Electronic case reporting (eCR)

The automated identification of reportable health events in electronic health records and their transmission to state and local public health authorities for review and action.
eCR Now

- Electronic case reporting (eCR) is a critical tool for COVID-19 and other outbreak management needs
  - Automated case reporting from EHRs to state and local public health agencies (PHAs)
  - Minimizes healthcare provider burden and meets core public health needs
  - Supports case management, contact tracing, situational awareness and reporting, connecting lab results, coordinating isolation and other response measures
  - Case reporting is a legally requirement in every state and territory
- eCR is operating well now for COVID-19, but there were a limited number EHRs with eCR capabilities when COVID-19 began
- We need more implementations of eCR Now
eCR Now Elements

1. Cohort-based COVID-19 rapid eCR implementations for provider sites that have eCR enabled EHRs

2. A new eCR Now FHIR app that non-eCR enabled EHRs can rapidly implement to automate COVID-19 eCR

3. Extension of the existing eHealth Exchange policy framework through a developing Carequality eCR implementation guide
eCR Now – Element 1

• Accelerated, cohort-based onboarding
  • Implementation has been streamlined to as little as just 3 days
  • Last week an initial California cohort onboarded 4.5 million patients and 13,000 physicians, this week there is a second cohort, and next week cohorts will expand outside of California
  • Over 100,000 COVID-19 case reports have now been triggered. Over 1000 facilities are actively reporting. 22 states are actively receiving reports and 45 have the capacity to do so.

• FHIR trigger code distribution service (eRSD)
  • Cases initiated from over 10 sets of evolving trigger codes (ICD, LOINC, SNOMED)

• Cases are automatically delivered to Public Health Agencies for surveillance – no manual entry in clinical care and minimized burden on healthcare providers and public health

• Electronic case reports are faster and more complete than manual reporting or ELR for outbreak management and contain critical clinical and demographic data
eCR Now FHIR App – Element 2

• A FHIR app that can be rapidly implemented to automate COVID-19 eCR in otherwise non-enabled EHRs

• Connect COVID-19 electronic case reporting to existing infrastructure to confirm case reports and route to appropriate public health surveillance systems

• Immediately implement in as many EHRs as possible, based on API that is “in the wild” without waiting for EHR software releases

• Initial version of eCR Now app for COVID-19 and source code will be available May 1 for EHR sandbox implementation and testing
## eCR Now - FHIR Reporting App

<table>
<thead>
<tr>
<th>Description</th>
<th>eCR Now COVID-19 and full eCR option</th>
<th>Backend Services App</th>
<th>Reporting Services in FHIR API</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Expedited delivery of app to provide automated COVID-19 eCR for EHRs that don’t have it. App can be used subsequently for full eCR.</td>
<td>Planned roll-out of app with fully automated launch, trust services, and other reporting functions</td>
<td>Advance FHIR Common Reporting Functions into FHIR API – all EHRs must report</td>
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<tr>
<td><strong>Timing</strong></td>
<td>App / source code available May 1</td>
<td>Projected for 2021</td>
<td>Longer term objective</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>HL7 CDA electronic Initial Case Report (eICR) Ver 1.1</td>
<td>HL7 FHIR electronic Initial Case Report Version 1.0 and other FHIR payloads</td>
<td>Multiple FHIR payloads</td>
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</tbody>
</table>
| **Operations** | • Fully manages triggering with eRSD input  
• Automated behind the scenes process  
• “SMART on FHIR App launch” for patient and encounter context  
• App launch by auto pages, CDS Hooks, etc.  
• Followed by system access for triggering and eICR loading or refresh tokens  
• Backend can be centrally hosted by EHR  
• Direct or XDR transport | • Full backend services app  
• Trust services for chronic surveillance  
• FHIR Subscription triggering  
• CQL engine connection | • Minimized app services  
• Possible CQL engine services |
| **Query Data** | • Argonaut 1.0.0 (R2) based on FHIR Version 1.0.2  
• USCore 2.0.0 (STU 2) based on FHIR Version 3.0.1 | • FHIR Release 5  
• USCore | • TBD |
Provider (EHR)
- Implements trigger codes
- Automatically generates Electronic Initial Case Reports (eICRs) during patient encounter

Policy agreements
- eHealth Exchange participation, APHL participation agreement, and Carequality coming

HL7 Standards
- Electronic Initial Case Report (eICR) CDA v1.1
- Reportability Response (RR) CDA v1.0

Existing eCR Infrastructure

Health Information Exchange (HIE) and/or eHealth Exchange HUB and/or DirectTrust

APHL Platform (AIMS)

CSTE / CDC Decision Support Engine (RCKMS)

Public Health Agency(ies)
- Where care was provided
- Patient residence

Provider (EHR)
eCR Now - “Ask”

• We would like your help in enabling automated reporting for COVID-19 in as many health systems as possible

• If you have a functional eCR EHR capability now, partner with us in rapid implementation cohorts

• If you do not have an eCR implementation yet, we would like you to:
  • Take the eCR Now app and source code on May 1st
  • Implement it in your sandbox
  • Participate in the Connectathon preparation webinar the week of May 4th and the HL7 FHIR Virtual Connectathon Public Health Track on May 13-15th.
  • Following any post Connectathon updates, implement the eCR Now app in your client organizations for seamless, automated COVID-19 reporting
FHIR Reporting Technical Team

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