual Criteria Met* are informational only and do not affect the test result outcome.



The following table details the options on the *Test Results* window.

Item	Description
Reporter Type	The reporter type associated with the test case.
Test Result	The test result. The test result compares the *Expected Reportable* information to that you indicate as *Actual Reportable.*
Expected Reportable	This specifies if the test case is expected to be reportable. You indicate the *Expected Reportable* information using the *Condition Expected to be Reportable* option in the test case.
Actual Reportable	The test case evaluation of actual reportability. It represents the determination of whether the *Expected Reportable* Condition is reportable based on exercising the test input through all of a PHA's reporting specifications.
Expected Reportable Condition	The reportable condition that was expected to be found. You indicate the *Expected Reportable Condition* by selecting a condition under the *Reporting Specification* field in the test case.
Actual Reportable Condition	The actual reportable condition met. It represents one or more conditions that are found to be reportable based on running the test input through all of a PHA's reporting specifications.
Expected Criteria Met	The criteria that was expected to be met. The *Expected Criteria Met* does not affect the test result outcome. It is the criteria you expect to be met when the test case is run.
Actual Criteria Met	The actual criteria that is met. It represents one or more criteria that are met based on running the test input through all of a PHA's reporting specifications. The *Actual Criteria Met* does not affect the test result outcome.
Duration	The test case execution time in milliseconds.
Jurisdiction Information	Select to display jurisdiction and routing information.
Test Subject	Select to display demographic information about the test subject.
Test Inputs	Select to display test source and expected criteria information.
Logs and Messages	Select to display messages generated during test case execution indicating reportability outcome following test case execution.
Links and References	Select to display any internal and external references associated with the authored condition.
Input XML	Select to display vMR XML input file contents representing the information and options submitted in the test case.
Output XML	Select to display vMR XML output file contents representing the information and options resulting from the test case execution.
Close	Select to close and display the previous page.

5.4 Testing Using the Shared Service Submission Tool

Similar to the file testing capability in the Test Case Manager tool, the Shared Service Submission Tool allows you to test reporting specifications with an input file. Keep in mind the following:

- When you run the Shared Service Submission Tool, the application simulates receipt of a report and moves that information through the logic chain defined for the reporting specification’s criteria, logic sets, and rules options, as determined by the routing information in the uploaded test file.
- A successful test case provides you with confirmation that the criteria and rules for a given reporter type provide the expected results.

- When a test case file is run using the Shared Service Submission Tool, it assesses the address information in the file to determine the jurisdiction whose rules should be run.

You can use the Shared Service Submission Tool to confirm the reporting criteria as Sufficient, Necessary, and Optional based on rules for the applicable reporter type, as displayed in the *Specifications* tab. When you run a test case, you are testing the logic set and rules for the reporting criteria associated with the applicable reporter type. You can run the test cases to account for any jurisdiction-specific information contained in the uploaded file. The Shared Service Submission Tool:

Authoring Tip

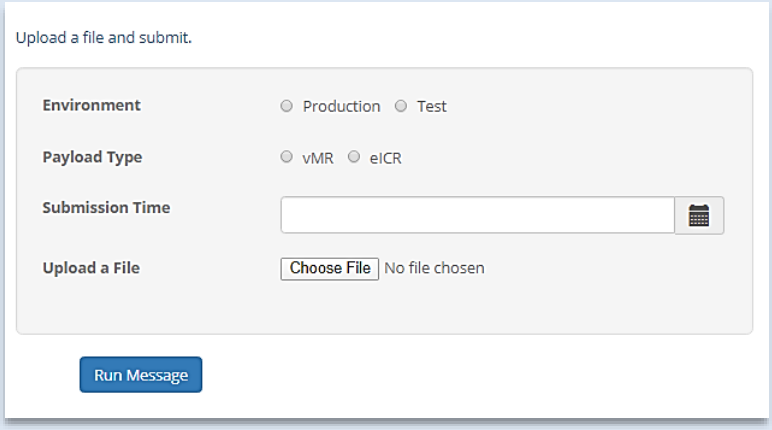
See *Section 3.1.2, Zip Codes* for additional details on how the match between eICR address fields and the zip codes associated with a jurisdiction are used to determine the jurisdictional rules to be run.

- Matches the patient address zip code in the eICR to zip codes associated with PHAs in RCKMS. If a match is found, that jurisdiction's rules are run. If no match is found, the patient address state code is used to do the match.
- Matches the facility address zip code in the eICR to zip codes associated with PHAs in RCKMS. If a match is found, that jurisdiction's rules are run. If no match is found, the facility address state code is used to do the match.
- If a condition is identified when the jurisdiction's rules are run, then the Shared Service Submission Tool checks the *Specifications Apply When* settings associated with the reporting specification for the condition.
    - If the patient's address was in the jurisdiction and *Specifications Apply When* setting was to report if the *Patient is a Resident of the Jurisdiction*, then the report would be sent to the jurisdiction.
    - If the facility address was in the jurisdiction and the *Specifications Apply When* setting was to report if *Care was Provided in the Jurisdiction*, then the report would be sent to the jurisdiction.

You can find example eICR files on the eCR website or by submitting a ticket to the RCKMS team. You can view and edit these files using an XML editor program or Notepad++. Modify the test file to include the condition, criteria, and patient and facility addresses you want to test, but make sure to replace all personally identifiable information (PII) with dummy data. For assistance modifying test eICR files to meet your jurisdiction's testing needs, submit a ticket to "eCR Reportability (RCKMS User Support)".

To run a test case using the Shared Service Submission Tool, perform the following steps:

1. Select **Main Menu** drop-down in the menu bar at the top of the page and choose **Shared Service Submission Tool**. RCKMS displays the *Shared Service Submission Tool* page.



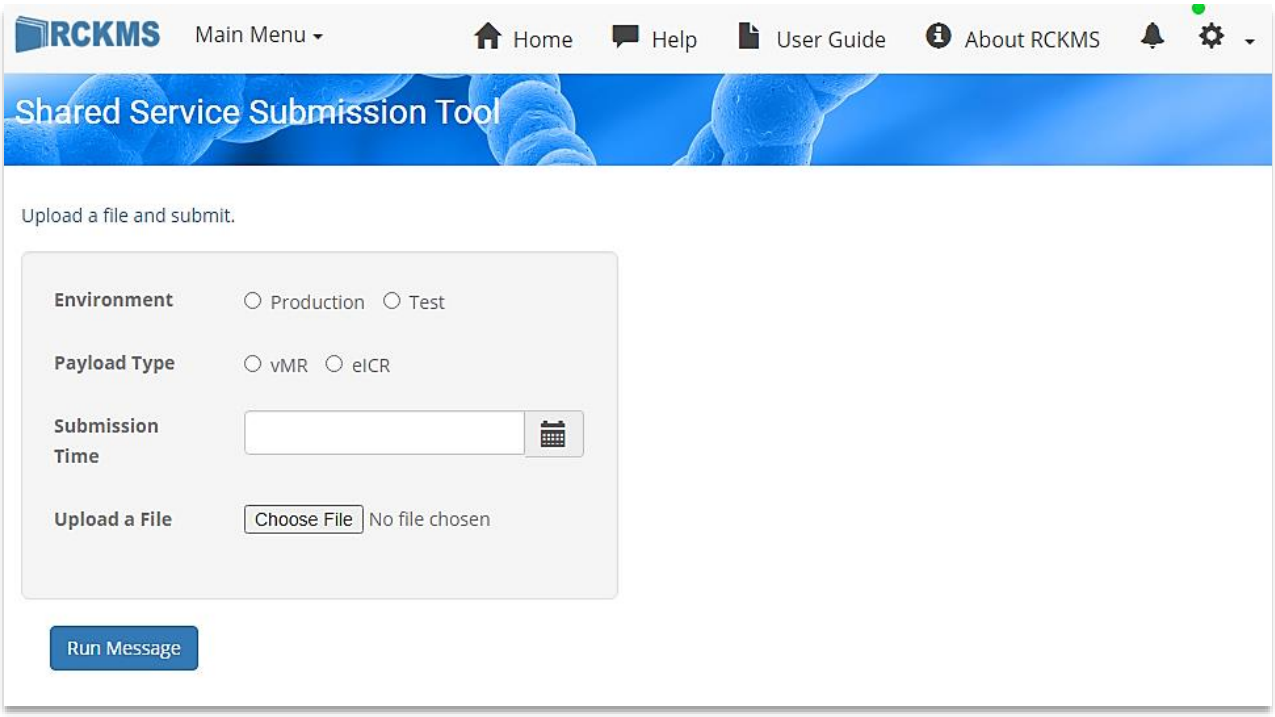
2. Select an **Environment** radio button and choose the environment you want. When testing an eICR for a reporting specification, you should always select the production account.
3. Select a **Payload Type** radio button and choose the type of file you will be uploading. RCKMS allows you to pick either **vMR** or **eICR** payload types. To evaluate an eICR, be sure to select the eICR payload type.
4. Select the **Submission Time** you would like the file to be run through the Shared Service Submission Tool. RCKMS allows you to enter a date, but the file will still be run when you select **Run Message**.
5. Select the **Choose File** button to select a file to upload. RCKMS allows you to upload a vMR or eICR file. The file you upload should correspond to the Payload Type that you selected.
6. When finished, select the **Run Message** button. RCKMS displays the *Shared Service Results* page.

Testing Tip

We recommend that users test with eICR files. If you are interested in learning more about vMR testing tools, please submit a ticket.

5.4.1 *Shared Service Submission Tool* Page

The *Shared Service Submission Tool* page is where you upload a test file to the Shared Service Submission Tool to confirm that the criteria and logic rules authored in the Specifications Grid return the expected results.



The following table details the options on the *Shared Service Submission Tool* page.

Item	Description
Environment	The environment you want to test in, either production or test. • Select **Production** if you want the test to evaluate against the live version of your rules. • Select **Test** if you want the test to evaluate the draft version of your rules before you publish to production.
Payload Type	The type of file you want to test with. We recommend testing with an eICR.
Submission Time	Provides the option to select the **Calendar** button to schedule the submission to run for a future time or select today's date to run on demand. This does not impact when the tool will run. The test file will still run when you select **Run Message**.
Upload a File	Select **Choose File** to upload a test file. Browse for the test file on your computer and upload it to the tool.
Run Message	Select this button to execute the test.

5.5 Shared Service Results

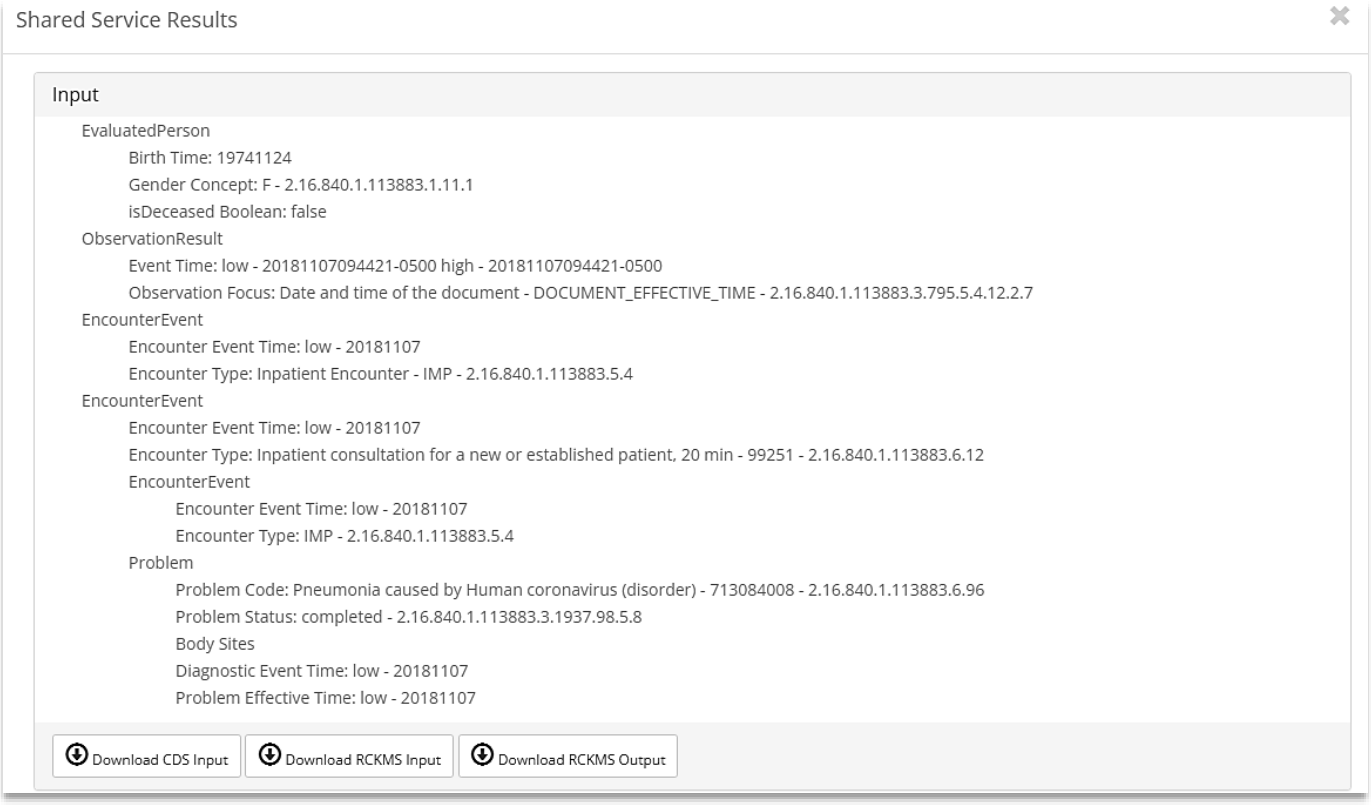
When you select **Run Message** in the Shared Service Submission Tool, RCKMS processes the message and displays the *Shared Service Results* page. There are three sections on the *Shared Service Results* page: *Input* section, *Response Details* section, and the *Jurisdiction Information* section. Each section is described in detail below.

5.5.1 *Input* Section

The *Input* section of the *Shared Service Results* page lists information about the Person, Observation, Encounter, and Problem, which is pulled from the input file. A sample input is shown in the screenshot below, but the fields may vary depending on what is included in the input file.

There are buttons at the bottom of the section to download three files:

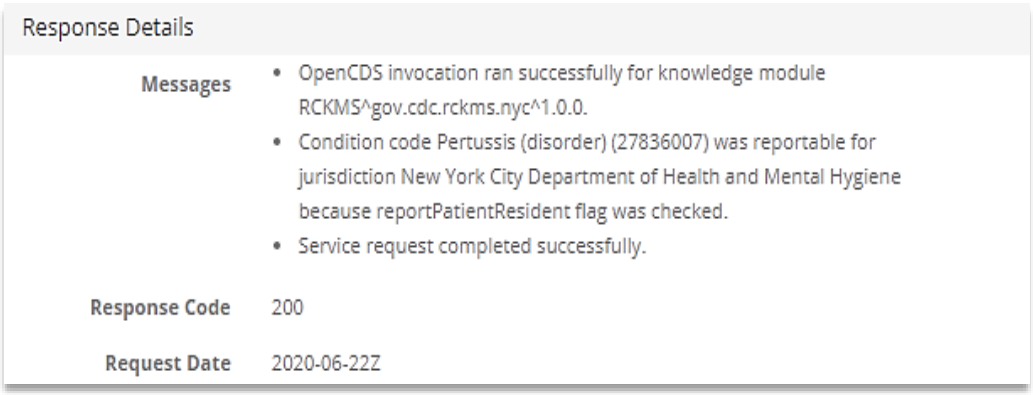
- **CDS Input:** The sample eICR used for testing
- **RCKMS Input:** Primarily used for internal testing by the RCKMS Team
- **RCKMS Output:** Contains the determination of reportability from RCKMS and is used to generate the RR. Most of this information is also displayed in the *Shared Service Results* window.



5.5.2 *Response Details* Section

The *Response Details* section displays information about the message processing. Keep in mind the following:

- This section alerts you if the DSS ran successfully and which jurisdiction's reporting specifications were run.
- The Response Code is displayed and the value of "200" indicates the message was successfully processed. If you see any other code, you should open a ticket to get help from the RCKMS Administrator. The Request Date indicates the date the message was submitted to run.



5.5.3 *Jurisdiction Information* Section

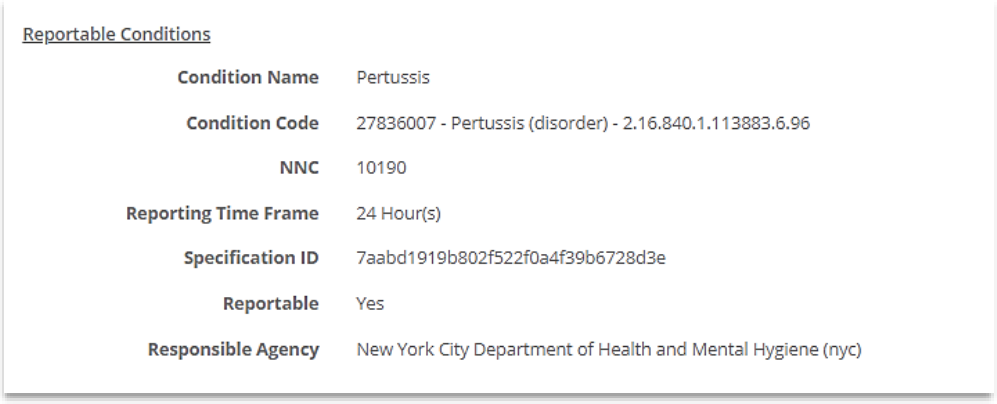
The *Jurisdiction Information* section has a summary area and five additional sections, which are described in more detail below:

- Reportable Conditions
- Logic Sets
- Criteria
- Links and References
- Output

In the summary area at the top of the *Jurisdiction Information* section, the following fields are displayed:

Field	Description
Rules run for	Jurisdiction whose rules were run.
Service Response Code	A response code of “200” indicates that the message was successfully processed.
Message	Whether the test ran successfully, and for which jurisdiction.
Authoring Agency	Agency that authored the rules that were run. An Authoring Agency could have authored rules on behalf of another agency (e.g., a state authoring rules for a local agency).
Routing Entity	Agency that receives the eICR and RR. This is defined during setup, on the *Edit Jurisdiction* page using the **Route eICR and Reportability Response to** field.

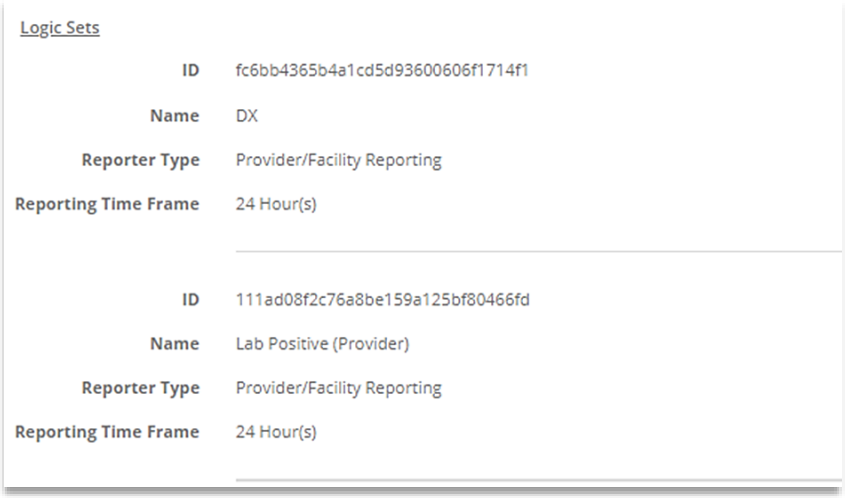
5.5.3.1 Reportable Conditions



The Reportable Conditions area lists:

Field	Description
Condition Name	Name of the reportable condition
Condition Code	SNOMED code for the reportable condition
NNC Number	Nationally Notifiable Condition number. A unique five-digit numerical code assigned to each notifiable disease or condition. This field will be blank for conditions that are not nationally notifiable.
Reporting Time Frame	Reporting time frame authored in the *Specifications* tab of the reporting specification
Specification ID	Auto-generated ID for the authored reporting specification
Reportable	Specifies whether the case was reportable or may be reportable
Responsible Agency	PHA to which reporting is legally required

5.5.3.2 Logic Sets



For the logic set that determined reportability for the condition listed in the Reportable Conditions area, the Logic Sets area lists:

Field	Description
ID	Auto-generated ID for the applicable logic set
Name	Name of the logic set that determined reportability
Reporter Type	Reporter type for the logic set authored in the *Specifications* tab of the reporting specification
Reporting Time Frame	Reporting time frame authored in the *Specifications* tab of the reporting specification

5.5.3.3 Criteria

For the criteria used to determine reportability of the condition listed in the Reportable Conditions area, the Criteria area lists:

Field	Description
Relationship ID	Auto-generated ID for the relationship between the reportable condition and the criteria
Criteria ID	Auto-generated ID for the criterion
Name	Name of the criterion that determined reportability
Criteria Type	Type (e.g., Clinical, Laboratory, Demographic) of criteria that determined reportability

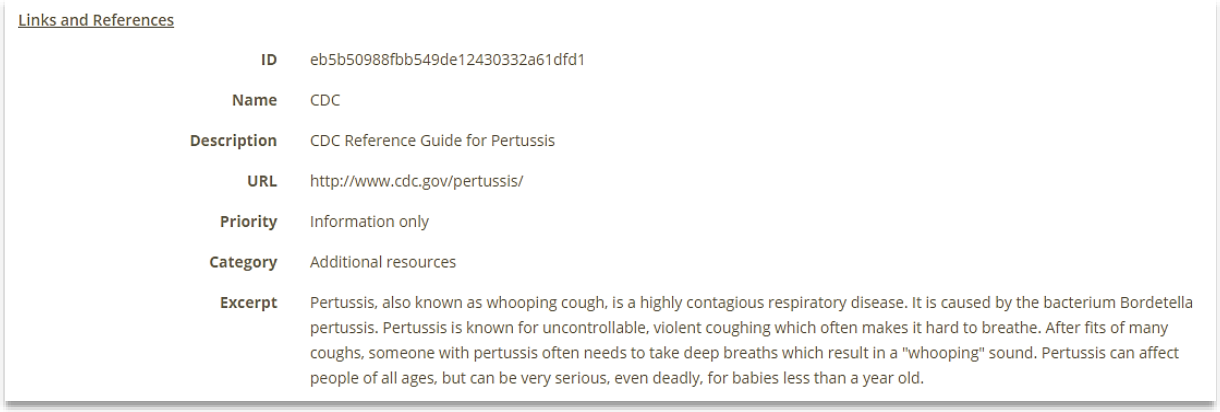
5.5.3.4 Links and References

For the reporting specification for a condition, the Links and References area lists the following fields. The ID is an auto-generated field for the reference. All other fields are defined by the author in the *External References* tab of the reporting specification.

- ID
- Name
- Description
- URL
- Priority
- Category
- Excerpts of Internal and External References

Authoring Tip

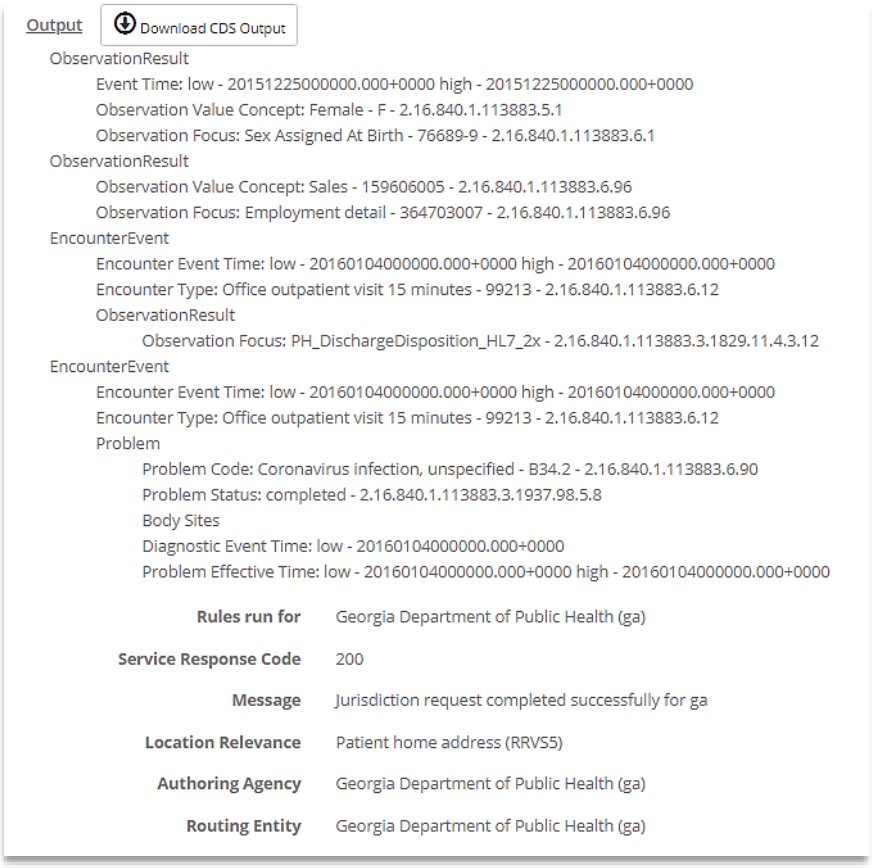
External References are also included in the RR. The Name and Excerpt fields are for internal use only and will not appear in the RR. Multiple references are ordered by Category.



5.5.3.5 Output

The Output area shows more details about Observation Results, including:

- Logic Sets
- Criteria
- Diagnosis (if applicable)



Testing Tip

We recommend downloading the CDS Output only if you are familiar with vMR files.

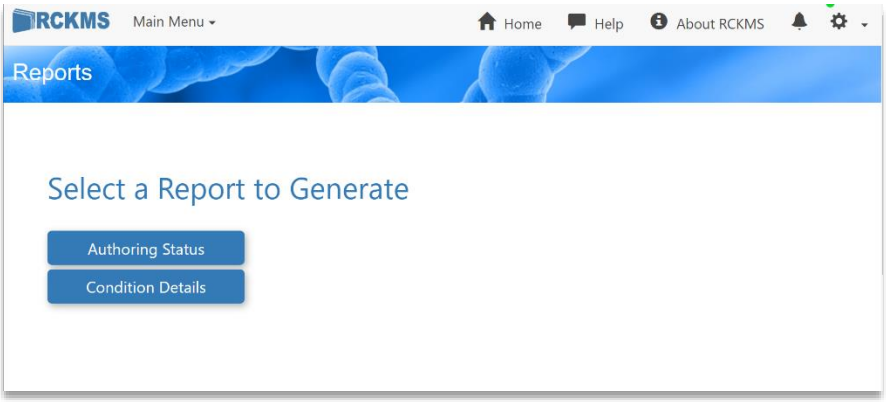
It also displays a button that enables you to download the CDS Output, the vMR output from the DSS that gets transformed into the RCKMS Output.

6 *Reports* Module

There are two reports currently available in RCKMS for viewing information related to jurisdictions and reporting specifications: The Authoring Status report and the Condition Details report. Review this section to learn about the information provided in each report and how to run the reports.

You can enter queries and generate reports using the *Reports* module. The *Reports* module provides a printable report or electronic file that contains information about the jurisdiction details and reporting specifications that were entered through the Authoring Interface.

The *Reports* module displays options for available reports. You can hover over the name of the report to see what the report includes. Selecting on a report allows you to enter queries, view the report, and export the report.



The Authoring Status report is a Jurisdiction Report containing:

- Public Health Agency Details
- Condition List
- Zip Code List
- User List
- Contact Information
- Responsible Agency, by Condition
- External Links and References by Condition

The Condition Details report is available for both default and jurisdiction reporting specifications. It includes:

- Condition Details
- Reporting Specification Status
- Reporting Preferences
- Links and References
- Logic Set Details
- Criteria List
- Concept and Value Sets

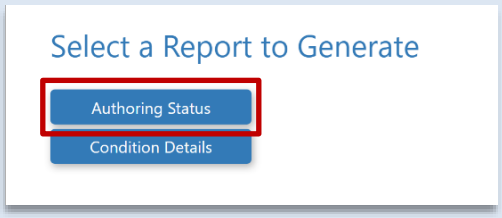
6.1 Authoring Status Report

The Authoring Status Report displays a summary output of all information related to your jurisdiction. You may want to run this report to see a summary of the conditions your jurisdiction is authoring and their status, users in your jurisdiction, jurisdiction contact information, and External References for each condition.

To run the Authoring Status report, perform the following steps:

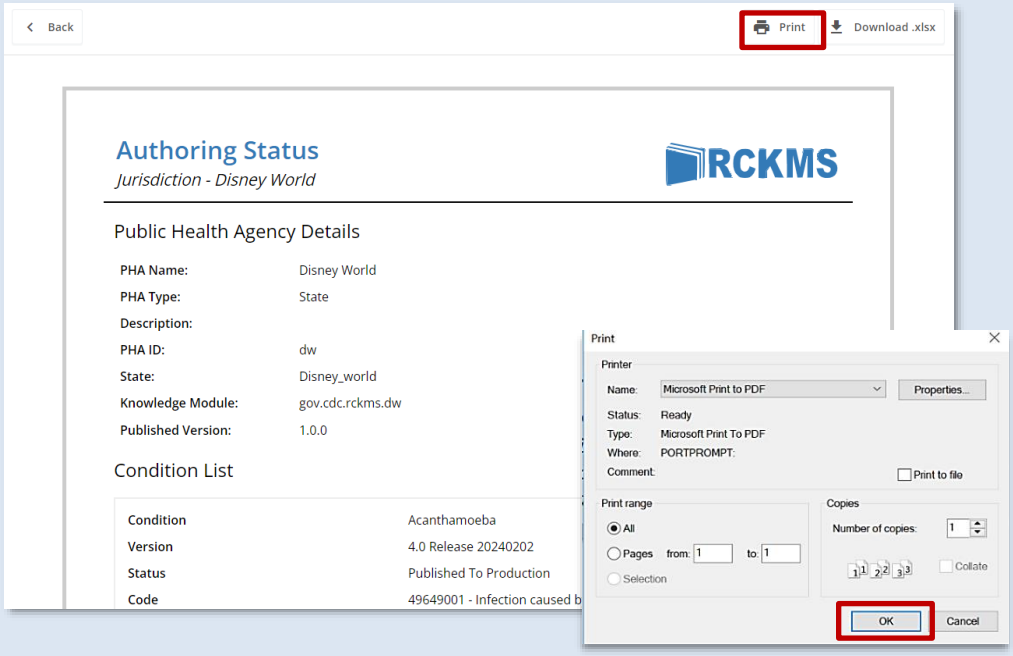
1. Access the *Reports* module by doing one of the following:
   - Select **Reports** in the left navigation menu on the *Home* page. RCKMS displays the *Reports* page.
   - Select the **Main Menu** drop-down at the top of the page and choose Reports. RCKMS displays the *Reports* page.

2. Select the **Authoring Status** button. The report will run automatically for your jurisdiction.



3. Select the **Export** button to generate an Excel download or a document that can be printed or saved as a PDF.

4. To save as a PDF, select **Print** and the *Print* window will open. Change the printer name to the Microsoft Print to PDF option. Select **OK**.



5. To download an Excel export, select **Download .xlsx** then navigate to the Downloads folder on your computer to open the file.
6. Select the **Back** button to return to the main *Reports* page.

6.2 Condition Details Report

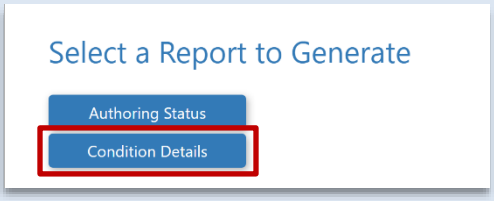
The Condition Details Report displays a detailed output of the reporting specification for the jurisdiction and condition you select, and listings of the active Sufficient, Necessary, and Optional reporting rules. You may run this report for the default or for any jurisdiction that has authored in RCKMS. This report is useful for:

- Reviewing the default reporting specification
- Seeing a summary of your jurisdiction's reporting specifications. Note that only active logic sets will be included in the report.
- Viewing how other jurisdictions have authored conditions
- Understanding what codes are included in a specific criterion and value set
- Troubleshooting why an eICR was determined to be reportable

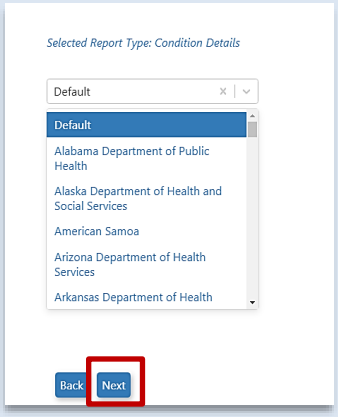
To run the Condition Details report, perform the following steps:

1. Access the *Reports* module by doing one of the following:
    - Select **Reports** in the left navigation menu on the *Home* page. RCKMS displays the *Reports* page.
    - Select the **Main Menu** drop-down at the top of the page and choose **Reports**. RCKMS displays the *Reports* page.

2. Select the **Conditions Details** button.

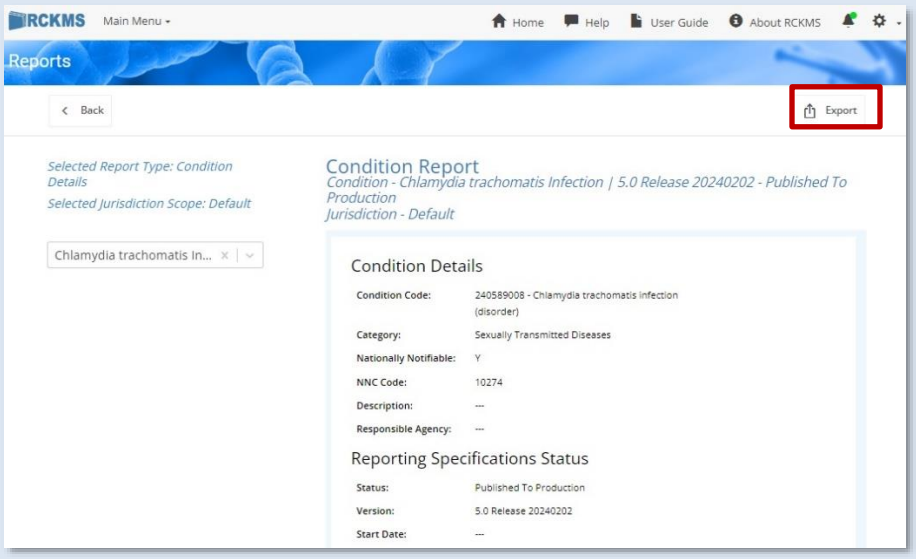


3. Select the jurisdiction whose reporting specification you want to view and then select **Next**. You can also select "Default" to view the default reporting specification for all conditions available for authoring.

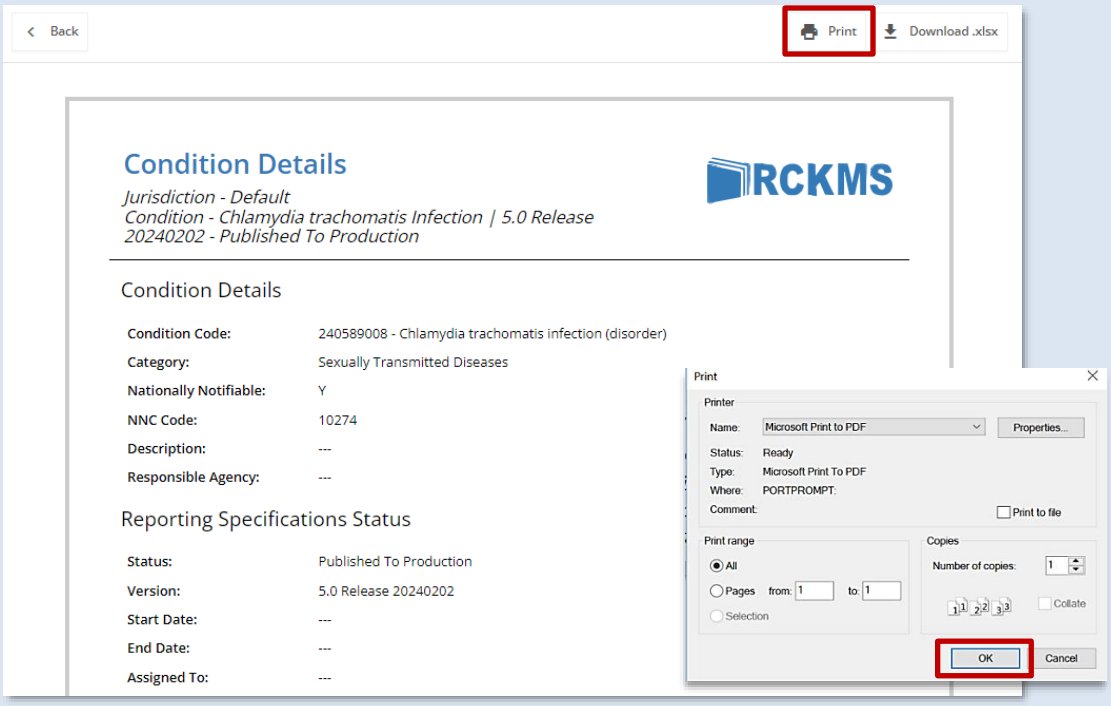


4. Select a condition from the drop-down list. The list will include only specifications that a jurisdiction has imported for authoring. If you selected "Default" in the previous step, this list will include all reporting specifications available in RCKMS. The report will automatically be generated when you select a condition.

5. Select the **Export** button to generate an Excel download or a document that can be printed or saved as a PDF.



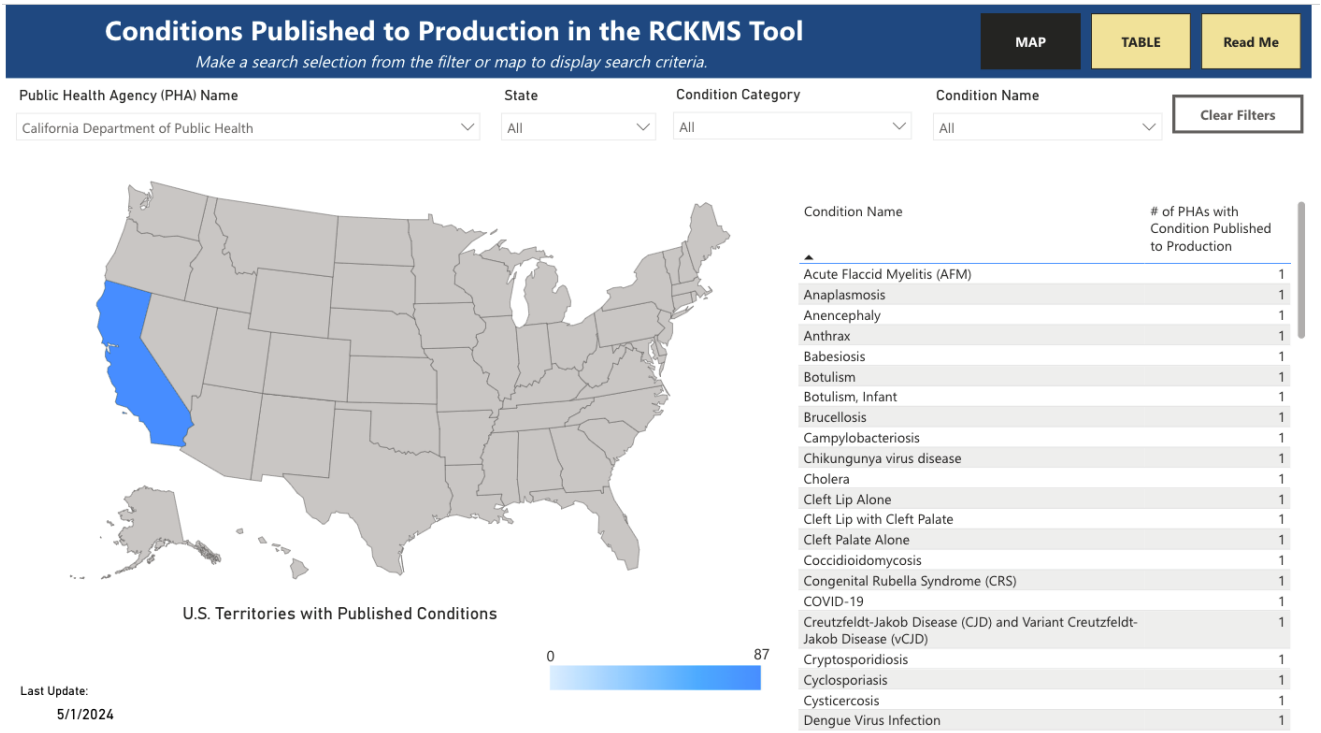
6. To save as a PDF, select **Print** and the *Print* window will open. Change the printer name to the Microsoft Print to PDF option. Select **OK**.



7. To download an Excel export, select **Download .xlsx** then navigate to the Downloads folder on your computer to open the file.
8. Select the **Back** button to return to the main *Reports* page.

7 Public Health Agency Authoring Dashboard

The Public Health Agency (PHA) Authoring Dashboard is a geographic visualization tool within the RCKMS tool. It provides a high-level overview of how all Public Health Agencies have conditions Published to Production. The main landing page is a map of U.S. States, Territories and the District of Columbia displaying the number of conditions authored and published to production. Note: Condition data for some Tribes are also available on the dashboard.



Note: The above image of the PHA Authoring Dashboard Map page includes sample data and does not reflect current authoring for the California Department of Public Health. Please log into your RCKMS user account and select the PHA Authoring Dashboard for a more detailed view.

To the right of the map there is a condensed table view listing the names of conditions authored in RCKMS and the number of PHAs with that condition published to production. This table will update to align with the selected filters. You can select the header row to sort either column alphabetically/numerically.

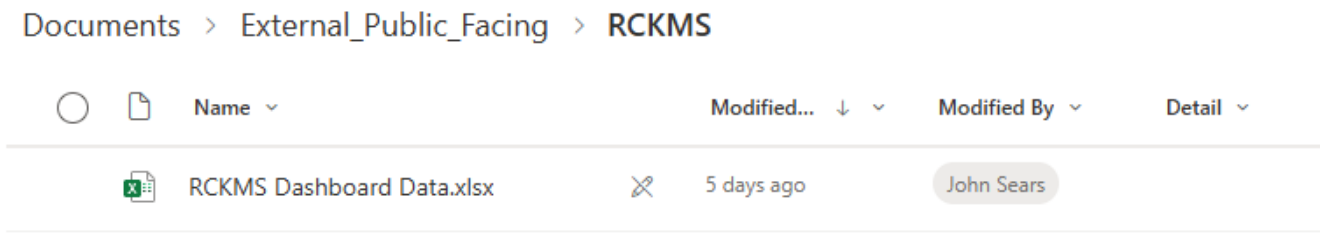
The map and table can be filtered using the drop-down boxes above the map:

Filter	Description
Public Health Agency (PHA) Name	Lists individual public health agencies that have authored at least one condition in RCKMS.
State	Lists states or U.S. territories, which may contain one or more PHA.

Filter	Description
Condition Category	Lists categories of conditions in RCKMS. Options include Birth Defects and Infant Disorders, Bloodborne Diseases, Cancer, Enteric Diseases, Healthcare-Associated Events, Injuries NEC, Neurological Diseases, Parasitic Diseases, Respiratory Conditions (infectious), Respiratory Conditions (non-infectious), Sexually Transmitted Diseases, Streptococcal Diseases, Systemic Conditions, Toxic Effects of Non-Medicinal Substances, Vaccine Preventable Diseases, Vectorborne Diseases, Waterborne (not enteric), and Zoonotic Diseases.
Condition Name	Lists the name of each individual condition within RCKMS. An individual condition that has undergone a name change between versions may appear in this list with multiple names (e.g., “Congenital Syphilis” and “Syphilis, Congenital”.

Selecting the **Table** button on the top right of the dashboard will bring you to a table view of the data populating the map. In the header, users can select the “Dataset Link” to download an Excel file containing the dataset used to populate the PHA Authoring Dashboard.

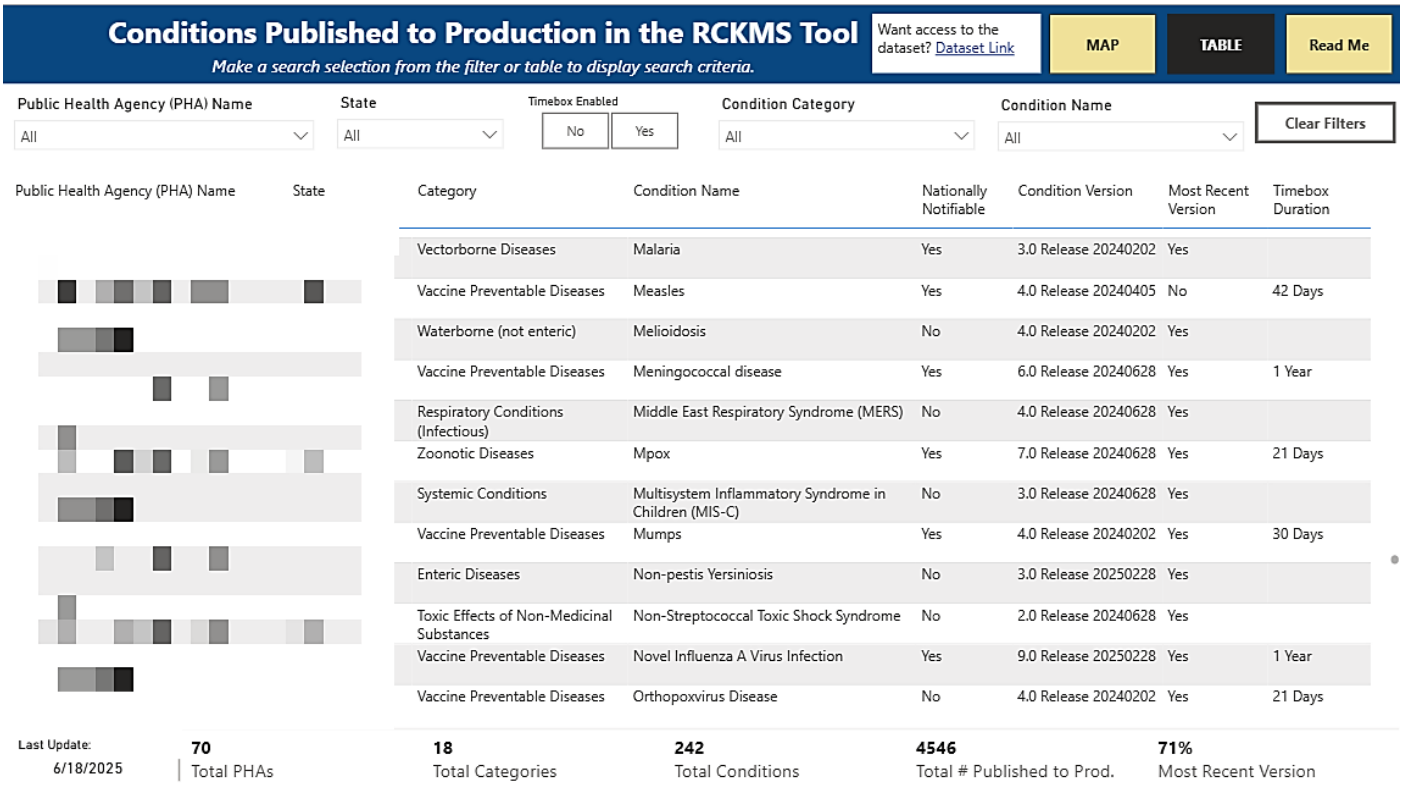
Clicking the “Dataset Link” will take you to a SharePoint location where the Excel file can be viewed or downloaded:



The Excel file contains three tabs:

- **READ ME:** An important disclaimer noting “Data authored in the Reportable Conditions Knowledge Management System (RCKMS) and made available in this report are intended for use by Public Health Agencies only. Please do not share this information outside your agency.”
- **Sheet1:** Contains the dataset displayed in the PHA Authoring Dashboard.
- **Update Date:** Contains the date the dataset was last updated. This date should be the same as the “Late Update” date found on the bottom of the PHA Authoring Dashboard.

The table view in the PHA Authoring Dashboard contains a row for each condition authored by each PHA:



Note: The above image includes a restricted view of the PHA Authoring Dashboard Table. Please log into your RCKMS user account and select the PHA Authoring Dashboard for a more detailed view.

The columns available within the table are:

Column Name	Description
Public Health Agency (PHA) Name	Lists individual public health agencies that have authored at least one condition in RCKMS.
State	Lists states or U.S. territories, which may contain one or more PHA.
Category	Lists categories of conditions currently available in RCKMS. Options include Birth Defects and Infant Disorders, Bloodborne Diseases, Cancer, Enteric Diseases, Healthcare-Associated Events, Injuries NEC, Neurological Diseases, Parasitic Diseases, Respiratory Conditions (infectious), Respiratory Conditions (non-infectious), Sexually Transmitted Diseases, Streptococcal Diseases, Systemic Conditions, Toxic Effects of Non-Medicinal Substances, Vaccine Preventable Diseases, Vectorborne Diseases, Waterborne (not enteric), and Zoonotic Diseases.
Condition Name	Lists the name of each individual condition within RCKMS. An individual condition that has undergone a name change between versions may appear in this list with multiple names (e.g., “Congenital Syphilis” and “Syphilis, Congenital”.
Nationally Notifiable	If the condition is listed as nationally notifiable to the CDC, then this column will reflect “Yes”. Otherwise, it will reflect “No”.
Condition Version	Lists the RCKMS version of the condition authored by the PHA.

Column Name	Description
Most Recent Version	Indicates if the version of the condition authored by the PHA is the most recent available version in RCKMS.
Timebox Duration	If a PHA has enabled timeboxing for a condition, this column will list the timebox duration used.

This table can also be filtered using drop-down menus on the top of the table:

Filter	Description
Public Health Agency (PHA) Name	Lists individual public health agencies that have authored at least one condition in RCKMS.
State	Lists states or U.S. territories, which may contain one or more PHA.
Timebox Enabled	Selecting “Yes” will filter to only conditions that have timeboxing enabled. Selecting “No” will filter to only conditions that do not have timeboxing enabled.
Condition Category	Lists categories of conditions in RCKMS. Options include Birth Defects and Infant Disorders , Bloodborne Diseases, Cancer, Enteric Diseases, Healthcare-Associated Events, Injuries NEC, Neurological Diseases, Parasitic Diseases, Respiratory Conditions (infectious), Respiratory Conditions (non-infectious), Sexually Transmitted Diseases, Streptococcal Diseases, Systemic Conditions, Toxic Effects of Non-Medicinal Substances, Vaccine Preventable Diseases, Vectorborne Diseases, Waterborne (not enteric), and Zoonotic Diseases.
Condition Name	Lists the name of each individual condition within RCKMS. An individual condition that has undergone a name change between versions may appear in this list with multiple names (e.g., “Congenital Syphilis” and “Syphilis, Congenital”.

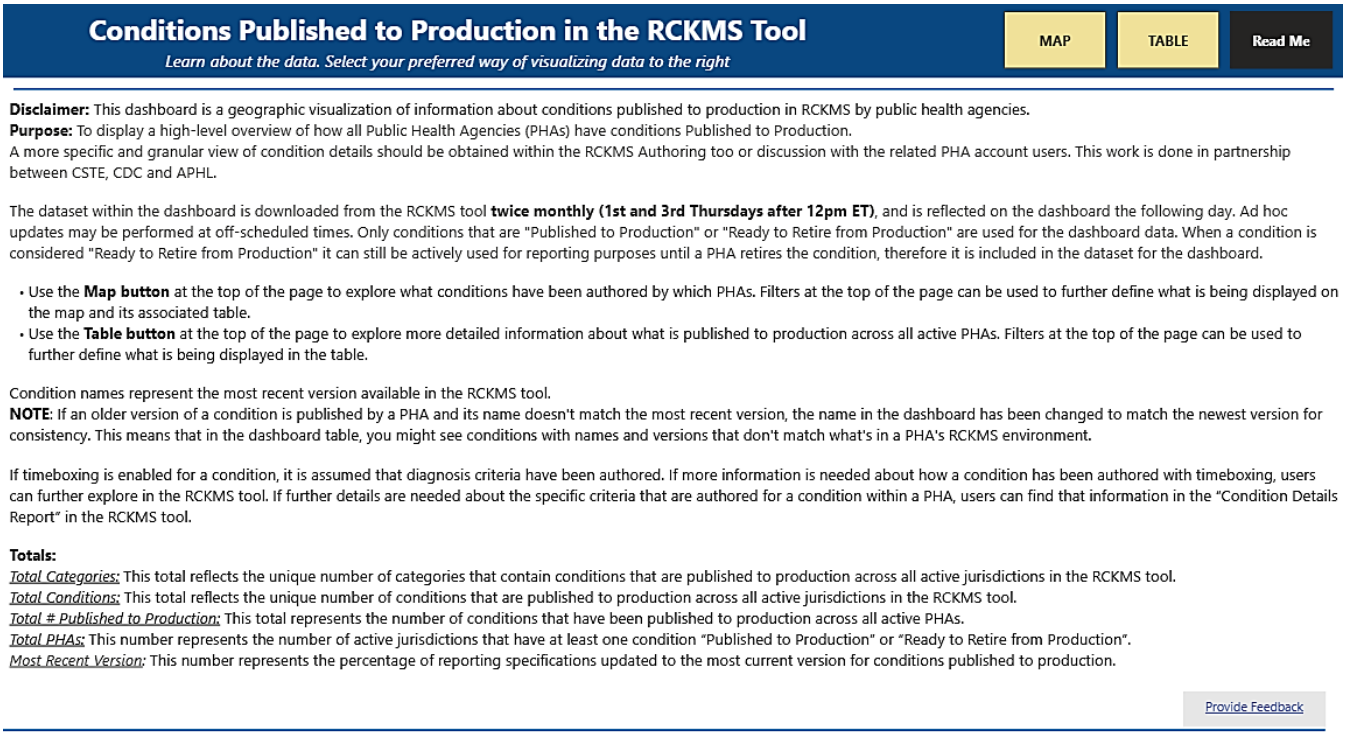
Select the **Clear Filters** button to remove any selected filters.

Below the table you will find a variety of metrics and a date that indicates when the dashboard was last updated. The metrics are defined below:

Metric	Description
Last Update	The date the information in the table was last updated. The data for the PHA Dashboard are updated twice a month.
Total # PHAs	The number of active jurisdictions that have at least one condition “Published to Production” or “Ready to Retire from Production”. This value will adjust as the table is filtered.
Total Categories	The unique number of categories that contain conditions that are published to production across all active jurisdictions in the RCKMS tool. This value will adjust as the table is filtered.
Total Conditions	The unique number of conditions that are published to production across all active jurisdictions in the RCKMS tool. This value will adjust as the table is filtered.
Total # Published to Production	The number of conditions that have been published to production across all active jurisdictions in the RCKMS tool. This value will adjust as the table is filtered.

Metric	Description
Most Recent Version	This number represents the percentage of reporting specifications updated to the most current version for conditions published to production. This value will adjust as the table is filtered.

Selecting the **Read Me** button on the top of the dashboard will bring you to a page containing a short Disclaimer and Purpose for use of the PHA Authoring Dashboard. On this page you will also find quick tips and other information that helps with navigation and use of the PHA Authoring Dashboard. Select the "Provide Feedback" link at the bottom right of this page to submit feedback on issues or suggested feature enhancements.



Glossary

APHL Informatics Messaging Service (AIMS)
A secure, cloud based environment that accelerates the implementation of public health messaging solutions by providing shared services to aid in the transport, validation, translation, and routing of electronic data.

Association of Public Health Laboratories (APHL)
An organization that works to strengthen laboratory systems serving the public's health in the United States and globally. APHL represents state and local governmental health laboratories in the United States. Its members, known as "public health laboratories," monitor, detect, and respond to health threats.

Authoring Interface
The centralized web portal that PHAs use to input, edit, and manage reporting criteria for their jurisdiction. The Authoring Interface comes pre-populated with default reporting specifications based on CSTE position statements as is designed to meet HL7 standards. Each PHA can either use the default content as-is or customize it to meet their needs.

Authoring Status Report
The Authoring Status Report displays a summary output of all information related to your jurisdiction. This generates a Jurisdiction Report that includes PHA details, condition list, zip codes, contact information, user list, responsible agency by condition, and external links and references by condition.

Condition Details Report
The Condition Details Report displays detailed output of the reporting specification for the jurisdiction and condition you select, and listings of the Sufficient, Necessary, and Optional reporting rules. You may run this report for the default or for any jurisdiction that has authored in RCKMS. The Condition Details Report also generates reporting specification status, reporting preferences, links and references, logic set details, criteria list, and concept and value sets.

Content Repository
A collection of condition-specific reference materials for the conditions you may be authoring. The Content Repository includes default reporting specifications, value sets, and the RCTC.

Council of State and Territorial Epidemiologists (CSTE)
A nonprofit membership organization consisting of local, territorial, county, and state public health epidemiologists representing multiple levels of public health practice. CSTE works to advance public health policy and epidemiologic capacity. It provides information, education, and developmental support of practicing epidemiologists, as well as expertise, technical advice, and assistance for program and surveillance efforts to partner organizations and federal public health agencies, such as the Centers for Disease Control and Prevention in a broad range of areas, including occupational health, infectious diseases, environmental health, chronic diseases, injury control, and maternal and child health.

Criteria
The narrative descriptions that determine whether a case should be reported to public health. In the RCKMS application, criteria capture condition-related patient information, such as a diagnosis, that can be identified in

a person's medical record. Each criterion is tied to logic that is supported by value sets and are represented by means of criteria templates, the machine-processible logic template upon which each criterion is based.

Criteria Templates
Machine-processible logic templates upon which the criteria are based. Each criterion is tied to logic that is supported by value sets and are represented by criteria templates.

Decision Support Service (DSS)
A service linked to provider EHR systems that is used to conduct a query to determine if a case should be reported and, if so, to where. The DSS uses the criteria and rules logic you entered using the RCKMS Authoring Interface to evaluate an eICR and determine reportability. After the patient visits the provider, the encounter information is recorded in the EHR. If the EHR detects information that suggests a suspected case, the EHR will call the DSS, which provides the RR.

Default Content
The reporting specifications for each of the conditions pre-populated in the RCKMS and made available through the website.

Determination of Reportability
The process of reviewing an initial core message against rules logic to assess if a case report should be sent to a jurisdiction based on the jurisdiction's reporting specifications. RCKMS centralizes this function in the DSS.

Electronic Case Reporting (eCR)
The electronic transmission of case reports from providers' EHR systems to public health.

Electronic Health Record (EHR)
An electronic version of a patient's medical history that is maintained by the provider over time and may include all of the key administrative clinical data relevant to that person's care under a particular provider, including demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data, and radiology reports.

Electronic Initial Case Report (eICR)
An initial case report made to public health containing sufficient data for PHAs to initiate investigation or other appropriate public health activities that is automatically initiated by the EHR when patient data is matched against a series of RCTCs. The eICR conveys core, initial case data to a PHA that may also lead to additional reporting or follow-up intended to confirm reportability, provide condition-specific or public health jurisdiction-specific reporting data, or support public health investigation, contact tracing, and/or countermeasure administration. The eICR serves as input to reportability evaluation to RCKMS and also allows PHAs to communicate the reportability of a condition back to clinical care personnel through the RR.

External Reference
Information, such as text, links to websites, documents, and other modes of information that the PHA makes available to reporters.

Internal Reference
Information, such as text, links to websites, documents, and other modes of information for use by the PHA.

Jurisdiction
The physical location bounding the PHA's area of responsibility.

Jurisdiction Administrator
An RCKMS user enabled to view, edit, and publish information for their assigned jurisdiction and no other.

Jurisdiction Member
An RCKMS user enabled to view and edit information for their assigned jurisdiction and no other. This user cannot import or publish reporting specifications, enable/disable timeboxing, configure overridable fields (e.g., user-defined patient age) or activate/inactivate optional predicates (e.g., user-defined patient age).

Jurisdictions Module
The RCKMS application pages displaying detailed information about your jurisdiction, including the PHA details, status of the supported conditions and reporting specifications, as well as zip codes and users.

Knowledge Repository
A database containing all the data related to reporting specifications, both the default content, and any customizations made by a PHA. When a PHA authors in the Authoring Interface, those data are stored here to be deployed to the DSS.

Logic Sets
Logical statements expressed in machine-processable language that indicate when a given reporter type should report to public health and what is required of them for reporting. A logic set is translated into rules logic for use in determining reportability. Used in combination with reporting criteria, logic sets follow the "S, N, O" notation used in the CSTE position statements. "S" indicates the criterion by itself qualifies the case for reporting, where "N" indicates necessary and "O" is optional.

May be Reportable
May be reportable refers to age-related cases where the age criterion is missing. Without the age information, RCKMS cannot determine whether or not the case is reportable, so it returns a "May be Reportable" response with the reason included.

Necessary
As part of the S, N, O notation, Necessary is used in combination with logic sets to indicate that a criterion qualifies the case for reporting. Presence of this criterion with other criteria (either *Necessary* or *Optional*) is needed to meet the requirement for reporting. For example, three criteria each indicate *Necessary*. If all three criteria are met, then the user must report. If only one or two criteria are met, then the user does not report.

Optional
As part of the S, N, O notation, Optional is used in combination with logic sets to indicate that a criterion qualifies the case for reporting. Within a group of Optional criteria, at least one *Optional* criterion is needed. *Optional* criteria must be paired with at least one *Necessary* criterion to meet the requirement for reporting. For example, criterion 1 is *Necessary* and criteria 2 and 3 are *Optional*. If criterion 1 is met, AND either criteria 2 or 3 (or both) is met, then the user must report. If only criteria 2 and 3 are met, then the user does not report.

Position Statements
The narrative descriptions published by CSTE used as the source for the RCKMS default reporting specifications. The CSTE Position Statements' Section VI-A narratives and Table VI concerning case reporting are used to determine whether a case should be reported to public health. Position Statements employ the "S, N, O" notation to indicate reportability, where "S" indicates the criterion by itself qualifies the case for reporting, where "N" indicates necessary and "O" is optional.

Production Account
Use the production account to author jurisdiction-specific reporting rules for conditions, test those rules, and publish them for eCR production use. The information published in the production account populates the Knowledge Repository and, therefore, must reflect your PHA's reporting rules.

Public Health Agency (PHA)
The governmental body at the local, state, and federal level responsible for delivery of public health services.

Public Health Agency Authoring Dashboard
An interface that displays a high-level overview of how all Public Health Agencies (PHAs) have conditions Published to Production.

Publish
In the RCKMS application, the process by which a completed and saved reporting specification is made available to the DSS rules engine to run the rules logic and respond on receipt of an eICR and determine if it is reportable.

RCKMS Administrator
A RCKMS user enabled to view, edit, and delete information for all jurisdictions, as well as perform other application administration tasks.

Reportability Response (RR)
A message generated by the RCKMS DSS documenting if any condition(s) in the eICR were found to be reportable, to which jurisdiction(s) reporting is required, and additional information, such as contact information of the relevant PHA. See Decision Support Service.

Reportable Conditions Knowledge Management System (RCKMS)
A tool developed to enhance surveillance by providing comprehensive information to clinicians, labs, and reporters about the "who, what, where, when, why, and how" of case reporting with the aim of delivering information from providers on potential cases to state and local public health as a service of the broader infrastructure for eCR. The RCKMS application has three main parts: the Authoring Interface, the Knowledge Repository, and the DSS.

Reportable Conditions Trigger Codes (RCTC)
Codes implemented in the EHR system to match against encounter information and initiate an eICR. See Trigger Codes.

Reporting Criteria
The narrative descriptions that determine whether a case should be reported to public health, which serve as the source for the RCKMS default reporting specifications. Reporting criteria are based on the CSTE Position Statements' Section VI-A narratives and Table VI concerning case reporting. In the RCKMS application, each criterion is tied to logic that is supported by the value sets. These are represented by means of criteria templates that provide pre-populated options used to create jurisdiction specific criteria.

Reporting Specification
The criteria, value sets, and logic sets representing each of the conditions pre-populated in the RCKMS tool, based on the CSTE Position Statements Section VI-A narratives and Table VI and any jurisdiction-specific criteria. Reporting specifications describe the details of reporting a condition to a jurisdiction and include all criteria, value sets, logic sets, and rules logic that specify when an RR is sent.

Reporting Specifications Module
The RCKMS application pages that provide options for managing the set of reporting specifications for the conditions supported in a jurisdiction. The *Reporting Specifications* module enables you to search and display reporting specifications for the available conditions; add and edit reporting specifications; view and edit basic information about the reporting specification; add and edit reporting criteria and logic sets; add reporting time frame information and indicate criteria are Sufficient, Necessary, or Optional; add and edit supporting text, links to web sites, and other documents; delete reporting specifications; save changes to reporting specifications; and publish reporting specifications.

Reports Module
The RCKMS application pages that provide a printable report or electronic file that contains information about the jurisdiction details and reporting specifications that were entered through the Authoring interface.

Responsible Agency
The description of the PHA to which reporting is legally required.

Routing Entity
The PHA that receives the eICR and RR. The routing entity is defined when you set up your PHA details on the *Edit Jurisdiction* page using the "Route eICR and Reportability Response to" field.

Rules Authoring Agency
The PHA that enters the reporting rules into RCKMS. An authoring agency could author rules on behalf of another agency (e.g., a state authoring rules for a local agency).

Rules Logic
Interpretation of reporting criteria into computable rules to be used in a decision support tool.

S, N, O Notation
Used in combination with reporting criteria, S, N, O notations are used with logic sets to express whether a criterion is Sufficient, Necessary, or Optional to qualify the case for reporting. Sufficient means that the

criterion alone makes this reportable to the PHA. Necessary and Optional work together, with all Necessary criteria in addition to at least one Optional criteria required for reporting.

Standard Codes
Numerical values (codes) and human-readable names (terms), drawn from standard vocabularies, such as SNOMED CT, RxNorm, LOINC and ICD-10-CM. See Value Set.

Sufficient
As part of the S, N, O notation, Sufficient is used in combination with logic sets to indicate that a criterion qualifies the case for reporting. Presence of this criterion alone indicates sufficient requirement for reporting. For example, three criteria each indicate *Sufficient*. If any one of the three criteria is met, then the user must report.

Test Case
An RCKMS application routine used to test the logic set and rules for the reporting criteria associated with the selected reporter type. A test case confirms the criteria authored as Sufficient, Necessary, and Optional based on rules for the selected reporter type, as displayed in the *Specifications* tab. When you run a test case, the application simulates receipt of a report and moves that information through the logic chain defined for the reporting specification's criteria, logic sets, and rules options. A successful test case provides confirmation that the criteria and rules for a given reporter provide the expected results.

Test Cases Module
The RCKMS application pages used to manage test case information and view test results. The Test Cases options confirm the criteria as Sufficient, Necessary, and Optional based on rules for the selected reporter type as displayed in the Specifications tab. You can add new test cases and edit existing test cases.

Timeboxing
An effort to reduce the number of eICR messages that are determined to be reportable to PHAs based on Encounter Diagnosis or Problem list entries that may not be related to the current instance of disease. This is accomplished by including date-based logic in RCKMS rules to assess the interval between two key dates from the eICR message.

Trigger Codes
Codes (LOINC, SNOMED, RXNorm, ICD-9/ICD-10) that, when present in an EHR, initiate the sending of an initial case message to public health. See Standard Codes; Value Set.

Value Set
The numerical values (codes) and human-readable names (terms) drawn from standard vocabularies, such as SNOMED CT , RxNorm, LOINC, and ICD-10-CM, which are used to define concepts used in clinical quality measures (e.g., patients with diabetes, clinical visit). (see https://vsac.nlm.nih.gov/)

Virtual Medical Record (vMR)
A simplified, standardized EHR data model sponsored by HL7 and designed to support interfacing to clinical decision support (CDS) systems. vMR is compatible with Service-oriented Architecture (SOA) of CDS.

XML

Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.