

Interoperability Scenarios

Care Theme: Public Health

Act 15 - Immunization Reporting

Scenario Primary Goal: To demonstrate Immunization information exchange within HIE.

Key Points

- Provider immunization information to state information systems, where other providers can access the same data.
- The scenario follows a child through several visits to his/her pediatrician for well-child checks and immunizations. Using the HIE's infrastructure, PHR and EHR systems are able to access and update the same data on the child's immunization history. The State's Immunization Information System is receiving updates from provider EHRs and because of this; public health can easily track population immunization rates and trends.

Meaningful Use Relevance

MU Objective 4: Improving Population and Public Health

Clinical Workflow:

A parent brings their child to the Pediatrician for routine well-child care and Immunizations. The Pediatrician retrieves the immunization history from the HIE, reviews the immunizations due, and the child is immunized in accordance with the recommended immunization schedule. The immunization summary is published to the HIE which transforms and forwards the immunization as an HL7 V2.3.1 message to public health. When the child is ready to enter school, the parent checks the child's immunization record, and sees one immunization is missing. The parent has the child immunized at a drugstore, and provides the immunization summary to the HIE. Predictions of an especially severe flu season cause the child's school to implement a school located vaccination program (SLV). The school nurse retrieves the immunization history from the IIS, and after administering the H1N1 vaccine, updates the IIS.

Care Scenario Steps	Care Setting From	Care Setting To	IHE Profiles*	Title	HITSP Capability / Construct	Title
15-1 Parent uses PHR to query HIE for records. Reviews information.	PHR	HIE	IC (QRPH)	Immunization Content	HITSP/CAP119 HITSP/C78	Communicate Structured Document Immunization Document
15-2 The PCP uses the EMR to query the HIE, retrieving the immunization recommendation. Immunizations are administered. The EMR updates IHE with the immunization record	Pediatrician /PCP	HIE	IC (QRPH)	Immunization Content	HITSP/CAP119 HITSP/C78	Communicate Structured Document Immunization Document
15-3 The HIE gateway service transforms submitted immunization documents and sends immunization message to the state public health department to fulfill immunization reporting requirements.	HIE Gateway Services	Public Health			HITSP/CAP131 HITSP /C72	Update Immunization Registry Immunization Message
15-4 The same patient, now a 5 year-old, is getting ready to enter school. The child's parent thinks the child is ready to be enrolled, but wants to confirm the child's immunization record. The Parent uses PHR to view the child's immunization records, and sees that one is missing. Parent gets the missing vaccination at a drugstore and submits immunization to the HIE	EHR	HIE	IC (QRPH)	Immunization Content	HITSP/CAP119 HITSP/C78	Communicate Structured Document Immunization Document
15-5 School nurse retrieves Immunizations from HIE. Vaccinate child. Provide updated immunization document to the HIE.	School	HIE	IC (QRPH)	Immunization Content	CAP119 HITSP/C78	Communicate Structured Document Immunization Document

Health Information Exchange (HIE) Core Services			
IHE Profiles		HITSP Service Collaborations / Constructs	
XCA XDS/XDR/XDM	Cross-community and Cross-enterprise Document Sharing	SC112 / TP13, T31, T33	Healthcare Document Management Manage Transfer of Documents, Document Reliable Interchange, Transfer of Documents on Media
PIX	Patient Identity Cross-reference	SC112 / TP22	Patient ID Cross-Referencing
PDQ	Patient Demographics Query	SC112 / T23	Patient Demographics Query
ATNA	Audit Trail and Node Authentication	SC112 / T15, T17	Collect and Communicate Security Audit Trail, Secured Communication Channel
CT	Consistent Time	SC112 / T16	Consistent Time