

California Department of Public Health

CalREDIE Quiet Room 74.167

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10:00 A.M.

Electronic Case Reporting (eCR) 101 Webinar

Transcription

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## **Background:**

Melanie Epstein-Corbin is the presenter in this eCR 101 webinar session recorded via WebEx. Local health department staff from several CalREDIE-participating jurisdictions attended. The duration of the presentation is approximately 40:00 minutes, and it includes a brief Questions & Answers session.

### **Slide 1 – Electronic Case Reporting (eCR) 101/California Reportable Disease Information Exchange (CalREDIE) - March 18, 2019**

Presenter: [Min 01:17] I'm just going to give it one more minute, and then we'll dive in.

Presenter: [Min 02:05] Okay, let's get started. Thank you for joining today's eCR 101 webinar. This webinar is intended to inform local health departments fully utilizing CalREDIE on electronic case reporting. My name is Melanie Epstein-Corbin and I am the electronic case reporting coordinator with CalREDIE. I have about a 30-40 minute presentation today, which should leave us with a good amount of time for questions and answers at the end of the session. So I'd like to ask that you please hold your questions until the end, so that we can get through all of the information today. There are slide numbers listed on the slides so if you'd like to take note of any particular slide for discussion later, I'll be happy to address that during the question and answer session. I will be recording the webinar today and once all of the eCR 101 sessions are completed, we'll post the recording to our CalREDIE eCR webpage.

### **Slide 2 – Objectives**

Presenter: [Min 03:07] The goal for this eCR 101 webinar is to bring everyone up to speed on where California is at with electronic case reporting, and make sure that we're all pursuing shared and realistic goals as eCR develops. So, today, I'll discuss the who, what, where, when, and why of electronic case reporting. I'll get into some of the details on how eCR works, as well as describe how we anticipate eCR working within CalREDIE. And I'll close with some updates on our current progress and projected timelines, as well as some next steps you can begin taking. I also quickly want to note that electronic case reporting is available to, and intended for all health care types, ranging from health care systems, to hospitals & clinics, to a single provider office. So, when you hear me mention "clinician", or "health care provider", those terms are used to indicate all health care types.

### **Slide 3 – What is eCR?**

Presenter: [Min 04:05] What is Electronic case reporting? eCR is the automated generation and transmission of case reports from the electronic health record (EHR) to public health agencies for review and action. So, in the current Public health reporting pathway eCR will automate the process by which the health care system reports a possible case to public health. eCR will fulfill the physician communicable disease reporting requirements under state regulations, and it also meets MU/Promoting Interoperability requirements. Our little disclaimer there is that although eCR will improve the method of reporting, it does not replace the responsibility of providers to report reportable conditions, especially those marked as "immediately" reportable will still require a phone call. And we make it a point to note this to the health care system community as well. We've had this health care system responsibility language added to our webpage, the CDPH Gateway, and eCR Informational bulletins as well.

#### Slide 4 – Partners in the Digital Bridge Initiative

Presenter: [Min 05:15] Who is leading eCR development? California is currently part of a national electronic case reporting pilot project that is being facilitated by the Digital Bridge Initiative, so I want to inform you a little bit about the Digital Bridge Initiative. The Digital Bridge is a forum for some of the key decision makers in health care, public health and health information technology (IT) to collaborate on ideas and solutions for a nationally consistent and sustainable approach to using electronic health data.

I wanted to share this slide because when we look at the breadth of representatives who are a part of this forum, you'll see that health care has been represented by Kaiser, which is important for CA, Health IT vendors like Epic and Cerner have been involved since the start, and public health has been at the table represented by NAACHO and the CDC and others; and the benefit of having all of these key perspectives at the table from the beginning is that there is an investment in eCR from each of these key players, which along with the planning and collaboration between these partners, bodes well for the future success of eCR.

Understanding the major players in eCR is also important to understand because there are components of eCR that are being developed at the national level, and therefore the work we do in California and within CalREDIE are often subject to the activities occurring at the national level.

The partnership is motivated by mutually beneficial outcomes among these organizations including:

- Easing the burden AND costs for all stakeholder groups (Providers, EHR vendors, and Public Health) AND
- Advancing greater standards-based information exchange across public health and health care.

#### Slide 5 – Digital Bridge

Presenter: [Min 07:17] The Digital Bridge is coordinating eCR pilot implementations at sites across different states and cities. California is one of the seven sites that has been selected to participate. The other pilot sites are in: Houston, Kansas, Massachusetts, Michigan, New York City and Utah. To date, 2 sites have successfully implemented the Digital Bridge approach to eCR and are receiving production level data: that would be Houston Methodist & Houston Department of Health as well as the Utah Department of Health and Intermountain Health. As it stands right now, California is scheduled to be 3<sup>rd</sup> in the nation to use the Digital Bridge approach for eCR. Each pilot sites consist of a partnership between a public health department, health care delivery system and health IT vendor. California Department of Public Health has partnered with Epic and UC Davis Medical Center to initially test and support 6 eCR pilot conditions: pertussis, gonorrhea, chlamydia, hep C, salmonellosis, and Zika. After the pilot is completed, CalREDIE eCR will support all state reportable conditions.

#### Slide 6 – eCR Data Flow from EHR to Public Health

Presenter: [Min 08:55] So now that I've described the Digital Bridge approach to eCR and the eCR Pilot, let's discuss how eCR actually works: I'm going to walk through the swim lanes starting on the left. And I want to note, that Electronic case reporting is focusing on existing health interoperability standards, so eCR is not a new technology.

- 1<sup>st</sup> lane: A patient comes in for a visit and the CLINICIAN enters information into the patient's electronic medical record according to their usual workflow.
- 2<sup>nd</sup> swimlane: In the background of the EHR system lives a list of nationally consistent trigger code reporting criteria. As the CLINICIAN enters a diagnosis, for example, or a lab order or result, these diagnostic and lab codes will be referenced against the list of trigger codes to see if there is a match.
- If there is NO match the sequence Ends and no report is sent.
- IF there is a match on one of the trigger codes, an electronic initial case report message will be automatically generated
- 3<sup>rd</sup> swimlane: the case report will be sent to the Decision Support Service and run through the Validation Tool where the data elements will be processed through a set of jurisdiction-specific reporting rules to determine if the case *IS* reportable. And, if it is reportable the Decision Support Service will transmit it to the appropriate public health agency.
- 4<sup>th</sup> swim: As Local Health Departments do now, they will be able to login to CalREDIE and evaluate case reports.

#### Slide 7 – What is the value of eCR?

Presenter: [Min 10:48] Why eCR? What is the value of eCR? The eCR approach will facilitate more complete & accurate data in real time which will allow for earlier detection of outbreaks, and hopefully allows for earlier interventions and diminished transmission of disease. eCR decreases the burden of reporting for providers because it shifts from the current paper-based, or manual data entry system to an automated process. Automating this exchange reduces opportunities for data entry errors, and eliminates confusion about what to report, when, and how to report it. Today, case reports for infectious disease are typically created through written reports that are faxed or must be manually entered instead of utilizing the patient's data that is already in the EHR. These are time-intensive manual processes that lead to slow response times and potentially dangerous disease outbreaks. With eCR, a reportable disease such as hepatitis or salmonella is automatically flagged, and a report is sent digitally to public health agencies. Lastly, an acknowledgement is sent to health care confirming the report was received and whether the patient's condition is reportable. This is the bi-directional communication piece that accompanies every electronic initial case report. So eCR has substantial promise for the future of public health surveillance because it offers benefits and addresses business needs for both data senders and data receivers.

#### Slide 8 – eCR Components

Presenter: [Min 12:36] So let's talk about some of the eCR Components.

#### Slide 9 – eCR Data Elements

Presenter: [Min 12:40] What type of data will come through on an electronic initial case report message? These data elements were initially identified by the Council for State and Territorial Epidemiologist, or CSTE, task force and have been mapped to information that is readily present and

available in health care provider's electronic health record systems, and these are considered fairly standard across all reportable conditions. In addition to list of data elements on the screen, Immunization status and travel history, have been included as possible data elements that may come in an eICR. Of course, the data must exist in the EHR if it's expected to come through on a case report. Part of the Digital Bridge approach was to standardize the data elements for reporting which is partly what allows the EHR vendors to develop eCR because it reduces the need for EHR Vendors to accommodate local or regional requirements that would generally require the vendor to create one-off solutions.

#### **Slide 10 – eICR Triggers: RCTC Table**

Presenter: [Min 13:55] How is this initial case report message triggered? The Reportable Conditions Trigger Code Table (RCTC) is embedded into the background of the EHR system by the vendor. This is the list of nationally consistent trigger codes. EHRs use the information in the RCTC table to scan all events to identify those that may be reportable to public health. When the record of an event includes a code that matches a trigger code, the EHR generates an electronic initial case report (eICR) and this eICR is automatically transmitted to the Decision Support Service for evaluation by the validation tool.

#### **Slide 11 – eCR Interface – Health Care Perspective**

Presenter: [Min 14:47] This is a mock demonstration from health care's perspective within the EHR. As the clinician is entering a diagnosis, and we'll pretend for today that this doesn't say Diabetes which is obviously not a reportable infectious disease, but this was the best EHR representation I could find. So, as the diagnosis is entered and an ICD10 code is populated within that patient's EMR, the RCTC table will be in the background of the EHR system looking for any matches. And all of this is occurring within the EHR. If there is a match to the RCTC then an eICR will be sent out of the EHR system to the Decision Support Service.

#### **Slide 12 – Decision Support Service (DSS) or the Reportable conditions knowledge management System (RCKMS) tool**

Presenter: [Min 15:44] So let's talk about the Decision Support Service (DSS) or the Reportable conditions knowledge management System (RCKMS) tool.

#### **Slide 13 – What is RCKMS?**

Presenter: [Min 15:52] The RCKMS has two main parts, the authoring interface and a Decision Support Service. The authoring interface is the portal where the Public Health Agency enters information about the reporting criteria and where it is stored and processed. The authoring interface also comes pre-populated with the default reporting specifications based on the standardized CSTE position statements on diseases and conditions. However, each jurisdiction is able to make customizations to these specifications within the authoring interface that will fit the requirements of the jurisdiction. The information entered into the authoring interface is stored in a repository of public health reporting criteria used by the second part of the tool, the Decision Support Service (aka DSS). The DSS is a platform that is used to determine whether a potential case is reportable and to which jurisdiction the report is sent.

### Slide 14 – Reporting Specification

Presenter: [Min 17:06] This is a screen shot of the RCKMS tool, which is an example of how jurisdiction-specific logic can be customized so LHJs can receive case reports. A PHA could login and select the set of logic that meets their jurisdiction’s requirements to define a case. So, for example, if you didn’t want to receive a suspected case of pertussis without the lab result to confirm the case, this is where your jurisdiction would set that criteria. Another example, would be in the case of Zika; let’s say you want to know anytime there is a suspected case of Zika, your jurisdiction might want to set your criteria so that your LHD would receive the eICR prior to a confirmed lab report, and solely based on the lab order for Zika. Selecting this logic should help LHDs narrow their workflow to the eICRs they really want to receive. And, in times of an outbreak, this logic set can be easily altered to make the criteria more sensitive if you want to receive suspected cases earlier, say for example based on the lab order instead of the result.

### Slide 15 – Reportability Response message

Presenter: [Min 18:27] One of the last components of eCR is the Reportability Response message.

### Slide 16 – Reportability Response to health care system

Presenter: [Min 18:37] The Reportability Response (RR) provides “bi-directional” communication between the health care system and public health. This is the acknowledgement that lets the provider know the status of the electronic initial case report that was triggered off their patient. This is similar to the acknowledgment that labs receive with Electronic Lab Reporting (ELR). RR functions to:

- Confirm that the electronic initial case report (eICR) message was received by the Decision Support Service and processed through the RCKMS tool.
- The RR Communicates this status back to the health care system.
- The response message will Indicate which local health department has been sent the report, and provides department contact information for the responsible public health agency.
- Lastly, the message may provide access to clinical support resources suggested by the public health agency.

The Reportability Response begins to satisfy this concern that Clinical care have expressed that they don’t receive any communication back from public health once they submit a case. The RR is a companion to an eICR and an RR will be generated for each eICR. Each patient visit may generate more than one eICR and therefore may generate more than one Reportability Response.

### Slide 17 – eICR Workflow in CalREDIE

Presenter: [Min 20:18] So let’s talk about how we expect eCR to work in CalREDIE.

### Slide 18 – eCR – “Automated Provider Portal (PP)”

Presenter: [Min 20:25] I understand not all LHJs are using PP but I think most are at least aware of PP, and I think this will be a helpful analogy to use to describe the eCR process. Right now, the CalREDIE Provider Portal module allows healthcare providers to login and submit Confidential Morbidity Reports (CMRs) to the LHDs directly through the online system. Provider Portal, however, still requires manual

entry of the data into the online CMR form, and it's not received into the CalREDIE system until it's filled out and submitted by the health care organization. It is not an automated process. Electronic Case Reporting will act as an automated provider portal where an individual does not need to login to CalREDIE to report a case because a report will be automatically triggered from within the EHR, based on the patient's data as the physician is entering information for that patient during the clinic visit.

#### **Slide 19 - Demo**

Presenter: [Min 21:35] Let's look at a demonstration of what I mean by an automated provider portal. This is a quick video to show you what will be happening in the background of CalREDIE once an electronic initial case report is received from the healthcare system's EHR. I'll go into each step in more detail in my next slides. Here you'll see the coding on the left and CalREDIE on the right. When a new eICR is received the internal infrastructure that the eCR Team has been building will enter the data from the eICR into CalREDIE just as would be done if an individual logged in to Provider Portal themselves. The Patient tab and Clinical Info tab will be populated with data present in the EHR and a new incident will be submitted to the DISA for LHD review.

#### **Slide 20 – Create new incident in CalREDIE**

Presenter: [Min 22:30] As I said, a new incident will be automatically created in CalREDIE, and will be waiting in the DISA for LHD to review prior to importing the incident as a case.

#### **Slide 21 – Mapping/auto-population of eICR data elements (demographic)**

Presenter: [Min 22:45] Each data element in the eICR has been mapped to the corresponding data element within CalREDIE and the Patient tab will be auto-populated with the information that was in the EHR and if that data element was not in the EHR then it will not be in CalREDIE.

#### **Slide 22 – Assign “Disease Being Reported”**

Presenter: [Min 23:07] The disease or condition will be assigned through this automated process.

#### **Slide 23 – Capability to add symptom data**

Presenter: [Min 23:13] And the Clinical Info tab AND the System Section will be completed with the data available from the eICR.

#### **Slide 24 – Incident recorded in system for review by LHD**

Presenter: [Min 23:22] An Incident will be created and will be waiting in the DISA for the LHD.

#### **Slide 25 – LHD User Imports Case into CalREDIE**

Presenter: [Min 23:33] The electronic initial case report (eICR) first goes to the DISA for LHD review. The incident is automatically created, but not automatically imported into CalREDIE. The LHD still determines whether to import that case from the DISA into CalREDIE. The process I just described is what we expect for the pilot. In the future, we may explore auto-processing of eICRs the way we have done for certain high volume conditions in ELR.

### Slide 26 – eCR “pilot” UDF

Presenter: [Min 24:12] We have created a new User Defined Form for eCR. The UDF will be a copy of the original information from an eICR message and it will be stored in the EFC for that patient. Like other UDF data, all of the data elements received in an eICR will be available through the Data Distribution Portal (DDP) for analysis. This is similar to the way current ELR messages are saved in the EFC.

### Slide 27 – Timeline & Next Steps

Presenter: [Min 24:57] Timeline & Next Steps

### Slide 28 – DRAFT-Electronic Case Reporting (eCR) California Statewide Implementation Timeline

Presenter: [Min 25:00] I wanted to briefly go over the current timeline for eCR. CalREDIE has been building the infrastructure to receive and process eICRs. We are currently in the process of conducting end-to-end testing for the pilot phase where we'll be using UC Davis “test data”. After end to end testing with UCD, we will continue to work with the Digital Bridge to evaluate the pilot outcomes. During this evaluation period we intend to receive “real data” from UC Davis into our CalREDIE Staging environment via eICRs for the 6 pilot conditions, on an ongoing basis. California’s timelines are affected by activities at the national level. Currently, we’re hearing that the components to operationalize electronic case reporting (eCR) beyond the pilot phase will be ready in August 2019. CalREDIE is actively working towards this timeline. Please note that there are many contingencies and dependencies that may affect these timelines, some of which are outside the scope of our control. Phase 3 Implementation is a target date and dependent on health care system readiness and ability to receive the EHR module to incorporate into their EHR system that would allow for eCR functionality. We are not just going to open the floodgates come August/Sept. We will be conducting an organized, formal onboarding process through very similar onboarding and user acceptance testing like we did for ELR. We want to keep you involved through the user acceptance testing to give us feedback on what is being received via eCR as compared to the paper CMR and we will work through any challenges together.

### Slide 29 – Next steps

Presenter: [Min 27:03] What can LHD stakeholder do next to be a part of electronic case reporting?

- Keep Informed!
  - Sign-up to receive the *CalREDIE eCR Informational Bulletin* & pass it on!
  - Check the CalREDIE eCR webpage for information, infographics, our bulletins are posted there, and other resources as well.
  - Co-brand eCR fliers with CalREDIE and share!
  - eCR 201 in Summer 2019. The eCR Team will continue to hold webinars to keep LHDs informed and we'll provide further learning opportunities for eCR.
- Instruct providers to contact their EHR vendor or IT analyst to determine if their EHR system will have the capacity to transmit an electronic initial case report message.



- Suggest providers contact CalREDIE to verify if they're ready to register for eCR.

### Slide 30 – Start the discussion

Presenter: [Min 28:29] Definitely start the discussion with submitters in your LHJ. You can begin inquiring if a health care organization is interested in eCR and encourage them to start the discussion within their facility on how they might want to adopt eCR. On the screen are some of the basic technology requirements for eCR:

- Providers must have CEHRT.
- Provider's EHR system must have ability to transmit an electronic initial case report (eICR) in conformance with HL7 CDA® R2 Implementation Guide: Public Health Case Report, Release 2 - US Realm - the Electronic Initial Case Report (eICR). \*Ask their EHR IT Analyst or EHR Vendor!

Lastly, The 5 EHR vendors you see listed here are all partners within the Digital Bridge, so it's our expectation that these EHR vendors may have the first eCR modules to offer their clients, but this doesn't mean that other vendors aren't currently working an eCR solution. Epic and Cerner are the furthest along right now as far as we understand, and Allscripts, eClinical Works, and Meditech are building their eCR solutions.

### Slide 31 – Thank you!

Presenter: [Min 29:48] Okay, so that's it. I'm going to unmute everyone, so we can hold a "Question & Answer" session, so give me just a second to unmute everyone.

### Questions & Answers Session [Min 30:20]

Orange County staff: [Min 30:48] Hello? Can you hear me? This is Patrick from Orange County Public Health. I was wondering, how do we send out requests to sign up for the Informational Bulletin?

Presenter: [Min 31:07]: Sure. You can always reach out to CalREDIE Helpdesk and they will pass on the information to us. Send them a quick email and let us know you would like to be added to our eCR distribution list.

Orange County Staff: [Min 31:23] Thank you.

[Background music from minute 31:27 to minute 32:01].

Fresno County staff: [Min 32:18] I'm wondering if each jurisdiction – where you can set the criteria for reporting – will everyone have access to that?

Presenter: [Min 32:33] You know, this is something we are still working out during the pilot phase here, so that's an excellent question; and this is why California really wanted to be part of this pilot, so we can discuss and work out some of those great questions. So stay tuned!

Fresno County staff: [Min 32:51] Thanks!

### Comments at the end:

Presenter: [Min 33:08] So I can tell you this is the fourth eCR 101 webinar session that I've done, and maybe I'll share some of the questions that I've heard in previous sessions, while others are thinking of some questions. One of the questions was "will eCR replace ELR." The answer to that is "No," ELR is the mechanism by which labs fulfill their reporting requirements, and eCR is the mechanism that providers can use to fulfill their reporting requirements; but one does not replace the other.

LHJ staff: [Min 33:58] Would eICRs get sent to the patient's jurisdiction or the jurisdiction of the provider?

Presenter: [Min 34:06] Yeah, great question. There is an opportunity within RCKMS to select that the eICR message go to both, the patient-based address local health jurisdiction, as well as the provider-based address local health jurisdiction; but if you don't actually make that selection, the eICR will be reported to the local health jurisdiction where the patient resides.

LHJ staff: [Min 34:38] Thanks!

Presenter: [Min 35:16] I will stay on the line here for another five minutes or so, in case anyone has some questions that they'd like to ask, but other than that thank you all for joining the eCR 101 Session.

Fresno County staff: [Min 35:40] Hi, I just wanted to make a comment - Right now, you were saying that it was all going through the Disease Incident Staging Area (DISA), but at times it might bypass that based on higher volume reports; I just wanted to note that we found there is a problem in the lab reporting side, and sometimes they send in negatives, and those negative get marked as a case. Just a warning that sometime when you skip that, you're getting false reports.

CalREDIE staff: [Min 36:21] What jurisdiction are you with? Just out of curiosity.

Fresno County staff: [Min 36:26] Fresno.

Presenter: [Min 36:29] Thank you for that feedback.

Presenter: [Min 38:30] Okay well, at this time I am going to close out the webinar. Again, thank you all for your participation today. If anyone has any questions or comments, please feel free to reach out to CalREDIE Help and they will get your comments on to me. Thank you, and have a great week.

END [Min 38:50].