New Mexico Department of Health Immunization Integration to State Registry

Background

Many healthcare providers are required by law to send their immunization records to the state registry. An immunization interface can assist healthcare providers with completing this task. Sometimes a standard immunization interface can work effectively, other times customization is needed. A client of Galen recently implemented an immunization interface to send their immunizations from their EHR to the state registry, NMSIIS (New Mexico Statewide Immunization Information System). This particular implementation required customization as the state registry only accepted weekly batch files and also required customization to scrub and filter transactions which did not meet requirements as outlined in the specification.

Batch File Transmission Process

The interface engine tethered to Allscripts Enterprise EHR™ - ConnectR - does not natively support batching of messages. As such, we had to deploy a customization to facilitate this batching. The immunization interface extracted data from the NMDOH (New Mexico Department of Health) Allscripts Enterprise EHR™ using the API (application programming interface), in this case the ConnectR Superset Source. An interface then mapped data from the superset source message to the HL7 VXU immunization format, in conformance with the specification issued by the state and output the messages to a flat-file.

The requirement specified sending a weekly batch file, which, on average contained 3,500 records. This was accomplished via the ConnectR Scheduler and a Microsoft Windows Scheduled Task. The ConnectR interface target system was left in a “stopped” state, with the immunization transactions queuing in the ConnectR interface source system. Leveraging the ConnectR Scheduler, the ConnectR interface’s target system interface was set to “start” weekly on Monday at 2:05AM for a window allowing all the queued data to pass through the ConnectR interface target system and consequently write to the flat-file.

Once the flat-file was written, the Microsoft Scheduled Task ran and executed a custom VBScript, which copied, processed, renamed and archived the file. NMSIIS required HL7 batch header and footer segments and batch file segments to be added to every group of immunizations. In accordance with HL7 specification, the footer needed to contain the number of immunizations that were in that particular batch file; as well as other metadata including the date of the file, etc.

Historical Load

NMDOH has been electronically documenting immunizations in the EHR for some time and has immunization records for previous years dating back to 2008. All said NMDOH has 1,669,578 historical transactions in the system that needed

> “Galen’s expertise and sound approach allowed our organization to achieve integration with the state registry. Their flexibility and ingenuity in facilitating necessary customizations combined with their wealth of knowledge with regard to standards was invaluable to the project. We highly recommend partnering with Galen in integration initiatives.”
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> *-Irene Vold, NMDOH BEHR Program Manager*

to be transmitted to the registry; however, the NMIIS registry could only accept 100,000 immunizations at once. As a result, custom programming was deployed to extract the historical transactions in quarterly batches. Each of these quarterly batch files were processed through the real-time interface and sent to the registry.

Custom Data Scrubbing and Filtering

Allscripts Enterprise EHR supports fuzzy date functionality for immunization administered date-time, but NMSIIS does not allow for fuzzy dates. As such, the delivered functionality was customized to comply with the following prescribed logic:

- If the fuzzy entry is childhood, adolescence, never, unknown – don't send the data
- If the fuzzy entry is before or after a date – don't send the data
- If the date is approximately with YEAR only – make the date 12/31/YEAR
- If the date is approximately with MONTH/YEAR – make the date MONTH/1/YEAR
- If the date is approximately with a full date – send the date

Additionally, NMSIIS supplied a table of invalid names for the Patient Name field in the HL7 VXU message (PID-5.2). If the patient's first name was in the list, the name was scrubbed and changed to be "NO FIRST NAME." Lastly, social security number was suppressed from PID-19 of the HL7 VXU message

Conclusion

Immunization interfaces can be invaluable to healthcare providers in terms of money and time saved and compelling to the patient in reducing duplicate tests. Different states and organizations have unique requirements that sometimes necessitate customization. Galen has a wealth of experience with deploying immunization integrations, including bi-directional functionality in and out of the EHR - and can assist your organization in achieving the compelling benefits that come with integration.