

Electronic Case Reporting: Implementation Guide



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Introduction

Healthcare providers are required by law to report approximately 100 different reportable conditions in each jurisdiction (state, territory) and nationally. Reporting laws vary for different jurisdictions, both in what to report and when, which can present challenges for healthcare organizations resulting in inconsistent, or incomplete reporting.

North Dakota has lessened the burden for state healthcare providers by grouping all reportable condition regulations under the North Dakota Century Code 23-07. Although reportable conditions are the core of public health surveillance, reporting compliance is not consistent. In addition to reporting to their local jurisdiction, healthcare providers for some conditions are also required to report to the patient's residence public health agency (PHA)- wherever in the country that may be. The substantial number of different reports and the variation in state laws create quite a challenge for healthcare providers and electronic health record (EHR) vendors. North Dakota Department of Health and Human Services (NDHHS) is promoting electronic case reporting (eCR) to simplify reporting and increase regulatory compliance.

eCR helps solve these problems by making it possible for EHR vendors to enable healthcare providers to meet their legal obligations. eCR automates reporting without changes to the provider's existing workflows, allowing healthcare providers to devote more time for their patients. It uses a single, all-condition, all-jurisdiction electronic initial case report (eICR) standard that simplifies EHR interface development. eCR also provides a single place for an organization's EHR vendor to send these reports, where they are processed to ensure their reportability and routing to all appropriate jurisdictions.

Electronic Lab Reporting (ELR) Versus eCR

- ELR is the electronic submission of laboratory reports that identify reportable conditions from laboratories to public health.
- eCR has potential to provide a broader array of data collection including health history and co-morbidities, ultimately supporting a more effective public health system.
- **NOTE:** eCR is **NOT** intended to replace ELR or be a substitute for any ELR requirements.

Healthcare Organization - Readiness and Implementation Checklist

The items listed below outline the actions a healthcare organization must take to enable the eCR workflow once project sponsorship has been secured. Some of the steps may be performed by your EHR vendor, depending on your existing contract, and supporting workflows.

- Verify eCR Prerequisites Are Met
- Registration of Intent
- Confirm Policy Path
- Establish Connectivity
- Conduct Testing
- Go-Live in the Production Environment

Contact the eCR general inquiries team at eCR-Info@aimsplatform.org with any questions that you may have about the process.

Verify eCR Prerequisites Are Met

EHR readiness involves the following items:

- **Elements related to your EHR software and vendor:** Your EHR vendor must be certified by the US Department of Health and Human Services (HHS) Office of the National Coordinator for Health Information Technology (ONC) for eCR prior to the end of the reporting period. The required code for eCR must be in your Live environment prior to the first day of your reporting period.
- **EHR implementation in your particular healthcare setting:** Your EHR vendor and/or healthcare technical staff will download and update an Electronic Reporting and Surveillance Distribution (eRSD) (including Reportable Conditions Trigger Codes (RCTC)) from public health that will guide the EHR to determine when and how to send reports. Some EHRs may need to map local lab codes to national coding systems to assure trigger reports are working correctly.
- **The ability to send the eICR:** The EHR should be able to create the all-condition, all-jurisdiction eICR standard. (If you are unsure about your EHR's ability to create the case report, please consult with your EHR vendor).

- **The ability to receive back a Reportability Response (RR):** The EHR should be able to receive a RR for each eICR that is sent by either attaching the RR to the appropriate patient's chart or receiving a notification when something is reportable or may be reportable. (If you are unsure about your EHR's ability receive the RR, please consult with your EHR vendor).

Registration of Intent

When you are moving forward with eCR, you will need to communicate your intent to participate to your PHA and with the eCR Support Team via the eCR general information desk eCR-Info@aimsplatform.org. NDHHS declared their readiness as of January 21, 2021. Click [here](#) to register your intent with NDHHS. Registration of Intent will allow you to attest for eCR in the Centers for Medicare and Medicaid Services (CMS) Promoting Interoperability Program. A letter of compliance can be requested from the NDHHS if needed by contacting Ben Schram at bschram@nd.gov.

Confirm Policy Path

With the implementation of eCR, a single point of connection can be used for reporting, however, the connection does require the implementation of business associate agreements that comply with the Health Insurance Portability and Accountability Act (HIPAA). There are several ways that your organization can establish the necessary agreements:

- Be an eHealth Exchange member or a member of a Health Information Exchange (HIE) or other organization that is a member of the eHealth Exchange.
- Be a Carequality Implementer or use an EHR vendor that is a Carequality Implementer.
- Be a CommonWell Health Alliance member or use an EHR vendor that is a CommonWell Health Alliance member.

If your organization is not represented by any of options listed above, the Association of Public Health Laboratories (APHL) offers a terms of service agreement that can be signed on behalf of your organization if your EHR vendor has not already signed it.

Participation with NDHIN, as an eHealth Exchange member, satisfies the policy component of eCR. Your EHR vendor may also serve this purpose as an implementer of Carequality. Please contact your EHR vendor or NDHIN Outreach Coordinator with any questions.

Establish Connectivity

The technical specifics of your reporting will be dependent on the Trust and Legal Connectivity approach you choose from the above options. There are currently two “transport” standards for technical connectivity: XDR and Direct. Soon, FHIR (Fast Healthcare Interoperability Resources) will also be a supported transport standard.

Currently, providers may submit through Direct Simple Mail Transfer Protocol (SMTP) using the HISP of their choice until such a time as FHIR APIs are widely adopted by EHR vendors to support eCR submissions. Contact your EHR vendor regarding available connection methods.

Direct SMTP

Direct SMTP provides a secure transport for the sending and receiving of encrypted health information. It is administered by DirectTrust, a nonprofit health care industry alliance. Connecting with Direct involves the use of the specifications outlined on the Direct Project Applicability Statement for Secure Health Transport website and can be accessed by clicking [here](#).

Direct SMTP Technical Prerequisites:

- It is a requirement that the HISP be in either the [Accredited Trust Bundle](#) or the [Interoperability Trust Bundle](#). For more information on the bundle specifics, please click [here](#).
- Direct Secure Messaging (DSM) setup through either your EHR’s preferred Health Information Services Provider (HISP) or the NDHIN HISP. Note: The Communicate Web portal will mostly likely not be an acceptable method to consider for eCR reporting.

How to Establish Connection with Direct SMTP

Once all EHR setup and configuration tasks are complete, including the ability to trigger a test eICR, you can now test your connectivity with the AIMS eCR Platform. Follow the steps outlined below to establish a Direct SMTP connection for eCR:

- Contact your HISP to confirm you have the latest certificates on your test environment and whether the Direct domain you will be using for testing is on the Production Accredited Trust Bundle or the Interoperability Testing Bundle. If your EHR vendor is Epic or Meditech, you will be using the NDHIN HISP. If you have additional questions regarding the NDHIN HISP, please contact NDHIN directly at NDHINSupport@koblegroup.com and place “eCR” in the Subject Line of the email.
- Open a ticket by sending an email to informatics.support@aphl.org informing the eCR Support Team that you sent the Hello World message via Direct. Include your technical contact information and sending address. Make the subject line: eCR - [your healthcare organization name] - Direct SMTP Connection Request (example: “eCR - ABC Hospital - Direct SMTP Connection Request”).
- Send a Hello World message from your Direct testing address to demo@direct.aimsplatform.com. Be sure the subject line is: eCR - [your healthcare organization name] and “Hello World” (example: “eCR - ABC Hospital - Hello World”).
- Once the initial Hello World message is received, the eCR platform will send a Hello World message back to the provided Direct address and request confirmation that it was received.
- Send test Trigger and eICR using a test patient that has fully populated demographic information. **PLEASE NOTE: Only send test data, no Protected Health Information (PHI), during these tests.**
 - If your test address is on the Interoperability Testing Bundle, send to test@aimsplatform.sandbox.dmhispc.com.
 - If your test address is on the Production Accredited Trust Bundle, send to demo@direct.aimsplatform.com.

Once you send the test eICR, confirm the RR receipt with the APHL Informatics Messaging Services (AIMS) eCR platform. The platform will

automatically send a RR message back to the sending Direct address upon receipt.

- If you do not receive a RR back, confirm your configuration to rule out the most common issues found below:
 - Confirm the eICR was generated and sent.
 - Confirm the eICR made it to your HISP.
 - Confirm the eICR was attached to a Direct Message.
 - Confirm you received a successful Message Disposition Notification (MDN) response from AIMS.
 - Confirm your patient matching configurations allow for matching the RR to an existing patient.

Confirm the process by opening a ticket and sending an email to informatics.support@aphl.org, with the subject line: eCR - [your healthcare organization name] - Direct SMTP in TEST. Inform the eCR Support Team that you sent a test eICR via Direct, include the time and date of the message, your Direct address, and note if you successfully received the RR back. If you did not receive the RR, include the troubleshooting steps completed prior to opening a ticket.

What To Do After Establishing Connection

Now that you have established a test connection for eCR, any eICR documents delivered will be processed and a RR returned as would happen in the production environment. **Please do not, however, send actual patient data to the test address.** Proper testing will require that data for synthetic patients (test patients with no real personal health information) be exchanged, and that this test patient data should resemble production patient data as much as possible.

Test eICRs will be validated, run through the Reportable Conditions Knowledge Management System (RCKMS) decision support, and a RR will be returned, finalizing your testing. When using the test environment, the test eICRs and RRs will be transmitted via a test channel to appropriate PHAs to validate those pathways. When in production, "reportable" and "may be reportable" RRs should be attached to the patient chart or directed to the appropriate provider/support staff work queue and all RRs should be reviewed by system administrators for errors and warnings.

Conduct Testing

Complete the test scenarios from the COVID-19 Test Package by clicking [here](#). You will find the test package at the bottom of the page and from there will begin generating test eICRs using synthetic patient data. Once you send the test eICR, the AIMS eCR platform will send a RR message back.

For each test scenario, make sure to:

- Only use the trigger codes specified for each test scenario.
- Export the test eICRs and save as XML files with the following naming convention: OrganizationName_Test eICR_YYYYMMDD.
- Validate the test eICR using the on-line validator (<https://validator.aimsplatform.org>) to upload your eICR XML files and verify the construction. (Synthetic patient data only, no PHI).
- Submit sample eICR (saved as XML) files for content review. Include at least one sample eICR triggered from an encounter diagnosis/ problem list and at least one triggered from a positive or detected laboratory result. Send an email to informatics.support@aphl.org with the subject “eCR – {your healthcare organization name} – Sample eICRs for Content Review]. An eCR Onboarding Coordinator will review the files and respond with any required content modifications.

For any issues, open a ticket by sending an email to informatics.support@aphl.org [Subject: eCR – {your healthcare organization name}]. Include that you sent a test eICR along with the time and date of the message. The team will follow up with you to either troubleshoot or confirm next steps.

For additional testing details, visit the [Healthcare - Conduct Testing](#) page.

Go-Live in the Production Environment

When all the readiness and implementation steps have been completed and the EHR implementer details for them are in place, you are ready to go into production. There are technical materials, including support for triggering, eICR creation, RR receipt, and technical readiness testing available through the eCR website. Technical details regarding specifics on how to move into production

are available for review in the EHR Implementers section of the website and can be accessed by clicking [here](#).

When you are ready for technical onboarding, please submit a helpdesk ticket with the eCR Support Team by emailing informatics.support@aphl.org and include “eCR” in the subject line to ensure proper triage and routing of the ticket created.

Post Go-Live: Please ensure your eCRs are being routed correctly by monitoring that RR’s are received and spot check several of the initial cases with NDHHS.