Use Case

Public Health Authority (PHA) receives a report for a specific group of individuals after a patient has tested positive for mumps and wants to see if the specific group of patients has been immunized.

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?
  - The rapid collection of immunization history for cases and contacts, to prevent further spread of a preventable, communicable disease.
  - What questions are you trying to answer?
    - The main questions are, who are the contacts, what is the population at risk, and where is the transmission setting? In addition, are there any contacts who for some reason cannot get the vaccine?
  - Is this surveillance or research?
    - Surveillance.

- What are your data needs?
  - Accurate immunization history from the case and the contacts.

- Where do you get this data? Via what means?
  - In Oregon they have Orpheus—an electronic surveillance system—and their IIS, ALERT. From Orpheus, the public health investigator can send a query to the IIS and in a matter of seconds get the immunization history, not only for the case but also for the contacts.
  - Is this question being answered through manual intervention today?
    - Not in Oregon.

- Who are the actors (HIE, QHIN, EHR, STLT, CDC, etc.) who are part of this query?
  - In Oregon, STLTs typically kick off the query.
  - Which types of data holder(s) are the source of data today?
    - In Oregon, the state IIS and a disease surveillance system. The EHR is generally not part of this use case; only in edge cases where the IIS doesn’t have the immunization history for a given contact. In the future, ECRs may play a larger role in providing clinical data for this use case.
• 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)
  o This query will be for a set of patients—the contacts of the patient.
  o If it’s a set of patients, are the set of patients specifically defined? If so, how are they defined? (attribute or enumerated list)
    ▪ The set is defined as a list; the contacts of the patient.
  o How do you know when to query for a specific patient? (Line level)
    ▪ This question is not relevant to the use case.
• Are you getting timely information?
  o In Oregon, when they didn’t have integration with Alert, it took a median of 28 hours for the immunization history to get populated (17 hours for high-risk patients); now that they have interoperability with the IIS, they can get all the information within the hour, often a matter of seconds.
  o 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?
    ▪ This question is not relevant to the use case.
• Are you getting accurate information?
  o Generally, yes.
  o Are you getting an appropriately scoped grouping of information? (Too much? Too little?)
    ▪ Generally, the information is sufficient for the use case.
  o How do we know we are receiving the correct information for the correct patient? Which system (requestor or responder) should determine that?
    ▪ In Oregon, the query to the IIS utilizes a matching algorithm that is usually sufficient. Sometimes the IIS will have multiple records for a single person, and in that case, there is a help desk that will merge the records (if appropriate) and the PHA investigator will re-query. In the case of multiple records, sometimes a given record may not have enough demographics—at least name, DOB, and immunization—to be merged into a more complete record. In that case, they do not want to merge them because of the risk that they are not the same person; they err on the side of caution and do not merge them. Afterwards, that case requires some manual work to determine which record is the one that the PHA investigator wants.
    ▪ In Oregon, there’s a known edge case that they need to fix—in the case of multiple returned patient records from the IIS, because there are not identifiers that are returned (e.g., social security numbers) and the query is always based on name and date of birth, the PHA investigator does not have the ability to re-query the system on any more granular information.
      • Utah has a similar issue with their IIS.
• Are you getting complete information?
  o Generally, yes.
  o What is the minimum necessary data?
- Generally, just the vaccination history from the contacts. However, additional information that is helpful to the PHA investigator includes: the lot number from the vaccination; the place where the vaccination was administered; and whether a shot was invalid (e.g., if there were issues with handling or storage).
  - After the data is consumed, what additional data is needed to complete the query?
    - For acute cases, there is no need to re-query. However, for chronic cases such as perinatal hepatitis B, PHA investigators will want to re-query after several weeks to confirm that patients received appropriate vaccinations.

- What are the policies/laws that allow manual requests for data?
  - As far as the group knows, there are no policies or laws restricting data usage around this use case since these systems are all operated by state health departments. In Oregon, they do have an internal data use agreement implementing some internal policies around data usage—this does not prohibit any data usage practices but does require them to clearly define what the purpose of the data usage is.
  - 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?
    - This question is not applicable to the use case.
  - What information is allowed to be disclosed under state, federal, and local law?
    - Within this use case, there are no restrictions around what data the PHA investigators are allowed to access from the state IIS.

- Can you request access under a specific scope?
  - No.
  - Are there per access authorization to access the data decisions that need to be made?
    - What are the exceptions to the authorities?
      - This question is not relevant to the use case.

- Is this a costly question/issue to answer?
  - The cost is if the data is not available; once patients are over 18, the data gets spotty. If there was a mumps outbreak in an adult population, for example, the investigation would likely cost more than in a child population—it would require a lot of manual work due to the lack of data.