

eCR Now

FHIR App

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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.

Legally Required Reporting

“ TITLE 17, California Code of Regulations

§ 2500. REPORTING TO THE LOCAL HEALTH AUTHORITY.

§ 2500(b) It shall be the duty of every health care provider, knowing of or in attendance on a case or suspected case of any of the diseases or condition listed below, to report to the local health officer for the jurisdiction where the patient resides. ...”

REPORTABLE COMMUNICABLE DISEASES §2500(i)

Partial list as example

Disease Name	Urgency	Disease Name	Urgency
Anaplasmosis	WEEK	Listeriosis	FAX ☎✉
Anthrax, human or animal	☎!	Lyme Disease	WEEK
Babesiosis	FAX ☎✉	Malaria	FAX ☎✉
Botulism (Infant, Foodborne, Wound, Other)	☎!	Measles (Rubeola)	☎!
Brucellosis, animal (except infections due to <i>Brucella canis</i>)	WEEK	Meningitis, Specify Etiology: Viral, Bacterial, Fungal, Parasitic	FAX ☎✉
Brucellosis, human	☎!	Meningococcal Infections	☎!
Campylobacteriosis	FAX ☎✉	Middle East Respiratory Syndrome (MERS)	☎!
Chancroid	WEEK	Mumps	WEEK
Chickenpox (Varicella)(Outbreaks, hospitalizations and deaths)	FAX ☎✉	Novel Coronavirus Infection	☎!
Chikungunya Virus Infection	FAX ☎✉	Novel Virus Infection with Pandemic Potential	☎!

<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/ReportableDiseases.pdf>

Electronic Case Reporting for COVID-19

- eCR is a critical tool for COVID-19 and other reporting needs
- COVID-19 highlights the need for essential clinical data for outbreak management at public health agencies:
 - patient demographics
 - race and ethnicity
 - occupation
 - pregnancy status
 - other clinical data
- 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

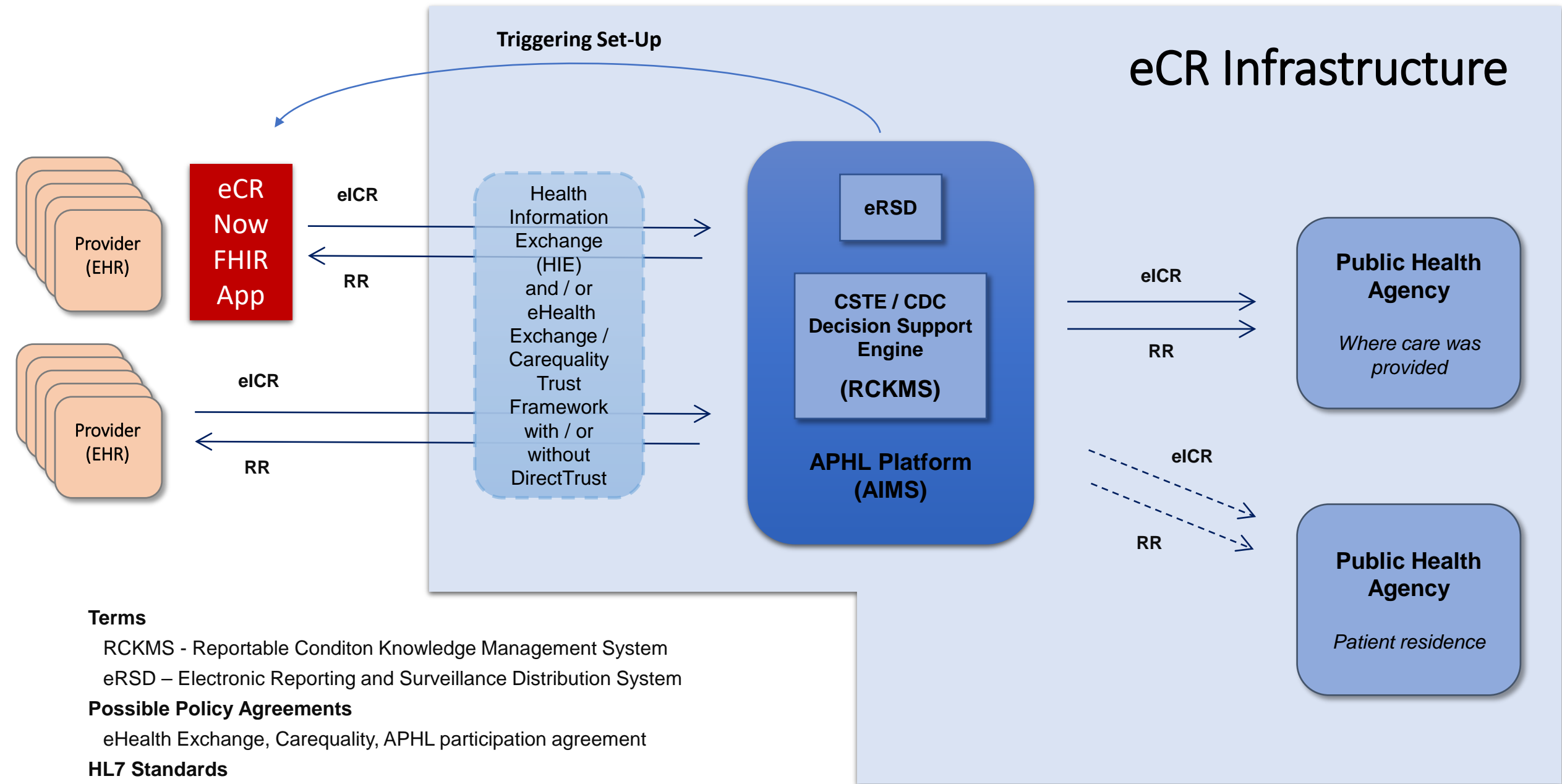
eCR Now Elements

1. Cohort-based COVID-19 rapid eCR implementations for provider sites that already 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 for ease of on-boarding

eCR Now FHIR App - Element #2

- Providers of care want to do COVID-19 eCR to stop manual reporting
- Public health agencies (with a few exceptions) are connected to receive
- We developed the “eCR Now FHIR App” so previously non-eCR enabled EHRs can do automated COVID-19 electronic case reporting now
- FHI app connects **CDA eICR v1.1** to existing eCR infrastructure to confirm case reports and route to appropriate public health jurisdictions / surveillance systems

eCR Infrastructure



Terms

- RCKMS - Reportable Condition Knowledge Management System
- eRSD – Electronic Reporting and Surveillance Distribution System

Possible Policy Agreements

- eHealth Exchange, Carequality, APL participation agreement

HL7 Standards

- eICR - Electronic Initial Case Report CDA v1.1
- RR - Reportability Response CDA v1.0

eCR Now – Production App Released (6/20)

- Background services app - no user interface
- Launch methods for patient and encounter context
 - ADT stream integration was considered as another approach, but requires much more
 - SMART on FHIR APP Launch
 - SMART on FHIR with system account
 - API-based launch with system account
- Validates outgoing CDA eICR version 1.1
- Supports Direct and has interface for XDR transport

SMART, NANCY | List | Recent | Name

SMART, NANCY	DOB: 8/11/1980	Age: 39 years	Sex: Female	MRN: 0000006930
Allergies: No Known Medication Allergies	Dose Wt: <No Data Available>	Advance Directive:	Code Status: <No Data Available>	Isolation: <No Data Available>
Care Team: Cerner Test, Physician - Hospitalist ... HealtheLife: No	HealthLife: No	Clinical Trial: <No Data Available>	Loc: MX Clinic 1	Outpatient FIN: 00000015958 [Reg Dt: 12/26/2019 10:31:51 AM CST] Visit...

- Menu
- Provider View
- Results Review
- Orders + Add
- Documentation + Add
- Outside Records
- Allergies + Add
- Clinical Media + Add
- Diagnoses and Problems
- Form Browser
- Growth Chart
- Histories
- Interactive View and I&O
- MAR Summary
- Medication List + Add
- Patient Information
- Recommendations
- American Well on FHIR
- Aunt Bertha
- Carevive
- Caringly
- DoseMeRX
- Healthwise
- Meducation
- Parachute Health
- T-System
- Vincari
- WellSheet
- eCRNow SMART**

eCR Now Electronic Case Reporting(eCR)

Application has been authorized with EHR successfully. [Close]

This "splash screen" will only be present if the eCR Now App has not been automatically launched. It is preferable to launch the App with an automated process at the start of encounters that does not have this user interface, does not impact healthcare provider workflow, and insures consistent operation. Specific launch implementation will depend on the EHR. The launch API is detailed in the available implementation specifications.

In the circumstance that automated launching cannot be accomplished, this text can be replaced with an appropriate message.

Ok

eCR Now – Production App Released (6/20)

- “Trigger” FHIR queries for:
 - Lab orders
 - Lab result test names
 - Lab result values
 - Conditions in problem list
 - Conditions in Dx
- “eICR Loading” FHIR Queries
 - DSTU2 or R4
 - Can be modified by EHR implementer

Section	Data Element	CDA XPath	DT	OC	FHIR Argoset	FHIR Argoset element	A	A	Arg Query
							k	C	
1	ClinicalDocument	ClinicalDocument/dateTime	1.1	n/s	n/s		n/s	n/s	n/s
2	ClinicalDocument	ClinicalDocument/id	1.1	n/s	n/s		n/s	n/s	n/s
3	ClinicalDocument	ClinicalDocument/status	0.1	n/s	n/s		n/s	n/s	n/s
4	ClinicalDocument	ClinicalDocument/versionNumber	0.1	n/s	n/s		n/s	n/s	n/s
5	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/id	1.*	arg-patient	Patient.identifier	M8	1.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
6	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/name	1.*	arg-patient	Patient.name	M8	1.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
7	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/telecom[phn]	1.*	arg-patient	Patient.telecom		0.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
8	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/telecom[mailto]	1.*	arg-patient	Patient.telecom		0.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
9	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/guardian/personName	0.*	arg-patient	Patient.contact.name		0.1		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
10	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/guardian/telecom[phn]	0.*	arg-patient	Patient.contact.telecom		0.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
11	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/guardian/telecom[mailto]	0.*	arg-patient	Patient.contact.telecom		0.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
12	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/address	1.*	arg-patient	Patient.contact.address		0.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
13	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/birthTime		arg-patient	Patient.birthDate	M8	0.1		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
14	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/administrativeGenderCode	1.1	arg-patient	Patient.gender	M8	1.1		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
15	ClinicalDocument/record/target	record/target/patient/patientRole/race	1.1	arg-race	Patient.race.extension[urlobCategory]	M8	0.5		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
16	ClinicalDocument/record/target	record/target/patient/patientRole/race	0.*	arg-race	Patient.race.extension[urlobDetailed]	M8	0.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
17	ClinicalDocument/record/target	record/target/patient/patientRole/ethnicityGroupCode	1.1	arg-ethnicity	Patient.race.extension[urlobCategory]	M8	0.1		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
18	ClinicalDocument/record/target	record/target/patient/patientRole/ethnicityGroupCode	0.*	arg-ethnicity	Patient.race.extension[urlobDetailed]	M8	0.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
19	ClinicalDocument/record/target	ClinicalDocument/record/target/patient/patientRole/languageCommunication/languageCode	1.*	arg-patient	Patient.communication.language	M8	0.*		GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate
20	ClinicalDocument/record/target								GET [base]/Patient[id] GET [base]/Patient[name][string]birthDate

eCR Now – Production App Released (6/20)

- Directly consumes electronic reporting and surveillance distribution (eRSD) trigger code and reporting specification
 - Trigger codes changing once a week during COVID-19
 - eRSD service built on FHIR subscription and polling
 - planDefinition orchestration of reporting by specification
- Cloud deployable by EHR or health system
- Switch from COVID-19 to full electronic case reporting is a configuration change