



Montana Department of Public Health and Human Services (MT DPHHS) Electronic Case Reporting (eCR) Implementation Guide

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Purpose

This document provides guidance on the electronic case reporting (eCR) onboarding process for eligible hospitals, Critical Access Hospitals (CAHs), and eligible providers with Montana Department of Health and Human Services (MT DPHHS).

The following two documents should be used in conjunction with this guide. The [Electronic Case Reporting \(eCR\) Onboarding Guide for Healthcare Organizations](#) created by the Centers for Disease Control and Prevention (CDC), Association of Public Health Laboratories (APHL), and Council of State and Territorial Epidemiologists (CSTE). It outlines the steps required to complete technical onboarding to the APHL Informatics Messaging Services (AIMS) platform to enable eCR transmission to public health jurisdictions. For further information on the requirements set by APHL for eCR capabilities for applications, networks, and vendor products please refer to APHL's [Electronic Case Reporting \(eCR\) Implementation Requirements Checklist](#).

Introduction to Electronic Case Reporting (eCR)

What is Electronic Case Reporting?

Electronic Case Reporting (eCR) is the automated generation and transmission of case reports from electronic health records (EHRs) to the appropriate public health agencies (PHAs) for further investigation. Compared to traditional case reporting eCR improves the timeliness, completeness, and accuracy of data allowing for a faster public health response without interrupting the workflow of the health provider. The reports sent are referred to as electronic initial case reports (eICRs) since some are the first 'initial' report sent by providers with diagnoses or suspect diagnoses, and further investigation might be needed before case status is determined by the PHA.

To confirm delivery of eICRs to PHA(s) providers will receive back a reportability response (RR) with information concerning: (1) condition(s) reported, (2) PHA(s) who received eICR, and (3) optional information from the PHA (i.e., timeframe which reporting is required, whether the eICR was delivered based on the "Patient home address" or "Provider facility address", treatment information, factsheets, etc.). This real-time, bidirectional exchange of information with eCR helps in meeting these various state requirements for reportable diseases, while reducing the burden of manual case reporting on healthcare providers and PHAs.

For more information on how eCR works visit: <https://www.cdc.gov/ecr/how-does-ecr-work.html> and <https://ecr.aimsplatform.org/>.

Promoting Interoperability

Beginning in 2022, eCR became required for those participating in the [Centers for Medicare and Medicaid Services \(CMS\) Medicare Promoting Interoperability Program \(PIP\)](#) for eligible hospitals and critical access hospitals (CAHs), and the [Merit-Based Incentive Payment System \(MIPS\)](#) Promoting Interoperability Performance Category for eligible clinicians.

MT DPHHS has declared readiness and has capacity to receive eICRs to help facilities and healthcare organizations (HCOs) meet Promoting Interoperability requirements. Any provider or non-hospital facility that wants to implement eCR to automate the reporting of required conditions is also eligible to implement eCR with MT DPHHS. However, eICRs are not currently implemented in the production environment of our electronic disease surveillance system, called MIDIS. Current reporting methods are required until MT DPHHS confirms eCR has been fully implemented and manual reporting can be stopped.

Communicable Disease Reporting Rules in Montana

Each state and territory have specific reporting requirements for certain diseases and conditions. When fully implemented eCR can help simplify and alleviate some of the burden of disease reporting, while increasing compliance with various state reporting requirements. In Montana, Administrative Rules— 37.114.101 through 37.114.583 –

define the data, timing, and other reporting specifications required for reporting. [Administrative Rule 37.114.203](#) lists the reportable conditions and diseases in Montana.

Data Transmission

AIMS & RCKMS

MT DPHHS does not accept eICR messages directly and requires participating senders use APHL Informatics Messaging Services (AIMS) platform to transmit eICRs to MT DPHHS. AIMS is a secure, cloud-based platform that receives, processes, and delivers eICRs to the appropriate jurisdiction(s). All 50 states along with some territories and local jurisdictions have connections with AIMS to receive eICRs. For more information on AIMS and their role in eCR please visit their [website](#).

AIMS uses a tool called the Reportable Conditions Knowledge Management System (RCKMS) to determine the reportability and appropriate jurisdictions to send eICRs. The RCKMS tool consists of three parts: (1) authoring interface—a real-time portal where PHAs input and edit the reporting criteria to match jurisdictional reporting requirements, (2) knowledge repository – stores the reporting criteria authored by each jurisdiction, and (3) decision support service (DSS)—processes the eICR and compares eICR data against the authored reporting specifications to determine reportability and jurisdiction(s) to deliver the eICR. A list of available conditions can be found on the [RCKMS website](#). MT DPHHS will continue to edit and manage the reporting criteria in RCKMS to account for changes in reporting requirements in Montana.

Reportable Conditions Trigger Codes (RCTC)

Triggering of eICRs from EHRs to AIMS is initiated from relevant patient record data matching reportable condition trigger codes (RCTC). Providers do have the ability to manually trigger an eICR to PHAs and provide reason for manually triggering. The list of RCTC can be downloaded from the [Electronic Reporting and Surveillance Distribution \(eRSD\) website](#). The list of RCTC continues to be updated and HCOs are expected to routinely update to the newest release of the RCTC to ensure that eICRs are being properly triggered.

There are six main triggering scenarios:

- (1) Lab orders (LOINC)
- (2) Diagnosis (SNOMED, ICD-10 CM)
- (3) Suspected diagnosis (SNOMED, ICD-10 CM)
- (4) Lab results (SNOMED)
- (5) Lab result test name (LOINC)
- (6) Medication- for version 3.X eICRs (CVX, RXNORM, SNOMED).

Providers will have the ability to manually trigger an eICR and record the reason for triggering the eICR for PHA understanding.

For more information on triggering visit [AIMS EHR Triggering](#).

HL7 Message Standards

The eICR is a Health Level Seven International (HL7) Clinical Document Architecture (CDA) balloted standard for reporting to public health. HL7 implementation guides for eICRs and RRs can be found below:

1. Public Health Case Report – the Electronic Initial Case Report ([HL7 Standards Product Brief - HL7 CDA® R2 Implementation Guide: Public Health Case Report - the Electronic Initial Case Report \(eICR\) Release 2, STU Release 3.1 - US Realm | HL7 International](#))
2. Reportability response ([HL7 Standards Product Brief - HL7 CDA® R2 Implementation Guide: Reportability Response, Release 1, STU Release 1.1 - US Realm | HL7 International](#))
3. [HL7 Fast Healthcare Interoperability Resources \(FHIR\) Electronic Case Reporting \(eCR\)](#) [Note: FHIR HL7 messages will be supported on AIMS in the future.]

Electronic Case Reporting (eCR) vs Electronic Lab Reporting (ELR)

Electronic Laboratory Reporting (ELR) is not being replaced with eCR. ELR is the submission of laboratory reports that identify reportable conditions from laboratories to public health. eCR provides a broader array of data collection compared to ELR including health history and co-morbidities. MT DPHHS plans to utilize ELR and eCR together for disease investigations.

Quick Resources & Tools

- [eCR Getting Started \(CDC\)](#)
- [eCR Overview \(AIMS\)](#)
- [MT DPHHS – Promoting Interoperability](#)
- [eCR Onboarding Guide for HCO](#)
- [eCR Implementation Requirements Checklist \(aimsplatform.org\)](#)
- [eRSD website \(RCTC Codes\)](#)
- HL7 CDA Standards (Implementation Guides)
 - [Electronic Initial Case Report \(eICR\)](#)
 - [Reportability Response \(RR\)](#)
- HL7 FHIR Standards (Implementation Guides)
 - [Electronic Case Reporting \(eCR\) and Reportability Response \(RR\)](#)

Onboarding Process for Electronic Case Reporting (eCR)

Implementation of eCR will occur in two parts: (1) creating a connection with AIMS and conducting initial testing, and (2) sending live feed to MT DPHHS for data validation and maintenance. Implementing eCR at your HCO/facility is going to require working with

your EHR vendor, CDC eCR Onboarding Team, APHL (AIMS), CSTE (RCKMS), and MT DPHHS. MT DPHHS looks forward to working with you and your team to implement eCR at your HCO/facility.

The steps below are to serve as a guide for HCOs to onboard for eCR with MT DPHHS. Make sure to consult with your EHR vendor before beginning the implementation as each EHR vendor has slightly different processes for completing the onboarding process to AIMS. For more detailed guidance on connecting with AIMS and data validation completion before officially onboarding with MT DPHHS please refer to the [Electronic Case Reporting \(eCR\) Onboarding Guide for Healthcare Organizations](#) created by APHL.

Step 1: Healthcare Organization eCR Planning & Preparation

Register Intent with MT DPHHS for Promoting Interoperability/MIPS

- Complete registration of intent form for eligible HCO/facility or eligible clinician on [MT DPHHS Promoting Interoperability website](#).
 - Registration is only required once with MT DPHHS.
 - **Change in EHR vendor will require new registration with MT DPHHS.**
 - Registration can be completed before EHR vendor is deemed ready for eCR.
 - No registration required if you do not plan to declare attestation for Promoting Interoperability/MIPS.
 - Please still notify MT DPHHS of plan to implement eCR so we can plan accordingly for receiving messages.

For more information on registering or questions, please email MIDIS@mt.gov.

Verify eCR Ready

- Obtain leadership approval to implement eCR at HCO/facility.
- EHRs/Health IT product classified as being in [General Availability](#) for eCR onboarding by CDC eCR Team.
 - EHR vendor listed – contact EHR vendor to discuss the options for eCR implementation.
 - EHR vendor not listed – inquire with your EHR vendor about timeline of availability to start onboarding process.

For more information on the requirements set for eCR implementation please refer to your EHR vendor's implementation task list and APHL's [Electronic Case Reporting \(eCR\) Implementation Requirements Checklist](#).

Contact the eCR Onboarding Team

- Either the EHR vendor or HCO/facility should contact the CDC eCR Team at eCR@cdc.gov to inform about plan to start the eCR implementation process



- Include in subject line: “onboarding – [insert HCO name] – [insert EHR product]”
- eCR Onboarding Team will provide onboarding materials and any necessary information

Confirm Policy Path for Reporting

- Confirm policy path/legal framework with CDC Onboarding Team
 - AIMS and RCKMS need to receive eICRs under the federal Health Insurance Portability and Accountability Act (HIPAA) business associate or comparable authorities. HIPAA and disease reporting rules for public health allow APHL to confirm that conditions meet reportability rules in each state or territory before sending them to the appropriate jurisdiction(s).
 - The policy path can be achieved through participating or connecting to an organization that either is a member or implementer of the one of the following:
 - **eHealth Exchange**
 - **Carequality**
 - **CommonWell**
 - **APHL participation agreement** – If your organization is not represented in any of three above options APHL offers a terms of service agreement.

For more information on the policy path options for HCOs please visit:

<https://ecr.aimsplatform.org/healthcare/confirm-policy-path>.

Complete eCR Pre-Implementation Tasks

- Confirm technical connection pathway with AIMS.
- Complete the eCR Provider Intake Form (if applicable).
- Complete CDC facility list template.
 - Compiled list of onboarding facilities:
 - Facility Name
 - National Provider Identifier (NPI)
 - CMS Certification Number (CCN)
 - Facility Address
 - Indicate if facility is not part of your organization
 - Type of facility (e.g., hospital, UC/ER, LTC, ambulatory, other)
 - Indicate if facility is a special type (e.g., FQHC, CAH, tribal, occupational)
 - Facility list can be completed while working on configuration with EHR.
 - Please also provide a copy of the completed facilities list to MT DPHHS. Updated facility lists will be requested periodically, and yearly at a minimum.

Step 2-3 will be guided by your EHR vendor along with your eCR onboarding coordinator. Requirements might change over time and eCR onboarding is not the same across EHR vendors. Please ensure to follow the tasks required by your EHR vendor, eCR onboarding coordinator, and APHL to ensure sufficient implementation and testing.

Step 2: Configuration

Complete EHR Specific Configuration

- Verify delivery of eCR interface into your appropriate environment (if applicable).
- Review your EHR vendor's implementation documentation for build instructions.
- Complete eCR build and required mappings:
 - Implement Reportable Conditions Trigger Codes (RCTC) from [eRSD](#). For more information on eICR triggering visit ([EHR Implementers – EHR Triggering](#)).
 - All eCR implementors are encouraged to implement for all conditions instead of just for COVID-19 and Mpox/Orthopox if EHR vendor is capable.
 - Ability to trigger test eICR to AIMS.
 - Produce a conformant message according to the [HL7 Standards](#).
 - Map eICR data elements listed in the [eICR Data Needs workbook](#).

For more information on eCR creation and standards visit [eICR Creation, Validation & Standards \(aimsplatform.org\)](#). The [eICR Data Needs workbook](#) is a helpful onboarding companion to the [HL7 CDA Implementation Guide](#) for ensuring all the eICR required data elements are mapped.

Establish AIMS Connection

- AIMS supports two secure technical connection options. [Note: Connection options availability dependent on EHR ability.]
 - Direct Simple Mail Transfer Protocol (SMTP)
 - Nationwide Health Information Network (NwHIN) Cross Enterprise Document Reliable Interchange (XDR) using the eHealth Exchange HUB
 - FHIR (Implemented Soon)

For more information on how to establish a connection with AIMS and details on the steps taken between the two connection options please refer to the [eCR Onboarding Guide for Healthcare Organizations](#) (pages 6-7) or visit the [AIMS Healthcare–Establish AIMS Connectivity for Testing website](#).

- Ability to trigger test eICR to AIMS
 - Produce a conformant message according to the [HL7 Standards](#) that is sent to AIMS.
- Ability to receive back and process an RR



- After a test eICR is sent AIMS will automatically send an RR back to the sending Direct address.

For more information on RRs and troubleshooting not receiving back an RR please read the [eCR Onboarding Guide for Healthcare Organizations](#) (page 7) or visit the [AIMS Reportability Response Receipt and Use website](#).

Step 3: Testing & Content Review

Healthcare Organization/Facility Testing

- The eCR Onboarding Team and your EHR vendor will determine the required testing scenarios required before moving into PHA validation. Please see your EHR's eCR setup documentation.

Healthcare Organization/Facility Content Review

- Conduct Schema/Schematron Validation using [AIMS Validator](#) to verify eICRs comply with standards set in: [HL7 CDA Implementation Guide: Public Health Case Report - the Electronic Initial Case Report \(eICR\)](#).
- Verify the following during content review:
 - Implemented the latest trigger code set version from eRSD.
 - Pregnancy status is mapped.
 - Race category (excluding nulls):
 - American Indian or Alaska Native (1002-5)
 - Asian (2028-9)
 - Black or African American (2054-5)
 - Native Hawaiian or Other Pacific Islander (2076-8)
 - White (2106-3)
 - Other (2131-1)
 - Ethnicity category (excluding nulls):
 - Hispanic or Latino (2135-2)
 - Not Hispanic or Latino (2186-5)
 - Encompassing Encounter is present.
 - Diagnosis code and/or Problem List Trigger Code present.
 - Laboratory Results include positive value and abnormal indicator.
- Ensure you received and can process the RR back after a test eICR is triggered to AIMS.
 - There should be one RR received back for each eICR sent.

Data Quality & Validation – “Soft Go-Live”

- After approval to move forward HCOs will enter a “soft go-live” phase, if EHR is capable, where production data will be analyzed for a short period of time.
 - Data Quality (DQ) Monitoring Report will be provided to both the HCO and the PHA.
 - Data elements will be given a “Completeness Score”.



- Failure to meet the Consensus Data Quality Metrics Standards of Completeness set by the PHA eCR Quality Assurance Workgroup will require further testing and corrective action.

Testing and content review must be completed and approved by the CDC eCR team before moving into PHA validation.

Step 4: Enabling Production Data Feed to PHAs

- Select an agreed upon start date for production data with APHL, MT DPHHS and any other PHAs involved.
- HCO or EHR vendor will send an email to eCR@cdc.gov to notify of production data enabled.
- AIMS will confirm receipt of eICRs and respond with an email.
- HCO must confirm receipt of RRs.
- AIMS will confirm receipt of eICRs and RRs to public health jurisdictions.

Step 5: PHA Data Quality & Validation

- MT DPHHS will continue to receive and validate the production eICRs sent through AIMS.
- **HCOs and providers will not be allowed to turn off current methods of reporting until official notification received by MT DPHHS.**
- MT DPHHS may require the repeat of previous testing steps if the following scenarios were to occur:
 - Change of EHR vendor.
 - HCO does not address the data quality issues reported by MT DPHHS within expected timeline.
 - Implementation of all conditions from currently only reporting COVID-19 and Mpox/Orthopox.

For post-production technical support, contact the eCR Support Team at eCRinfo@aimsplatform.org -- Include "eCR Production Support – [insert your healthcare organization name] – [insert your EHR product]" in the subject line.

Step 6: Production Use & End Manual Reporting Methods

MT DPHHS does not currently have eICRs implemented into the production environment of our surveillance system. Manual reporting of conditions will be required until officially notified when and for which conditions current reporting methods can be discontinued.

- EHR companies or HCO technical staff are expected to continue to download and update to the newest version of RCTC codes from [eRSD](#) as they become available.
- Reporting facility/HCO will be officially notified by MT DPHHS when dual reporting can be turned off and for which conditions.



- Continue to call the local health departments for conditions that require immediate notification.

Contact Information

For questions related to eCR:

MT DPHHS eCR Coordinator

Kristen Merrell

kristen.merrell@mt.gov

MIDIS inbox

MIDIS@mt.gov

For onboarding or connecting with CDC eCR team:

eCR@cdc.gov

For general eCR inquiries for AIMS:

eCR-Info@aimsplatform.org

For post-production technical assistance with AIMS:

eCRinfo@aimsplatform.org

Acronyms

eCR – Electronic Case Reporting/ Electronic Case Report

eICR – Electronic initial Case Report

ELR – Electronic Lab Reporting

RR – Reportability Response

APHL – Association of Public Health Laboratories (APHL)

AIMS – APHL Informatics Messaging System

CDC – Centers for Disease Control and Prevention

CSTE – Council of State and Territorial Epidemiologists

RCKMS – Reportable Conditions Knowledge Management System

RCTC – Reportable Conditions Trigger Codes

PHA – Public Health Agency [Note: This could include state, local, and tribal.]

HCO – Healthcare Organization

CAH – Critical Access Hospital

EH – Eligible Hospital

HL7 – Health Level Seven [Note: International standards used to provide guidance with transferring and sharing data.]

CMS – Centers for Medicare and Medicaid Services

PI – Promoting Interoperability

MIPS – Merit-Based Incentive Payment System