Conformance Reporting User Guide

Version v3 | September 21, 2021

Table of Contents

Introduction

Conformance standards—adherence to certain specifications, standards and guidelines—are designed to continually improve the data that flows through the Michigan Health Information Network Shared Services (MiHIN), ensuring it is complete and actionable when it's received by the practitioners using the information. Conformance thresholds apply to all inpatient, observation, and ED visits.

Hospitals must maintain data quality standards for all ADT and C-CDA transmission. ADT messages must meet and maintain the associated conformance threshold across three categories: complete routing, complete mapping, and adherence to coding standards. C-CDA data conformance is met when all med rec fields have been completely routed.

The overall purpose of the Conformance Module is to have automated conformance reporting available for ADTs and CCDs to the customer at any time. It serves two primary functions:

1. To display the Conformance Report of that user's organization in a convenient way.
   ***Note**: these reports do not contain PHI and are instead aggregated evaluations on various fields or segments within messages in general.*
2. To allow the user to view and download live production messages of the message type in question (ADTs or C-CDAs), which serve as examples of why that organization's conformance scores were compliant or not. These are live messages that do contain PHI, but are limited to messages that were sent by, and originated from, the organization whose user is logged in. These are referred to as "fallout examples."

In order to utilize the full capabilities of the conformance reporting, the user must first get a MIGateway account provisioned and have the Conformance Module activated. The user may then interact with the functionality within the module, including viewing the general reports and being able to search for, view, and download specific message examples.

How to use this guide

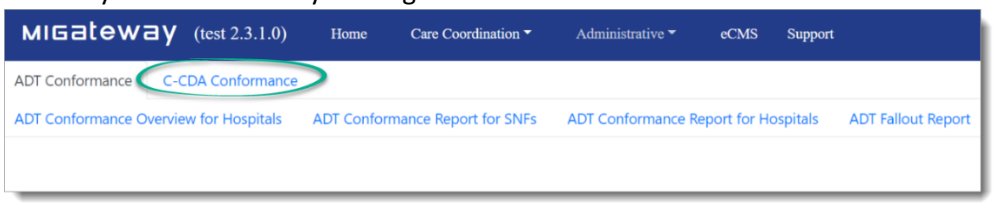
This guide will help you and your organization navigate the Conformance Reporting Module within the MIGateway platform. Use this guide to achieve the full capabilities the Conformance Reporting module offers.

> ***Note:** The reports in this guide and their data in the Conformance Reporting Module will vary based on your specific user's Conformance Reporting permissions.*

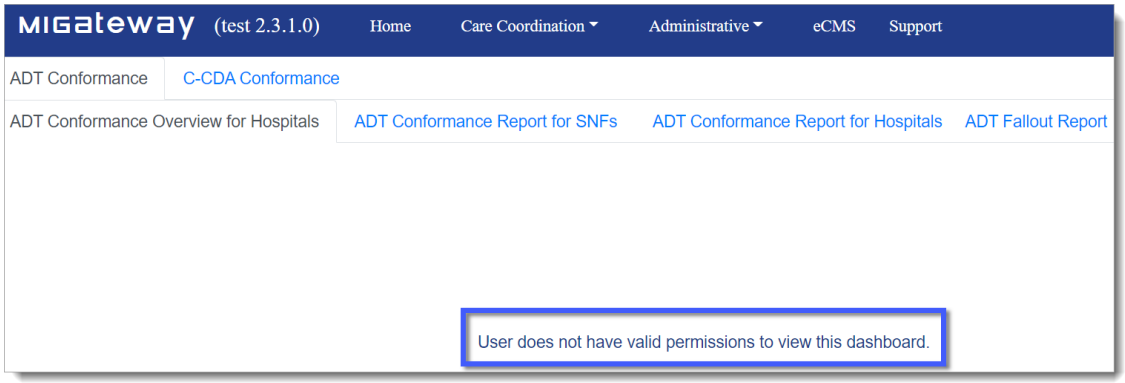
Viewing Conformance Dashboards in MIGateway

1. Log in to the **MIGateway Application.**
2. Choose the **Administrative** dropdown menu, and then choose **Conformance Reporting**.

3. The **Conformance Reporting** window will have two options for your dashboards:
   - ADT Conformance
   - C-CDA Conformance
4. Choose your dashboard by clicking on the desired tab:



***Note**: If you receive a permissions warning, please contact the MiHIN Help Desk (help@mihin.org) to edit your assigned groups.*



ADT Conformance

ADT Conformance Overview for Hospitals

This dashboard is primarily used for Organizations/Groups that manage multiple facilities.

- **Overall Conformance Report**. Describes overall conformance rates and CKS population rates across groups/facilities.
- **Population Report: Routing Fields**. (1) Each Routing ADT Conformance field and sending facility reports the frequency at which that field was populated in sent ADT messages for the period. (2) Common key is included in the *PID-3.1 (CK)* in the first column and is included in the overall conformance score.
- **Population Report: Mapping Fields**. Each Mapped ADT Conformance field and sending facility reports the frequency at which that field was populated in messages that are sent.
- **Population Report: Correct Coding Fields**. Each Mapped/Correct Coding ADT Conformance field and sending facility reports the frequency at which that field was populated in ADT messages that are sent.
- **Mapping Report**. Each Mapped ADT Conformance field and sending facility reports the percentage of values in those fields which were properly mapped based on supplied values in the message and mapping table.
- **Correct Coding Report**. Each Correct Coding ADT Conformance field and sending facility reports the percentage of values in those fields which contained values reflecting properly coded contents for this period.

ADT Conformance Report for Skilled Nursing Facilities

This dashboard is used for Skilled Nursing Facilities (SNFs) and any organization/facility managing a SNF group.

- **Overall Conformance Report**. Describes overall conformance rates and Common Key Service (CKS) population rates across groups/facilities
- **Population Report: Routing Fields**. Each Routing ADT Conformance field and sending facility, reports the frequency at which that field was populated in ADT messages that are sent for the period. Common key is included in the *PID-3.1 (CK)* in the first column and is included in the overall conformance score.
- **Population Report: Mapping Fields**. Each Mapped ADT Conformance field and sending facility, reports the frequency at which that field was populated in ADT messages that are sent.
- **Population Report: Correct Coding Fields**. Each Mapped/Correct Coding ADT Conformance field and sending facility, reports the frequency at which that field was populated in ADT messages that are sent.
- **Mapping Report**. Each Mapped ADT Conformance field and sending facility reports the percentage of values in those fields which were properly mapped based on supplied values in the message and mapping table.
- **Correct Coding Report**. Each Correct Coding ADT Conformance field and sending facility reports the percentage of values in those fields which contained values reflecting properly coded contents for this period.

ADT Conformance Report for Hospitals

This dashboard is primarily used for individual hospitals.

- **Hospital ADT Conformance Report**. Provides an overview at the sender level of the Overall ADT Conformance Score for that organization, along with the field score rates, such as population, mapping, correct coding, etc., of the various constituent fields.
- **Hospital ADT Conformance Population Report for Hospitals**. Provides a detailed overview of which fields were populated at what rate across various ADT Trigger Types, for example, A01, A03, A08, etc.

ADT Fallout Report

Use the filters to find messages within the last 30 days that meet up to four separate ADT conformance criteria.

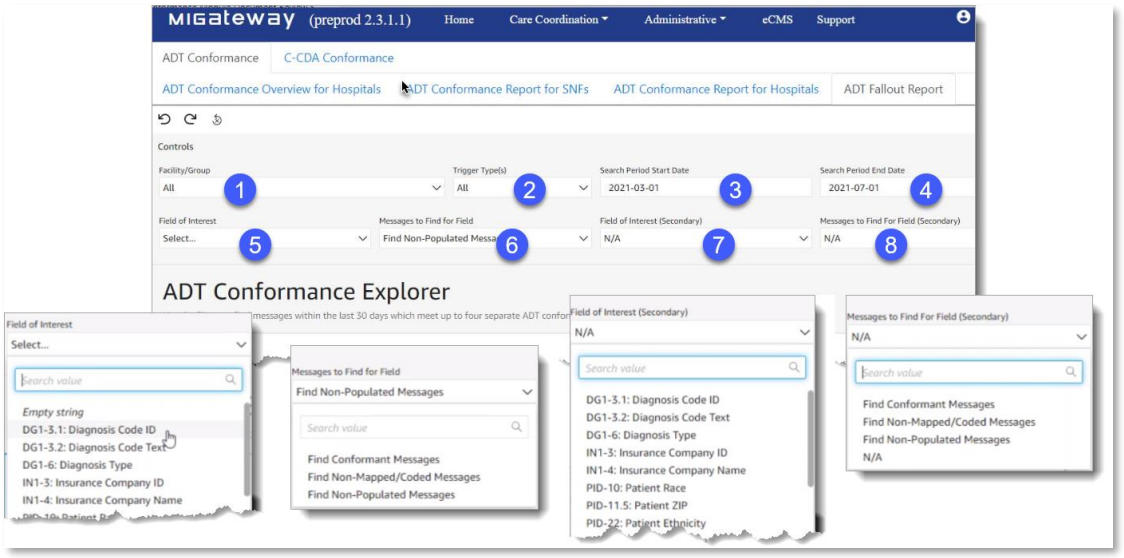
ADT Conformance Report Field Definitions/Controls

Use the following controls to generate the ADT Fallout Report.

1. **Facility/Group**. Click the dropdown arrow to choose the facility or group name.
2. **Trigger Type(s)**. Accept the default or choose a trigger type.
3. **Search Period Start Date**. Accept the default or click to use the calendar and choose a start date.
4. **Search Period End Date**. Accept the default or click to use the calendar and choose an end date.

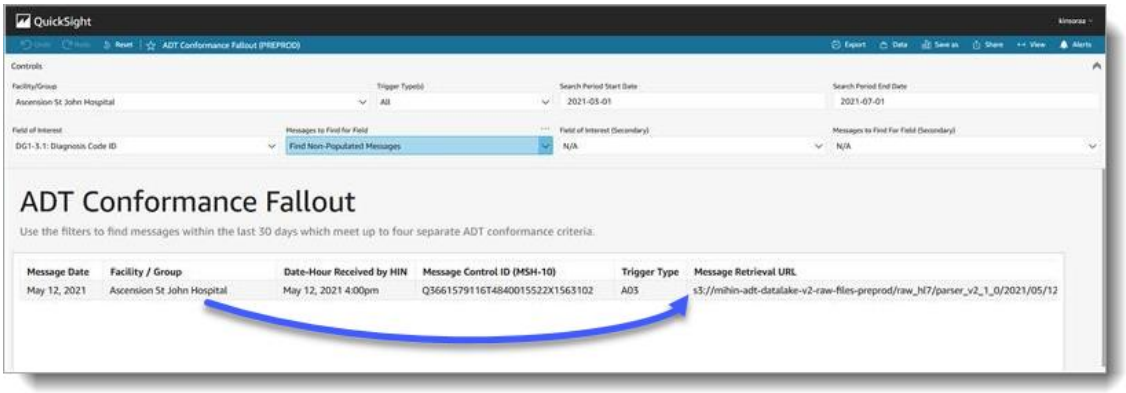
   ***Note**: The same start and end date cannot be used for the search period, as a time of midnight is assumed. In order to view one day of data, you must select the date of interest as the start date and then the next day as the end date.*

5. **Field of Interest**. Click the dropdown arrow and choose a field name.
6. **Messages to Find for Field**. Then use your **Find Non-Populated Messages** dialog to choose from the following list:
   - Find Conformant Messages
   - Find Non-Mapped/Coded Messages
   - Find Non-Populated Messages
7. **Field of Interest (Secondary)**. Click the dropdown arrow to choose from the following list:
   - Find Conformant Messages
   - Find Non-Mapped/Coded Messages
   - Find Non-Populated Messages
   - N/A
8. **Messages to Find for Field (Secondary)**. Click the dropdown arrow and choose a field name.

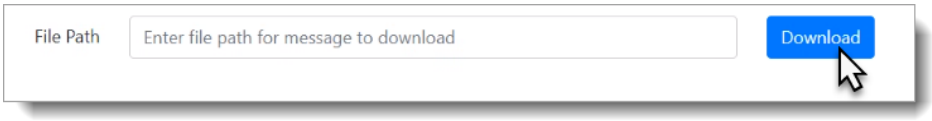


Downloading ADT Conformance Fallout Report messages

1. When the ADT Conformance Fallout Report displays, review the list of messages on the left. Then from the **Message Retrieved URL** column, choose and copy the message **URL** you wish to download.



2. Paste the **URL** into the **File Path** search box, then click **Download**.



3. The message will download and display at the bottom of your browser, double-click to open the message.

Downloading an ADT Conformance Report (Fallout Excluded)

1. Open the **report** you would like to download.
2. When you hover on the right-hand side of the report, a **toolbar** will display.
3. Click the **toolbar**.
4. Choose the **ellipsis** (**…**).
5. Choose either **Export to CSV** or **Export to Excel**.

ADT Event Type Definitions

Message Type	Message Description
A01	Admit/Visit Notification
A02	Transfer a Patient
A03	Discharge/End Visit
A04	Register a Patient
A05	Pre-Admit a Patient
A06	Change an Outpatient to an Inpatient
A07	Change an Inpatient to an Outpatient
A08	Update Patient Information
A09	Patient Departing - Tracking
A10	Patient Arriving - Tracking
A11	Cancel Admit/Visit Notification
A12	Cancel Transfer
A13	Cancel Discharge/End Visit
A14	Pending Admit
A15	Pending Transfer
A16	Pending Discharge
A17	Swap Patients
A18	Merge Patient Information
A21	Patient Goes on a Leave of Absence
A22	Patient Returns from a Leave of Absence
A23	Delete a Patient Record
A25	Cancel Pending Discharge
A26	Cancel Pending Transfer
A27	Cancel Pending Admit
A28	Add Person or Patient Information
A29	Delete Person Information
A34	Merge Patient Information - Patient ID Only
A35	Merge Patient Information - Account Number Only
A36	Merge Patient Information - Patient ID & Account Number
A38	Cancel Pre-Admit
A40	Merge Patient - Patient Identifier List
A41	Merge Account - Patient Account Number
A44	Move Account Information - Patient Account Number
A45	Move Visit Information - Visit Number
A52	Cancel Patient Returns from a Leave of Absence

Conformance Scoring Criteria

Population Requirements for Messages

Patient Class (PV1-2) Exlusions/Inclusions
Outpatient, Pre-Admit, Recurring, Commerical Account Always Excluded
Inpatient Only (PV1-4, PV1-14, PV1-17)
Inpatient or Emergency Only (DG1-3.1, DG1-3.2, DG1-6, and PV1-7)

	Complete Routing Data														Complete Mapping									Coding Standards			
Message Type	PID-3.1	PID-5.1	PID-5.2	PID-7	PID-11.5	PV1-19	PID-29*	PID-30	PID-19	PV1-37	PV1-44	PV1-45	IN1-3	IN1-4	MSH-4.1	PID-8	PID-10	PID-22	PV1-2	PV1-4	PV1-10	PV1-14	PV1-36	DG1-6	DG1-3.1	DG1-3.2	PV1-7	PV1-17
A01	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%		≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%						
A02	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A03	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%
A04	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A05	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%		≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A06	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%		≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A07	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%		≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A08	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A09	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A10	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A11	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A12	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A13	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%		≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A14	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%		≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A15	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A16	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%		≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A17	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A18	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A21	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A22	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A23	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A25	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A26	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A27	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A						≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A28	≥60%	≥95%	≥95%	≥95%	≥95%		≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%		≥95%		≥95%						
A29	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A						≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A34	≥60%	≥95%	≥95%	≥95%	≥95%		≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A35	≥60%	≥95%	≥95%	≥95%	≥95%		≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A36	≥60%	≥95%	≥95%	≥95%	≥95%		≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A38	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A40	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A41	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A44	≥60%	≥95%	≥95%	≥95%	≥95%		≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A45	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	≥95%		≥95%						
A52	≥60%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	≥95%	N/A		≥95%				≥95%	≥95%	≥95%	≥95%	≥95%	>95%		>95%						

*PID-29 only measured where PID-30 indicates "Y/Yes" that the patient is deceased.

CKS Field Measurement: PID-3.1 and PID-3.5 are measured together for the purposes of conformance. PID-3.1 (any iteration) must be populated with the patient's Common Key Service attribute and PID-3.5 must be populated with the value "CKS" in order for the message to be conformant for this field.

C-CDA Conformance

MedRec Conformance Report

Describes overall conformance rates for C-CDA messages sent.

Field Definitions/Controls

- Conformance Report for Hospitals
- Overview Report – Patient Fields
- Overview Report – Visit Fields
- Overview Report – Provider and Discharge Fields

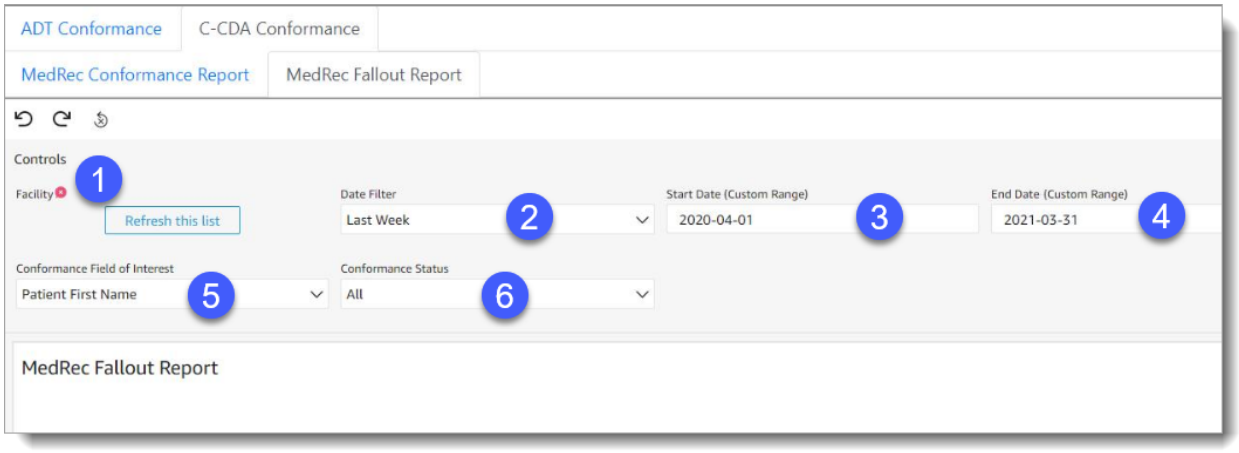
MedRec Fallout Report

Shows C-CDA messages that did not meet the conformance thresholds.

Field Definitions/Controls

Use the following controls to filter the C-CDA report for the specific criteria information you need:

1. **Facility**
2. **Date Filter**
    - Custom Range
    - Last Month
    - Last Quarter
    - Last Week
    - Last Year
    - Yesterday
3. **Start Date (Custom Range)** - This field will only affect the data selection if the **Period of Interest** field is set to the value of **Custom Range**.
4. **End Date (Custom Range)** - This field will only affect the data selection if the **Period of Interest** field is set to the value of **Custom Range**.
5. **Conformance Field of Interest** – Use this field to choose specific criteria such as patient name.
6. **Conformance Status** – Accept the default or choose a status from the dropdown list.



Required XPaths

Below is a list of the XPaths used in the XML document. The **Description** column contains the data elements within the C-CDA Conformance report. The **Xpaths** column contains what is used to determine the presence of the data element.

Section	Description	Xpaths
Header Section	**Provider Organization**	recordTarget/patientRole/providerOrganization/name or author/assignedAuthor/representedOrganization/name
	Facility OID	recordTarget/patientRole/providerOrganization/id/extension == [MSH-4.1^MSH-4.2 (should match OIDs sent in ADTs]
	EMR	author/assignedAuthor/assignedAuthoringDevice/manufacturerModelName
	Patient First Name	recordTarget/patientRole/patient/name/given
	Patient Last Name	recordTarget/patientRole/patient/name/family
	Patient Date of Birth	recordTarget/patientRole/patient/birthTime
	Patient Gender	recordTarget/patientRole/patient/administrativeGenderCode/code
	Patient SSN	if recordTarget/patientRole/id/root == “2.16.840.1.113883.4.1” then recordTarget/patientRole/id/extension
	Patient Address	recordTarget/patientRole/addr/streetAddressLine
	Patient City	recordTarget/patientRole/addr/city
	Patient State	recordTarget/patientRole/addr/state
	Patient Zip Code	recordTarget/patientRole/addr/postalCode
	Visit ID	componentOf/encompassingEncounter/id/extension
	Progress Note	templateId/root == "2.16.840.1.113883.10.20.22.1.9"
	Attending Provider First Name	documentationOf/serviceEvent/performer/assignedEntity/assignedPerson/name/given or componentOf/encompassingEncounter/encounterParticipant/assignedEntity/assignedPerson/name/given

Section	Description	Xpaths
	Attending Provider Last Name	documentationOf/serviceEvent/performer/assignedEntity/assignedPerson/name/family or componentOf/encompassingEncounter/encounterParticipant/assignedEntity/assignedPerson/name/family
	Attending Provider NPI	documentationOf/serviceEvent/performer/assignedEntity/id/extension or componentOf/encompassingEncounter/encounterParticipant/assignedEntity/id/extension
	Attending Provider Phone	documentationOf/serviceEvent/performer/assignedEntity/telecom/value or componentOf/encompassingEncounter/encounterParticipant/assignedEntity/telecom/value
Component Section	**Admission Medications**	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.1 " or "2.16.840.1.113883.10.20.22.2.1.1" or "2.16.840.1.113883.10.20.22.2.38"
	Active Problems	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.5" or "2.16.840.1.113883.10.20.22.2.5.1"
	Admission Medications	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.1 " or "2.16.840.1.113883.10.20.22.2.1.1" or "2.16.840.1.113883.10.20.22.2.38"
	Advanced Directives	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.4.48" or "2.16.840.1.113883.10.20.22.2.21" or "2.16.840.1.113883.10.20.22.2.21.1"
	Allergies	if component/structuredBody/component/section/templateId/root =="2.16.840.1.113883.10.20.22.2.6.1"
	Chief Complaint	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.12" or "2.16.840.1.113883.10.20.22.2.13" or "1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1"
	Discharge Instructions	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.41"
	Encounter Type	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.22.1" or "2.16.840.1.113883.10.20.22.2.22" or "2.16.840.1.113883.10.20.22.4.49"
	Functional Status	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.14"
	Immunizations	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.2" or "2.16.840.1.113883.10.20.22.2.2.1"
	Plan of Care	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.10"
	Procedures	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.7" or "2.16.840.1.113883.10.20.22.2.7.1"
	Reason for Referral	if component/structuredBody/component/section/templateId/root == 1.3.6.1.4.1.19376.1.5.3.1.3.1
	Results/Laboratory Values	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.3.1"
	Social History	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.17"
	Tests Ordered	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.16"

Section	Description	Xpaths
	Visit Diagnosis	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.24 " or "2.16.840.1.113883.10.20.22.2.43" or "2.16.840.1.113883.10.20.22.2.8"
	Visit Diagnosis Description	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.22" or "2.16.840.1.113883.10.20.22.2.22.1" then component/structuredBody/component/section/templateId/entry/encounter/templateId/root ="2.16.840.1.113883.10.20.22.4.49"/entryRelationship/act/templateId/root == "2.16.840.1.113883.10.20.22.4.80"
	Vital Signs	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.4.1" or "2.16.840.1.113883.10.20.22.2.4"
	Discharge Medication Name	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/consumable/manufacturedProduct/manufacturedMaterial/code/displayName or if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/consumable/manufacturedProduct/manufacturedMaterial/code/translation/displayName or if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/consumable/*manufacturedProduct*/manufacturedMaterial/code/originalText
	Discharge Medication Code	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/consumable/manufacturedProduct/manufacturedMaterial/code/codeSystemName== "RxNorm" or "NDC" or if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root ==

Section	Description	Xpaths
		"2.16.840.1.113883.10.20.22.4.16"/consumable/manufacturedProduct/manufacturedMaterial/code/translation/codeSystemName== "RxNorm" or "NDC"
	Discharge Medication Begin Date	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/effectiveTime/low/value
	Discharge Medication End Date	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/effectiveTime/high/value
	Discharge Medication Status	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/statusCode/code
	Discharge Medication Dose Unit	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/doseQuantity/unit
	Discharge Medication Dose Quantity	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/doseQuantity/value

Section	Description	Xpaths
	Discharge Medication Instructions	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/entryRelationship/act/templateId/root == "2.16.840.1.113883.10.20.22.4.20" or if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/entry/act/templateId/root ="2.16.840.1.113883.10.20.22.4.35"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.16"/entryRelationship/substanceAdministration/templateId/root == "2.16.840.1.113883.10.20.22.4.147"

Template OID Descriptions

This table is a list of the template Object Identifiers (OIDs) used in each section.

Template OID	Title	Description
2.16.840.1.113883.10.20.22.2.1	Medications	The Medications section defines a patient's current medications and pertinent medication history. At a minimum, the currently active medications are to be listed, with an entire medication history as an option. The section may also include a patient's prescription and dispense history.
2.16.840.1.113883.10.20.22.2.1.1	Medications	The Medications section defines a patient's current medications and pertinent medication history. At a minimum, the currently active medications are to be listed, with an entire medication history as an option. The section may also include a patient's prescription and dispense history. This section requires that there be either an entry indicating the subject is not known to be on any medications, or that there be entries summarizing the subject's medications.
2.16.840.1.113883.10.20.22.2.38	Medications Administered	The Medications Administered section defines medications and fluids administered during the procedure, encounter, or other activity excluding anesthetic medications. This guide recommends anesthesia medications be documented as described in the section on Anesthesia.
2.16.840.1.113883.10.20.22.2.11	Hospital Discharge Medications List	The Hospital Discharge Medications section defines the medications that the patient is intended to take (or stop) after discharge. The currently active medications must be listed. The section may also include a patient's prescription history and indicate the source of the medication list, for example, from a pharmacy system versus from the patient.
2.16.840.1.113883.10.20.22.2.11.1	Hospital Discharge Medications	The Hospital Discharge Medications section defines the medications that the patient is intended to take (or stop) after discharge. At a minimum, the currently active medications should be listed with an entire medication history as an option. The section may also include a patient's prescription history and indicate the source of the medication list, for example, from a pharmacy system versus from the patient.
2.16.840.1.113883.10.20.22.4.35	Discharge Medication Code	The Discharge Medications entry codes medications that the patient is intended to take (or stop) after discharge.
2.16.840.1.113883.10.20.22.4.16	Medication Activity	A medication activity describes substance administrations that have actually occurred, for example, pills ingested or injections given) or are intended to occur, for example, "take 2 tablets twice a day for the next 10 days"). Medication activities in "INT" mood are reflections of what a clinician intends a patient to be taking. Medication activities in "EVN" mood reflect actual use. Medication timing is complex. This template requires that there be a substanceAdministration/effectiveTime valued with a time interval, representing the start and stop

Template OID	Title	Description
		dates. Additional effectiveTime elements are optional and can be used to represent frequency and other aspects of more detailed dosing regimens.
2.16.840.1.113883.10.20.22.2.24	Hospital Discharge Diagnosis	The Hospital Discharge Diagnosis section describes the relevant problems or diagnoses at the time of discharge that occurred during the hospitalization or that need to be followed after hospitalization. This section includes an optional entry to record patient conditions.
2.16.840.1.113883.10.20.22.2.43	Admitting Diagnoses	The Hospital Admitting Diagnosis section contains a narrative description of the primary reason for admission to a hospital facility. The section includes an optional entry to record patient conditions.
2.16.840.1.113883.10.20.22.2.8	Assessments	The Assessment section (also called impression or diagnoses) represents the clinician's conclusions and working assumptions that will guide treatment of the patient. The assessment formulates a specific plan or set of recommendations. The assessment may be a list of specific disease entities or a narrative block.
2.16.840.1.113883.10.20.22.2.5	Problem List	This section lists and describes all relevant clinical problems at the time the document is generated. At a minimum, all pertinent current and historical problems should be listed.
2.16.840.1.113883.10.20.22.2.5.1	Problems	This section lists and describes all relevant clinical problems at the time the document is generated. At a minimum, all pertinent current and historical problems should be listed.
2.16.840.1.113883.10.20.22.2.12	Reason for Visit	This section records the patient's reason for the patient's visit (as documented by the provider). Local policy determines whether Reason for Visit and Chief Complaint are in separate or combined sections.
2.16.840.1.113883.10.20.22.2.13	Chief Complaint and Reason for Visit	This section records the patient's chief complaint (the patient's own description) and/or the reason for the patient's visit (the provider's description of the reason for visit). Local policy determines whether the information is divided into two sections or recorded in one section serving both purposes.
1.3.6.1.4.1.19376.1.5.3.1.1.13.2.1	Chief Complaint	This section records the patient's chief complaint (the patient's own description).
2.16.840.1.113883.10.20.22.2.6.1	Allergies	This section lists and describes any medication allergies, adverse reactions, idiosyncratic reactions, anaphylaxis/anaphylactoid reactions to food items, and metabolic variations or adverse reactions/allergies to other substances (such as latex, iodine, tape adhesives) used to assure the safety of health care delivery. At a minimum, it should list currently active and any relevant historical allergies and adverse reactions.
2.16.840.1.113883.10.20.22.4.48	Advanced Directive Observation	Advanced Directives Observations assert findings, for example, "resuscitation status is Full Code" rather than orders and should not be considered legal documents. A legal document can be referenced using the reference/externalReference construct.

Template OID	Title	Description
2.16.840.1.113883.10.20.22.2.21	Advanced Directives	This section contains data defining the patient's advance directives and any reference to supporting documentation. The most recent and up-to-date directives are required, if known, and should be listed in as much detail as possible. This section contains data such as the existence of living wills, healthcare proxies, and CPR and resuscitation status. If referenced documents are available, they can be included in the CCD exchange package. NOTE: The descriptions in this section differentiate between "advance directives" and "advance directive documents." The former are the directions whereas the latter are legal documents containing those directions. Thus, an advance directive might be "no cardiopulmonary resuscitation," and this directive might be stated in a legal advance directive document.
2.16.840.1.113883.10.20.22.2.21.1	Advanced Directives	This section contains data defining the patient's advance directives and any reference to supporting documentation. The most recent and up-to-date directives are required, if known, and should be listed in as much detail as possible. This section contains data such as the existence of living wills, healthcare proxies, and CPR and resuscitation status. If referenced documents are available, they can be included in the CCD exchange package. *Note*: The descriptions in this section differentiate between "advance directives" and "advance directive documents." The former are the directions whereas the latter are legal documents containing those directions. Thus, an advance directive might be "no cardiopulmonary resuscitation," and this directive might be stated in a legal advance directive document.
2.16.840.1.113883.10.20.22.2.4	Vital Signs	The Vital Signs section contains relevant vital signs for the context and use case of the document type, such as blood pressure, heart rate, respiratory rate, height, weight, body mass index, head circumference, and pulse oximetry. The section should include notable vital signs such as the most recent, maximum and/or minimum, baseline, or relevant trends. Vital signs are represented in the same way as other results but are aggregated into their own section to follow clinical conventions.
2.16.840.1.113883.10.20.22.2.4.1	Vital Signs	The Vital Signs section contains current and historically relevant vital signs for the context and use case of the document type, such as blood pressure, heart rate, respiratory rate, height, weight, body mass index, head circumference, and pulse oximetry. The section should include notable vital signs such as the most recent, maximum and/or minimum, baseline, or relevant trends. Vital signs are represented in the same way as other results but are aggregated into their own section to follow clinical conventions.
2.16.840.1.113883.10.20.22.2.41	Hospital Discharge Instructions	The Hospital Discharge Instructions section records instructions at discharge.

Template OID	Title	Description
2.16.840.1.113883.10.20.22.2.14	Functional Status	The Functional Status section describes the patient's physical state, status of functioning, and environmental status at the time the document was created. A patient's physical state may include information regarding the patient's physical findings as they relate to problems, including but not limited to: • Pressure Ulcers • Amputations • Heart murmur • Ostomies A patient's functional status may include information regarding the patient relative to their general functional and cognitive ability, including: • Ambulatory ability • Mental status or competency • Activities of Daily Living (ADLs), including bathing, dressing, feeding, grooming • Home or living situation having an effect on the health status of the patient • Ability to care for self • Social activity, including issues with social cognition, participation with friends and acquaintances other than family members • Occupation activity, including activities partly or directly related to working, housework or volunteering, family and home responsibilities or activities related to home and family • Communication ability, including issues with speech, writing or cognition required for communication • Perception, including sight, hearing, taste, skin sensation, kinesthetic sense, proprioception, or balance A patient's environmental status may include information regarding the patient's current exposures from their daily environment, including but not limited to: • Airborne hazards such as second-hand smoke, volatile organic compounds, dust, or other allergens • Radiation • Safety hazards in home, such as throw rugs, poor lighting, lack of railings/grab bars, etc. • Safety hazards at work, such as communicable diseases, excessive heat, excessive noise, etc. The patient's functional status may be expressed as a problem or as a result observation. A functional or cognitive status problem observation describes a patient's problem, symptoms, or condition. A functional or cognitive status result observation may include observations resulting from an assessment scale, evaluation or question and answer assessment. Any deviation from normal function displayed by the patient and recorded in the record should be included. Of particular interest are those limitations that would interfere with self-care or the medical therapeutic process in any way. In addition, a note of normal function, an improvement, or a change in functioning status may be included.
2.16.840.1.113883.10.20.22.2.2	Immunizations	The Immunizations section defines a patient's current immunization status and pertinent immunization history. The primary use case for the Immunization section is to enable communication of a patient's immunization status. The section should include current immunization status and may contain the entire immunization history that is relevant to the period of time being summarized.

Template OID	Title	Description
2.16.840.1.113883.10.20.22.2.2.1	Immunizations	The Immunizations section defines a patient's current immunization status and pertinent immunization history. The primary use case for the Immunization section is to enable communication of a patient's immunization status. The section should include current immunization status and may contain the entire immunization history that is relevant to the period of time being summarized.
2.16.840.1.113883.10.20.22.2.10	Plan of Care	The Plan of Care section contains data that defines pending orders, interventions, encounters, services, and procedures for the patient. It is limited to prospective, unfulfilled, or incomplete orders and requests only, which are indicated by the @moodCode of the entries within this section. All active, incomplete, or pending orders, appointments, referrals, procedures, services, or any other pending event of clinical significance to the current care of the patient should be listed unless constrained due to privacy issues. The plan may also contain information about ongoing care of the patient and information regarding goals and clinical reminders. Clinical reminders are placed here to provide prompts for disease prevention and management, patient safety, and health-care quality improvements, including widely accepted performance measures. The plan may also indicate that patient education will be provided.
2.16.840.1.113883.10.20.22.2.7	Procedures	This section defines all interventional, surgical, diagnostic, or therapeutic procedures or treatments pertinent to the patient historically at the time the document is generated. The section is intended to include notable procedures but can contain all procedures for the period of time being summarized. The common notion of "procedure" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM). Therefore, this section contains procedure templates represented with three RIM classes: Act. Observation, and Procedure. Procedure act is for procedures the alter that physical condition of a patient (Splenectomy). Observation act is for procedures that result in new information about a patient but do not cause physical alteration (EEG). Act is for all other types of procedures (dressing change). The length of an encounter is documented in the documentationOf/encompassingEncounter/effectiveTime and length of service in documentationOf/ServiceEvent/effectiveTime.

Template OID	Title	Description
2.16.840.1.113883.10.20.22.2.7.1	Procedures	This section defines all interventional, surgical, diagnostic, or therapeutic procedures or treatments pertinent to the patient historically at the time the document is generated. The section may contain all procedures for the period of time being summarized but should include notable procedures. The common notion of ""procedure"" is broader than that specified by the HL7 Version 3 Reference Information Model (RIM). Therefore, this section contains procedure templates represented with three RIM classes: Act. Observation, and Procedure. Procedure act is for procedures the alter that physical condition of a patient (Splenectomy). Observation act is for procedures that result in new information about a patient but do not cause physical alteration (EEG). Act is for all other types of procedures (dressing change).
1.3.6.1.4.1.19376.1.5.3.1.3.1	Reason for Referral	A Reason for Referral section records the reason the patient is being referred for a consultation by a provider. An optional Chief Complaint section may capture the patient's description of the reason for the consultation.
2.16.840.1.113883.10.20.22.2.3.1	Results	The Results section contains the results of observations generated by laboratories, imaging procedures, and other procedures. The scope includes observations such as hematology, chemistry, serology, virology, toxicology, microbiology, plain x-ray, ultrasound, CT, MRI, angiography, echocardiography, nuclear medicine, pathology, and procedure observations. The section often includes notable results such as abnormal values or relevant trends and could contain all results for the period of time being documented. Laboratory results are typically generated by laboratories providing analytic services in areas such as chemistry, hematology, serology, histology, cytology, anatomic pathology, microbiology, and/or virology. These observations are based on analysis of specimens obtained from the patient and submitted to the laboratory. Imaging results are typically generated by a clinician reviewing the output of an imaging procedure, such as where a cardiologist reports the left ventricular ejection fraction based on the review of a cardiac echocardiogram. Procedure results are typically generated by a clinician to provide more granular information about component observations made during a procedure, such as where a gastroenterologist reports the size of a polyp observed during a colonoscopy.
2.16.840.1.113883.10.20.22.2.17	Social History	This section contains data defining the patient's occupational, personal, for example, lifestyle), social, and environmental history and health risk factors, as well as administrative data such as marital status, race, ethnicity, and religious affiliation. Social history can have significant influence on a patient's physical, psychological, and emotional health and wellbeing so should be considered in the development of a complete record.

Template OID	Title	Description
2.16.840.1.113883.10.20.22.2.22.1	Encounters	This section lists and describes any healthcare encounters pertinent to the patient's current health status or historical health history. An Encounter is an interaction, regardless of the setting, between a patient and a practitioner who is vested with primary responsibility for diagnosing, evaluating, or treating the patient's condition. It may include visits, appointments, as well as non-face-to-face interactions. It is also a contact between a patient and a practitioner who has primary responsibility for assessing and treating the patient at a given contact, exercising independent judgment. This section may contain all encounters for the time period being summarized but should include notable encounters.
2.16.840.1.113883.10.20.22.2.22	Encounters	This section lists and describes any healthcare encounters pertinent to the patient's current health status or historical health history. An Encounter is an interaction, regardless of the setting, between a patient and a practitioner who is vested with primary responsibility for diagnosing, evaluating, or treating the patient's condition. It may include visits, appointments, as well as non-face-to-face interactions. It is also a contact between a patient and a practitioner who has primary responsibility for assessing and treating the patient at a given contact, exercising independent judgment. This section may contain all encounters for the time period being summarized but should include notable encounters.
2.16.840.1.113883.10.20.22.4.49	Encounter Activities	This clinical statement describes the interactions between the patient and clinicians. Interactions include in-person encounters, telephone conversations, and email exchanges.
2.16.840.1.113883.10.20.22.2.16	Hospital Discharge Studies Summary	This section records the results of observations generated by laboratories, imaging procedures, and other procedures. The scope includes hematology, chemistry, serology, virology, toxicology, microbiology, plain x-ray, ultrasound, CT, MRI, angiography, echocardiography, nuclear medicine, pathology, and procedure observations. This section often includes notable results such as abnormal values or relevant trends and could record all results for the period of time being documented. Laboratory results are typically generated by laboratories providing analytic services in areas such as chemistry, hematology, serology, histology, cytology, anatomic pathology, microbiology, and/or virology. These observations are based on analysis of specimens obtained from the patient and submitted to the laboratory. Imaging results are typically generated by a clinician reviewing the output of an imaging procedure, such as where a cardiologist reports the left ventricular ejection fraction based on the review of an echocardiogram. Procedure results are typically generated by a clinician wanting to provide more

Template OID	Title	Description
		granular information about component observations made during the performance of a procedure, such as when a gastroenterologist reports the size of a polyp observed during a colonoscopy. Note that there are discrepancies between CCD and the lab domain model, such as the effectiveTime in specimen collection.

XPath Exclusions Table

When the XPaths listed in the table below are present, the Discharge Medication Fields are excluded from the measurement scoring criteria.

Description	Path
When the following XPaths are present the message shall be ***excluded*** from measurement for **Discharge Medication** fields **(Code, Name, Instructions, Dose Quantity, Dose Unit, Begin Date, End Date,** and **Status)**.	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/text/paragraph/"No Known Medications"
	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/content/"No Current Hospital Discharge Medications"
	if component/structuredBody/component/section/templateId/root == "2.16.840.1.113883.10.20.22.2.11" or "2.16.840.1.113883.10.20.22.2.11.1" then component/structuredBody/component/section/templateId/content/"Hospital Discharge Medications excluded/not available"

When the following XPath is present, the document is tagged as an *ambulatory CCD* and excluded from *Discharge Med Rec* conformance: componentOf/encompassingEncounter/code/@code == "AMB"

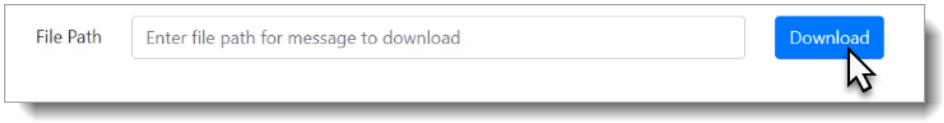
***Note**: Conformance may be measured separately on these message types at a future date.*

Downloading C-CDA Fallout Report messages

1. Log in to **MIGateway**.
2. Choose the **Administrative** dropdown menu, and then choose **Conformance Reporting**.
3. On the **Conformance Reporting** window, choose **C-CDA Conformance**.
4. Choose the **C-CDA Fallout Report** tab to access your fallout messages.
5. Choose your Facility using the dropdown menu.
6. Choose the desired time period using the **Date Filter.**

   Note: *If you would like to search a specific time frame not included in the date filter, select* ***Custom Range*** *in the* ***Date Filter*** *dropdown menu, and then select the* ***Start Date (Custom Range)*** *and the* ***End Date (Custom Range).***

7. Choose your **Conformance Field of Interest.**
8. Choose your **Conformance Status.**
9. Copy the **File ID** for the specific message you wish to download which is located in the **file_id** column.
10. Paste the **file_id** into the **File Path** search box.



11. The message will download and display at the bottom of your browser. Double-click to open the message.

Downloading a C-CDA Report (Fallout Excluded)

1. Open the **report** you would like to download.
2. When you hover on the right-hand side of the report, a **toolbar** will appear.
3. Click the **toolbar**.
4. Choose the **Ellipsis** (**…**)
5. Choose either **Export to CSV** or **Export to Excel**.

Appendix A: Field Definitions

DG1-3.1: Diagnosis Code ID

DG1-3.2: Diagnosis Code Text

DG1-6: Diagnosis Type

IN1-3: Insurance Company ID

IN1-4: Insurance Company Name

PID-5.1: Patient Last Name

PID-5.2: Patient First Name

PID-7: Patient DOB

PID-8: Patient Sex

PID-10: Patient Race

PID-11.5: Patient ZIP

PID-19: Patient SSN

PID-22: Ethnic Group

PID-29: Patient Death Date/Time

PID-30: Patient Death Indicator

PV1-2: Patient Class

PV1-4: Admission Type

PV1-7: Attending Doctor ID

PV1-10: Hospital Service

PV1-14: Admit Source

PV1-17: Admitting Doctor ID

PV1-19: Visit Number

PV1-36: Discharge Disposition

PV1-37: Discharge to Location

PV1-44: Admit Date/Time

PV1-45: Discharge Date/Time

Appendix B: Glossary of Abbreviations and Acronyms

ADT	An Admission, Discharge, Transfer message is used for trigger events such as hospital admissions, discharges and transfers and is used to exchange the patient's status within a facility.
CCD	Continuity of Care Document is a patient's clinical summary for electronic document exchange between providers, systems and/or facilities. Contained within a CCD is the most relevant demographic and clinical information about a patient in HL7 FHIR V3 (XML). This includes: Patient demographics, Patient history, Medications, Allergies, Procedures, Encounters, Problem lists, Immunizations, Lab results.
C-CDA	Consolidated Clinical Documentation Architecture
CKS	Common Key Service
OID	Object Identifier. An identifier mechanism standardized by the International Telecommunications Union (ITU) and ISO/IEC for naming any object, concept, or "thing" with a globally unambiguous persistent name.
URL	Uniform Resource Locator
XML	Extensible Markup Language
XPath	XML path language