Helios Align and Optimize: Tuberculosis Drug Resistance

Use Case

Use Case #9 – Public Health Authority (PHA) receives a report on a patient with a TB case, the individual is resistant to specific drugs, and the PHA wants to send that data back to the provider.

Key

- Black = evaluation framework questions
- Red = legal questions
- Blue = summary of public health experts’ responses

Evaluation Questions and Answer Summary

- What is the public health purpose?
  - What questions are you trying to answer?
  - Is this surveillance or research?
    - In Oregon, this use case is neither research nor surveillance; it is information sharing. The information is provided through surveillance, but the use case is about giving the information back to the provider.
- What are your data needs?
  - Medications and treatment information, which are generally LOINC codes.
- Where do you get this data? Via what means?
  - Is this question being answered through manual intervention today?
    - This data is typically received through lab results, which generally come to PHAs in standardized HL7 v2 messages that are incorporated into a surveillance system. Sometimes, the data is received through fax, after which it is manually entered. TB drug resistance information is sent back to a provider manually via phone or email.
- Who are the actors (HIE, QHIN, EHR, STLT, CDC, etc.) who are part of this query?
  - Which types of data holder(s) are the source of data today?
    - The data holders vary; it could be public labs or clinical labs that send this information as part of a panel of results. It is also possible for this data to come through an HIE.
- Do you need to answer this question for a group of people or an individual?/Is this query for an individual or is this for a set of patients? (Line level)
If it’s a set of patients, is the set of patients specifically defined? If so, how are they defined? (through an attribute or enumerated list)

- The data is usually for an individual. Occasionally, there is an outbreak where there is a cluster of related individuals.

How do you know when to query for a specific patient? (Line level)

- Are you getting timely information?

  - How often do you send the report? Does it need to be sent in real-time or could the information be sent as a batch? Does the response need to be sent back immediately or when it is ready?
    - The information transfer is not instantaneous but occurs relatively quickly across days rather than weeks or months.

  - How do we determine the urgency/frequency of this request?
    - This use case usually involves a request with urgency.

- Are you getting accurate information?

  - Are you getting an appropriately scoped grouping of information? (Too much? Too little?)
    - The information received is fairly accurate, but the way that the data is presented can sometimes be confusing. The data can be coded values, indicators, or flags.

  - How do we know we are receiving the correct information for the correct patient? Which system (requestor or responder) should determine that?
    - Patient matching verification will vary by surveillance system, but the matching algorithms are sophisticated. PHAs may not know how exactly to be in touch with the provider and must make sure that they are sending the information back to the correct EHR for the correct provider. This can be difficult, as the data might only have an ordering provider or a facility National Provider Identifier (NPI). In these cases, PHAs may need to investigate to determine (1) which EHR system and/or (2) which provider to send the data to.

- Are you getting complete information?

  - What is the minimum necessary data?
    - It seems that about 70 percent of the information is there. There are issues with automating: (1) knowing where the provider resides, (2) knowing the provider you are talking to, and (3) if the patient is the point of contact, soliciting this information from them. There is a possibility that a PHA may get a panel of results that include some of the susceptibilities, but not all of them. Therefore, the PHA might not get a resistant result in the same panel as a result that is susceptible to a whole series, which could generate multiple pushes.

  - After the data is consumed, what additional data is needed to complete the query?
    - One can assume that in a primary care facility, the provider would be changing the course of medicine. There may be a future workflow where PHAs want to later confirm that there was some action taken by the provider.

- What are the policies/laws that allow manual requests for data?
Is the data required to be reported by law under the jurisdiction? Which data or reportable infectious disease is required to be sent under state or local law?

- There are no state or local laws that apply to this use case, but it is possible there are laws around sending the information to the health system generally (i.e., everyone who has access to the patient chart, rather than a specific provider).

What information is allowed to be disclosed under state, federal, and local law?

- Can you request access under a specific scope? **This question does not apply to this use case.**
- Is there per-access authorization to access the data decisions that need to be made? What are the exceptions to the authorities?

Is this a costly question/issue to answer?

- It is costly in the sense that drug-resistant TB is costly, therefore, getting quick interventions is important. The way that this is being communicated now through manual labor consumes person-hours.