

Peer to Peer Call – eCR

Louisiana

March 22, 2018

Case Presentation – Describe the leadership challenge you face.

What is the challenge or problem you're facing? Gap you're trying to narrow?

Our challenge is generally having the capacity to efficiently perform quality control on our ELR data. While onboarding new facilities for ELR transmission or maintaining current feeds, we have basically no way to ensure data quality in ELR messages other than visually inspecting them one at a time. Whereas our syndromic surveillance system, for example, parses HL7 contents into a database upon import of messages which facilitates performing validation and QC, we have no such tools for ELR since they are consumed by various systems within several sections (Infectious Disease Epidemiology, STD/HIV, TB, Environmental Epidemiology, etc.).

In Louisiana, ELR messages are first received at the state level by an ersatz informatics group of several developers housed within the STD/HIV Program (SHP). The messages are processed through a system called Alexander which has been cobbled together over the years and of which basically no one understands the internal workings. After being processed by Alexander, the messages are distributed to the individual sections based on the condition indicated by the test type contained in the message.

Other than ensuring that ELR messages are able to pass through Alexander without error and be routed to the appropriate section, the “informatics” group in SHP isn't concerned with the content of the messages; individual sections have to perform QC to ensure that data elements necessary for their functions are being sent in ELR and are surviving the processing in Alexander. Therefore, we basically need a tool for an epidemiologist to be able to efficiently inspect incoming ELR messages to ensure that necessary data elements are being transmitted to us in a usable manner.

Who are the major players? What are their conflicting perspectives and interests?

- SHP “Informatics” Group
 - Manages ELR receipt at the state level, processing through Alexander system, and routing to appropriate sections (Infectious Disease Epidemiology, STD/HIV, TB, Environmental Epidemiology, etc.)
 - Little interest in content validation of ELR messages; primarily ensure structural compliance
 - Shared resource between several sections with shared funding, but physically and administratively housed in SHP, making neutrality and equitable attention to sections difficult
- Infectious Disease Epidemiology Section
 - Recipient of ELR messages after processing through Alexander
 - Need to ensure that ELR messages contain necessary information for programmatic activities (intelligible test/result, specimen source, identifiers, etc.), as well as identifying where in the message these data are located
 - Would like to be able to perform analysis of incoming ELR on an aggregate level, such as facility-level frequency of fields and identification of what tests are being sent by which facilities
 - Limited staff time for individually inspecting messages one at a time or development of a tool to facilitate this work
- Other sections within Office of Public Health (STD/HIV, TB, Environmental Epidemiology, etc.)
 - Also responsible for QC of program-relevant ELR messages (potential duplication of effort within each section)

What action have you taken or are thinking about taking?

- Attempts at non-resource-intensive analysis using Excel and SAS have largely been unsuccessful
- Considered developing a tool in R to parse ELR messages, but complexity of HL7 and limited knowledge of HL7 make this a potentially monumental task to start from scratch

- Solutions in Rhapsody are potentially feasible, but would require licensing of additional (expensive) Communication Points, as well as non-negligible staff resources
- ELR processing is set to be transitioned from Alexander to Rhapsody, which may assist in setting up solutions for ELR QC

What are your stakes and interests? Any hidden issues?

- Receipt of ELR messages with complete information is necessary for adequate infectious disease surveillance
- We need to have information on ELR content available to epidemiologists within our sections to assess the completeness and quality of information received
- Data on ELR messages received also needs to be readily accessible for grant/cooperative agreement performance measures and progress reports
- IT/informatics capacity and access are both very limited

What do you want to be advised on by your group?

- How do other jurisdictions handle ELR receipt, processing, and routing to various programs?
- What tools are available or in use by other jurisdictions to perform analysis of ELR (or HL7 files in general) in an aggregate manner?
- What metrics do other jurisdictions assess from their ELR feeds?