ELECTRONIC CASE REPORTING (eCR)

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Deputy Director for Science, Center for Surveillance, Epidemiology and Laboratory Services, CDC
Electronic Case Reporting (eCR)
The automated generation and transmission of case reports from the electronic health record (EHR) to public health agencies for review and action.
Value of Electronic Case Reporting (eCR)

• More complete, accurate data in real time for action
• Early detection of cases allows...
  • earlier intervention
  • diminished transmission of disease
• Improves detection of outbreaks
• Responds directly to local and state partner needs
• Diminishes burden on healthcare provider to report
• Directly links health care to population health
eCR is the future of surveillance

• Get started

• Our priority
  • Obtaining electronically the initial message reporting potential cases
  • Scalable eCR implementation
  • Tangible, incremental success
Healthcare Provider

Record encounter in EHR

Electronic Health Record

Trigger Codes

Generate initial case report

Match?

Yes

Generate initial case report

Reportable Condition Knowledge Management Service (RCKMS)

Determine Reportability

Rules

Yes/No/Maybe

Route initial case report

Gather URL and pre-populated data

Surveillance System

URL

Send Notice of Reportability “No/Yes/Maybe”

Receive Notice of Reportability

Route to Reporter

Decision Support Intermediary

CDC

Public Health

Jurisdiction Receives Initial Case report

Yes/No/Maybe
Trigger Codes

• Logical Observation Identifiers Names and Codes (LOINC)
• Systematized Nomenclature of Medicine (SNOMED)
• International Disease Classification – 10 (ICD-10)

• Initial conditions to be evaluated with eCR
  • Chlamydia, Gonorrhea, Pertussis, Salmonella, Zika virus
Data must exist in the EHR
Used for all conditions in all jurisdictions

*CSTE Initial Case Report Task Force
Reportable Conditions Knowledge Management System (RCKMS)

• Reporting criteria differ across state and local jurisdictions
• RCKMS is a tool that provides standardized criteria, logic and value sets for reportable conditions that can be customized by jurisdictions
• Sits on intermediary platform(s) (e.g., APHL’s AIMS Platform)
• Receives triggered reports from the EHR
• Assesses reports for their potential to be a “case”
• Reports potential “cases” to jurisdiction(s)
eCR is ELR on steroids

• More complete and accurate information from the EHR (patient address, telephone, pregnancy, HPI........)
• Potential for direct integration of data
• Electronic feedback to healthcare
• Continued need for de-duplication (expected)
Digital Bridge

• “Public health is like a thousand gnats. They consistently pester you, but they never help you do anything.” --- Prominent EHR vendor

• Positive meetings at HIMSS with EPIC, Cerner, AllScripts, eClinicalWorks and Meditech

• RWJF convened meeting to discuss a vision for eCR, create shared governance and determine the initial steps for eCR implementation
What is the Digital Bridge?

- Goal: a consistent, nationwide, and sustainable approach to using health care’s EHR data to improve public health surveillance
- Partnership between public health, health care delivery systems, and health IT (EHR) vendors
- Governance funded by the Robert Wood Johnson Foundation
- Initial focus: electronic case reporting (eCR)
Digital Bridge Governance Body Members

**Governance Body**
- Care Delivery Networks
  - HealthPartners
  - Kaiser Permanente
  - Partners Healthcare
  - UNMC
- Public Health
  - APHL
  - AASTHO
  - CDC
  - CSTE
  - NACCHO
- EHR Systems
  - Allscripts
  - Cerner
  - eClinical Works
  - Epic
  - Meditech

**Project Management**
- Project Director
- Communications Director
- Communications Specialist
- Analyst
- Project Manager
- Analyst
- Technical Strategy SME
- Technical Project Manager

**Ex Officio Members**
- Co-Principal Investigators
- CDC Rep
- ONC Rep
### Initial Objective: Electronic Case Reporting (eCR)

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Convene initial meeting; consensus on goal, objective</th>
<th>June 2016 [Completed]</th>
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</thead>
<tbody>
<tr>
<td>Phase 2</td>
<td>Define requirements and technical architecture for multi-jurisdictional eCR approach</td>
<td>September 2016 – January 2017</td>
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<tr>
<td>Phase 3</td>
<td>eCR implementations</td>
<td>February 2017 – January 2018</td>
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</tbody>
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*After Phase 3, intent is to address other topics (e.g., chronic diseases, injury).*
## Site Participation

<table>
<thead>
<tr>
<th>Public Health Agency</th>
<th>Health Care Provider</th>
<th>EHR Vendor</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>UC Davis</td>
<td>Epic</td>
</tr>
<tr>
<td>Houston</td>
<td>Houston Methodist</td>
<td>Epic</td>
</tr>
<tr>
<td>Kansas</td>
<td>Lawrence Memorial Hospital</td>
<td>Cerner</td>
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<td>Massachusetts</td>
<td>Partners HealthCare</td>
<td>Epic</td>
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<tr>
<td>Michigan</td>
<td>McLaren Health Center</td>
<td>NetSmart (HIE-MiHIN)</td>
</tr>
<tr>
<td>New York City</td>
<td>Institute of Family Health</td>
<td>Epic</td>
</tr>
<tr>
<td>Utah</td>
<td>Intermountain Healthcare</td>
<td>Cerner</td>
</tr>
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Evolution and Improvement

• Learn from initial implementations
  • Participating sites will participate in eCR evaluations.
• Adapt accordingly
• Continued attention to legal requirements and sustainability
• Broaden use cases (e.g. longitudinal data)
  • Unique identifier(s)
  • Reporting Mandates or Business Associate Agreements
• Any public health agency interested in eCR can use the Digital Bridge approach
Healthcare Provider

- Record encounter in EHR

Electronic Health Record

- Trigger Codes
- Generate initial case report
- Match?
  - Yes
  - Match?

Decision Support Intermediary

Reportable Condition Knowledge Management Service (RCKMS)

- Determine Reportability
- Rules
- Reportable?
  - Yes/Maybe
  - No

- Route initial case report
- Send Notice of Reportability “No/Yes/Maybe”

Public Health

- Jurisdiction Receives Initial Case report
- Surveillance System

CDC

- Trigger Codes
- Gather URL and pre-populated data
- URL