Microsoft Vaccination Management Overview

HL7 Integration with External Immunization Systems

Any healthcare organization that administers COVID-19 vaccination to residents has to report the information to the state. The state's immunizations systems accept the data in [HL7 format](http://www.hl7.org/implement/standards/). The state agencies securely store the vaccination information in their databases to track, manage, and report the overall progress of the vaccination program. For example, Centers for Disease Control and Prevention (CDC) stores the vaccination information in [Immunization Information Systems (IIS)](https://www.cdc.gov/vaccines/programs/iis/func-stds.html). As a healthcare organization that administers COVID-19 vaccination, you are responsible for understanding the specific state and federal requirements for reporting vaccination information.

The message structure to report the vaccination information to state healthcare agencies varies across states and countries. The message generation and sharing capability in Vaccination Management provides a template and reference design for the integration with the state agency's immunization system. As an implementor, you will have to ascertain the structure of the message being generated and make necessary modifications to adapt the message structure according to the respective immunization system.

Timeline

Description automatically generated

1. The HL7 message generation is triggered after the shot is administered and the vaccinator selects **Complete vaccination** in the [frontline worker app](https://review.docs.microsoft.com/en-us/dynamics365/industry/vaccination-management/check-in-administer). This creates a vaccination record in Dataverse that can be viewed in the Vaccination site management app under [Vaccination](https://review.docs.microsoft.com/en-us/dynamics365/industry/vaccination-management/site-management). After the business logic to associate vaccination documents is complete, the **Completed**" flag on the vaccination record is set. This will trigger the message generation plug-in.
2. After the message is generated successfully, a **Vaccination Data Sharing Notification Log** is created for the vaccination. This will trigger the plug-in to send the HL7 message to the state agencies immunization system. The response from the immunization system will be stored in the same record.
3. The message generation can also be triggered by setting the **Generate HL7** flag on the vaccination record in the Vaccination site management app under [Vaccination](https://review.docs.microsoft.com/en-us/dynamics365/industry/vaccination-management/site-management). This will allow the administrator, in case of errors when sending the data to the state, to fix any data issues pertaining to vaccination and then regenerate the message.

Each message generation will create a record in **Vaccination Data Sharing Notification Log**. The response from the immunization system will also be stored in the same record, thereby allowing to have a log of number of times a particular vaccination record was replayed and what the issues were with each message.

To understand more on how to implement HL7 integration with external immunization systems, please reference the following [article](https://docs.microsoft.com/en-us/dynamics365/industry/vaccination-management/integration-immunization-systems) on Microsoft Docs.