MIGateway®

User Guide

Version 5
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Document History

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1. Introduction

1.1 Purpose

MIGateway® gives providers and managing organizations a single, consistent, interoperable solution for coordinating patient care.

The Medical Information Gateway (MIGateway®) is a service that centralizes Michigan Health Information Network Shared Services' (MiHIN) Use Case applications to help healthcare professionals find, view, use, and exchange health information for their patients.

Many providers have adopted Electronic Health Records (EHRs) to digitize and exchange health information, but the lack of interoperability among EHR vendors still impedes the effective exchange of electronic health information.

MIGateway® solves this challenge with an easy-to-use interface that offers a single point of entry to access a host of shared services available in the State of Michigan for practices, managing organizations, and other care coordination organizations.

1.2 Functionality

MIGateway® creates opportunities to make information exchanged through Michigan's statewide network usable and valuable. MIGateway® allows users to:

- View other members of a patient's care team, manage shared information for their patients, and view treatment information in the form of transitions of care (TOC) messages.
- Upload Active Care Relationship Service® (ACRS®) files.
- MIGateway® provides tools to view and work with several different message types and data, including:
    - Admission, Discharge, and Transfer (ADT) messages with any message enrichments
    - Documents conforming to clinical document architecture standards including Continuity of Care Documents (CCDs)

1.3 Data Flow

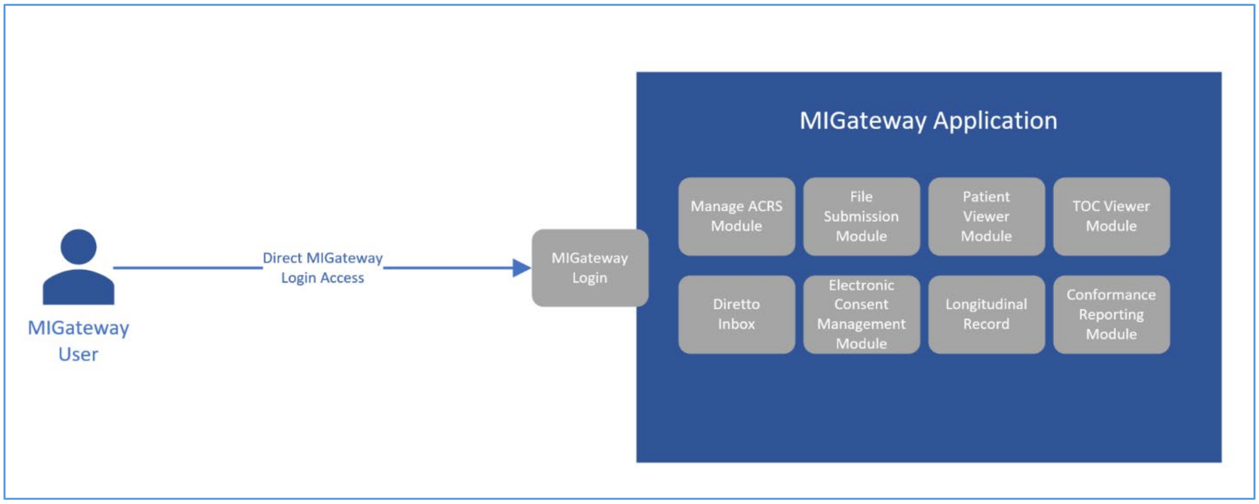


Figure 1. MIGateway® Data Flow

Figure 1 shows the data flow a MIGateway® User would follow. The full application summary is available online at: https://mihin.org/migateway/ . For additional information, visit www.mihin.org/requesthelp.

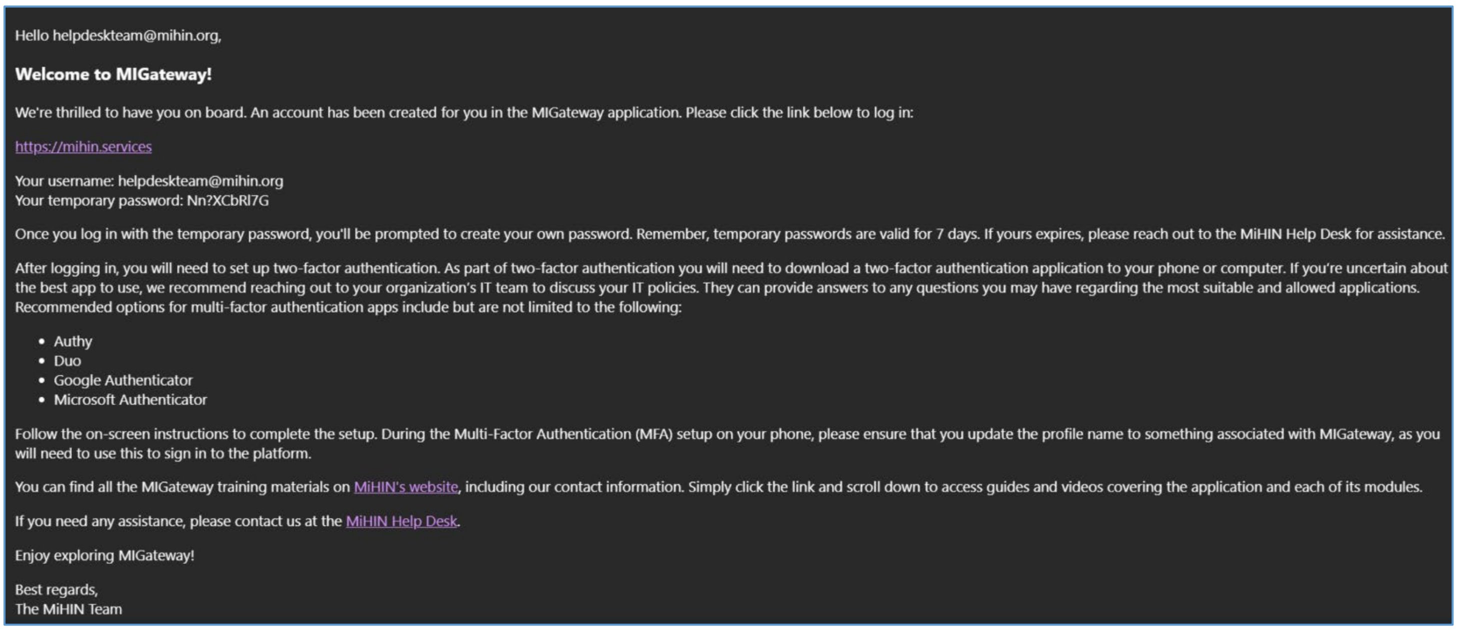
2. Login and Support

The following sections describe the user interfaces and basic processes performed in each module. There are also processes that are either agnostic to any of the modules, or which use a combination of modules.

2.1 Accessing MIGateway®

2.1.1 Initial Login

A welcome email from MiHIN will be delivered to the registered email address to set up an account once a completed request form has been received and processed.



Hello helpdeskteam@mihin.org,

Welcome to MIGateway!

We're thrilled to have you on board. An account has been created for you in the MIGateway application. Please click the link below to log in:

https://mihin.services

Your username: helpdeskteam@mihin.org
Your temporary password: Nn?XCbRl7G

Once you log in with the temporary password, you'll be prompted to create your own password. Remember, temporary passwords are valid for 7 days. If yours expires, please reach out to the MiHIN Help Desk for assistance.

After logging in, you will need to set up two-factor authentication. As part of two-factor authentication you will need to download a two-factor authentication application to your phone or computer. If you're uncertain about the best app to use, we recommend reaching out to your organization's IT team to discuss your IT policies. They can provide answers to any questions you may have regarding the most suitable and allowed applications. Recommended options for multi-factor authentication apps include but are not limited to the following:

- Authy
- Duo
- Google Authenticator
- Microsoft Authenticator

Follow the on-screen instructions to complete the setup. During the Multi-Factor Authentication (MFA) setup on your phone, please ensure that you update the profile name to something associated with MIGateway, as you will need to use this to sign in to the platform.

You can find all the MIGateway training materials on MiHIN's website, including our contact information. Simply click the link and scroll down to access guides and videos covering the application and each of its modules.

If you need any assistance, please contact us at the MiHIN Help Desk.

Enjoy exploring MIGateway!

Best regards,
The MiHIN Team

Figure 2. **MIGateway®** ***Welcome Email***

1. Click the link in the email to begin registering a MIGateway® account as shown in ***Figure 2***.

2. On the MIGateway® login screen as shown in ***Figure 3***, select 'Login Now.' Once on the Email and Password screen, as shown in ***Figure 4***, enter the username and temporary password provided in the welcome email and click 'Sign in'.'

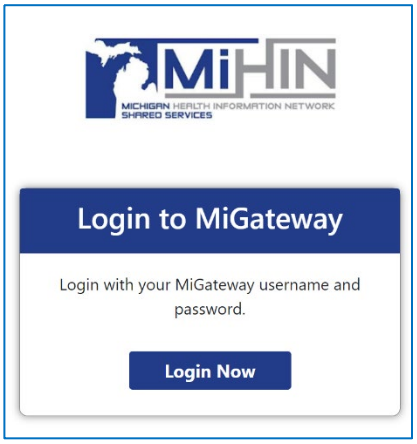


Figure 3. Initial Login Screen

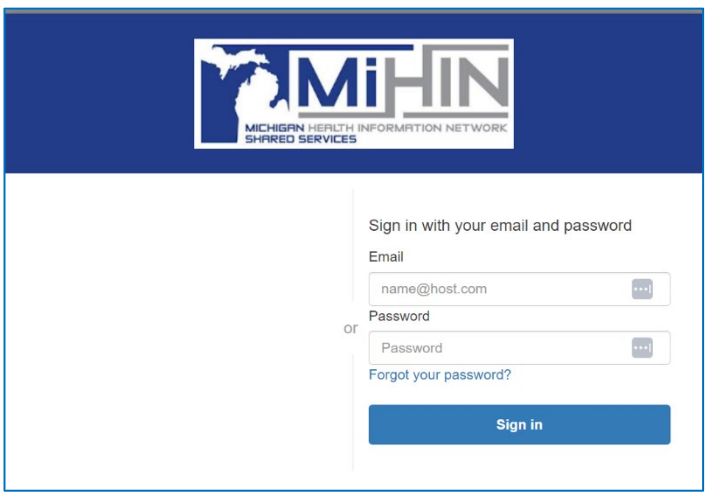


Figure 4. Email and Password Login Screen

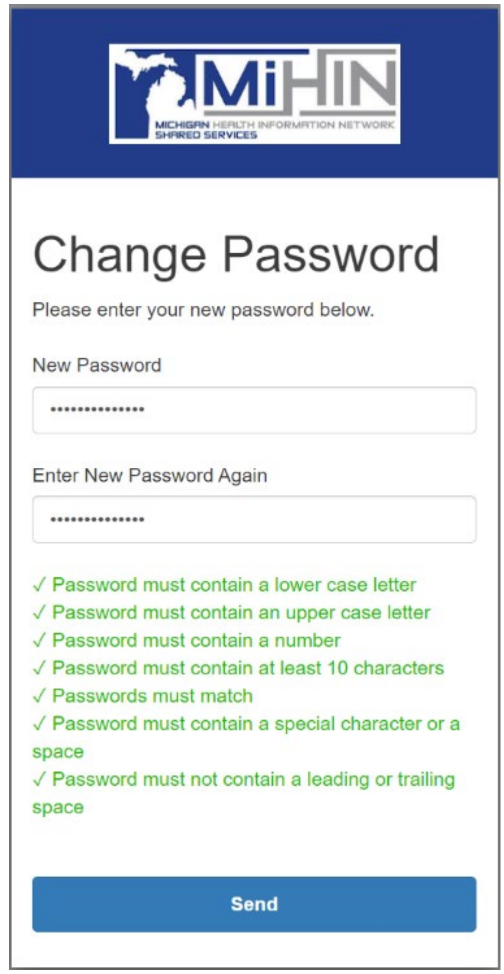


Figure 5. MIGateway® Set Password

3. A password reset will be required with requirements displayed as shown in ***Figure 5***.
4. Create a password and click 'Send.'
5. After creating your new password, you will be required to set up multi-factor authentication (MFA). Follow the instructions, as shown in ***Figure 6***.

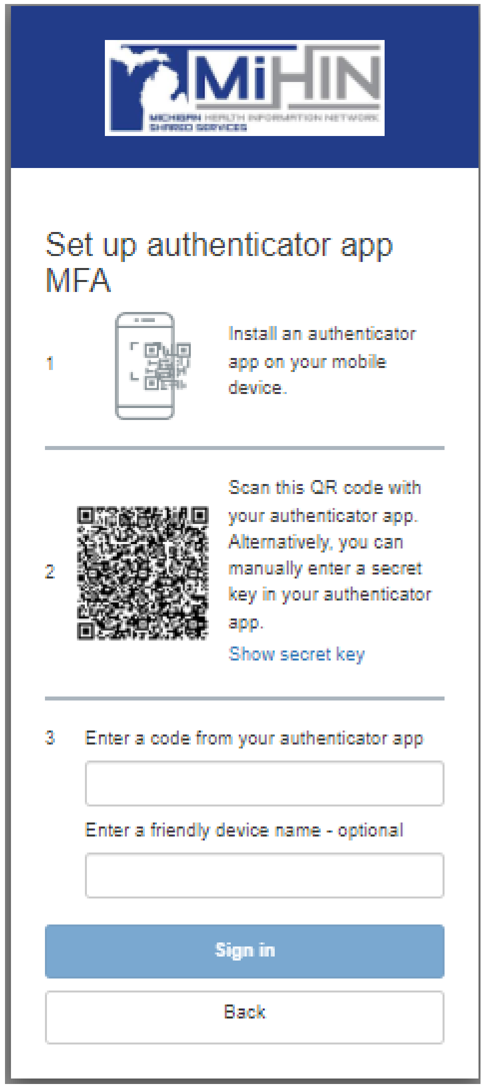


Figure 6. MIGateway® Account Creation Multi-Factor Authentication

6. Enter the authentication code from your choice of authenticator applications and click ‘Sign in’ as shown in ***Figure 6***.
7. After establishing multi-factor authentication, you will automatically be asked to re-sign in with your new password and enter the code from MiHIN’s passcode app as shown in ***Figures 7 and 8.***

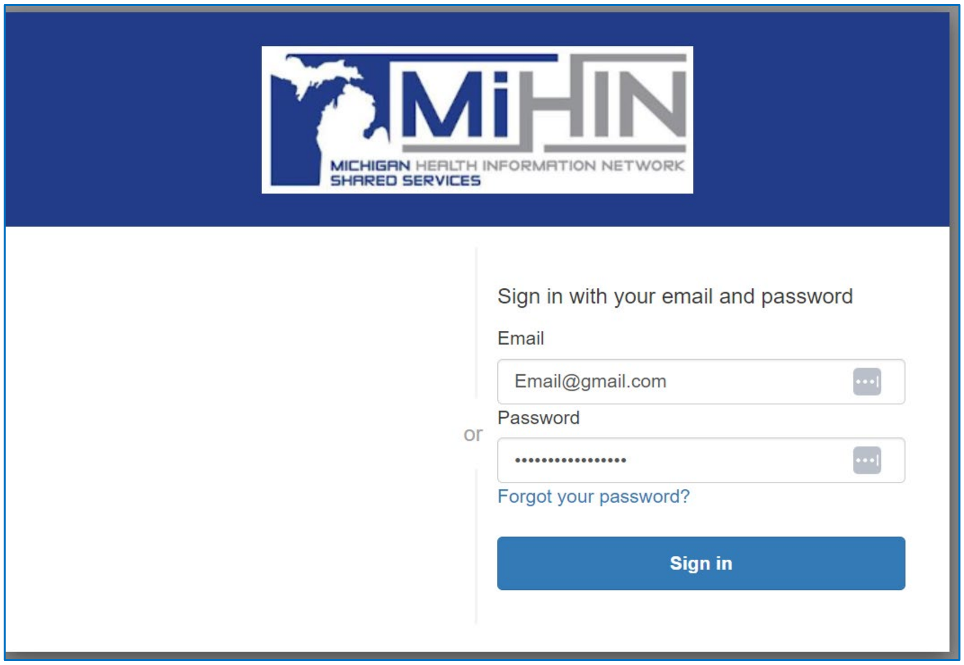


Figure 7. MIGateway® Login Page

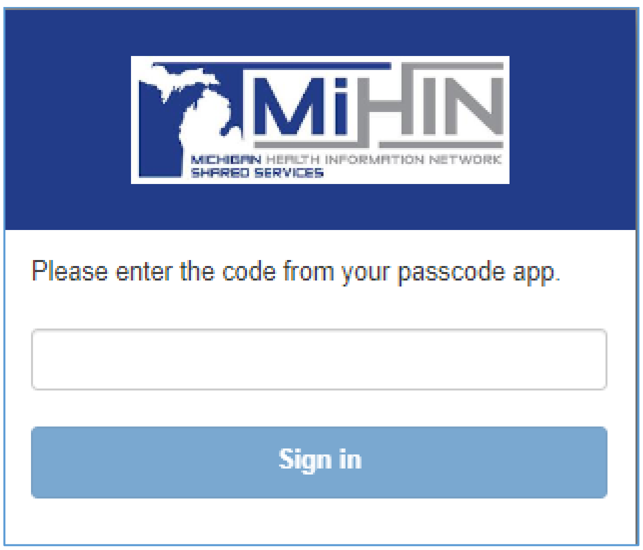


Figure 8. MIGateway® Login Page - Submit Authentication Code

Note: MiHIN's MIGateway® application no longer supports the use of Internet Explorer. For more information and recommended browsers, please see [Appendix E](#).

2.1.2 Forgot Password

If a new password is needed, select 'Forgot password?' as shown in ***Figure 9.*** Enter your email address to receive the reset instructions as shown in ***Figure 10***. If difficulty occurs with password reset, please contact help@mihin.org.

Figure 9. MIGateway® Forgot Password Link

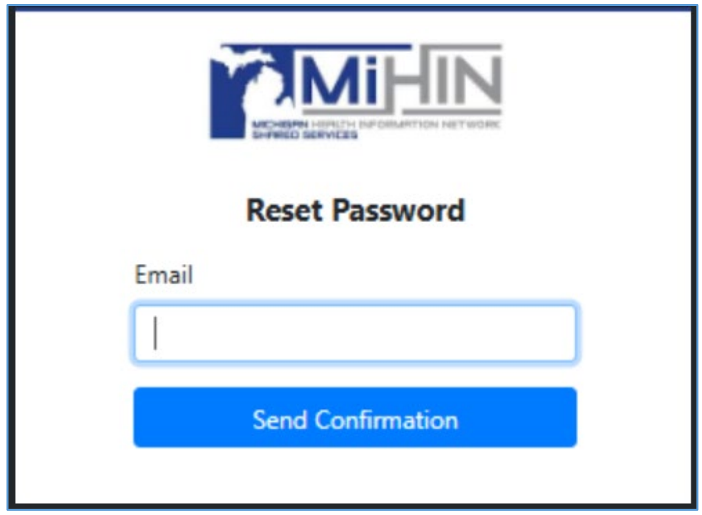


Figure 10. MIGateway® Password Reset

2.1.3 Password Expiration

- MIGateway® passwords are valid for 90 days from the date the account was created, with expiration reminders sent at 75,85 and 90 days from account creation. An example of this notice can be found in Appendix H.
- After 90 days the MIGateway® account will be disabled until the account password is reset.
    - The user must submit a request to help@mihin.org requesting their MIGateway® account be re-enabled after the 90 days of inactivity.
- Once the account is re-enabled, an email will be sent to the email address associated with the account with instructions on how to reset the account password.
- Once the account password has been reset, the new password age will be set back to zero days.

2.2 Requesting Support

2.2.1 Support Module

The Support module allows users to submit support tickets directly from MIGateway® to MiHIN's Help Desk. To access the module, click on the 'Support' tab in the navigation bar as shown in **Figure 12**.

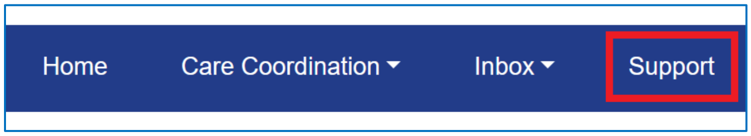


Figure 12. Support Tab in the Navigation Bar

Once on the Support page, complete the required fields on the webform as shown in **Figure 13.** If a support request involves PHI, click the 'Additional PHI Needed?' checkbox under the description field.

*****Please, do not submit any PHI through the Support module or the MiHIN ticketing system directly. If PHI needs to be exchanged, MiHIN will use secure methods for its exchange.*****

Once the support ticket is ready for submission and all required fields have been filled out, click 'Submit Message.' MiHIN's Help Desk will respond via email to the support ticket to the email address used for initial MIGateway® login.

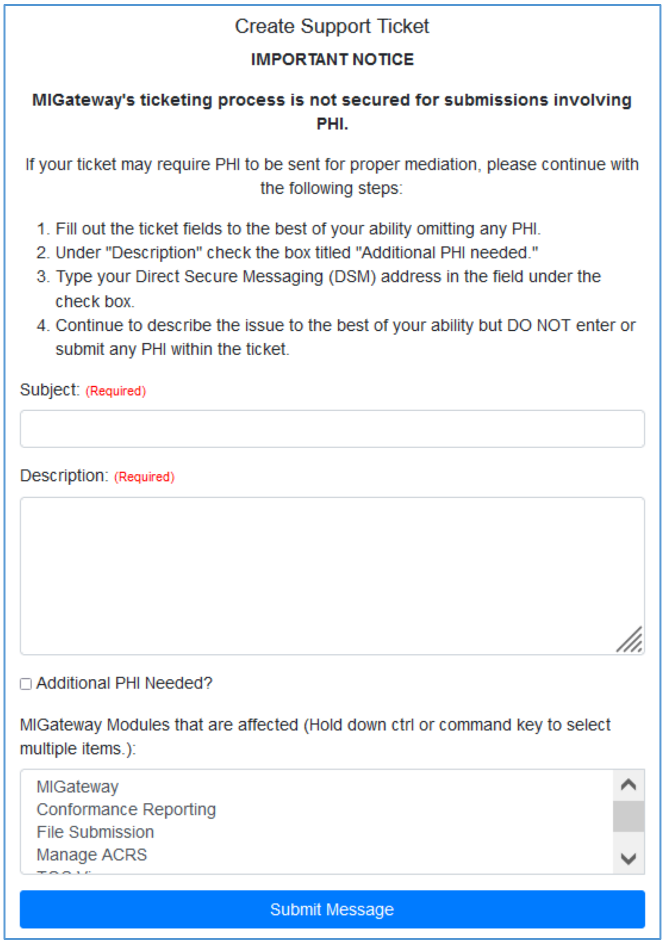


Figure 13. Support Ticket Page

2.2.3 Additional Support Information

Additional information on MIGateway® can be found online at https://mihin.org/products-list

For support please contact:

MiHIN Help Desk

844-454-2443

help@mihin.org

MiHIN Help Desk Portal (https://mihinhelp.refined.site/portal/50)

3. Modules

The MIGateway® application is composed of several modules. Common tasks managed through MIGateway® often utilize multiple modules working together.

This section is intended to give a foundational knowledge for each module.

3.1 File Submission

The File Submission module allows organizations to submit their ACRS® file via MIGateway® and receive processing and feedback in return.

Additionally, through the File Submission module, an organization can see information relevant to their submitted ACRS® file including:

- Time/Date of Submission
- Status of File
- ACRS® file name for both delivery and attribution files
- Transaction IDs for all submitted files
- Status Message indicating the outcome of the submission and whether there were any errors found.

3.1.1 File Submission UI Elements

Figure 14. File Submission Menu Location

The File Submission module can be accessed by navigating to the Care Coordination drop-down menu and selecting the File Submission option as shown in ***Figure 14***.

The File Submission module has two tabs that users can select from depending on what tasks they are attempting to complete. These are as follows:

3.1.1.1 File Submission Tab

This tab has the primary interface used for the submission of ACRS® files. Its UI elements are illustrated in ***Figure 15***:

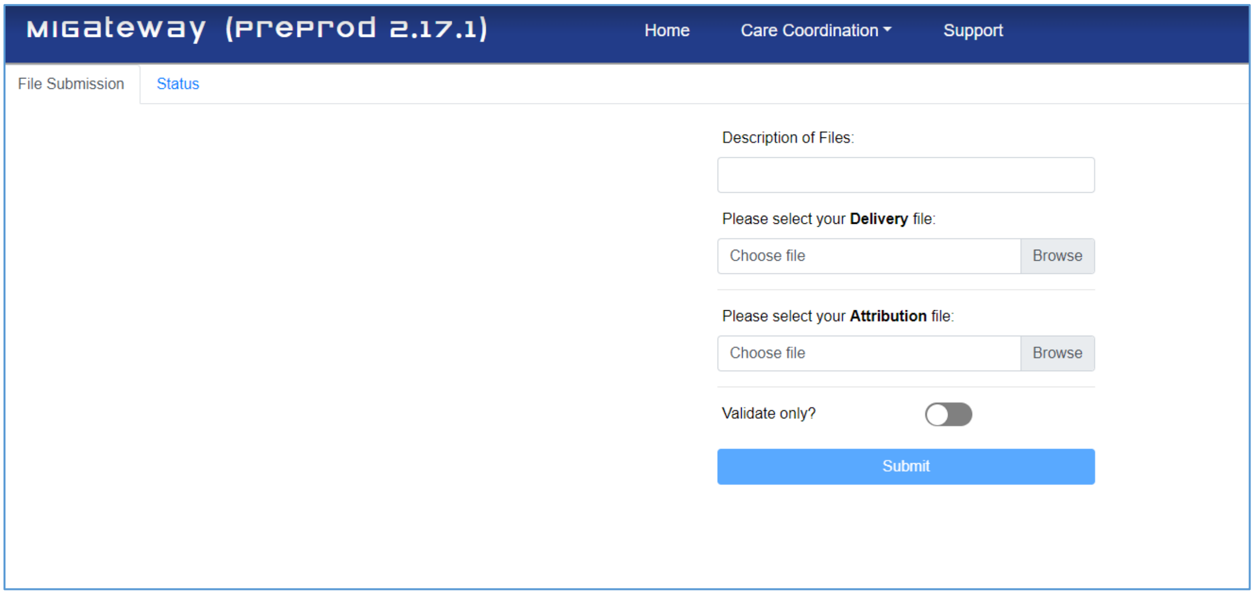


Figure 15. File Submission Tab Layout

This form has several elements that allow a user to customize the ACRS® file submission process. A breakdown of these elements is illustrated in ***Figures 16 and 17***.

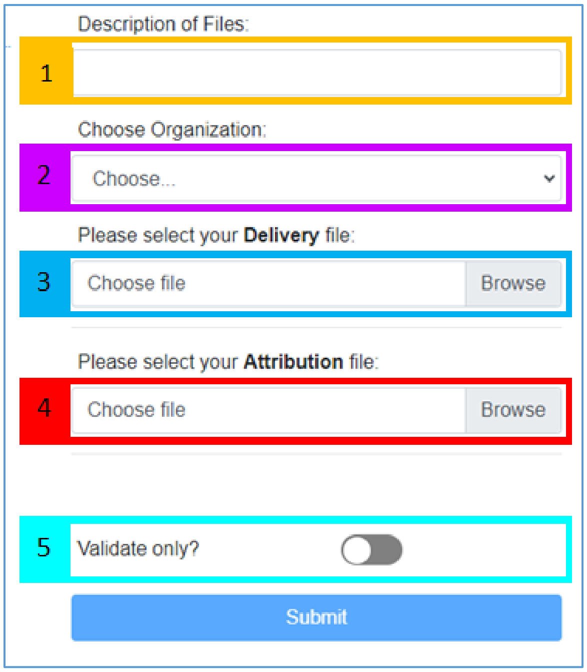


Figure 16. File Submission UI Elements

1	**Description of Files:** Text field used to provide a description of the files being submitted, including type of files, which facility they are for, and other identifying information. Information is at the submitting user's discretion. No PHI should be used in this field.
2	**Choose Organization:** Drop-down list of applicable organization data source names. **Note:** If the user only has access to one organization data source this field will not be present.
3	**Please select your Delivery file:** Field that allows users to browse available drives to find and select the Delivery file to submit.
4	**Please select your Attribution file:** Field that allows users to browse available drives to find and select the Attribution file to submit.
5	**Validate only?:** Clicking the "Validate Only?" toggle will run validation on the uploaded files without submitting and loading the files afterward. Both validation and cross validation errors will be returned.

Figure 17. File Submission UI Element Description

3.1.1.2 Status Tab

The Status tab provides search tools that allow a user to check on the status of submitted ACRS® attribution and delivery files. Its UI elements are illustrated in ***Figure 18***.

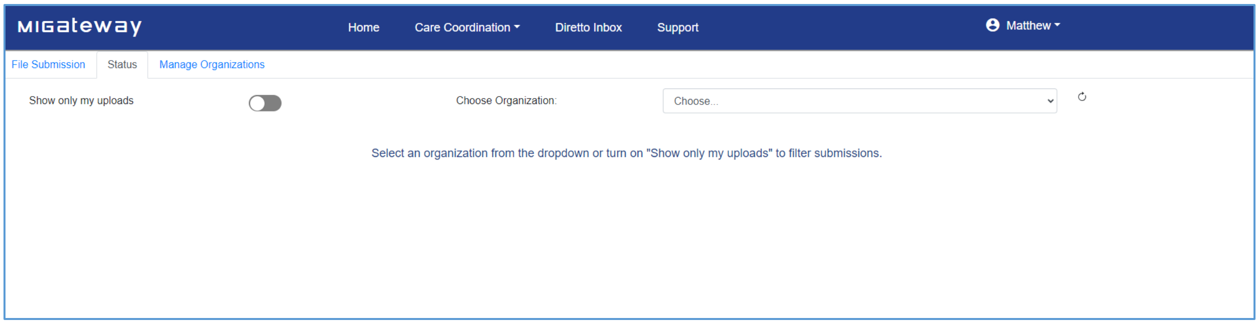


Figure 18. Status Tab Layout

This UI has elements designed to help search for the status on select ACRS® files, and headers which display status information on those files as shown in ***Figures 19 and 20***.

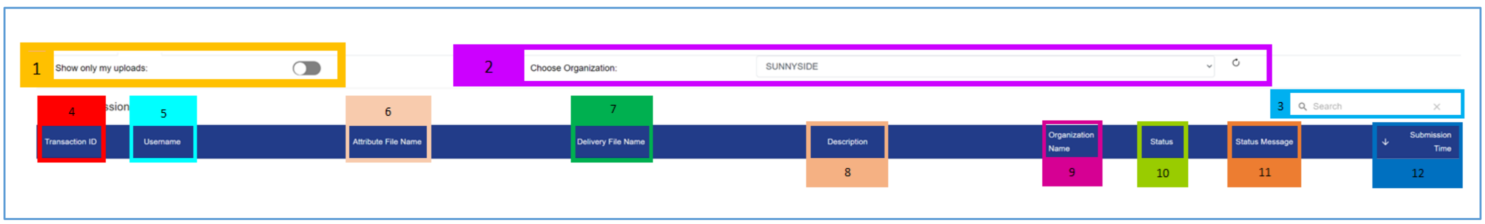


Figure 19. Status Tab UI Elements

1	**Show only my uploads:** Clicking this toggle will filter file submission transactions to those submitted by the user.
2	**Choose Organization:** Drop-down list of organization data source names. **Note:** If the user only has access to one organization data source, this field will not be present.
3	**Search:** Matches entered text with any occurrences within information shown under headers 4-11.
4	**Transaction ID:** Shows the unique ID attributed to a submitted file and can be used to identify a specific submission status.
5	**Username:** Lists the username of the user that submitted a specific Attribution and/or Delivery file.
6	**Attribute File Name:** Lists the full name of a submitted Attribution file associated with a specific Transaction ID. ■ Attribution Files that are loaded together with a Delivery file will be displayed with that corresponding Delivery file
7	**Delivery File:** Lists the full name of a submitted Delivery file associated with a specific Transaction ID

	■ Delivery files that are loaded together with an Attribution file will be displayed with that corresponding Attribution file.
8	**Description:** The Description of Files entered during file upload via File Submission. If the file was submitted via SFTP, the description will be automatically populated with "SFTP Submission."
9	**Organization Name:** Organization data source name that the submitted files are associated with
10	**Status:** Status of the submitted Attribution and Delivery files ■ "Partial Loading" Status indicates when a file is submitted for partial loading after failing to validate in a previous submission ■ "Validating" Status indicates the files are in the process of being validated ■ "Incorrect File" Status could indicate either the file was submitted with formatting issues (like the file was not CSV formatted); or headers are missing or in the wrong order. ■ "Error" Status indicates that a problem occurred during validation or loading. For assistance, please place a ticket to help@mihin.org. ■ "Invalid" Status indicates that something about either the attribution or delivery file did not meet file specifications and could not be processed ■ "Loaded" status indicates that the file has at least partially passed validation and has been loaded for use. ■ "Valid" Status indicates that the selected files were valid, but did not proceed with loading because the "Validate Only?" toggle was selected when submitting the files. ■ "Loading" Status indicates the files are in the process of loading
11	**Status Message:** Lists additional information on the status of a file including the following information: ■ **An internal error occurred. Please contact the Help Desk at help@mihin.org for validation errors and reference the transaction ID** #####. **–** Indicates an error has occurred with process an ACRS® file and is usually associated with the "Error" status. ■ **Cross-Validation is not valid. Click here for more information** – Indicates that there are discrepancies between the submitted Attribution and Delivery file; and provides a link that lists said errors for correction. Usually associated with the "Invalid" status. ■ **Incorrect Delivery/Attribution file type or format submitted. –** Message that occurs with the "Incorrect File" Status and indicates

	that while the overall CSV format was correct, the Delivery or Attribution file that was submitted had non-valid CSV headers. ■ **SFTP Submission was too invalid to continue –** Message occurs with the “Invalid” status and occurs when a threshold for percentage of rows is invalid for SFTP submissions. ■ **Delivery/Attribution/Cross Validation are invalid –** Message that occurs with the “Invalid” Status and indicates which validations failed when both a Delivery and Attribution file are submitted. May be any combination of the three depending on the validation issues that occurred. ■ **Attribution, Delivery and Cross Validation are valid –** Message that occurs with the “Valid” or “Loading” status and indicates that all files, and their cross validation are valid. ■ **All valid, files loaded –** Message that occurs with the “Loaded” status and indicates that all files were deemed valid and were loaded
12	**Submission Time:** Lists the timestamp of the submission in the following format: ■ YYYY-MM-DD-HH:MM: SS

Figure 20. Status Tab UI Element Descriptions

3.1.2 Getting Started with File Submission

3.1.2.1 Submitting an ACRS® Attribution and/or Delivery File

Organizations wishing to submit their ACRS® file will first navigate to the File Submission module described in the previous sections. In the File Submission form, organizations can enter in a description of the file being submitted (optional) and choose their organization from the drop-down menu as illustrated in ***Figure 21***.

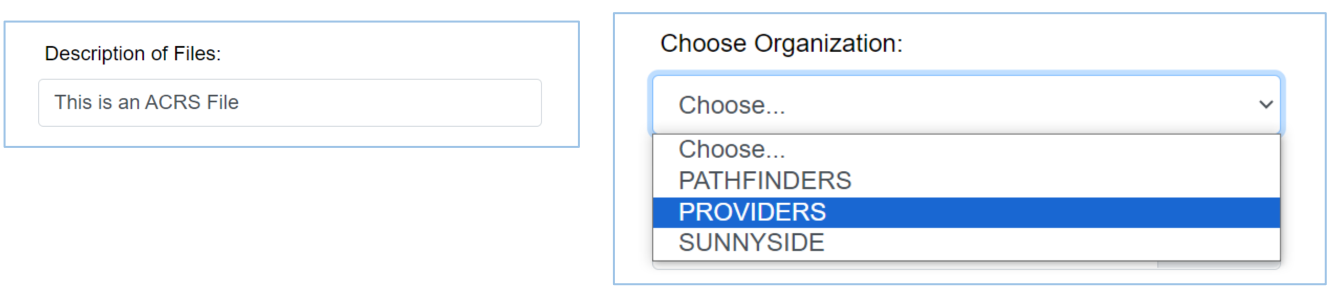


Figure 21. Selecting ACRS® File Description and Organization

Please Note: If the submitting user only has one Organization associated with their account, the "Choose Organization" drop down will not be presented and their one file will be auto selected.

The list of names displayed in this drop-down menu is determined by the ACRS® name and organization information provided in the MIGateway® Onboarding Form. Once these fields have been completed, the organization will select the Attribution and/or Delivery file to be submitted by clicking the "Browse" button for each entry as shown in ***Figure 22***.

Please note: Attribution and Delivery files can be submitted independently of each other if this has been configured during MIGateway® setup. If this is configured, completion of both fields will not be required.

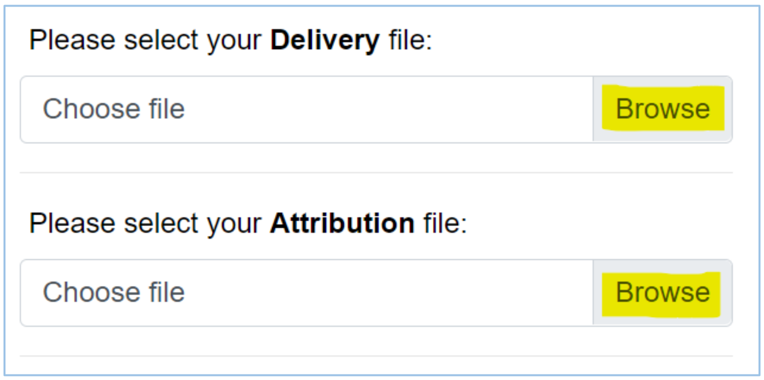


Figure 22. ACRS® Attribution and Delivery File Selection Fields

Please note: the "Validate only?" toggle is off by default and will only be selected when an organization is looking to evaluate to see if their file is valid without submission as shown in ***Figures 23 and 24***.

Figure 23. Off Position

Figure 24. On Position

If the user has been configured to submit the Attribution and Delivery files independently, a pop-up message will appear after submitting either file without the other, as shown in ***Figure 25***.

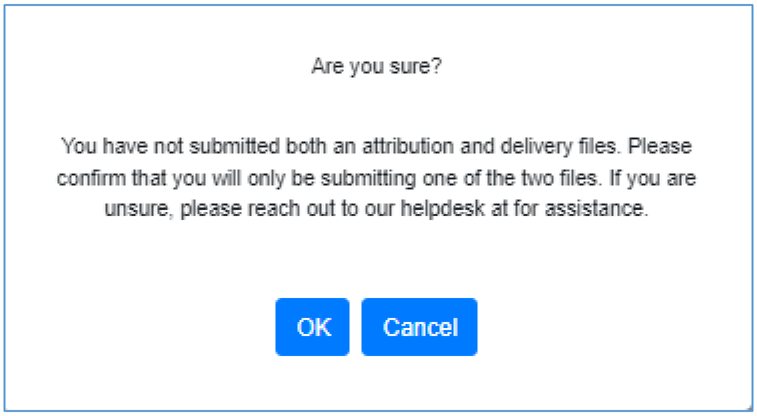


Figure 25. Single File Submission Confirmation Screen

For more information on creating Attribution and Delivery files that meet specifications, refer to the ACRS® Implementation Guide.

3.1.2.2 View the Status of Uploads

After a file has been submitted, the user can check the status of the file by navigating to the "Status" tab described in [section 3.1.1.2](). On this screen, the user will select the organization they would like to see file status for as shown in ***Figure 26***.

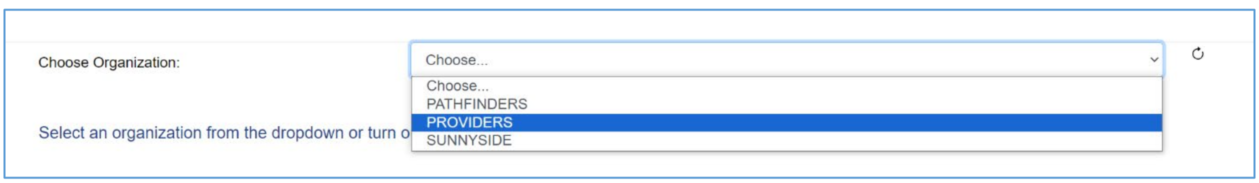


Figure 26. Organization Drop-Down

Additionally, if the user would like to only see the files they uploaded, they may activate the "Show only my uploads" toggle as shown in ***Figure 27***.

Figure 27. "Show Only My Uploads" Toggle

Once selected, a list of all ACRS® file submissions associated with the organization will be displayed, listing all the information described in [section 3.1.1.2]() .Users should take note of the following information:

- Transaction ID – This is a generated ID associated with the submission. This information creates a unique identifier that can be used by internal MiHIN staff to identify and troubleshoot issues with files. Users should always try to provide this ID when reporting issues or asking questions about a particular submission.

- Status – The status of a submission will let the user know what action, if any, is required for their submitted files. For a full list of potential statuses, please refer to section 3.1.1.2.
- Status Message – The Status Message provides further information on the statuses described previously. For a full list of potential status messages, please refer to section 3.1.1.2.
- Submission Time – This lists the time and date of the submission. This is useful when reporting issues or trying to identify one file of many that an organization may have submitted. When sending help requests, this information should be provided along with the transaction ID to aid in troubleshooting.

3.1.2.3 Address Upload Error/Invalid Messages

For files that have failed validation, a review will be required to address the issues indicated in the "Status Message" section before the files are able to be successfully loaded and used. For files that have the "Invalid" status, a link will be provided that identifies the issues behind the status. The errors are divided into three categories:

- Attribution File Validation Errors
- Delivery File Validation Errors
- Cross-Validation Errors

For each type of error, the page will indicate a file row and the related column that needs attention, and an error message will be provided as shown in ***Figures 28-30***.

- Attribution File Errors
  Lists each row and column where validation errors occurred along with the specific error.

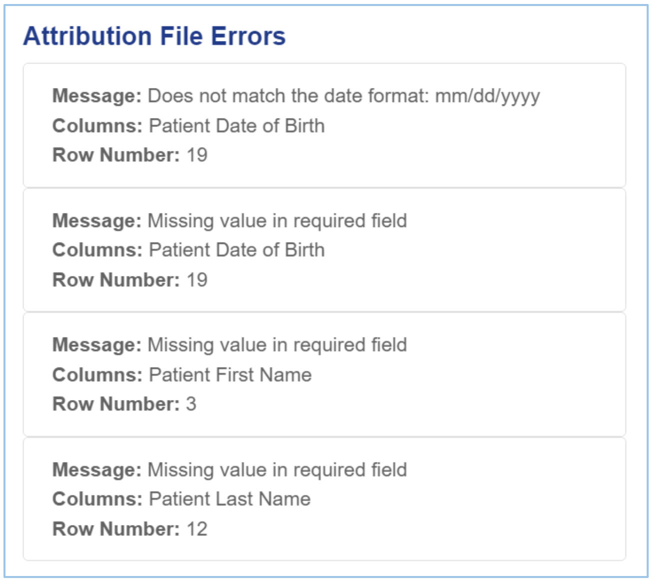


Figure 28. Attribution File Error Example

- Delivery File Errors
  Lists each row, column, and/or headers where validation errors or formatting issues occurred, along with the specific error.

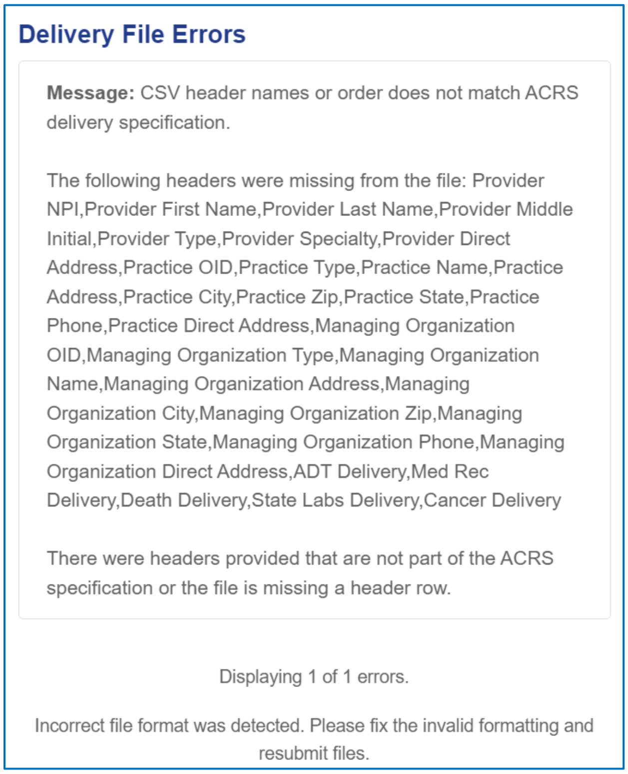


Figure 29. Delivery File Error Example

- Cross-Validation Errors
  Cross-Validation Errors will be listed so the submitter can make corrections to prevent message routing or delivery issues in the future.

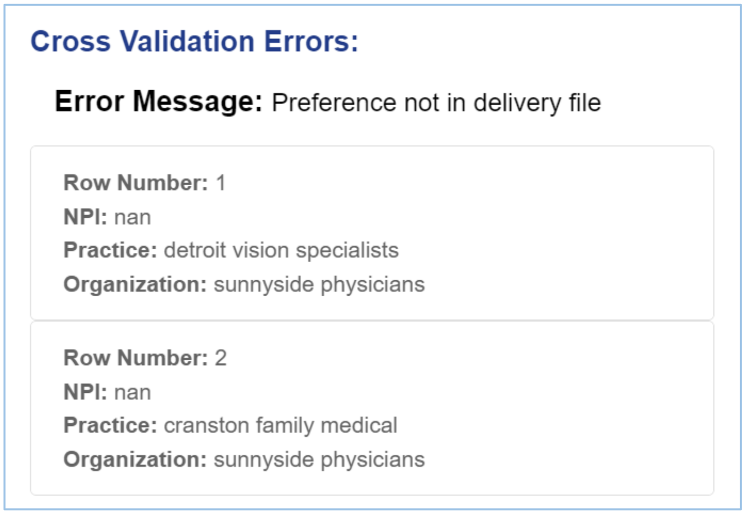


Figure 30. Cross-Validation Error Example

3.1.2.4 Working with Files with Errors

The File Submission module allows the submission of files that contain validation errors. This function will remove all rows containing validation errors within either the attribution or delivery file. This can be done by clicking the “Submit” button on the validation errors pop-up window, as shown in ***Figure 31***.

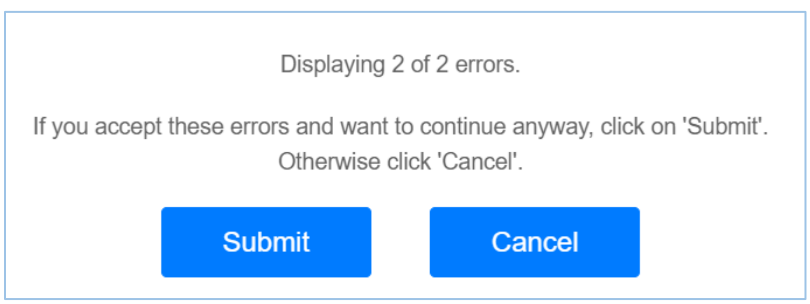


Figure 31. File Submission Invalid Rows Submission Screen

After clicking the “Submit” button, another pop-up window will appear asking for confirmation as shown in ***Figure 32***. Clicking “Yes” will load the file and remove the rows with validation errors in them but will also mean that **messages will not be routed based on those deleted rows**.

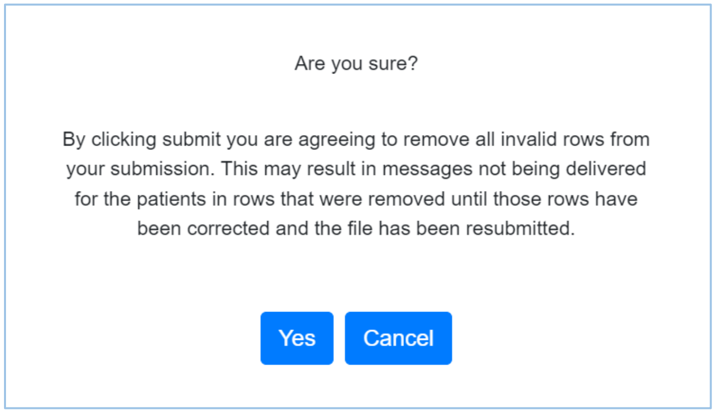


Figure 32. File Submission with Invalid Row Confirmation

Once the files have been submitted, email messages will be generated and sent to the email address associated with the submission. This will either be the MIGateway® user account email or the one associated with the SFTP User Account through which the files were uploaded.

Emails will always be delivered when files go through at least one of the following, regardless of success or error status:

- Attribution Validation
- Delivery Validation
- Cross Validation

In situations where a file is found to be invalid, a file will be attached to the email with explanations detailing the source of the error. This will be the same file that users can see when reviewing file submissions in the “Status” tab, illustrated earlier in this section. For examples of emails that can be sent for given validation scenarios, please refer to [Appendix 4.6].

3.2 Manage ACRS®

Manage ACRS® allows direct access to ACRS® populations within MIGateway®, offering the ability to search patient populations using represented filters or to add or modify active care relationships on demand. The features included with Manage ACRS® provide the following views:

- Hierarchy of active care relationships within a network;
- Access to all active care relationships within personal hierarchy;
- Active care relationships associated with a specific practice;
- Active care relationships with a specific provider, and
- Patient care team.

3.2.1 Manage ACRS® UI Elements

Manage ACRS® can be accessed by navigating to the Care Coordination drop-down menu at the top of MIGateway® and clicking "Manage ACRS®" as shown in ***Figure 33***.

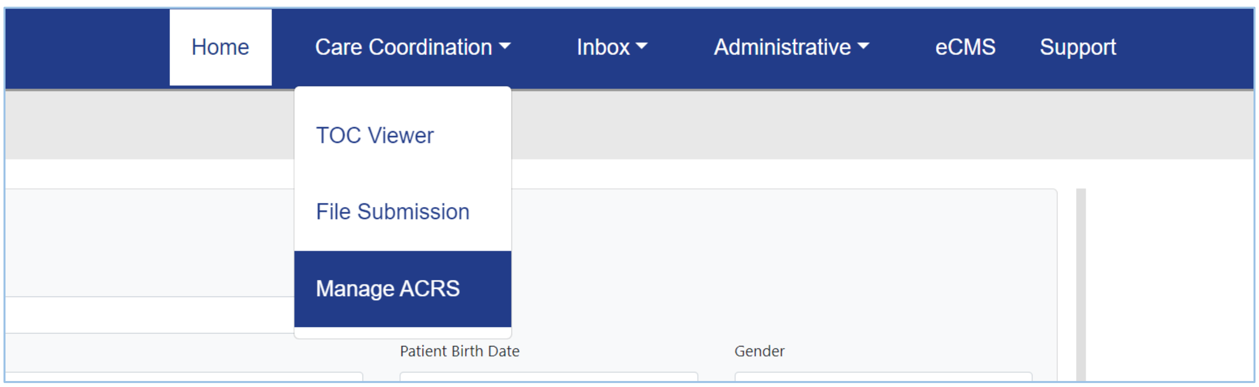


Figure 33. Manage ACRS® Menu Location

The "Active Care Relationships Filter" interface is the main user interface element for Manage ACRS®, as shown in ***Figure 34***.

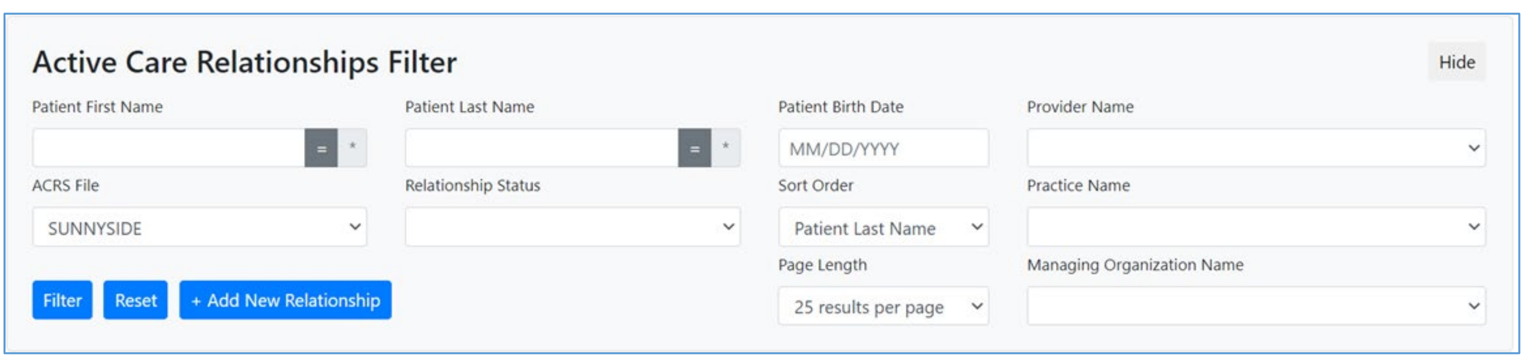


Figure 34. Active Care Relationship Filter Layout

The filter has several elements to look up information about applicable ACRS® files and the patients that are attributed to them. A breakdown of these elements is illustrated in ***Figures 35 and 36***.

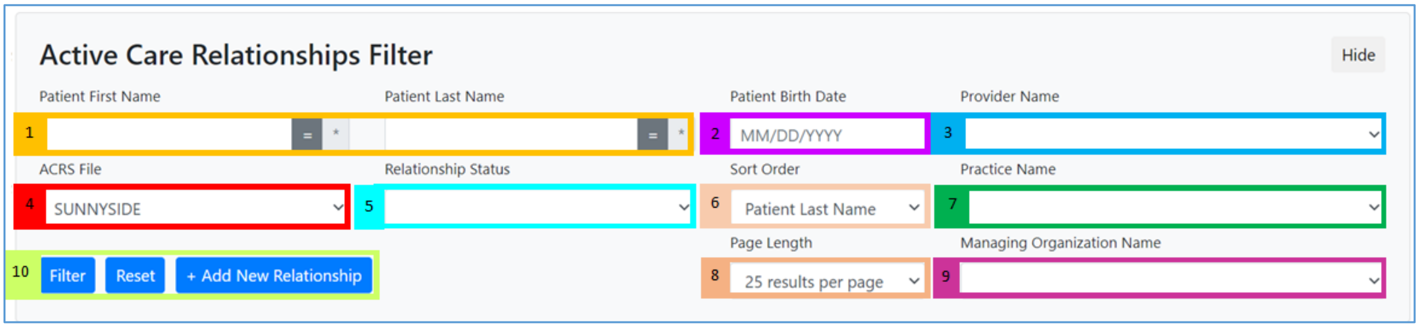


Figure 35. Active Care Relationship Filter UI Elements

1	**Patient First/Last Name:** Filter by patient first/last name with optional wildcard search function (for more information on wildcard searches, see appendix E)
2	**Patient Birth Date:** Filter by patient date of birth (MM/DD/YYYY)
3	**Provider Name:** Filter by Provider Name within ACRS® file ■ Utilizes a drop-down list of all practices from ACRS® file available within the Practice Name Field
4	**ACRS® File:** Filter by ACRS® file (applicable if organizations submit multiple ACRS files)
5	**Relationship Status:** Filter by relationship status. Currently, only one status is searchable: **Declared**
6	**Sort Order:** Sort results based on data elements (Patient Last Name, Provider Last Name, Practice Name)
7	**Practice Name:** Filter by Practice Name within ACRS® file ■ Utilizes a drop-down list of all providers from ACRS® file available within the Provider Name Field
8	■ **Page Length:** Adjust results shown per page (25, 50, 100 or 200 results)
9	**Managing Organization Name:** Filter by Managing Organization Name within ACRS file ■ Utilizes a drop-down list of all providers from ACRS® file available within the Managing Organization Name Field
10	**Filter/Reset/+Add New Relationship:** ■ "Filter" button will refresh page results with applied filter(s) ■ "Reset" button will refresh page results with default Transitions of Care Viewer settings

	■ "Add New Relationship" button will add new patient relationship(s) to ACRS® file

Figure 36. Active Care Relationship Filter UI Element Descriptions

The resulting list of entries are laid out under the following headers as shown in ***Figure 37 and 38***.

Figure 37. Active Care Relationship Filter Results Headers

1	**Patient Name:** Lists patient name, Gender, and Date of Birth in the following format: ■ Last Name, First Name M.I. (Gender) MM/DD/YYYY
2	**Patient Address:** Lists patient address in the following format: ■ Street Address City, State, Zip Code
3	**Care Team Member/Practice:** Lists Provider Last Name, First Name, NPI, Practice Name, and Practice OID of patient's care team member in the following format: ■ Last Name, First Name ((NPI)) Practice name ((Practice OID))
4	**Managing Organization:** Lists the Name and OID of the organization managing the list of care team members and practices in the following format: ■ Managing Organization Name ((Managing Org OID))
5	**Actions:** Lists actions to be made with the Patient Entry: ■ Relationship-Declared – Used to remove a declared relationship between patient and care team member ■ Copy – Used to copy the relationship. This will open the entry to confirm details of the relationship ■ Edit – Used to edit the details of the relationship

Figure 38. Active Care Relationship Filter Results Header Descriptions

3.2.2 Working with ACRS® Populations

3.2.2.1 Adding and Removing Active Care Relationships

The Manage ACRS® module can be used to add active care relationships by clicking the "+Add New Relationship" button, as shown in ***Figure 39***:

Figure 39. Add New Relationship Button

A window will appear, allowing the creation of a new active relationship by entering in the corresponding information, as pictured in ***Figure 40***.

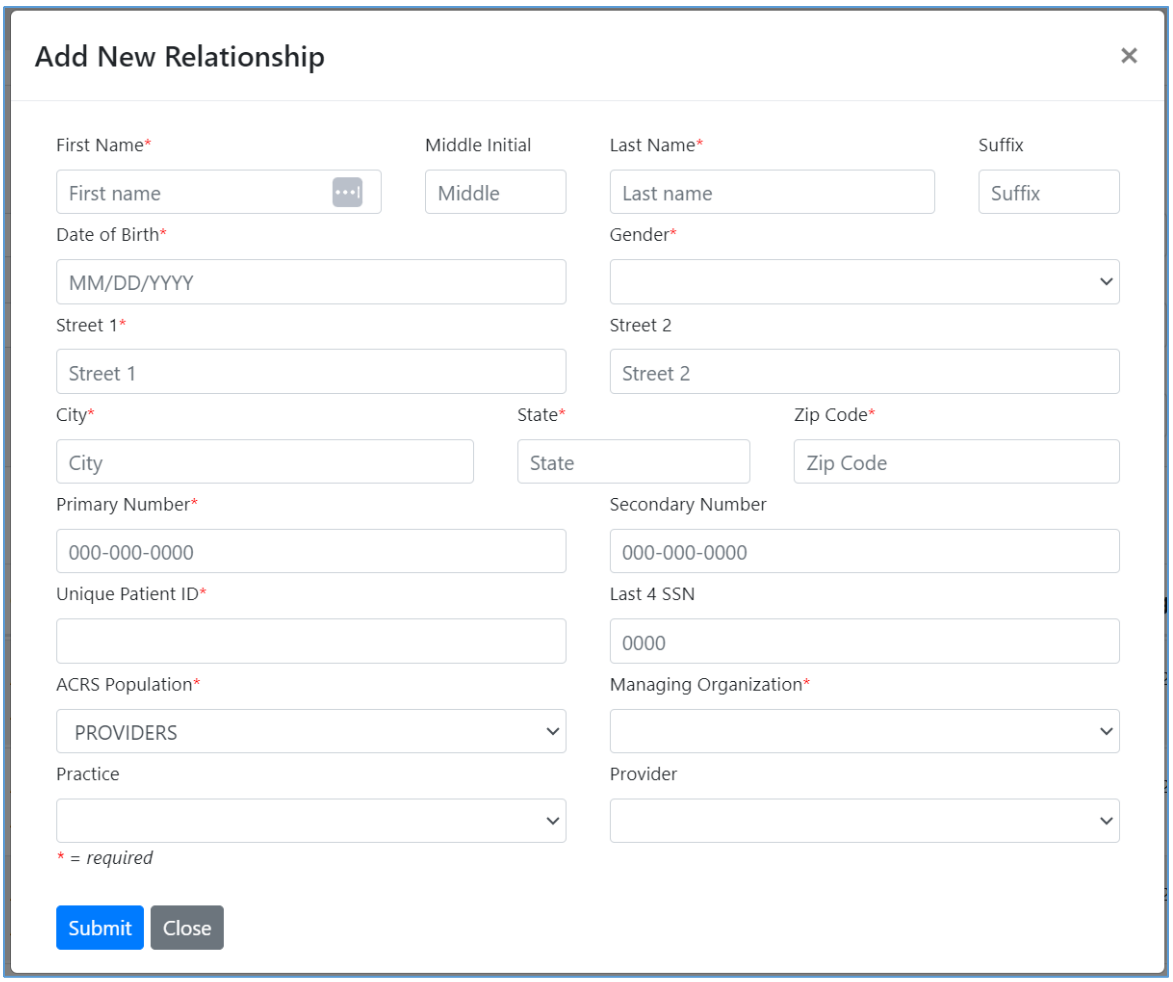


Figure 40. Add New Relationship Field Layout

The ACRS® Population, Managing Organization, Practice and Provider fields are all drop-down menus that will be populated based on information in the Health Directory that was selected in the Active Care Relationships filter.

Once all required fields are populated, the user will click "Submit" and the Manage ACRS® module will reappear with a green banner at the top declaring that the new active relationship was successfully created as shown in ***Figure 41***. The newly created relationship should appear amongst the results for that population, though it may not appear on the first page, as the results are sorted alphabetically.

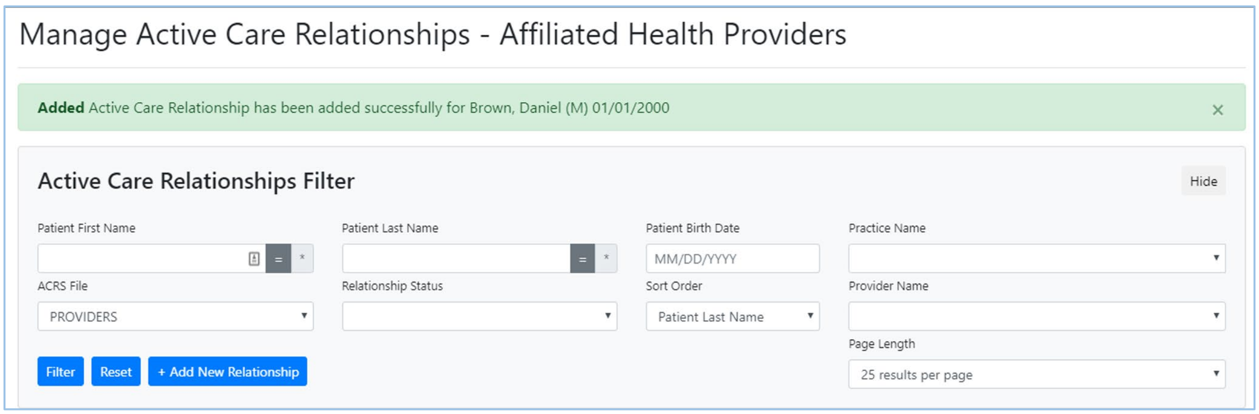


Figure 41. Successful Active Care Relationship Added Message

3.2.2.2 Copy/Edit Active Care Relationships

When an ACRS® file is selected and "Filter" is done, it will display up to the first five hundred records attributed to that ACRS® file, along with information on that patient and the patient's care team. These active care relationship entries can be copied or edited as shown in ***Figure 42***.

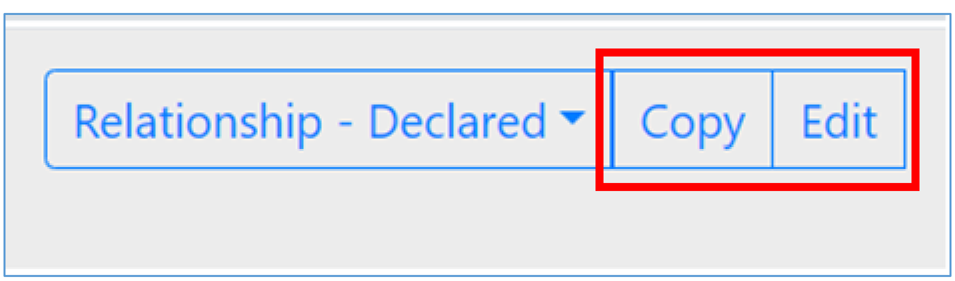


Figure 42. Copy and Edit Active Care Relationship Buttons

The "Copy" function will duplicate patient demographic data from the current entry and allow changes to be made and saved as a new active care relationship entry.

The “Edit” function will allow the ability to update and save the current active care relationship entry. Clicking either of these options will display pop-up window as shown in ***Figure 43***.

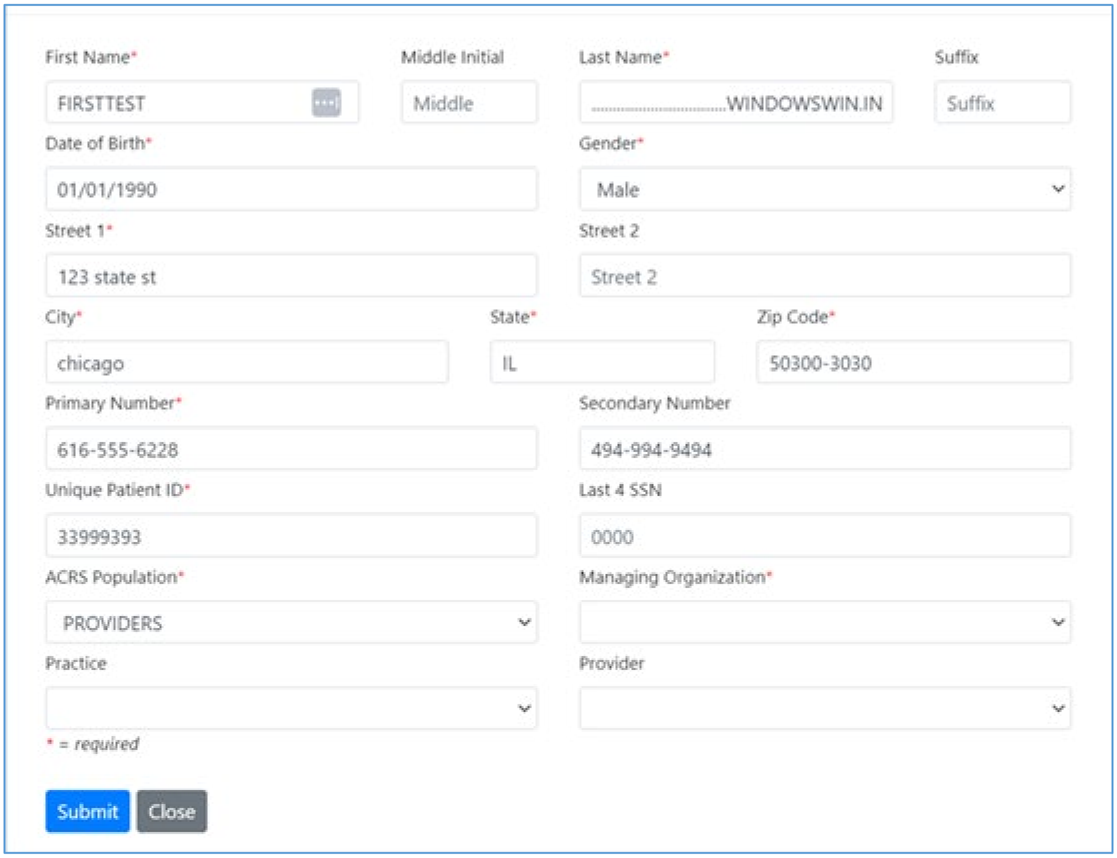


Figure 43. Copy/Edit Relationship Field Layout

This window allows fields to be updated before copying or to update the active relationship itself. Once the needed edits are made, the user can click the “Submit” button to complete the copy or update.

3.2.2.3 Removing Active Care Relationships

Deleting an active care relationship can also be accomplished through the Manage ACRS® module. In the same section as the “Copy” and “Edit” options, the “Relationship – Declared” button will display a “Remove” option when clicked as shown in **Figure 44**.

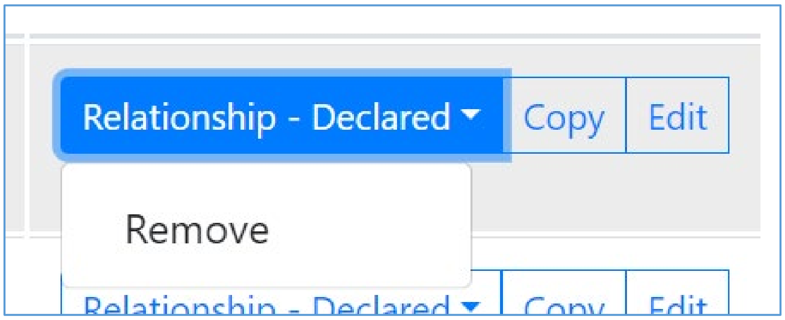


Figure 44. Remove Relationship Drop-down

When this option is selected, a confirmation window will be displayed. Clicking the “Remove” option will remove the relationship from the ACRS® file, as shown in ***Figure 45***.

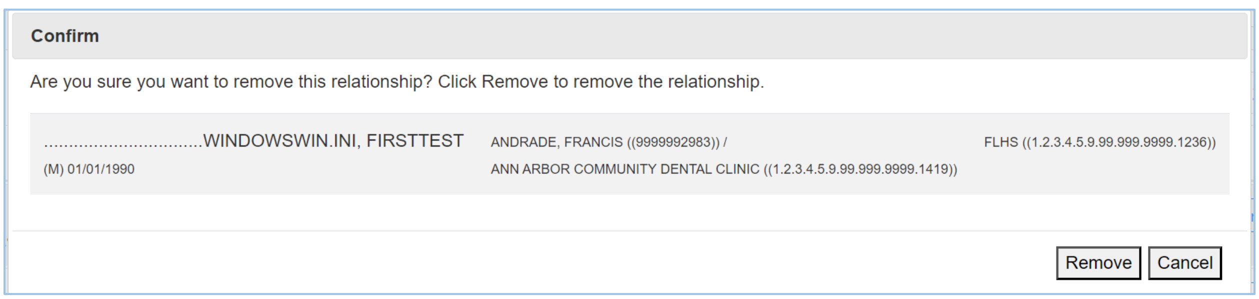


Figure 45. Remove Active Care Relationship Confirmation Screen

3.3 Patient Viewer

The Patient Viewer module is used in conjunction with other modules to display additional information about a patient. Depending on which modules the user has access to, Patient Viewer can be launched for any patient that is found through the following methods:

- Patient Search displayed on the MIGateway® homepage
- Patients displayed in the Manage ACRS® module
- Patients displayed in the TOC Viewer module

These modules will offer a list of patients in one of two ways: in the case of the Manage ACRS® module, the list will show attributed patients and their associated care team information. For the TOC Viewer module, the list will display encounter messages associated with the patient. In either situation, the patients included within these results can be selected to open the Patient Viewer.

3.3.1 Patient Viewer User Interface (UI) Elements and Views

The Patient Viewer module has several screens that are used to search for patients and provide information about patients found in other modules, including their care teams and the documents and messages associated with them.

3.3.1.1 Patient Search User Interface (UI)

For users with access to the Patient Search module, the Patient Search UI can be accessed from the MIGateway® home page after logging in as shown in ***Figure 46***.

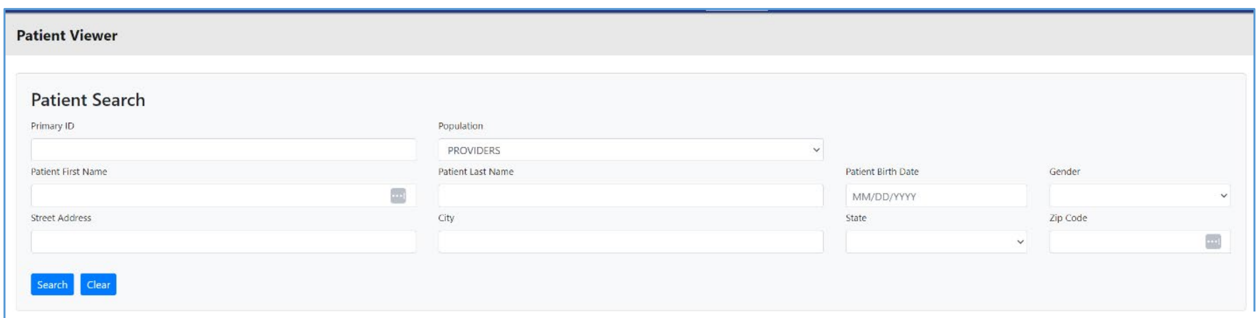


Figure 46. Patient Search Field Layout

The Patient Search UI has several elements used to filter all patients attributed to a chosen population/data source. There is also a set of headers that are used to create a list of the patients filtered from the search. These are described in ***Figures 47-50***.

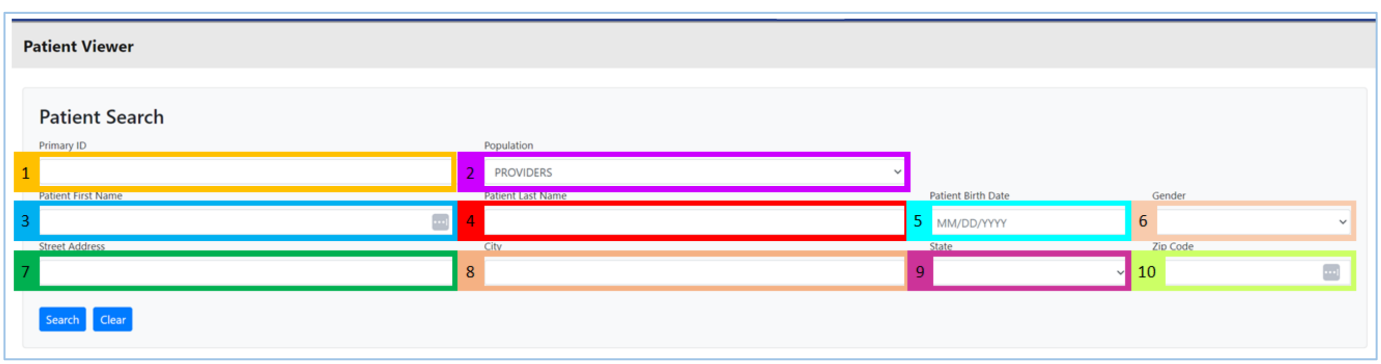


Figure 47. Patient Search UI Elements

1	**Primary ID:** Filters by the unique identifier assigned to the patient by the managing organization as part of their ACRS® attribution entry. This ID is

	established and used at the discretion of the managing organization that provided it. This field is case sensitive.
2	**Population:** Filters by the selected ACRS® population. The drop-down lists all ACRS® populations associated with the user.
3	**Patient First Name:** Filters patients by the first name of patients listed in the selected ACRS® population.
4	**Patient Last Name:** Filters patients by the last name of patients listed in the selected ACRS® population.
5	**Patient Birth Date:** Filters patients listed in the selected ACRS® population by the selected date of birth, entered in the format: **MM/DD/YYYY**
6	**Gender:** Filters patients listed in the selected ACRS® population by the selected gender from the following list: ■ M – Male ■ F – Female ■ O – Other ■ U - Unknown
7	**Street Address:** Filters patients listed in the selected ACRS® population by their address in the format: **Street Number, Street Name**
8	**City:** Filters patients listed in the selected ACRS® population by listed city.
9	**State:** Filters patients listed in the selected ACRS® population by state. Drop down includes: ■ MI ■ GA ■ WI
10	**Zip Code:** Filters patients listed in the selected ACRS® population by entered, 5-digit zip code

Figure 48. Patient Search UI Element Descriptions

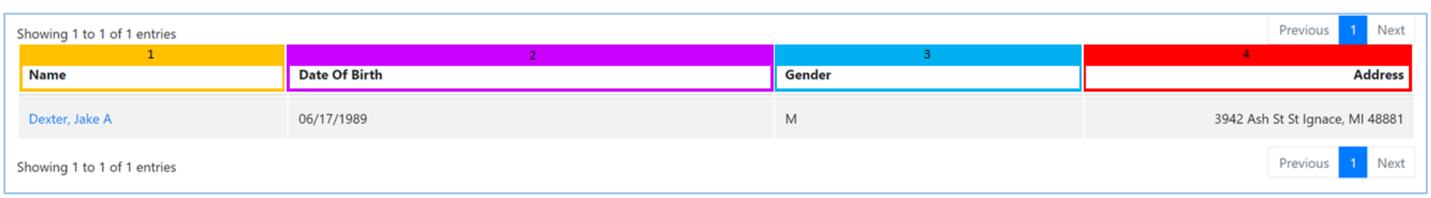


Figure 49. Patient Search Results Header UI

1	**Name:** Lists names of all patients meeting search criteria in alphabetical order, in the format: **Last Name, First Name, Middle Initial**
2	**Date of Birth:** Lists associated date of birth for all patients meeting search criteria in the format: **MM/DD/YYYY**

3	**Gender:** Lists associated gender for all patients meeting search criteria from the following list: ■ M – Male ■ F – Female ■ O – Other ■ U - Unknown
4	**Address:** Lists associated address for all patients meeting search criteria in the format: **Street Number, Street Name, City, State, Zip Code**

Figure 50. Patient Search Result Header UI Descriptions

3.3.1.2 Viewer UI

Clicking on the name of a patient listed in the Patient Search results will open another screen with more detailed information about the patient, including their care team, documents associated with them, their consent information, as well as links to their associated longitudinal record entry. This screen has display and UI elements as illustrated in ***Figures 51-58***.

Patient Summary

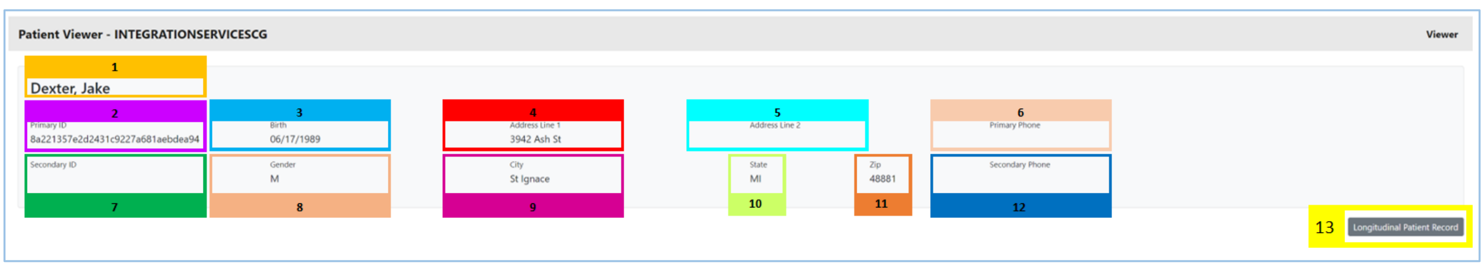


Figure 51. Patient Summary UI Elements

1	**Patient Name:** Displays the name of the selected patient in the format: **Last Name, First Name**
2	**Primary ID:** Displays the primary unique identifier associated with the patient that is provided by the managing organization as part of their ACRS® attribution entry. This ID is established and used at the discretion of the managing organization that provided it.
3	**Date of Birth:** Displays the patient's date of birth in the format: **MM/DD/YYYY**
4	**Address Line 1:** Displays the primary address for patient in the format: **Street Number, Street Name**

5	**Address Line 2:** Displays secondary address information including the following: ■ Unit/Apt Number ■ P.O. Box Number
6	**Primary Phone:** Displays patient's primary phone number, including area code
7	**Secondary ID:** Displays the secondary identifier associated with the patient that is provided by the managing organization as part of their ACRS® attribution entry. This ID is established and used at the discretion of the managing organization that provided it.
8	**Gender:** Displays patient's listed gender from the following options: ■ M – Male ■ F – Female ■ O – Other ■ U - Unknown
9	**City:** Displays patient's city of residence
10	**State:** Displays patient's state of residence
11	**Zip:** Displays patient's 5-digit zip code of residence
12	**Secondary Phone:** Displays any additional phone number associated with the patient other than their primary phone number
13	**Longitudinal Record:** Clicking this button will open an additional window that will display the full longitudinal record for the selected patient. The Longitudinal Record module will be covered in greater detail in section 3.7.

Figure 52. Patient Summary UI Element Descriptions

Care Team Tab

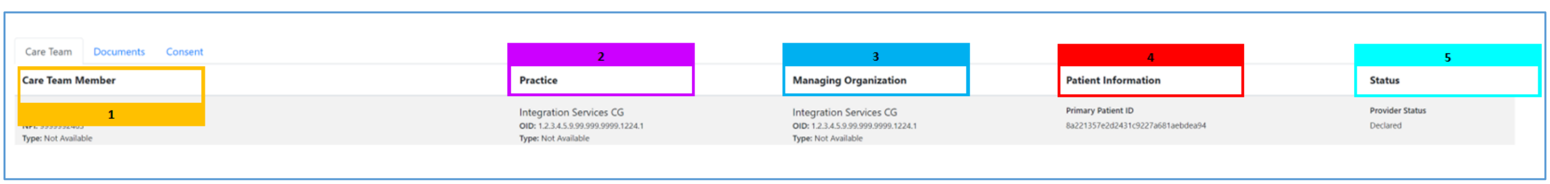


Figure 53. Care Team Tab Headers

1	**Care Member Team:** Lists all members of a patient's care team, along with additional details including: ■ Name in the format: Last Name, First Name ■ NPI ■ Type ■ Specialties

	■ Direct Address ■ Phone Number
2	**Practice:** Lists information about the practice associated with each Care Team Member, including: ■ Practice OID ■ Type ■ Phone Number ■ Address
3	**Managing Organization:** Lists information about the managing organization for the Care Team Member, including: ■ Managing Organization OID ■ Type ■ Phone Number ■ Address
4	**Patient Information:** Lists some of the same information displayed in the patient summary display for the patient, including: ■ Primary Patient ID ■ Patient Address in the format: **Street Number, Street Name, City, State, Zip Code**
5	**Status:** Lists the status of the Care Team Member's provider and consumer relationship with the patient: ■ Declared

Figure 54. Care Team Tab Header Descriptions

Documents Tab (If configured for Intelligent Query Broker)

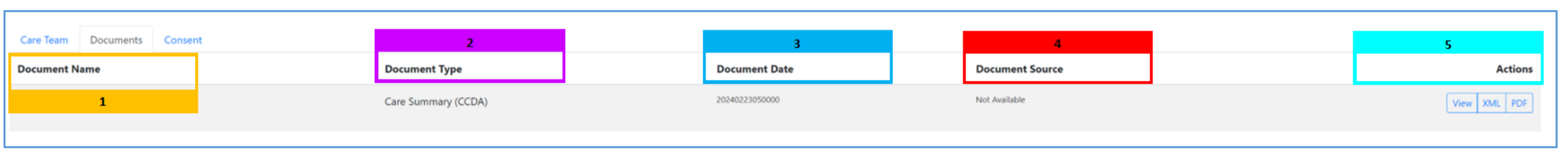


Figure 55. Documents Tab Headers

1	**Document Name:** Displays a list of documents associated with the patient, including the following: ■ Summarization of Episode Notes
2	**Document Type:** Displays CCD documents. The documents displayed may have many different names depending on the providing organization. The CCDs are retrieved from federated calls. The documents may include the following: ■ Summarization of Episode Notes (90% of documents)

	■ Other (For a complete list of documents that may be present in this field, please see 4.7 Appendix G – C-CDA Documents.
3	**Document Date:** Displays the creation date for each listed document in the format: **YYYYMMDD050000 (entire time stamp of the creation date)**
4	**Document Source:** Displays the organization or location from where the document was produced and is kept.
5	**Actions:** Lists actions that can be taken by the user to interact with the listed document, including: ■ View – Opens a more detailed window view of the entire listed document ■ XML – Export the document in raw XML format ■ PDF – Export the document in human-readable PDF format

Figure 56. Documents Tab Header Descriptions

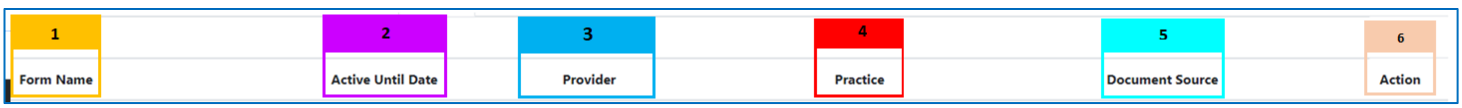


Figure 57. Consent Tab Headers

Consent Tab

1	**Form Name:** Displays the name of both the Active and Inactive consent forms on file for the patient
2	**Active Until Date:** Displays the last date active consent forms will be usable for consent-related processes and the last date that inactive consent forms were usable for consent-related processes
3	**Provider:** Displays the provider that the active and inactive consent forms authorized
4	**Practice:** Displays the practice associated with the provider that the active and inactive consent forms authorized
5	**Document Source:** Lists the source of the active and inactive consent forms
6	**Action:** Displays actions available for users to interact with the listed active and inactive consent forms, including**:** ■ PDF – Export the document in human-readable PDF format

Figure 58. Consent Tab Header Descriptions

3.3.2 Using the Patient Viewer Module

Users can access the information found within the Patient Viewer module from any other module that pulls up and displays a list of patients. Patients can also be searched for directly by using the Patient Search function.

3.3.2.1 Searching for a Patient

Users looking for a specific, or set of specific, patients can use the Patient Search function to enter criteria that will filter the list of patients attributed to a specific ACRS® population if they have been set up for Home Patient Search during their account configuration. From the MIGateway® home page, the user will need to first select the ACRS® population they would like to filter results from by selecting the applicable ACRS® population from the drop down as shown in ***Figure 59***.

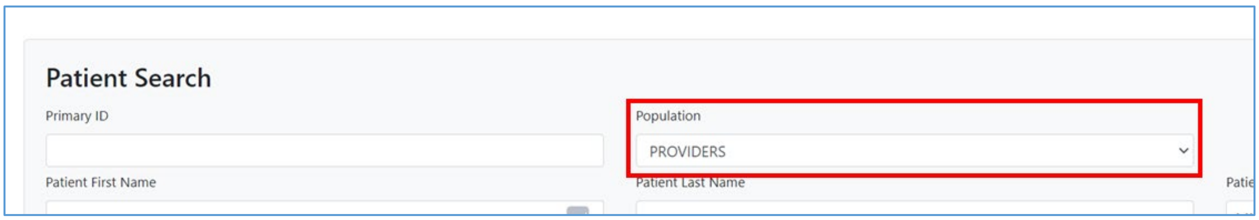


Figure 59. Patient Search Population Drop-Down Menu

The list of ACRS® populations available is determined by the ACRS® files that were specified during the MIGateway® account set up process. From here, the user will need to define the search criteria by entering values into the applicable filter fields. These are defined in detail in section 3.3.1.1. Once all needed fields have been defined, click the "Search" button to filter the results.

A list of patients that meet the specified search criteria will be listed below the Patient Search menu, as shown in ***Figure 60***.

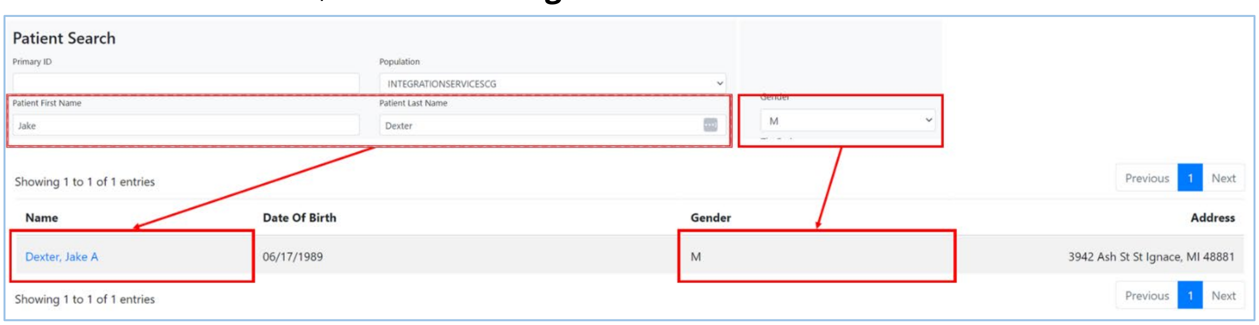


Figure 60. Patient Search Filter Entries and Results

This list shows basic information associated with each patient such as Date of Birth, Gender, and Address. It also provides a link on the patient's name that can be clicked to see more detailed information and other tools that can be used to work with the patient's entry as shown in ***Figure 61***.

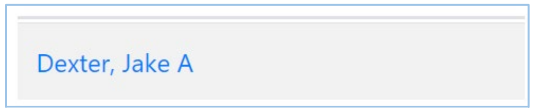


Figure 61. Patient Viewer Link

3.3.2.2 Working with Patient Viewer Entries Patient Summary

When a specific patient's name is clicked on, a new window will open, displaying a much more detailed summary for the patient, as shown in ***Figure 62***.

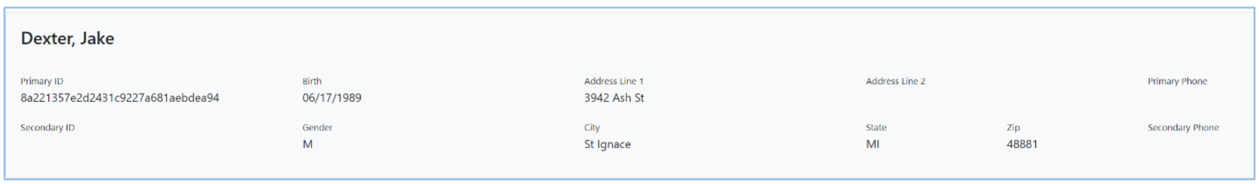


Figure 62. Patient Summary Screen

This summary includes all the information displayed on the previous page, but includes additional information such as the following:

- Primary and Secondary Phone Numbers
- Secondary ID
- Address Line 2

These entries are defined in detail in section 3.3.1.2. Additionally, the "Longitudinal Patient Record" button located on the lower right-hand corner will take the user to the patient's detailed longitudinal record view, which will be covered in greater detail in section 3.6

In addition to the Patient Summary, there are three tabs displayed for each patient that list information about the patient's care team members, any documents associated with the patient, and any Electronic Consent Management Services Use Case (eCMS) documents associated with the patient on file (this will be available soon).

Viewing Care Team Information

Users can view a summary of care team information for the patient in the care team tab, which lists all members of a patient's care team across all loaded ACRS® populations, as shown in ***Figure 63***. Users can review information about care team members by clicking this tab.

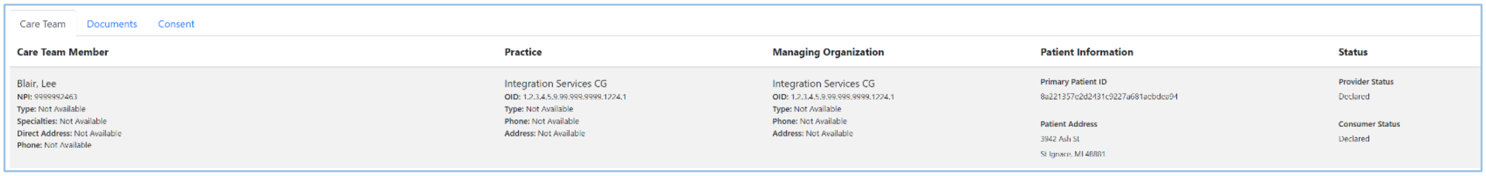


Figure 63. Care Team Tab View

This information includes:

- Care Team Member Details
- Details about the practice of which the care team member is a part of
- Details about the Managing Organization of the practice/care team member
- Patient Information that reiterates details from the ACRS file that the patient is attributed to
- The current provider and consumer status between the patient and care team member.

Viewing Patient Documents

Users can utilize the documents tab to view a summary list of all care documents on file for a selected patient. This tab also includes tools that allow a user to access a complete view of listed documents as shown in ***Figure 64***.

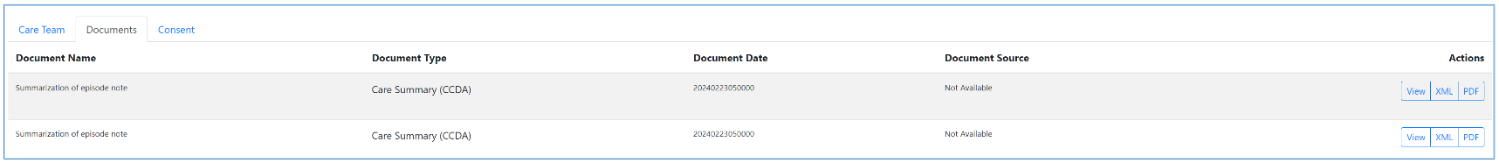


Figure 64. Documents Tab Display

In this tab, users can view a summary list of all documents on file associated with the chosen including:

- The name of all documents listed
- The type of document each named document is
- The date the document was created
- The source of the document

Additionally, under the "Actions" header, the "View" button can be used to view all the information included in a listed document as shown in ***Figure 65***.

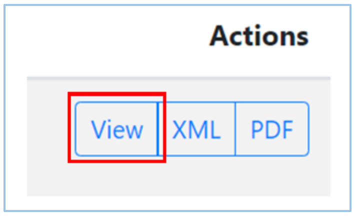


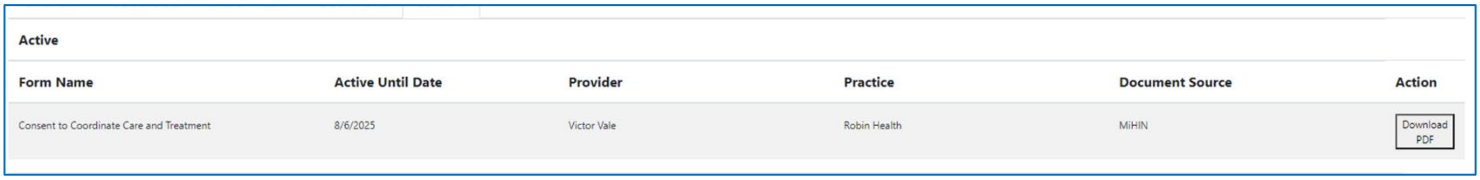
Figure 65. View Button to View Full Documents

The resulting view lists all information included in the listed document and can vary depending on the document listed. Figure 66 is an example of a detailed view of a Summarization of Episode Note while using this view:

Figure 66. Summarization of Episode Note Example

Viewing Consent Information

The Patient Viewer module can also be used to view available patient consent documents as shown in ***Figure 67.*** This is accomplished by clicking on the "Consent" tab under the patient summary.



Active

Form Name	Active Until Date	Provider	Practice	Document Source	Action
Consent to Coordinate Care and Treatment	8/6/2025	Victor Vale	Robin Health	MiHIN	Download PDF

Figure 67. Consent Tab Screen

Please note: While information is included in this user guide, the eCMS module is still being finished and will only be available in a future version of MIGateway® after is initial release. When available, the "Consent" tab will only be present for users that have signed up for the eCMS Module.

The resulting view lists all active and inactive consent forms on file, as well as summary information about each consent form, including:

- The date the form is/was active until
- The provider that the consent authorized for use
- The practice that the listed provider was a part of
- The source of the consent document

A more detailed view of the complete consent document can be reviewed by clicking the "Download PDF" button under "Actions" as shown in ***Figure 68***.

Figure 68. View Documents Button

3.3.2.3 Exporting Patient Documents and Consent Forms

In addition to viewing the documents and consent forms listed for each patient, selected documents and consent forms can be exported for use. In either case, the user will select the format they wish to export the document in. The options can vary depending on the document, but in general, the options available are:

- XML – Export the raw XML file for a CCD (May not be applicable for all document types)
- PDF – Export a human-readable version of the document

Once the user has determined what format the document should be exported in, they will click the appropriate button under the "Action" header in the patient summary view, or alternatively, can click the appropriate format option within the detailed document view itself, also under the “Action” header as shown in ***Figures 69 and 70***.

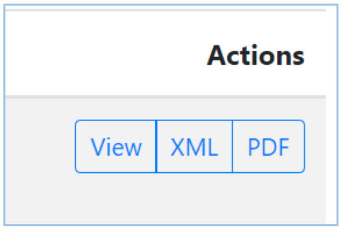


Figure 69. Document Format Export Options in Patient Summary

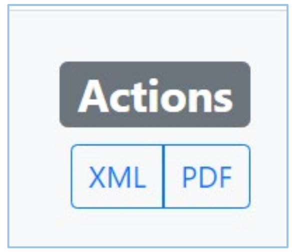
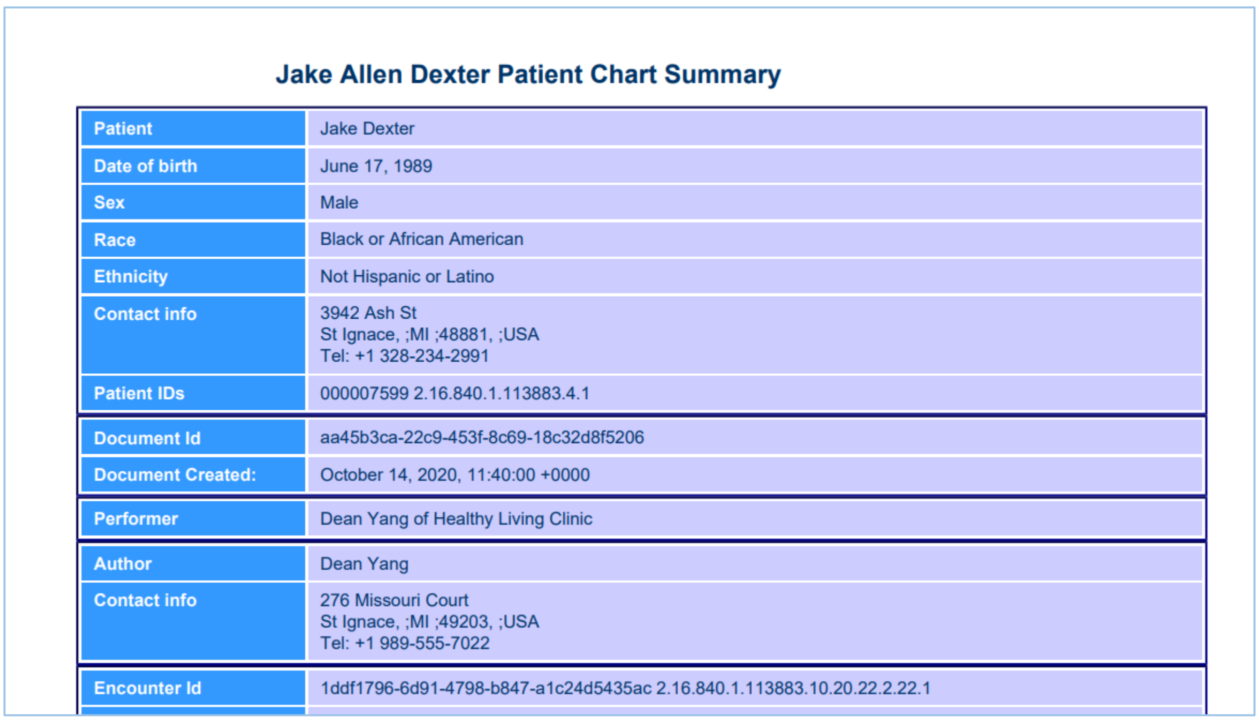


Figure 70. Document Format Export Options Within Document View

Once selected, MIGateway® will generate the document in the chosen format and download it to the user’s system. An example of an exported PDF is displayed in ***Figure 71***.



Jake Allen Dexter Patient Chart Summary

Patient	Jake Dexter
Date of birth	June 17, 1989
Sex	Male
Race	Black or African American
Ethnicity	Not Hispanic or Latino
Contact info	3942 Ash St St Ignace, ;MI ;48881, ;USA Tel: +1 328-234-2991
Patient IDs	000007599 2.16.840.1.113883.4.1
Document Id	aa45b3ca-22c9-453f-8c69-18c32d8f5206
Document Created:	October 14, 2020, 11:40:00 +0000
Performer	Dean Yang of Healthy Living Clinic
Author	Dean Yang
Contact info	276 Missouri Court St Ignace, ;MI ;49203, ;USA Tel: +1 989-555-7022
Encounter Id	1ddf1796-6d91-4798-b847-a1c24d5435ac 2.16.840.1.113883.10.20.22.2.22.1

Figure 71. Chart Summary PDF Example

3.4 Transitions of Care (TOC) Viewer

Users can view various electronic messages regarding patients in the Transition of Care (TOC) Viewer, including the following message types:

- Admission, Discharge, Transfer Notifications
- Discharge Medication Reconciliation
- Ambulatory CCDs

The features included with the TOC Viewer allow users to:

- See human-readable versions of ADT Notifications that are sent for patients;
- Filter received ADT notifications for a given message type, patient, organization, etc.;
- View medication reconciliation messages that are associated with specific ADT notifications (A03 event types); and
- Work through a notification queue and act on messages.

3.4.1 TOC Viewer UI Elements

TOC Viewer can be accessed by navigating to the Care Coordination dropdown and selecting the TOC Viewer option, as illustrated in ***Figure 72***.

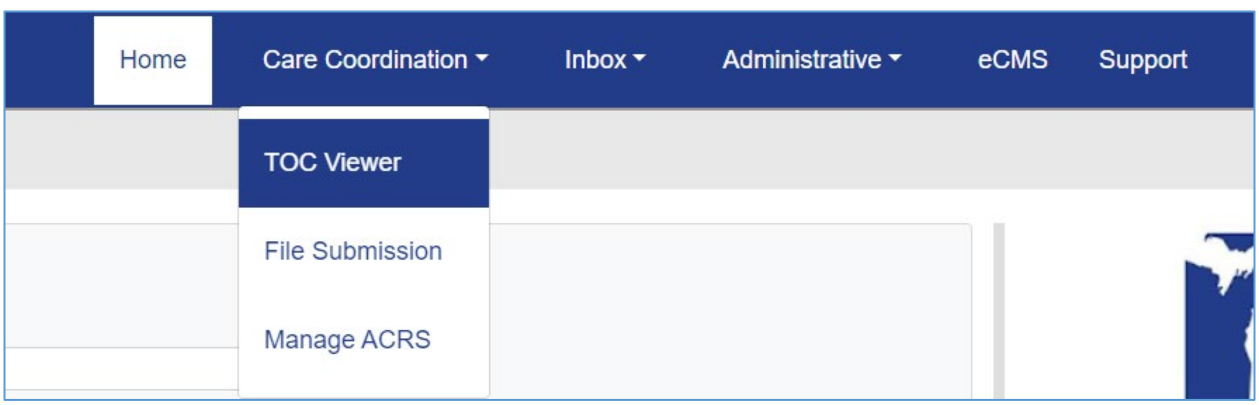


Figure 72. TOC Viewer Menu Location

3.4.1.1 TOC Viewer - ADT Filter View

The main user interface element used within the TOC Viewer module is the ADT Filter, which can be selected by clicking the “Viewer” option in the upper right-hand corner of the screen as shown in ***Figures 73 and 74***.

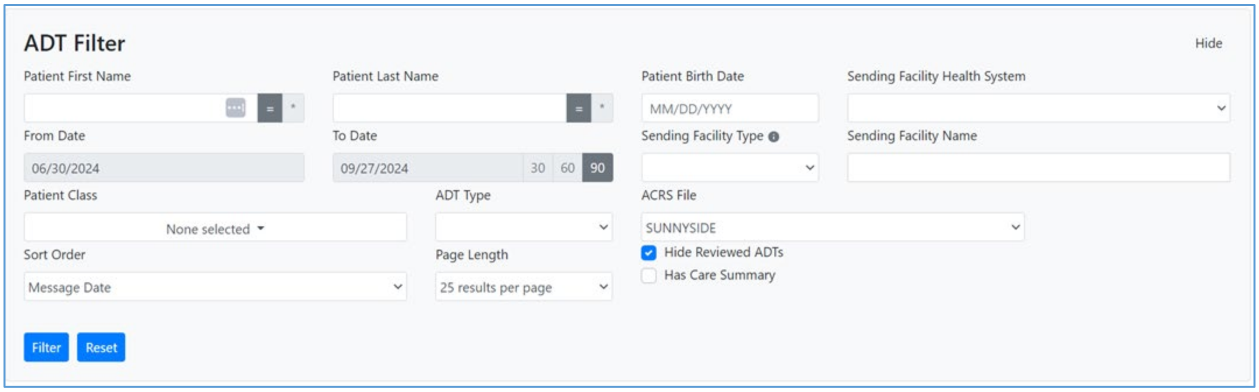


Figure 73. ADT Filter Screen Layout

Figure 74. ADT Filter Viewer Option

The filter has several elements to search for and look up information about applicable ADT and Med Rec messages. A breakdown of these elements is illustrated in ***Figures 75 and 76***.:

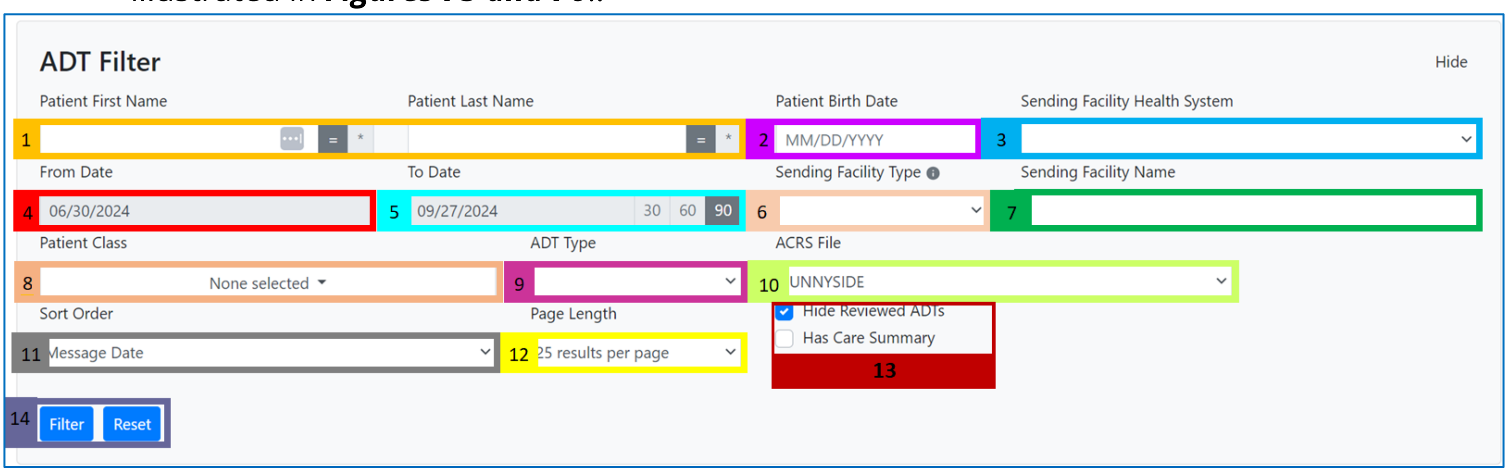


Figure 75. ADT Filter UI Elements

1	**Patient First and Last Name:** Filter by patient first/last name with optional wildcard search functions (for more information on wildcard searches, see Appendix 4.5 E)

2	**Patient Birth Date:** Filter by patient date of birth in the format: **MM/DD/YYYY**
3	**Sending Facility Health System:** Filter for ADTs within a health system ■ Type first three letters of a sending facility health system for drop-down suggestions – not a free entry field
4	**From Date:** Filter by specific start date
5	**To Date:** Filter by specific end date within 90 days or 30, 60, 90-day date range
6	**Sending Facility Type:** Filter by facility type: ■ Hospital ■ Skilled Nursing Facility ■ Home Health Used in conjunction with the "Sending Facility Name" filter
7	**Sending Facility Name:** Filter for ADTs within a health system ■ Type first three letters of the sending facility name for drop-down suggestions to appear
8	**Patient Class:** Filter by patient class: ■ Inpatient ■ Outpatient ■ Emergency ■ Observation
9	**ADT Type:** Filter to view messages of specific event types from the following: ■ Admission (A01) ■ Transfer (A02) ■ Discharge (A03) ■ Register (A04) ■ OP to IP (A06)
10	**ACRS® File:** Filter to view multiple Active Care Relationship Service (ACRS®) patient populations (if applicable)
11	**Sort Order:** Sort results based on data elements: ■ Message Date ■ Patient Name
12	**Page Length:** Adjust results shown per page (25, 50, 100 or 200 results)
13	**Hide Reviewed ADTs/Has Care Summary:** Selecting either of these check boxes will refine the search to include messages already reviewed by the user and/or refine the search to only show ADTs that have a care summary, respectively. The "Hide Reviewed ADTs" box is checked by default.

14	**Filter/Reset:** The “Filter” button will refresh page results with applied filter(s). The “Reset” button will refresh page results with default TOC Viewer settings.

Figure 76. ADT Filter UI Element Descriptions

After the filter has been configured and refreshed, all TOC message entries meeting the search criteria are displayed under the headers shown in ***Figures 77 and 78***.

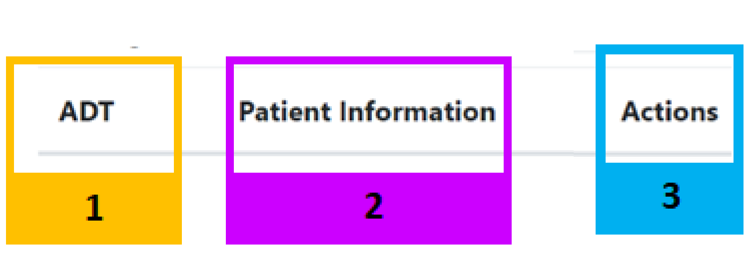


Figure 77. TOC Viewer Message Result Headers

1	**ADT:** Displays the event type associated with the displayed messages: ■ Admission (A01) ■ Transfer (A02) ■ Discharge (A03) ■ Register (A04) ■ OP to IP (A06)
2	**Patient Information:** Lists information about the patient associated with the displayed TOC message: ■ Name of the patient, date of birth, location of event type, and date of encounter ■ Provider ■ Message Date/Time ■ Patient Class ■ Diagnosis Type ■ Diagnosis ■ Insurance Company Name ■ Admission Type ■ Admit Reason ■ Assigned Location Admission Time (A01) ■ Discharge Disposition ■ Discharge Location ■ Discharge Time (A03) **Note:** Some patient information entries may indicate that the patient associated with the selected messages is deceased. This status is

	marked with the  symbol. Hovering over this symbol will display the message, “Patient is marked as deceased.”
3	**Actions:** Lists several actions that can be taken to see additional views associated with the TOC message, the associated patient, and the CCD, including the following: ▪ Care Summary – If applicable, ▪ View ▪ HL7 ▪ PDF

Figure 78. TOC Viewer Message Result Header Descriptions

3.4.1.2 TOC Viewer – Reporting

The TOC Viewer – Reporting interface is accessed by clicking the “Reporting” option in the upper righthand corner of the TOC Viewer Screen, as pictured in ***Figure 79***.

Figure 79. TOC Viewer - Reporting Button

The resulting screen has several UI elements used in generating report information relevant in Meaningful Use Stage 3 attestations, which will be covered in greater detail in section 3.4.2.3. The UI elements are as shown in ***Figures 80 and 81***.

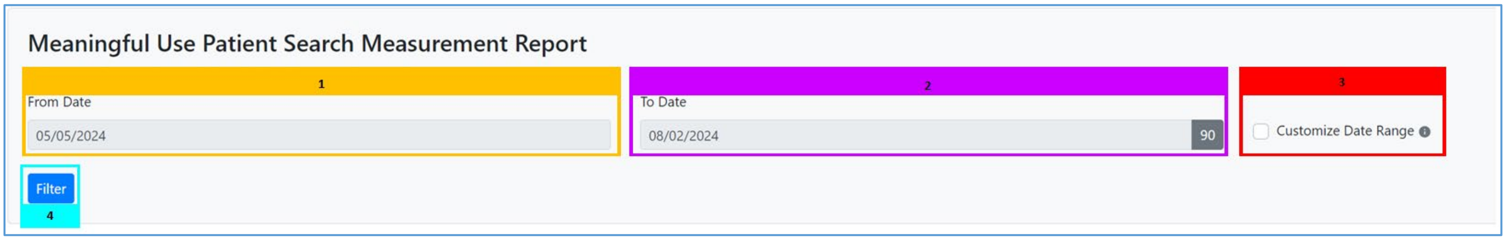


Figure 80. Meaningful Use Reporting UI Elements

1	**From Date:** Earliest date in the range that the user would like to run a report on Patient Search metrics (maximum range of 90 days)
2	**To Date:** Latest date in the range that the user would like to run a report on Patient Search Metrics (maximum r of 90 days)

3	**Customize Date Range:** When checked, allows users to run a report on Patient Search metrics outside of the maximum 90-day range
4	**Filter:** Filters results based on the above criteria and produces results within the specified range of dates

Figure 81. Meaningful Use Reporting UI Element Descriptions

3.4.2 Working with Transitions of Care Messages

3.4.2.1 ADT and Care Summary Overview

A List of messages and corresponding patients appear after criteria have been defined in the ADT Filer. **Figure 82** shows an example of the ADT message overview.

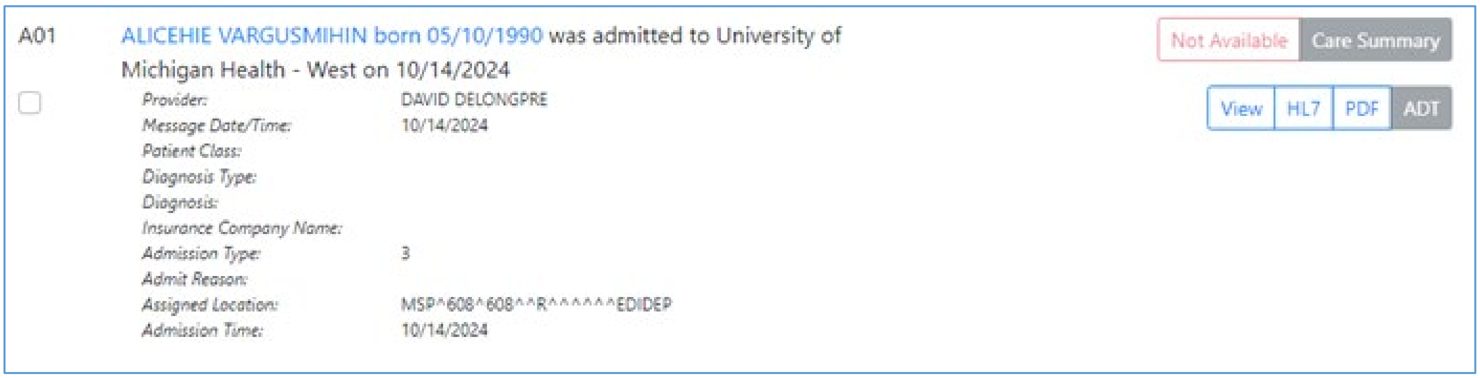


Figure 82. ADT Message Overview Example

Clicking on the patient's name/date of birth will open the Patient Viewer page for the patient. More information on this module and view is covered in Section 3.3.

Clicking the "View" Button, as shown in ***Figure 83***, will open an additional screen showing the full ADT message for the patient as shown in ***Figure 84***.

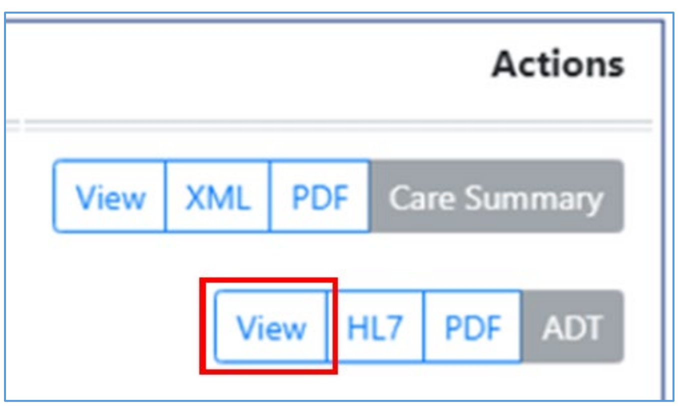


Figure 83. View Button for Full ADT View

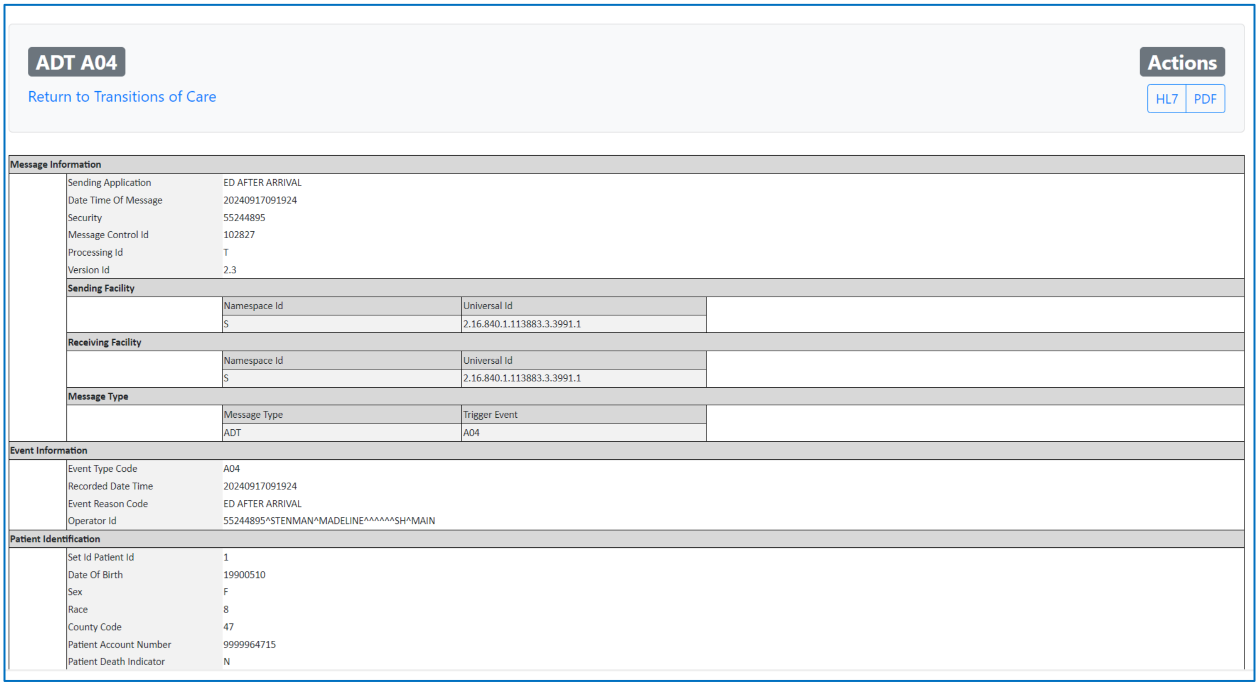


Figure 84. Full ADT Message View

Additionally, users can view a more detailed discharge care summary CCD by clicking the other “View” button next to Care Summary under the “Actions” header, as shown in ***Figure 85***.

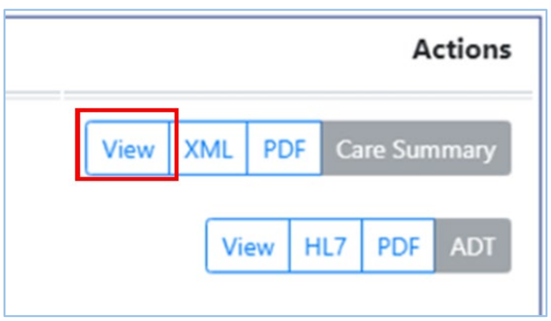


Figure 85. View Button for Complete Care Summary View

In the resulting view, the full Discharge Care Summary is displayed as shown as illustrated in ***Figure 86***.

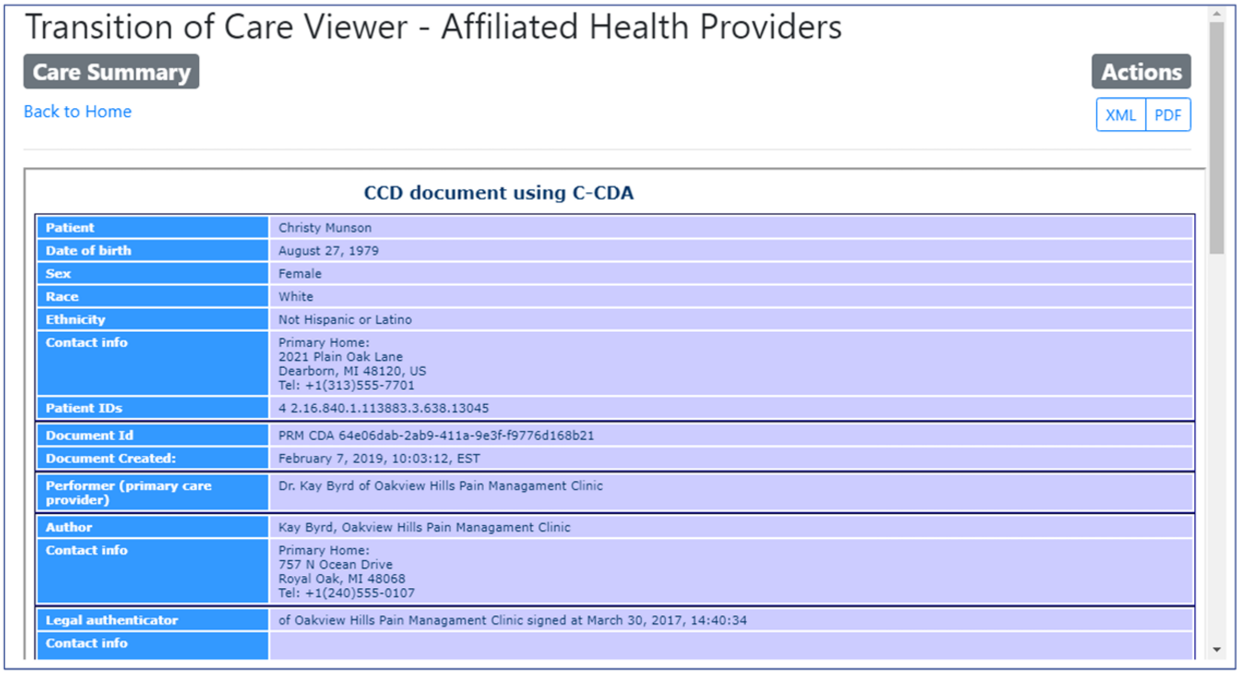


Figure 86. Discharge Care Summary Example

3.4.2.2 Exporting ADTs and Care Summaries

The TOC viewer also offers export options for both ADT and Care Summary messages. These can be found in the same areas as the “View” buttons described in the previous section under the “Actions” header. These can be exported in the formats shown in ***Figures 87 and 88***, depending on which summary is needed:

Care Summary Export Options:

Figure 87. Care Summary Export Option Buttons

- **XML:** Download the raw care summary XML file
- **PDF:** Download the human readable Care Summary in PDF format

ADT Export Options:

Figure 88. ADT Message Export Option Buttons

- **HL7:** Download the raw HL7 ADT File
- **PDF:** Download the human readable ADT in PDF format

Note: Only Discharge ADTs (A03) will have an associated Care Summary attached to the ADT Notification. Additionally, the following information must match what is included in the A03 ADT, as well as the Care Summary, for the CCD to be attached to the A03 ADT Notification:

- Patient First Name
- Patient Last Name
- Patient Date of Birth
- Patient Gender
- Encounter ID/Visit ID

Additionally, export options are also available for the detailed ADT and Care Summary message view as HL7, XML, or PDF options, as shown in ***Figures 89 and 90***.

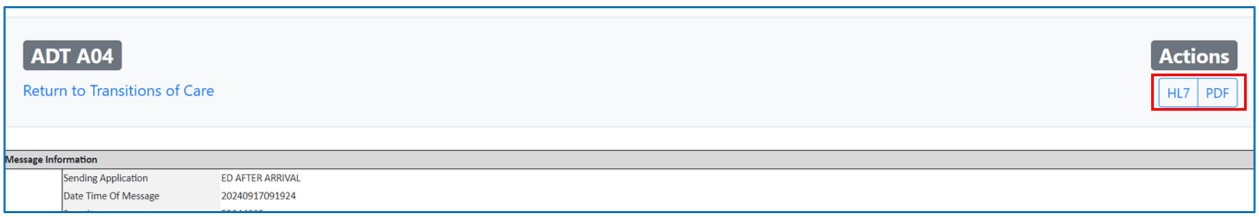


Figure 89. ADT Message Export Options

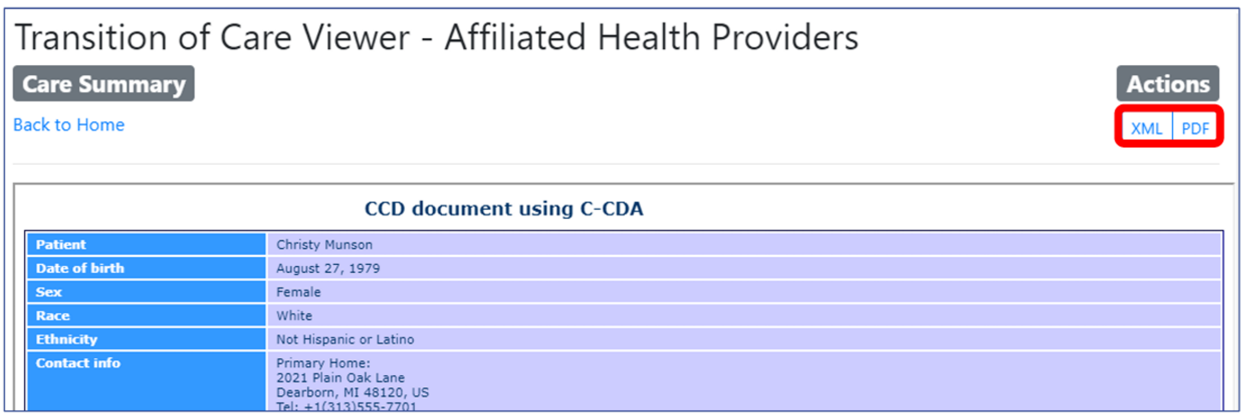


Figure 90. Care Summary Message Export Options

3.4.3 Reporting with TOC Viewer

3.4.3.1 Meaningful Use Patient Search Measure Report

The TOC Viewer Reporting functionality can generate reports to show how many patients the user successfully searched for during a given 90-day period. This data is useful in Meaningful Use Reporting attestations. This reporting functionality allows the user to do the following:

- Filter based on a specified period to see the number of patients successfully searched in TOC Viewer when the patient's first name, last name, and date of birth are entered
    - The data also includes the number of patients found, as well as the number of patients found with a CCD
- Download a PDF version of the report to support Meaningful Use Stage 3 attestations

For a patient to be counted in the report, a patient's first name, last name, and date of birth must have been searched during the time range set by the filter. If only the first name and last name are provided while using TOC viewer and one or more patients are returned, they will not be counted in the report.

To run the report, a user must select a date range using the options outlined previously in section 3.4.1.2. Once selected, clicking the "Filter" button will generate a report with two sections: a high-level overview of the results and a table of patients the user has searched. These are covered in greater detail below:

Results Overview

At the top of the results section, information is returned on the established search criteria, including the date the report was ran and the date range provided in the filter menu. This includes the following information:

- Total Patients Searched – Number of patients searched for during the chosen search date range using first name, last name, and date of birth
- Total Patients Returned in Search
- Total Patients Returned in Search with a CCD

An example of this report is shown in **Figure 91**, along with its search criteria.

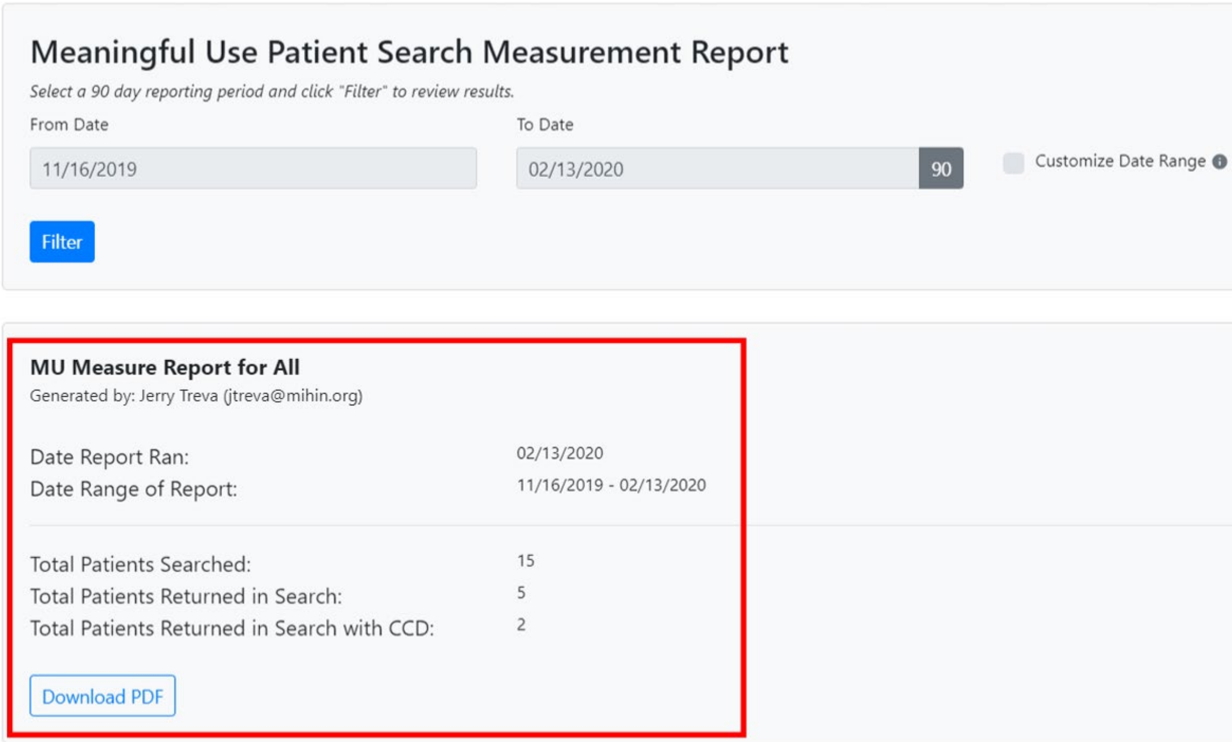
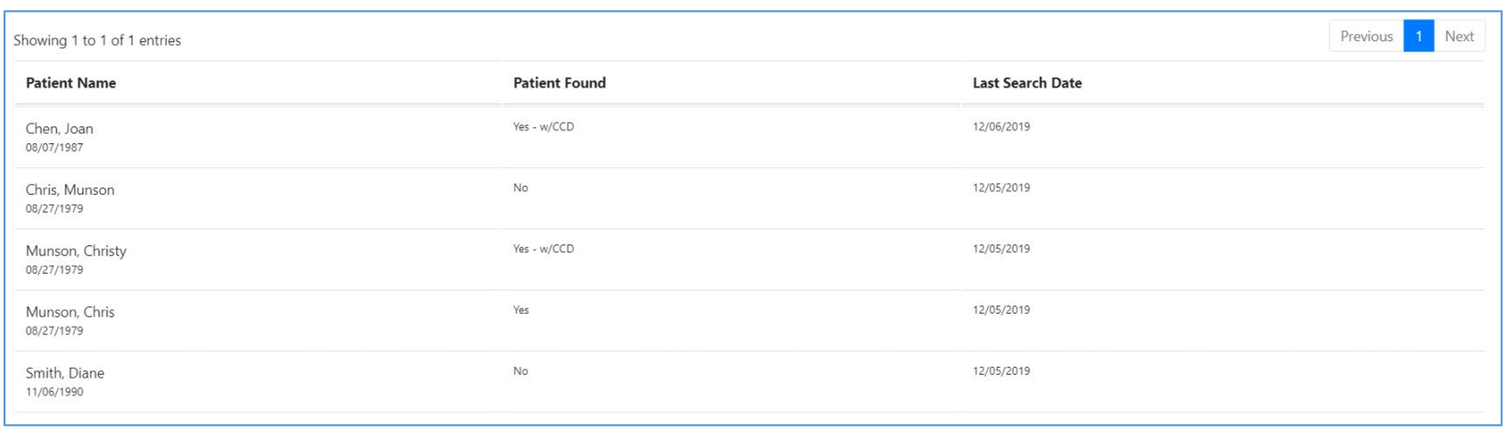


Figure 91. Meaningful Use Patient Search Measurement Report Results

Searched Patient Table

Search data that meets the criteria will also be displayed in a table within the user interface, as shown in **Figure 92**.


Showing 1 to 1 of 1 entries

Previous 1 Next

Patient Name	Patient Found	Last Search Date
Chen, Joan 08/07/1987	Yes - w/CCD	12/06/2019
Chris, Munson 08/27/1979	No	12/05/2019
Munson, Christy 08/27/1979	Yes - w/CCD	12/05/2019
Munson, Chris 08/27/1979	Yes	12/05/2019
Smith, Diane 11/06/1990	No	12/05/2019

Figure 92. Meaningful Use Patient Search Measurement Report Patient Table

Each displayed row will show whether a patient was found at the time of the last search date and if the patients found have a related CCD.

Users can download a copy of the report in PDF format by clicking the “Download PDF” button, as shown in **Figure 93**.

Figure 93. Download PDF of Meaningful Use Patient Search Measurement Report

3.5 Diretto®

MiHIN’s Health Information Service Provider (HISP), Diretto®, makes sending direct secure messages with patient Protected Health Information (PHI) quick, easy, and efficient. Users can access Diretto® from within the MIGateway® application.

The login screen for the Diretto® inbox tab is shown in ***Figure 94***. Users must enter credentials for their Diretto® account.

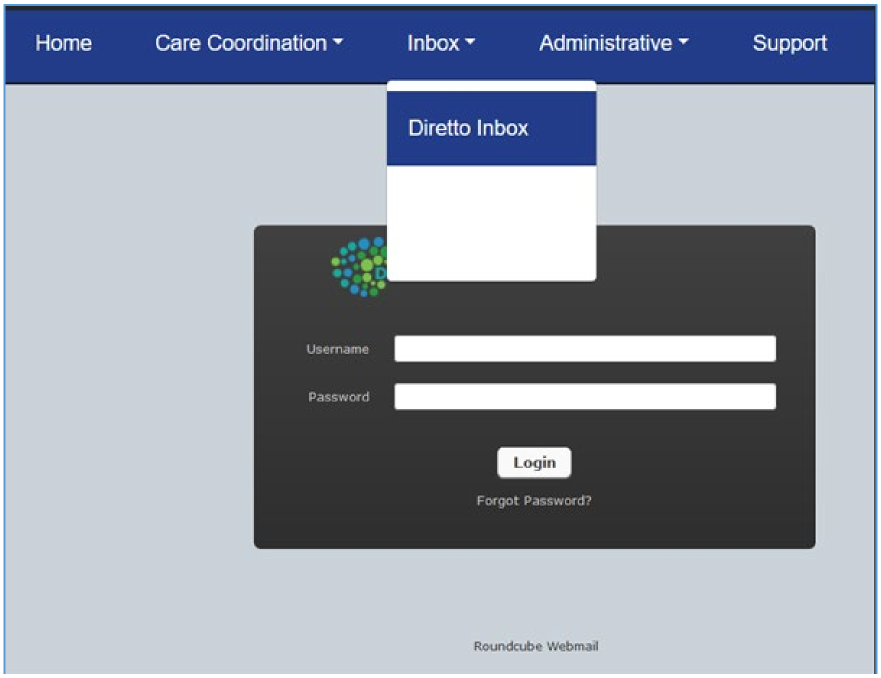


Figure 94. Diretto® UI and Login Screen

3.5.1 Diretto® Interface

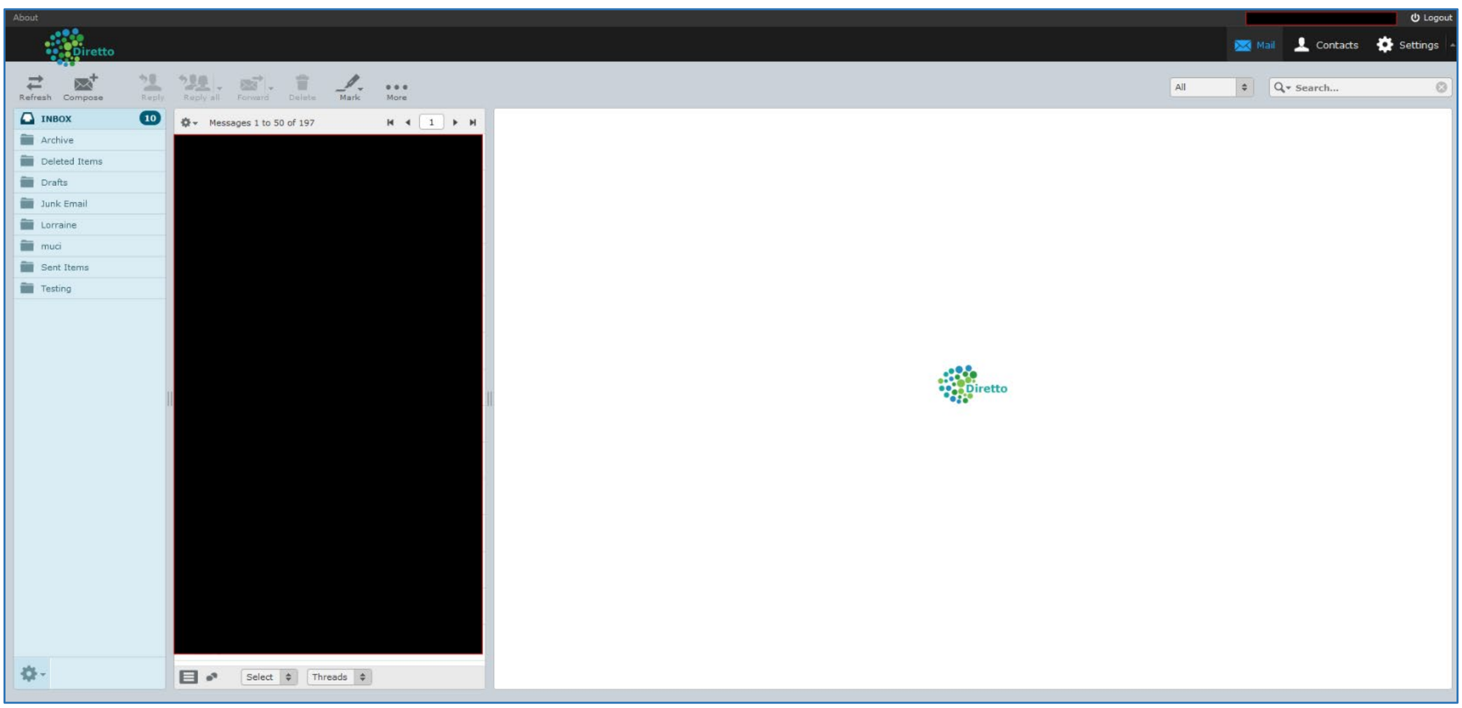


Figure 95. Diretto® Email Interface

Once logged in, the user will be taken to the main mailbox page, as shown in ***Figure 95***.

The layout is like any email client with the following folders:

- Inbox – Location of all incoming messages
- Archive – Location where older messages are stored after a certain period
- Deleted Items – Any items deleted out of any of the other folders will be placed in this folder. From here, they can either be restored to their original folder or deleted permanently.
- Junk Email – Location of unwanted messages sent from unrecognized sources. The messages that qualify as junk mail can be defined as needed.
- Sent Items – Location of a copy of all sent messages

In addition, custom folders may be created to further organize the inbox, and rules can be set to automatically sort incoming mail by selecting the "More" button.

Users can request an account if interested in this service. To do so, please go to https://mihin.org/requesthelp/.

For more information on Diretto®, visit https://mihin.org/services/diretto/.

3.6 Longitudinal Patient Record

The Longitudinal Patient Record is a comprehensive patient record comprised of data from several data sources across the healthcare continuum. It is designed to be one record per patient by using comprehensive patient matching logic wrapped in a consent management model. The Longitudinal Patient Record module provides an interface for users to access this patient record in a convenient and digestible manner and provides tools to work with the data displayed. This module allows users to:

- Access clinical data efficiently, including data needed for:
    - Treatment
    - Payment
    - Operations
    - Public Health
    - Federal Programs
    - Individual Authorizations
- Provides information needed for resolution of:
    - Care Coordination

- Population Health Management
- Medication Management
- Clinical Decision Support

The Longitudinal Patient Record module seeks to present data in a timely manner and in a usable and actionable format so recipients can deliver efficient and effective patient care.

3.6.1 Longitudinal Record UI Elements

The Longitudinal Record is accessed via the Patient Viewer described in more detail in section 3.3. A user can access the Longitudinal Record in the Patient Summary view by clicking the gray "Longitudinal Patient Record" button located in the lower right corner, as shown in **Figure 96**.

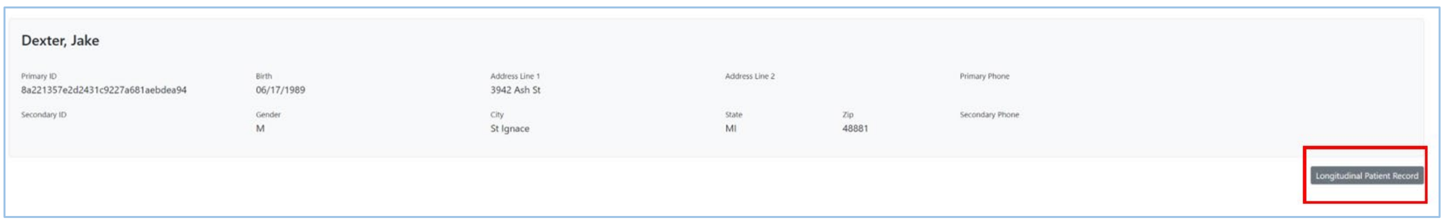


Figure 96. Longitudinal Record Access via Patient Viewer

The resulting screen will display the Longitudinal Record for the selected patient. This view has many sections and UI elements that display a wide range of information about the patient and their summary of care. These are broken into the following sections:

3.6.1.2 General Setting UI Elements

There are several UI elements on the main Longitudinal Record page, which are designed to allow the user to better define and work with the information provided throughout the rest of the page as shown in ***Figures 97 and 98***.

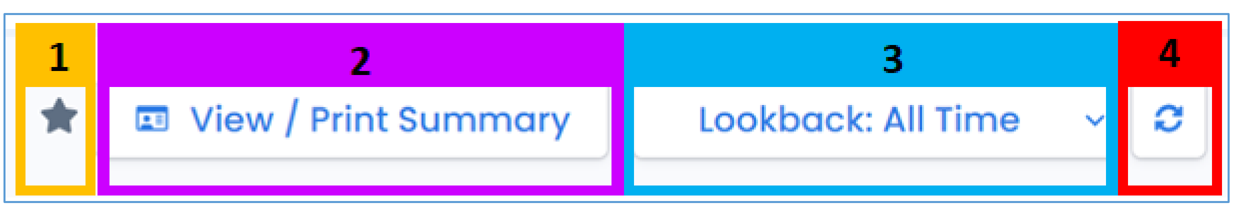


Figure 97. General Longitudinal Record UI

1	**"Star:"** When toggled, this sets the patient record as a "favorite" that can be accessed from favorited patients list.

2	**View/Print Summary:** Opens an interface that allows users to create “Face Sheets” that customize the summary information the user would like to create a printable or downloadable file for
3	**Lookback:** Drop-down menu that allows a user to define the period they would like information on the patient for in the following increments: ■ All Time ■ 12 Months ■ 6 Months ■ 5 Years
4	**Refresh:** Refreshes the Patient Summary page, considering any changes to the specified period

Figure 98. LR General UI Element Descriptions

3.6.1.1 Patient Information

The patient information section of the Longitudinal Record displays individual details about the patient, including name, identifiers, demographics, and address information. These details are organized into a series of tabs as shown in ***Figures 99 and 100***.

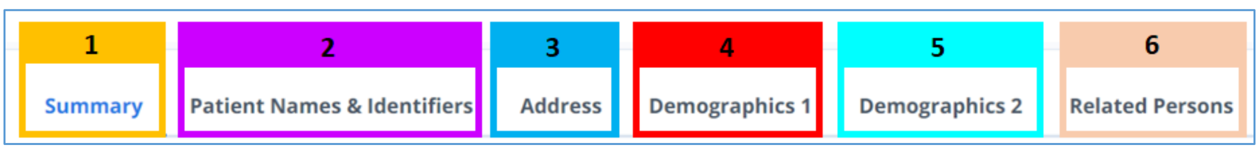


Figure 99. Patient Summary – Patient Information Headers

1	**Summary:** Displays a summary of the basic patient information included in all other tabs, including:
	■ Patient Information
	    ○ EID
	    ○ First Name
	    ○ Middle Name
	    ○ Last Name
	■ Demographics
	    ○ Date of Birth in the format: YYYY-MM-DD
	    ○ Gender
	    ○ Marital Status
	    ○ Deceased
	■ Contact Information
	    ○ Email
	    ○ Phone

	○ Address in the format: Street Number, Street Name, City, State, Zip Code
2	**Patient Names & Identifiers:** Displays all unique identifiers (both primary and secondary), as well as any names attributed to the patient in the following sections: ■ Primary IDs ○ ID Source ○ Patient ID ■ Secondary IDs ○ ID Source ○ ID Value ○ ID Type ■ Names ○ First – All first names attributed to patient ○ Last – All last names attributed to patient
3	**Address:** Displays address information for the patient, including the following information: ■ Source – The source the address information was pulled from ■ Address Line 1 – Street number and name ■ Address Line 2 – Apt/Unit Number or P.O. Box ■ City ■ State ■ Postal Code – 5 Digits ■ Last Updated in the format: MM/DD/YYYY
4	**Demographics 1:** Displays additional demographic information for the patient, including the following: ■ Language ○ Language ○ Preferred Status: True or False ○ Source ○ Last Updated in the format: MM/DD/YYYY ■ Religion ■ Citizenship
5	**Demographics 2:** Displays additional demographic information for the patient, including the following: ■ Birthplace ■ Race ○ Race ○ Source

	○ Last Updated in the format: MM/DD/YYYY ■ Ethnicity ○ Ethnicity ○ Source ○ Last Updated in the format: MM/DD/YYYY
6	**Related Persons:** Displays a list of individuals related to the patient

Figure 100. Patient Summary - Patient Information Header Descriptions

3.6.1.2 Problems

The Problems section lists any medical-related problems that a patient has had over the specified period and allows for searches to filter the list for specific information. This section and its headers are shown in ***Figures 101 and 102***.

Figure 101. Problems Section Headers

1	**Condition:** Lists the name of a clinical condition, problem, diagnosis, or other event, situation, issue, or clinical concept that has risen to a level of concern
2	**ICD Code:** Code associated with the identification of the condition, problem, or diagnosis
3	**Category:** Displays the type of problem or condition. It is contextual based on a provider's list of category types.
4	**Status:** Displays the status of the listed problem from the following: ■ Active ■ Inactive
5	**Recorded Date:** Date when this condition record was created in the system, which is often a system-generated date: **MM/DD/YYYY**
6	**Onset Date:** Estimated date, actual date, or date-time the condition, situation, or concern began in the opinion of the clinician: **MM/DD/YYYY**
7	**Search:** Filters list of all medication orders and requests on the entered terms

Figure 102. Problems Section Header Descriptions

3.6.1.3 Medication Orders and Requests

The Medication Orders and Requests lists information regarding the details and status of medications prescribed to the patient and allows for searches to filter the list for specific information. The information in this section is detailed in ***Figures 103 and 104***.

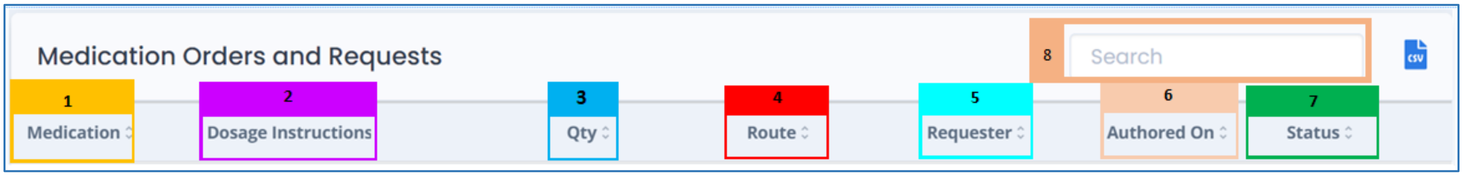


Figure 103. Medication Orders and Requests Headers and UI Elements

1	**Medication:** Displays the name and type of the medication ordered/requested
2	**Dosage Instructions:** Displays instructions for the listed medications, including method and frequency of administration
3	**Dosage Quantity:** Displays the unit of measurement used to measure a dosage of the listed medications as one of the following: ■ Mg ■ Ug ■ {Each} ■ g ■ {Puff}
4	**Dosage Route:** Displays the method of intake for the listed medication from the following: ■ Oral ■ Topical ■ Inhalation
5	**Requester:** Displays the name of the care provider requesting the medication order
6	**Authored Date:** Displays the date that the medication order and/or request was written in the format: **MM/DD/YYYY**
7	**Status:** Displays the status of the ordered medication with the listed patient from the following options: ■ Active ■ Stopped
8	**Search:** Filters list of all medication orders and requests on the entered terms

Figure 104. Medication Orders and Requests Headers and UI Element Descriptions

3.6.1.4 Procedures

The Procedures section details medical procedures performed on the patient and allows searches to filter the list for specific information. The information detailed in this section is described in ***Figures 105 and 106***.

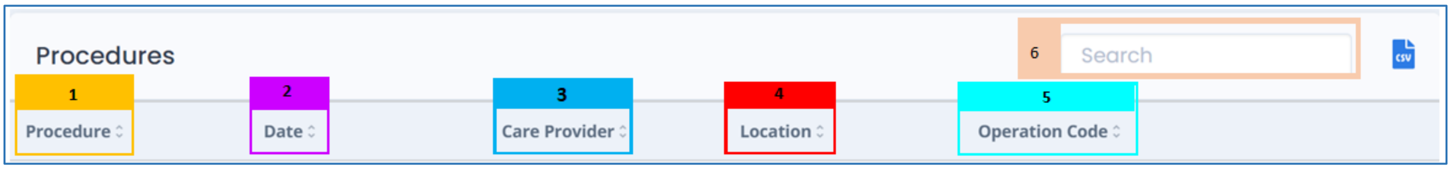


Figure 105. Procedures Headers and UI Elements

1	**Procedure:** Displays the action that is being or was performed on an individual
2	**Date**: Displays the date of the given procedure in the format: **MM/DD/YYYY**
3	**Care Provider:** Displays the name of the provider that performed the listed procedure in the format: **Last Name, First Name**
4	**Location:** Displays the location where the procedure was performed
5	**Operation Code**: Displays the procedure's number identification, as defined by the associated code set in the format: **00000**
6	**Search:** Filters list of all listed procedures based on the information entered

Figure 106. Procedures Header and UI Elements Descriptions

3.6.1.5 Immunizations

The Immunizations section includes information on all immunizations prescribed and administered to the patient and allows for a search function to filter the list for specific information. The details of this section are described in ***Figures 107 and 108***.

Figure 107. Immunizations Headers and UI Elements

1	**Vaccine:** Displays the vaccine product administered
2	**Date:** Displays the date on which the listed vaccination was administered in the format: **MM/DD/YYYY**

3	**Manufacturer:** Displays the name of the organization that administered the listed vaccine
4	**Lot Number:** Displays the identifying code representing the lot number for the listed vaccine in the format: **0123L45A**
5	**Dosage:** Displays the amount and units of the vaccine administered in the following unit: ■ mL
6	**Search:** Filters list of all listed immunizations based on the information entered

Figure 108. Immunizations Header and UI Element Descriptions

3.6.1.6 Care Plans

The Care Plan section describes details of all Care Plans the patient is subject to and provides a search function to filter the list for specific information. The information detailed in this section is described in ***Figures 109 and 110***.

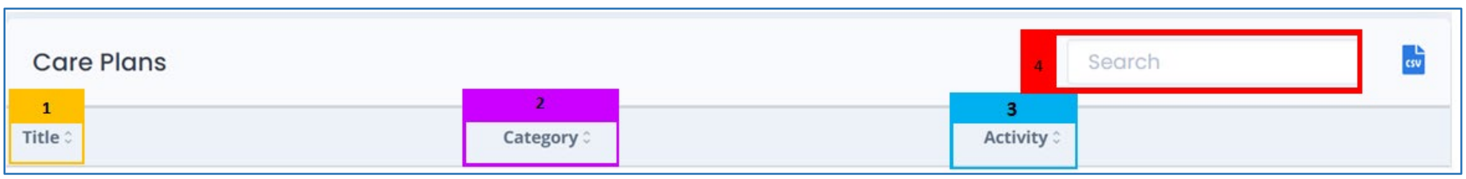


Figure 109. Care Plan Headers and UI Elements

1	**Title:** Displays the name of the care plan associated with the patient
2	**Category:** Displays the type of care plan that is associated with the patient
3	**Activity:** Describes the procedures performed on the patient as specified by the care plan in the format: **Activity, Activity, Activity, etc.**
4	**Search:** Filters list of all listed care plan entries based on the information entered

Figure 110. Care Plan Header and UI Element Descriptions

3.6.1.7 Encounters

The Encounters section lists details regarding all interactions the patient has had with various care providers and the nature of those interactions. It also provides a search function to filter the list for specific information. The details of this section are described in ***Figures 111 and 112***:

Figure 111. Encounters Headers and UI Elements

1	**Date:** Displays the start date of the encounter in the format: **MM/DD/YYYY**
2	**Type:** Displays the specific type of encounter. Due to the substantial number of encounters, it is not possible to have a list of values.
3	**Facility:** Displays the name of the facility where the encounter occurred
4	**Department:** Displays the name of the department at the listed facility where the encounter occurred
5	**Care Provider:** Displays the service provider that managed the encounter in the following format: **Last Name, First Name**
6	**End of Encounter:** Displays the concluding date of the encounter in the format: **MM/DD/YYYY**
7	**Encounter Number:** Displays the number assigned to the encounter by the care provider in the format: **00000**
8	**Admit Reason:** Displays the reason the patient was admitted based on a data set of predefined encounter codes
9	**Local MRN:** Displays the MRN value associated with the encounter in the care provider's system
10	**Search:** Filters list of all listed encounter entries based on the information entered

Figure 112. Encounter Header and UI Element Descriptions

3.6.1.8 Allergies

The Allergies section describes details regarding allergies that the patient possesses and the type of reaction they have to them. It also allows for a search to filter the list for specific information. The details in the section are described in ***Figures 113 and 114***.

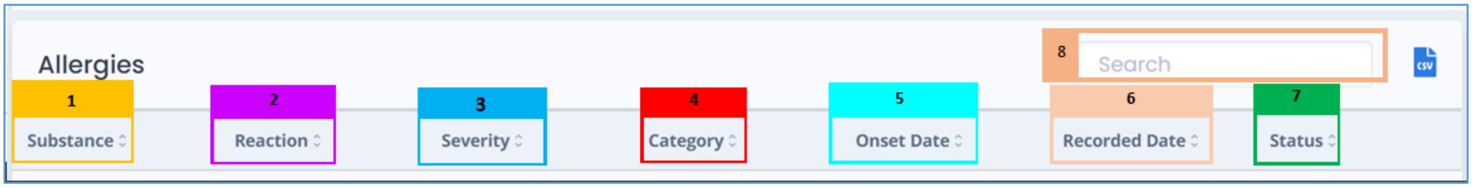


Figure 113. Allergies Headers and UI Elements

1	**Substance:** Lists the substance the patient has an allergy to taken from a value set of substances
2	**Reaction:** Describes the clinical symptoms/signs associated with the substance exposure event
3	**Severity:** Lists the severity of the reaction associated with the substance exposure event from the following options: ■ Mild ■ Moderate ■ Severe
4	**Category:** Describes which category the reaction to the associated exposure event is from the following: ■ Food ■ Medication ■ Environment ■ Biologic
5	**Onset Date:** Lists the date of the last known occurrence of a reaction in the format: **MM/DD/YYYY**
6	**Recorded Date:** Lists the date the occurrence of a reaction was recorded by provider in the format: **MM/DD/YYYY**
7	**Status:** Lists the status of the patient in relation to the substance exposure event from the following: ■ Active ■ Recurrence ■ Relapse ■ Inactive ■ Remission ■ Resolved ■ Unknown
8	**Search:** Filters list of all allergy entries based on the information entered

Figure 114. Allergies Header and UI Element Descriptions

3.6.1.9 Coverages

The Coverages section lists details about insurance, medical plans, or payment agreements that cover the patient currently or in the past. It also allows a search function to filter the list for specific information. The details of this section are described in ***Figures 115 and 116***.

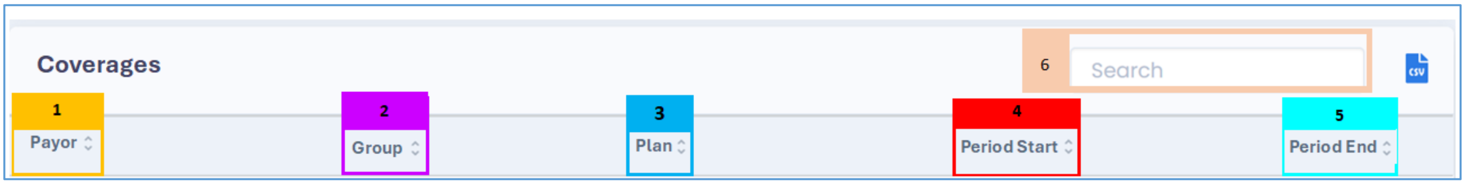


Figure 115. Coverages Headers and UI Elements

1	**Classification:** Displays the name of the organization providing coverage for the listed patient
2	**Group:** Displays the name of the group and lists its classification from a value set, including the following, but not limited to: ■ Group ■ Subgroup ■ Plan ■ RxGroup ■ Sequence ■ Class
3	**Plan:** Displays information about the plan the patient is covered by including: ■ Insurance Provider (BCBS) ■ Level of coverage (Basic, Federal) ■ Type of Plan (HMP)
4	**Period Start:** Displays the insurance plan's start date in the format: **MM/DD/YYYY**
5	**Period End:** Displays the insurance plan's end date in the format: **MM/DD/YYYY**
5	**Search:** Filters list of all Coverage entries based on the information entered

Figure 116. Coverages Header and UI Element Descriptions

3.6.1.10 Diagnostic Report

The Diagnostic Report section lists the findings and/or interpretation of diagnostic tests performed on patients, groups of patients, products, substances, devices, and locations, and/or specimens. The details of this section are described in ***Figures 117 and 118***.

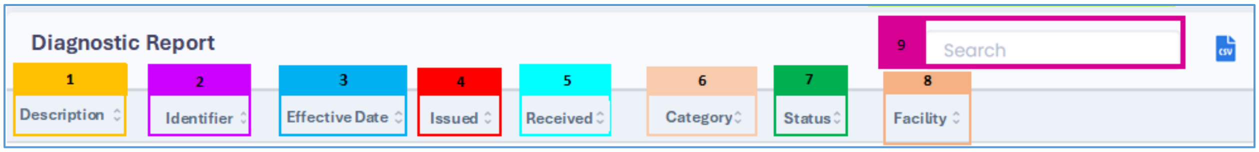


Figure 117. Diagnostic Report Headers and UI Elements

1	**Description:** Displays details about the diagnostic reports, which can be a combination of request information, atomic results, images, interpretations, etc.
2	**Identifier:** Displays the business identifier for the facility or organization that produced the report
3	**Effective Date:** Displays the clinically relevant date for the report in the format: **DD/MM/YYYY**
4	**Issued:** Displays the date and time this version of the report was made in the format: **DD/MM/YYYY 00:00:00**
5	**Received:** Displays the date and time this version of the report was received by the listed patient in the format: **DD/MM/YYYY 00:00:00**
6	**Category:** Displays the service category from a value set of diagnostic service section codes, such as the following: ■ Laboratory ■ Immunology ■ Diagnostic Imaging
7	**Status**: Displays the status of the report from the following: ■ Registered ■ Partial ■ Preliminary ■ Modified ■ Final ■ Amended ■ Corrected ■ Appended ■ Cancelled ■ Entered-in-Error ■ Unknown
8	**Facility:** Displays the name of the facility that the report was produced at
9	**Search:** Filters list of all Diagnostic Report entries based on the information entered

Figure 118. Diagnostic Report Header and UI Element Descriptions

3.6.1.11 Laboratories

The Laboratories section details information regarding all labs requested and fulfilled for the patient and allows for a search function to filter the list for specific information. The details included in this section are described in ***Figures 119 and 120***.

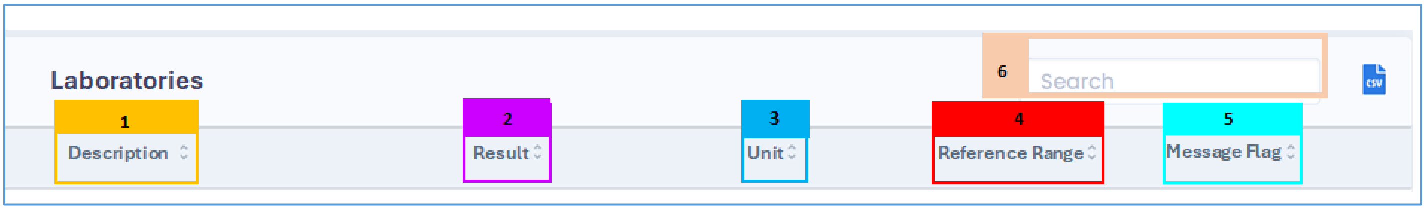


Figure 119. Laboratories Headers and UI Elements

1	**Description:** Displays a description of the ordered labs such as: ■ Histology ■ Cytology ■ Virology
2	**Result:** Displays the numeric value of the measured amount resulting from the listed lab
3	**Unit:** Displays the represented unit that applies to the listed result
4	**Reference Range:** Displays information on how to interpret the value by comparison to a normal or recommended range
5	**Message Flag:** Displays any key information to flag healthcare providers associated with the listed lab results
6	**Search:** Filters list of all Laboratory entries based on the information entered

Figure 120. Laboratories Header and UI Element Descriptions

3.6.1.12 Vital Signs

The Vital Signs section details information related to measurements taken to gauge the status of a patient's health. It also includes a search function to filter the list for specific information. The details included in this section are described in ***Figures 121 and 122***.

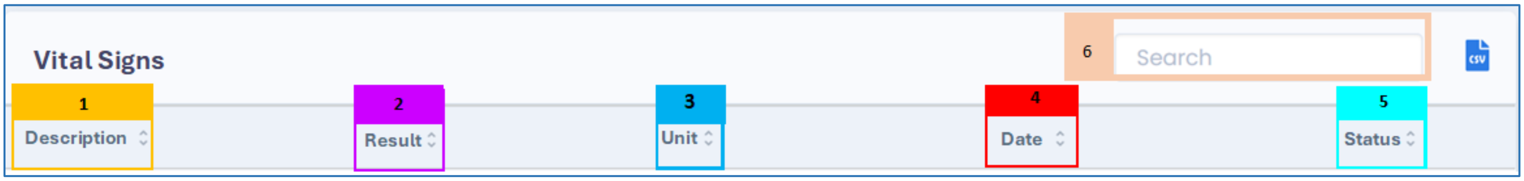


Figure 121. Vital Signs Headers and UI Elements

1	**Description:** Displays the description of the vital sign measured such as: ■ Heart Rate ■ Respiratory Rate ■ Height ■ Weight ■ Temperature
2	**Result:** Displays the numeric value of the measured vital sign
3	**Unit:** Displays the represented unit that applies to the listed vital sign
4	**Date:** Displays the date the listed vital signs were taken in the format: **DD/MM/YYYY**
5	**Status:** Displays the status of the listed vital sign values from the following: ■ Registered ■ Preliminary ■ Final ■ Amended ■ Corrected ■ Cancelled ■ Entered-in-Error ■ Unknown
6	**Search:** Filters list of all Laboratory entries based on the information entered

Figure 122. Vital Signs Header and UI Element Descriptions

3.6.1.13 Social History

The Social History section details information about a patient's job (occupation and industry), lifestyle, and environmental health risk factors that may impact their health. It also provides a search function to filter these results for specific information. The details included in this section are described in ***Figures 123 and 124***.

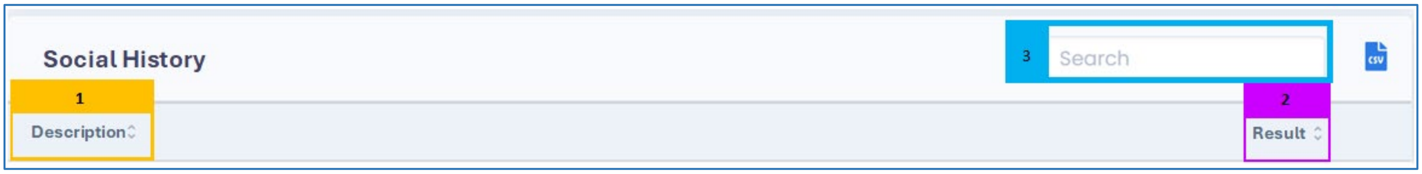


Figure 123. Social History Headers and UI Elements

1	**Description:** Displays a description for the listed social history factor
2	**Result:** Displays the numeric value of the measured social history factor, where applicable
3	**Search:** Filters list of all social history entries based on the information entered

Figure 124. Social History Headers and UI Element Descriptions

3.6.1.14 Documents/Clinical Notes

The Documents/Clinical Notes section lists all medical documents attributed to the listed patient and allows a search function to filter the list for specific Documents/Clinical Notes. The section also provides tools to view, export, and download the full documents. The information included in this section is described in ***Figures 125 and 126***.

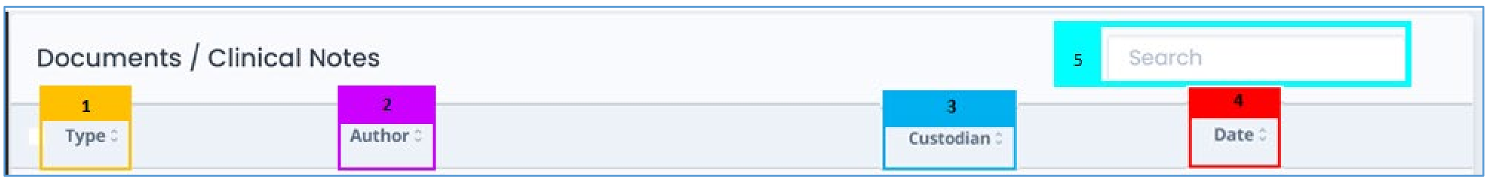


Figure 125. Documents/Clinical Notes Headers and UI Elements

1	**Type:** Lists the type of document from a comprehensive value set
2	**Author:** Lists the name of the professional that created the document listed in the format: **Last Name, First Name**
3	**Custodian:** Lists the name of the organization that maintains the document listed
4	**Date:** Displays the date the document or clinical note was created in the format: **DD/MM/YYYY**
5	**Search:** Filters list of all Documents and Clinical Note entries based on the information entered

Figure 126. Documents/Clinical Notes Header and UI Element Description

3.6.1.15 Devices

The Devices Section lists all medical devices currently being used by the patient and a search function to filter the list for specific information about these devices.

The information included in this section is described in ***Figures 127 and 128***.

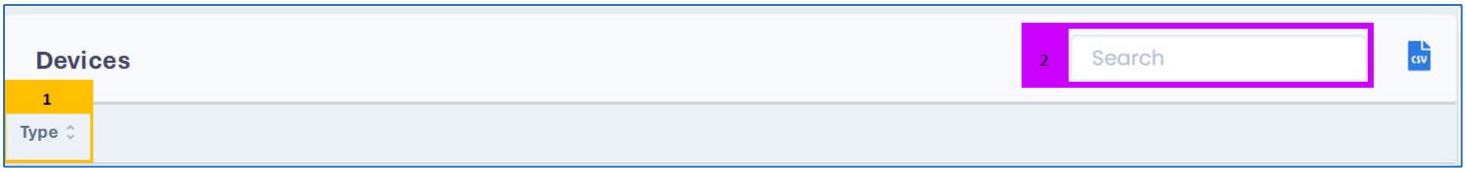


Figure 127. Devices Header and UI Elements

1	**Type:** Displays the type of device that is listed from a value set of devices
2	**Search:** Filters list of all Device entries based on the information entered

Figure 128. Devices Header and UI Element Descriptions

3.6.1.16 Care Team

The Care Team section lists members of the patient's care team as described in the ACRS® file the patient is attributed to. Additionally, this section provides details about what role the care team members serve in the patient's overall care. Lastly, a user can utilize the search function to filter this list for specific information about the listed care team members.

The information included in this section is described in ***Figures 129 and 130.***

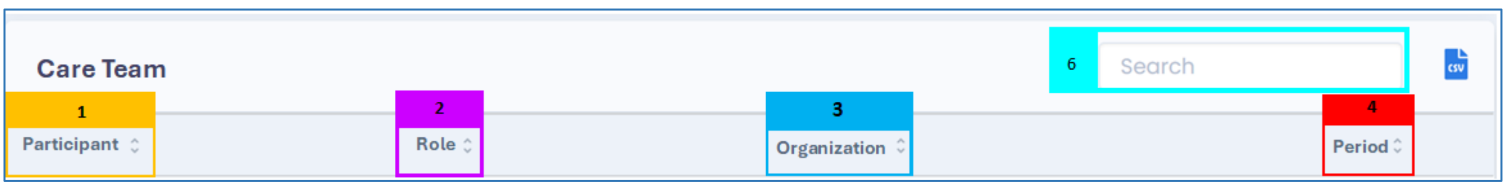


Figure 129. Care Team Header and UI Elements

1	**Participant:** Displays the name of the care team member in the format: **Last Name, First Name**
2	**Role:** Displays the role the listed care team member fills as a part of their organization
3	**Organization:** Displays the name of the organization that the listed care team member is a part of
4	**Period:** Displays the date in which the care team member was associated with the patient in the format: **MM/DD/YYYY**
5	**Search:** Filters list of all care team member entries based on the information entered

Figure 130. Care Team Header and UI Element Descriptions

3.6.2 Getting Started with Longitudinal Patient Record

3.6.2.1 Customizing the Longitudinal Record

By default, a patient's Longitudinal Record will default to displaying records and information as far back as is possible. Users can change this period by clicking the "Lookback" button and selecting a different time range and clicking the refresh button, as shown in ***Figure 131***.

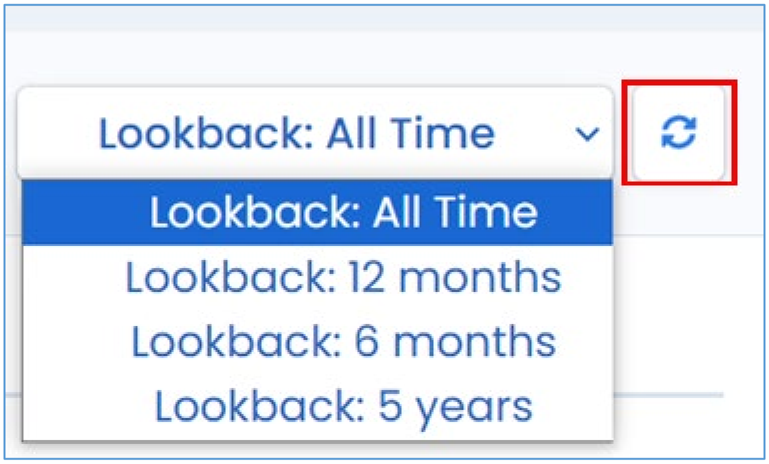


Figure 131. Lookback Dropdown Menu Options and Refresh Button

Once the page refreshes, entries for all sections of the patient's Longitudinal Record will now display data only for the specified range.

3.6.2.2 Viewing and Downloading Patient Documents

The Longitudinal Record module offers several methods for users to view patient summary information and documents associated with the patient's care coordination.

Creating .CSV Files

For any of the Longitudinal Record sections displayed for a patient, the listed information can be exported to a .csv format.

In any of the sections, clicking the "CSV"  icon will download the displayed information in .csv format to the user's computer. An example of this file is shown in ***Figure 132***.

Id	Source	Authored (	Medicatio	Dose	Qty	Requester	Status
14790196	#1ok7HUAHXcGmpJw		azithromycin 500 MG Oral Tablet				active
14788600	#N9lbOpsX6CGfBla3		azithromycin 500 MG Oral Tablet				active
14790194	#Ae5jC6RHvKCyaH4E		azithromycin 500 MG Oral Tablet				active
65d95e83l	#YxokzWLaF3fjESfw		azithromycin 500 MG Oral Tablet				active
14789158	#eGGRaZWaXOZFMW		azithromycin 500 MG Oral Tablet				active
14788597	#vYGsETxMxWk9Cp4l		azithromycin 500 MG Oral Tablet				active
65d95e83l	#OoL3jv1YcJKelnLj		azithromycin 500 MG Oral Tablet				active
14789156	#oTpl3nt9Xr9MgUQg		azithromycin 500 MG Oral Tablet				active
14788594	#28x80jjf6nl7rWtl		azithromycin 500 MG Oral Tablet				active
65d95e83l	#gGU4R6sXcRpovl2b		losartan potassium 25 MG Oral Tablet				active

Figure 132. Exported .CSV File Example

Viewing Documents and Clinical Notes

In the Documents/Clinical Notes section of the Longitudinal Record, users click the "View"  icon to open the full document in another tab on their internet browser.

In addition to viewing clinical documents and notes, users can download and export the documents by clicking the "Download"  icon. This will save the associated document to the user's computer in the file's applicable format.

Viewing and Creating Face Sheets

A Customized Face Sheet can be created, if desired. The Face Sheet allows users to select the information needed for a summary document that can then be viewed and downloaded.

A Face Sheet is created by first navigating to the “View/Print Summary” button in the upper righthand corner of the Patient Summary screen, as shown in ***Figure 133***.

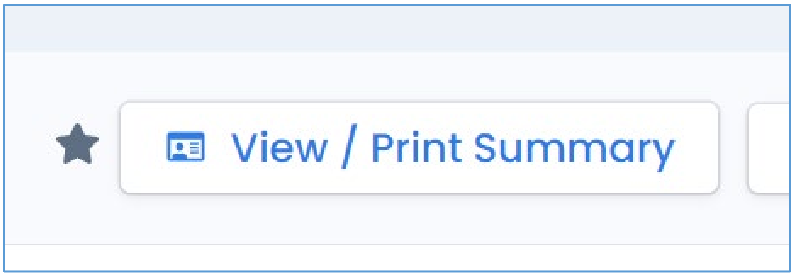
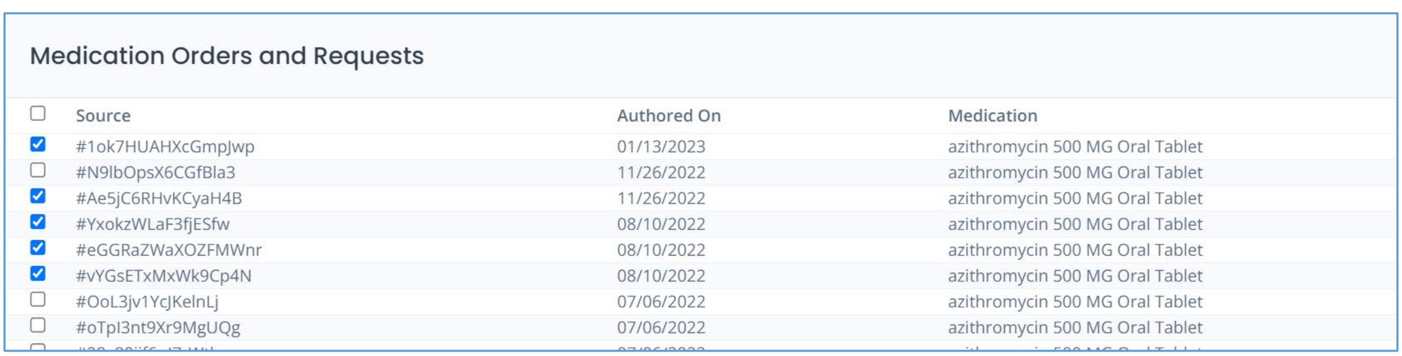


Figure 133. View/Print Summary Access Button

The resulting screen displays the following sections from the Patient Summary screen, along with all the list information for each:

- Problems
- Medication Orders and Requests
- Procedures
- Immunizations
- Care Plans
- Encounters
- Allergies
- Insurance
- Diagnostic Imaging
- Other Results
- Lab Results

For each section, the desired entries can be checked, as shown in ***Figure 134***. Alternatively, the check box in the header can be selected to choose all entries in the list.



Medication Orders and Requests

☐	Source	Authored On	Medication
☑	#1ok7HUAHXcGmpJwp	01/13/2023	azithromycin 500 MG Oral Tablet
☐	#N9lbOpsX6CGfBla3	11/26/2022	azithromycin 500 MG Oral Tablet
☑	#Ae5jC6RHvKCyaH4B	11/26/2022	azithromycin 500 MG Oral Tablet
☑	#YxokzWLaF3fjESfw	08/10/2022	azithromycin 500 MG Oral Tablet
☑	#eGGRaZWaXOZFMWnr	08/10/2022	azithromycin 500 MG Oral Tablet
☑	#vYGsETxMxWk9Cp4N	08/10/2022	azithromycin 500 MG Oral Tablet
☐	#OoL3jv1YcJKelnLj	07/06/2022	azithromycin 500 MG Oral Tablet
☐	#oTpI3nt9Xr9MgUQg	07/06/2022	azithromycin 500 MG Oral Tablet

Figure 134. Face Sheet Entry Selection Interface

Once all desired entries have been selected, clicking “Print” or “Download PDF” will generate a summary Face Sheet document with all the selected information. It will either be sent to print or download a PDF version to the user’s computer.

4. Appendices

4.1 Appendix A - Allowing Third-Party Cookies

MIGateway applications (including TOC Viewer) require third-party application cookies since the applications are embedded inside of Amazon Web Services (AWS). Browsers like Google Chrome and Mozilla Firefox have this allowed by default; Internet Explorer and Microsoft Edge may require third-party cookies to be allowed manually.

In most browsers, this setting can be found by going into Browser Settings, then Security and Privacy, and then Allow Third-Party Cookies.

In Microsoft Edge, if ‘do not allow third-party cookies' is selected and the setting is grayed out (disabled), use the following steps to allow the cookies:

1. With an administrator account, click on the Windows search icon and type “gpedit.” Open the “Edit Group Policy” application.
2. Navigate to the Microsoft Edge Cookie settings through the following path: Computer Configuration > Administrative Templates > Windows Components > Microsoft Edge > Configure Cookies.
3. In the Configure Cookies window, select the “enable” radio button, and make sure “Allow All Cookies” is selected from the Configure Cookies drop-down.
4. Click Apply and Okay. Close Edit Group Policy.
5. This setting may need to be updated through the system using group policy. Open Command Prompt application.
6. In Command Prompt, type “gpupdate /force.” Once this has successfully completed, you can close Command Prompt.

4.2 Appendix B - MIGateway® Applications with Cut-Off Drop-Down View

This occurs when a user is using Google Chrome (Version 68+) on Windows, MIGateway® application is open on an external monitor, and the display scaling setting of the computer's monitors are different values (ex. 100% & 120%).

There is an open bug with the Chrome browser regarding dropdowns being cut off when display scaling sizes are different and the application loaded is in an Iframe (all MIGateway® applications are loaded in Iframes).

- https://bugs.chromium.org/p/chromium/issues/detail?id=877625

Steps to Troubleshoot:

Set the Scale and Layout setting to the same value for all displays.

1. Open display settings by right clicking on the desktop and clicking Display Settings.
2. All displays will appear numbered. For each display, do the following:
   a. Under Scale and Layout, set the drop-down to the same value (ex. 100%).
3. Refresh the MIGateway® web page and the dropdowns should not be cut off.

4.3 Appendix C - Service Communication

- **MIGateway® Service Downtime**: MiHIN will provide communication to MIGateway® users regarding service downtime.
    - An email notification will be sent to users for any downtime during normal business hours (8:00AM - 5:00PM Eastern Standard Time).
    - A follow-up email will be sent once MIGateway® services are available.
    - Users can sign up to receive these notifications by emailing help@mihin.org

4.4 Appendix D – Moving Away from Support of Internet Explorer (IE):

As of October 2019, Internet Explorer (IE) will no longer be a supported browser for MIGateway®. With the introduction of Microsoft Edge and the availability of more modern browsers (Mozilla Firefox, Google Chrome, etc.), more organizations are moving away from continuing to support IE integration with their applications.

MIGateway® will continue to support current and future versions of **Firefox**, **Chrome**, **Edge**, and for certain applicable modules, **Safari**.

For questions or concerns, please go to https://mihin.org/requesthelp/.

4.5 Appendix E – Wildcard Searches

Wildcard searches can be used in the First Name or Last Name MIGateway® filter fields within the Manage ACRS® or TOC Viewer modules to use partial spellings of names to find a wider array of results. The rules of wildcard searches are as follows:

- First Name + Date of Birth (DOB): First Name wildcard search must contain three (3) or more characters. E.g., 'car' + DOB.
- Last Name + Date of Birth (DOB): Last Name wildcard search must contain four (4) or more characters. E.g., 'Fran' + DOB.
- Searching BOTH First and Last Name + Date of Birth (DOB): Wildcard search will work if at least the First Name field has three (3) or more characters OR the Last Name field has four (4) or more characters.
    - E.g., First Name: 'c' and Last Name: 'Fran' + DOB.
    - E.g., First Name 'car' Last Name: 'F' + DOB
- Wildcard search will not work if one (1) or two (2) characters are specified for each field.

- E.g., First Name ‘c’ and Last Name: ‘F’
- First Name ‘ca’ and Last Name: ‘Fr’

4.6 Appendix F – Validation Email Examples

Validation	Status /Scenario	Description	Example Email Body
Individual File Validation	Attribution/Delivery Valid	Validation email received for valid attribution or delivery file submission.	Thank you for your recent submission of ACRS® (2.0) Attribution(s). We received 1 file(s) and 1 passed successfully. The following files were validated successfully. 3 of 3 rows were valid.
Individual File Validation	Attribution/Delivery Rows Invalid (via File Submission); Delivery Rows Invalid (via SFTP Submission)	Validation email received for invalid rows found in the attribution or delivery files during validation.	Thank you for your recent submission of ACRS® (2.0) Attribution(s). We received 1 file(s) and 0 validated successfully. The following file(s) that you recently submitted failed validation. 12 of 15 rows were valid.
Individual File Validation	Attribution Rows Invalid (via SFTP Submission)	Validation email received for invalid rows found in the attribution file during validation when submission was received via SFTP Submission.	Thank you for your recent submission of ACRS® (2.0) Attribution(s). We received 1 file(s) and 0 validated successfully. The following file(s) that you recently submitted failed validation. 2 of 6 rows were valid. If the attribution file submitted via SFTP is

			50% or more cross valid, it will load.
Individual File Validation	Attribution/Delivery Format Invalid (via File Submission or SFTP Submission)	Validation email received if the attribution or delivery file failed validation due to formatting errors.	Thank you for your recent submission of ACRS® (2.0) Attribution(s). We received 1 file(s) and 0 validated successfully. The following file(s) that you recently submitted failed validation. The file format was invalid.
Cross File Validation	Cross Validation Success (via File Submission or SFTP Submission)	Cross-validation email received when an attribution and delivery file were submitted together and are found to have no cross-validation issues.	Thank you for your recent ACRS® (2.0) file submission. Cross validation passed successfully. The following file(s) were submitted. 100% of the attribution file rows cross validated successfully. File(s) are now being loaded.
Cross File Validation	Cross Validation Skipped (via File Submission)	Cross-validation email received when either the attribution or delivery files are submitted independently and the file submitted was valid and is being loaded.	Thank you for your recent ACRS® (2.0) file submission. Cross validation was skipped because only one file was uploaded. The following file(s) were submitted. File(s) are now being loaded.
Cross File Validation	Cross Validation Skipped (via File Submission)	Cross-validation email received when either the attribution or delivery files are submitted independently, and the file submitted was invalid and did not load automatically after validation.	Thank you for your recent ACRS® (2.0) file submission. Cross validation was skipped because only one file was uploaded. The following file(s) were submitted. File(s) were not loaded because the

			Attribution or Delivery file was invalid.
Cross File Validation	Cross Validation Skipped (via SFTP Submission)	Cross-validation email received when attribution and delivery files are submitted together and either delivery or attribution files have errors.	Thank you for your recent ACRS® (2.0) file submission. Cross validation was skipped because the attribution file was invalid. The following file(s) were submitted. File(s) were not loaded because the Attribution or Delivery file was invalid.
Cross File Validation	Cross Validation Failed (via File Submission)	Cross-validation email received when attribution and delivery files are submitted together and there are cross-validation errors found.	Thank you for your recent ACRS® (2.0) file submission. Cross validation failed. The following file(s) that you recently submitted failed cross validation. 33% of the attribution file rows cross validated successfully. The file(s) were not loaded.
Cross File Validation	Cross Validation Failed (via SFTP Submission)	Cross-validation email received when attribution and delivery files are submitted together and there are cross-validation errors found. *Does not mean that the SFTP Submission did not load; that would depend on the percentage of cross-validated rows successfully, as indicated in the email.	Thank you for your recent ACRS® (2.0) file submission. Cross validation failed. The following file(s) that you recently submitted failed cross validation. 66% of the attribution file rows cross validated successfully. At least 50% of valid attribution rows must cross validate successfully for files to load via SFTP.

Partial Upload	Partial Upload Triggered	Email received when validation or cross-validation errors are found, and the errors are accepted, and the submission is loaded anyway. *Note: only invalid rows from the attribution or delivery file are removed during partial upload. Rows with cross-validation errors are not removed from loading to ACRS.	Thank you for your recent ACRS® (2.0) file submission. Please note: upon initial validation, some rows in the file were marked as invalid. The end user opted to delete those rows and proceed with loading only the valid rows. The valid rows from the following files were submitted and are now being loaded.

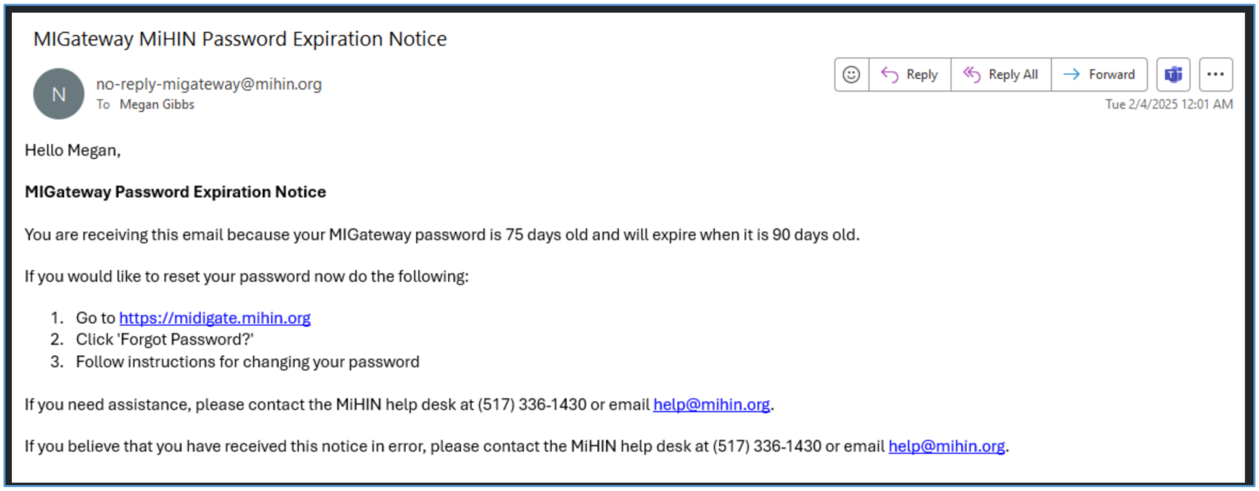
4.7 Appendix G – C-CDA Documents

C-CDA Templates

US Realm CDA Header	Diagnostic Imaging Report (DIR) V2	Patient Questionnaire Summary Document
US Realm Header (V2)	Procedure Note	MDS Patient Questionnaire Summary Document
Continuity of Care Document	Procedure Note V2	OASIS Patient Questionnaire Summary Document
Continuity of Care Document V2	Operative Note	Transfer Summary Document (MASS HIE)
History and Physical	Operative Note V2	Transfer Summary (C-CDA)
History and Physical V2	Discharge Summary	Referral Summary (C-CDA)
Consultation Note	Discharge Summary V2	Care Plan (C-CDA)
Consultation Note V2	Progress Note	Care Plan (Nutrition)
Diagnostic Imaging Report (DIR)	Progress Note V2	Minimally Structured Document (Xdoc)

Unstructured Document (V2)	Unstructured Document	

4.8 Appendix H – Expiration Notice Email



MIGateway MiHIN Password Expiration Notice

N no-reply-migateway@mihin.org
To Megan Gibbs

Reply Reply All Forward
Tue 2/4/2025 12:01 AM

Hello Megan,

MIGateway Password Expiration Notice

You are receiving this email because your MIGateway password is 75 days old and will expire when it is 90 days old.

If you would like to reset your password now do the following:

1. Go to https://midigate.mihin.org
2. Click 'Forgot Password?'
3. Follow instructions for changing your password

If you need assistance, please contact the MiHIN help desk at (517) 336-1430 or email help@mihin.org.

If you believe that you have received this notice in error, please contact the MiHIN help desk at (517) 336-1430 or email help@mihin.org.

Figure 135. Expiration Notice Email Example

5. Production Support

	Severity Levels			
	1	*2*	*3*	*4*
Description	**Critical Impact/ System Down:** Business critical software is down, or critical interface has failed. The issue is impacting all production systems, causing all participating organizations or other organizations' ability to function to be unusable.	**Significant Business Impact:** Software component severely restricted. Entire organization is unable to continue business functions, causing all communications and transfer of messages to be halted.	**Partial Failure or Downtime:** Program is useable and less significant features unavailable. The service is online, though it may not work as intended or may not currently work as intended or may not currently be accessible, though other systems are currently available.	**Minimal Business:** A non-critical software component is malfunctioning, causing minimal impact, or a test system is down.
Example	All messages to and from MiHIN are unable to be sent and received, let alone tracked	MiHIN cannot communicate (send or receive) messages between single or multiple participating organizations but can still successfully communicate with other organizations.	Messages are lost in transit; messages can be received but not sent.	Additional feature requested.
Primary Initiation Method	***Phone:*** (517) 336-1430	***Phone:*** (517) 336-1430	Web form at http://mihin.org/requesthelp	Web form at http://mihin.org/requesthelp
Secondary Initiation Method	Web form at http://mihin.org/requesthelp	Web form at http://mihin.org/requesthelp	Email to help@mihin.org	Email to help@mihin.org
Tertiary Initiation Method	Email to help@mihin.org	Email to help@mihin.org	N/A	N/A
Initial Response	Within 2 hours	Within 2 hours	1 business day	1 business day
Resolution Goal	24 hours	24 hours	3 business days	7 business days

A list of frequent questions regarding the MIGateway® application can be found at: *https://mihin.org/migateway/*. If you have questions, please contact the MiHIN Help Desk:

- www.mihin.org/requesthelp
- help@mihin.org
- Phone: 844-454-2443
- Monday – Friday 8:00 AM – 5:00 PM EST

6. Acronyms and Abbreviations Guide

ACK	HL7 Acknowledgment message
ACRS®	Active Care Relationship Service
API	Application Programming Interface
CCHD	Critical Congenital Heart Disease
CMS	Centers for Medicare & Medicaid Services
DDE	Direct Data Entry
DQA	Data Quality Assurance
EHR	Electronic Health Record
FHIR	Fast Healthcare Interoperability Resources
HIE	Health Information Exchange
HIN	Health Information Network
HISP	Health Internet Service Provider
HL7	Health Level Seven
HPD	Health Provider Directory
MDHHS	Michigan Department of Health and Human Services
MIGateway ®	Medical Information Direct Gateway
MiHIN	Michigan Health Information Network Shared Services
MUCA	Master Use Case Agreement
NACK	Negative Acknowledgement
NBS	Newborn Screening
NwHIN	Nationwide Health Information Network
OID	Object Identifier
PO	Participating Organization
RAS	Registration and Attestation System
REST	Representational State Transfer
SAML	Security Assertion Markup Language
SMTP	Simple Mail Transfer Protocol
SOM	State of Michigan
TDSO	Trusted Data Sharing Organization
UCE	Use Case Exhibit
UCS	Use Case Summary
VPN	Virtual Private Network
XCA	Cross-Community Access
XDS	Cross-Enterprise Document Sharing

7. Definitions

Active Care Relationship (ACR). An ACR may be any of the following:

A. For health providers: a patient who has been seen by a provider within the past 24 months or is considered part of the health provider's active patient population they are responsible for managing, unless notice of termination of that treatment relationship has been provided to MiHIN
B. For payers: an eligible member of a health plan
C. An active relationship between a patient and a health provider for the purpose of treatment, payment, and/or healthcare operations consistent with the requirements set forth in HIPAA.
D. A relationship with a health provider asserted by a consumer and approved by the health provider.
E. (e) Any person or Trusted Data Sharing Organization (TDSO) authorized to receive message content under an exhibit which specifies that an ACR may be generated by sending or receiving message content under that exhibit

ACR records are stored by MiHIN in the Active Care Relationship Service® (ACRS®).

Active Care Relationship Service® (ACRS®). ACRS® is MiHIN's care mapping service supporting the ability to exchange real-time notifications and updates on a patient to all of those in the health ecosystem legally caring for that person. ACRS® creates an electronic roadmap between care team members so any changes to a patient's status can be sent to the relevant providers, even if they are part of different organizations or medical groups and work on different systems.

Admission, Discharge, Transfer (ADT). An event that occurs when a patient is admitted to, discharged from, or transferred from one care setting to another care setting or to the patient's home. For example, an ADT event occurs when a patient is discharged from a hospital. An ADT event also occurs when a patient arrives in a care setting such as a health clinic or hospital.

Applicable Laws and Standards. In addition to the definition set forth in the Data Sharing Agreement, the federal Confidentiality of Alcohol and Drug Abuse Patient Records statute, section 543 of the Public Health Service Act, 42 U.S.C. 290dd-2, and its implementing regulation, 42 CFR Part 2; the Michigan Mental Health Code, at MCLA §§ 333.1748 and 333.1748a; and the Michigan Public Health Code, at MCL § 333.5131, 5114a.

Attribution. The connection between a consumer and their health care providers. One definition of attribution is “assigning a provider or providers who will be held accountable for a member based on an analysis of that member’s claim data.” The attributed provider is deemed responsible for the patient’s cost and quality of care, regardless of which providers deliver the service.

Conforming Message. A message that is in a standard format that strictly adheres to the implementation guide for its applicable use case.

Critical Congenital Heart Disease (CCHD). A group of serious heart defects that are present from birth. These abnormalities result from problems with the formation of one or more parts of the heart during the initial stages of embryonic development.

Data Sharing Agreement. Any data sharing organization agreement signed by both MiHIN and a participating organization. Data sharing organization agreements include but are not limited to: Qualified Data Sharing Organization Agreement, Virtual Qualified Data Sharing Organization Agreement, Consumer Qualified Data Sharing Agreement, Sponsored Shared Organization Agreement, State Sponsored Sharing Organization Agreement, Direct Data Sharing Organization Agreement, Simple Data Sharing Organization Agreement, or other data sharing organization agreements developed by MiHIN.

Electronic Address. A string that identifies the transport protocol and end point address for communicating electronically with a recipient. A recipient may be a person, organization, or other entity that has designated the electronic address as the point at which it will receive electronic messages. Examples of an electronic address include a secure email address (Direct via secure SMTP) or secure URL (SOAP / XDR / REST / FHIR). Communication with an electronic address may require a digital certificate or participation in a trust bundle.

Electronic Medical Record or Electronic Health Record (EMR/EHR). A digital version of a patient's paper medical chart.

Electronic Service Information (ESI). All information necessary to define an electronic destination’s ability to receive and use a specific type of information (e.g., discharge summary, patient summary, laboratory report, or query for patient/provider/healthcare data). ESI may include the type of information (e.g. patient summary or query), the destination’s electronic address, the messaging framework supported (e.g., SMTP, HTTP/SOAP, XDR, REST, FHIR), security information supported or required (e.g., digital certificate), and specific payload definitions (e.g., CCD C32 V2.5). In addition, ESI may include labels that help identify the type of recipient (e.g., medical records department).

End Point. An instance of an electronic address or ESI.

Exhibit. Collectively, a use case exhibit or a pilot activity exhibit.

FedSim. Simulators that are utilized in a testing environment to simulate testing with a federal partner (e.g., Social Security Administration or Veterans Affairs)

Health Directory. The statewide shared service established by MiHIN that contains contact information on health providers, electronic addresses, end points, and ESI as a resource for authorized users to obtain contact information and to securely exchange health information.

Health Level 7 (HL7). An interface standard and specifications for clinical and administrative healthcare data developed by the Health Level Seven organization and approved by the American National Standards Institute (ANSI). HL7 provides a method for disparate systems to communicate clinical and administrative information in a normalized format with acknowledgement of receipt.

Health Information. Any information, including genetic information, whether oral or recorded in any form or medium, that (a) is created or received by a health provider, public health authority, employer, life insurer, school or university, or healthcare clearinghouse; and (b) relates to the past, present, or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present, or future payment for the provision of health care to an individual.

Health Information Network (HIN). An organization or group of organizations responsible for coordinating the exchange of protected health information (PHI) in a region, state, or nationally.

Health Plan. An individual or group plan that provides or pays the cost of medical care (as “group health plan” and “medical care” are defined in section 2791(a)(2) of the Public Health Service Act, 42 U.S.C. 300gg-91(a)(2)). Health plans further include those entities defined as a health plan under HIPAA, 45 C.F.R 160.103.

Health Professional.(a) any individual licensed, registered, or certified under applicable federal or state laws or regulations to provide healthcare services; (b) any person holding a nonclinical position within or associated with an organization that provides or coordinates healthcare or healthcare-related services; and (c) people who contribute to the gathering, recording, processing, analysis, or communication of health information. Examples include, but are not limited to, physicians, physician assistants, nurse practitioners, nurses, medical assistants, home health professionals, administrative assistants, care managers, care coordinators, receptionists, and clerks.

Health Provider. Facilities/hospitals, health professionals, health plans, caregivers, pharmacists/other qualified professionals, or any other person or organization involved in providing healthcare.

Information Source. Any organization that provides information that is added to a MiHIN infrastructure service.

Master Use Case Agreement (MUCA). Legal document covering expected rules of engagement across all use cases. Trusted data sharing organizations sign the master use case agreement once, then sign use case exhibits for participation in specific use cases.

Message. A mechanism for exchanging message content between the participating organization to MiHIN services, including query and retrieve.

Message Content. Information, as further defined in an exhibit, which is sent, received, found, or used by a participating organization to or from MiHIN services. Message content includes the message content header.

Message Header ("MSH") or Message Content Header. The MSH segment present in every HL7 message type defines the message's source, purpose, destination, and specific syntax such as delimiters (separator characters) and character sets. It is always the first segment in the HL7 message, with the only exception being HL7 batch messages.

Michigan Health Information Network Shared Services. The state-designated HIE, serving as a consolidated, statewide, public-private partnership.

MiHIN Infrastructure Service. Certain services that are shared by numerous use cases. MiHIN infrastructure services include, but are not limited to, Active Care Relationship Service (ACRS®), Health Directory, Statewide Consumer Directory (SCD), and the Medical Information Direct Gateway (MIGateway®).

MiHIN Services. The MiHIN infrastructure services and additional services and functionality provided by MiHIN allowing the participating organizations to send, receive, find, or use information to or from MiHIN as further set forth in an exhibit.

Negative Acknowledgment (NAK or NACK). “Not acknowledged” and is used to negatively acknowledge or to reject previously received message content or to indicate an error.

Newborn Screening. Screening to detect conditions such as critical congenital heart disease (CCHD) in newborns. The newborn screening is not limited to this test.

Notice. A message transmission that is not message content and which may include an acknowledgement of receipt or error response, such as an ACK or NACK.

Patient Data. Any data about a patient or a consumer that is electronically filed in a participating organization’s systems or repositories. The data may contain protected health information (PHI), personal credit information (PCI), and/or personally identifiable information (PII).

Person Record. Any record in a MiHIN infrastructure service that primarily relates to a person.

Pilot Activity. The activities set forth in the applicable exhibit, which typically include sharing message content through early trials of a use case that is still being defined and is still under development. A pilot activity may include participating organization feedback to MiHIN to assist in finalizing a use case exhibit upon conclusion of the pilot activity.

Principal. A person or a system utilizing a federated identity through a federated organization.

Promoting Interoperability. Using certified EHR technology to improve quality, safety, and efficiency of healthcare, and to reduce health disparities as further contemplated by title XIII of the American Recovery and Reinvestment Act of 2009.

Provider Community. A healthcare provider with an active care relationship with the applicable patient.

Send / Receive / Find / Use (SRFU). It means sending, receiving, finding, or using message content. Sending involves the transport of message content. Receiving involves accepting and consuming or storing message content. Finding means querying to locate message content. Using means any use of the message content other than sending, receiving, and finding. Examples of use include consuming into workflow, reporting, storing, or analysis. Send/Receive/Find/Use

(SRFU) activities must comply with Applicable Laws & Standards or State Administrative Code as that term is defined in the data sharing agreement.

Service Interruption. A party is unable to send, receive, or find message content for any reason, including the failure of network equipment or software, scheduled or unscheduled maintenance, general Internet outages, and events of force.

Source System. A computer system, such as an electronic health record system, at the participating organization that sends, receives, finds, or uses message content or notices.

Transactional Basis. The transmission of message content or a notice within a period of receiving message content or notice from a sending or receiving party may be further set forth in a specific exhibit.

Transitions of Care. The movement of a patient from one setting of care (e.g., hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, rehabilitation facility, etc.) to another setting of care and can include transfers within a healthcare organization.

Trusted Data Sharing Organization (TDSO). An organization that has signed any form of agreement with MiHIN for data sharing.

Use Case. (a) A use case agreement previously executed by a participating organization; or (b) the use case summary, use case exhibit, and a use case implementation guide that participating organization or TDSO must follow to share specific message content with the MiHIN.

Use Case Exhibit. The legal agreement attached as an exhibit to the master use case agreement that governs participation in any specific use case.

Use Case Implementation Guide (UCIG). The document providing technical specifications related to message content and transport of message content between a participating organization, MiHIN, and other TDSOs. Use case implementation guides are made available via URLs in exhibits.

Use Case Summary. The document providing the executive summary, business justification, and value proposition of a use case. Use case summaries are provided by MiHIN upon request and via the MiHIN website at www.mihin.org.

View Download Transmit (VDT). A requirement for Meaningful Use with the objective of providing patients with the ability to view online, download, and transmit their health information within a certain period of the information being available to an eligible professional.

XCA. The IHE (Integrating the Healthcare Enterprise®) standard for Cross-Community Access which provides specifications to query and retrieve patient-relevant health information held by other communities.

XDS.b. The IHE (Integrating the Healthcare Enterprise®) standard for Cross-Enterprise Document Sharing Revision B, which provides specifications to query and retrieve patient-relevant healthcare data held within a community.