**Bi-Directional Data Exchange**

**Provider Checklist Document**

**Overview**

Electronic Health Record (EHR) systems vary in their ability to accept vaccination data from another information source and integrate it back into the EHR’s patient vaccination record. To date EHR systems have not been required to accept data back from the Alaska State Immunization Information System (IIS) to meet any Meaningful Use standard. Standards on bi-directional data exchange are expected to be part of the Meaningful Use Stage 3 certification. Ongoing discussion about these standards is underway between the Office of the National Coordinator for Health Information Exchange (ONC) and other key stakeholders.

To prepare the provider to have the most productive conversation with their EHR vendor about how the EHR will accept and process immunization data from the IIS the following list of questions should be reviewed. At the end of the discussion, the provider should know exactly what the vendor means when they say they can support this type of electronic data exchange.

Below are common known issues involving an EHR’s ability to accept immunization data from a state IIS:

1. EHR can accept vaccinations but does not integrate it into the patient’s EHR immunization record. It may be located somewhere else in the patient record.
2. EHR accepts vaccinations but does not integrate the new vaccinations into the patient’s vaccine forecast.
3. EHR does not have the logic to deduplicate vaccinations. The EHR may not have the logic that an IIS uses such as:
   1. If there are matching vaccinations, an IIS decides which is the most “trusted” vaccination record and is therefore retained in the patient record.
   2. If the same vaccinations are recorded within “x” days of each other, an IIS will allow the user to decide how many days apart vaccinations can be and still consider them the same vaccination.
4. Some EHR vaccine code tables are not complete and may not recognize the historical vaccinations that are returned from the IIS. This is particularly true for older vaccines that were given to adults as children, e.g. DTP, OPV, etc. This may also be true for travel vaccines that are not commonly given in a private provider office but are part of an IIS vaccination record.

**EHR Bi-Directional Screening Checklist**

**Readiness to accept vaccination data from the IIS**

**EHR Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ EHR Version:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

| # | Question | Notes |
| --- | --- | --- |
| 1. | Does the EHR have the ability to query the IIS in current version in use? |  Yes (Go to question 2)   No (Go to question 16) |
| 2. | Describe the workflow the user must use to query the IIS. For example is there a button that prompts the user to send the data back or is it automatic in some way? | It is recommended that the IIS request a demonstration of the EHR’s query function in the EHR and a written description of the functionality. |
| 3. | How is the data returned – Real-time or Batch? | The user may be querying in real-time, but the response back may be batch. The IIS should have the EHR describe this mechanism. The IIS cannot impact how it works but can get an idea of how satisfied the provider may be with how it functions.  Recommended questions:   1. Can the user expect an immediate response to the query request? If yes, how long? 2. If responses are returned in a batch when does that occur? 3. What may be the cause for potential delays on returning data? |
| 4. | After the query is completed, where does the user see the data that is retrieved from the IIS? How will the clinical staff view this data? |  |
| 5. | Where is the data saved after the query is completed? | If data is saved incorrectly after the query, there is a chance the vaccination will be sent back to the IIS, negatively impact the provider’s inventory and/or create an ongoing feedback loop between the IIS and the EHR. |
| 6. | Does the EHR accept all vaccinations that are in the IIS for the patient or just the ones that are not currently in the EHR vaccination record? |  |
| 7. | How are the vaccines received from the IIS query recorded in the EHR? Are they distinguished in some way to the EHR user? | Vaccinations received from the query that appear in the EHR as newly administered vaccinations have the potential to be included in the provider’s billing and impact inventory management if not documented correctly.  The IIS would be best served to have vaccination data from the IIS appear in the provider’s EHR correctly as a historical vaccination AND/OR the source of that data identified in some way (e.g. symbol, etc…) to note it was administered outside of their own facility. |
| 8. | What logic does the EHR use to ensure that duplicate vaccinations do not appear in the patient’s EHR record? | Potential Scenarios to Review:   1. How would the EHR handle a vaccination recorded in the EHR on one day and the same vaccination in The IIS recorded with a date 2 days later/earlier? 2. If an EHR only documents single antigens, how would they handle the code for a combo vaccine? 3. How would the EHR handle different codes sent back within the same vaccine family? E.G. Returns HIB/Hep B vaccine but the EHR only accepts HIB. What trumps what? |
| 9. | What vaccination detail is the EHR able to accept from the IIS? E.G. If The IIS sends vaccine lot number, manufacturer, vaccinator name, etc... can the EHR accept that detail or is it only vaccine name and date? |  |
| 10. | Is there a method for the EHR user to choose which vaccinations are sent from the IIS to the EHR? |  |
| 11. | If the EHR has a vaccination forecast, do the vaccinations returned from the IIS update the patient’s vaccine forecast? |  |
| 12. | Is the EHR capable of accepting an updated vaccine forecast from the IIS? |  |
| 13. | If the EHR has vaccine forecasting available, what is their data source to ensure the vaccine forecast is valid according to ACIP recommendations? | This lends to provider satisfaction and the provider’s reliance on the EHR forecasting to keep patients vaccinated and avoid missed opportunities.  This is also part of the Meaningful Use Stage 3 discussion. |
| 13. | Is the EHR able to accept ANY vaccination that is recorded in the IIS including older vaccines and travel shots? |  |
| 14. | Besides a query sent from the EHR, is there any other method the EHR can retrieve data from the IIS? |  |
| 15. | What patient identification number will the EHR use to ensure the data retrieved from the IIS is the same patient? |  |
| 16. | What version of the EHR will support querying (or other methods) to retrieve vaccination data from the IIS? |  |
| 17. | What functionality is planned for that release? |  |

*Note:  This checklist is a guide to help the provider prepare for developing a bi-directional interface.  How the data is handled once in the EHR set must be agreed upon between the provider and vendor. At that point, the IIS fills a consulting role for the vendor as they work through their vaccination deduplication logic and display issues.*