HIMSS 2013 – IHE Interoperability Showcase
Immunization Scenario

A 4-year-old patient visits his doctor.
The provider's EHR queries the regional HIE and retrieves an Immunization Content (CCD) document that shows the child's past immunizations and vaccine recommendation. The provider administers vaccinations and enters the records into his EHR.

Step 1: Community A, PCP #1

The HIE shares data with the State Immunization Registry
Upon receiving the immunization update from the EHR, the Public Health Gateway at the HIE determines that the State Immunization Registry (IR) should be updated with the patient's new immunizations using HL7v2.

Step 2: Community A, HIE #1 and Public Health Gateway

The State Immunization Registry reconciles new content
The IR receives the new immunization content for the patient, and reconciles it against the existing data for the patient. The IR then creates a consolidated immunization history for the patient, including a vaccine forecast, and sends it back to the HIE.

Step 3: Community A, Immunization Registry

After changing States, the child requires a new vaccination
The child and family move to a new State, and register the child for school. The school nurse notices that, according to the vaccine schedule for that State, one vaccination is missing. The child visits his new PCP and has the vaccination administered.
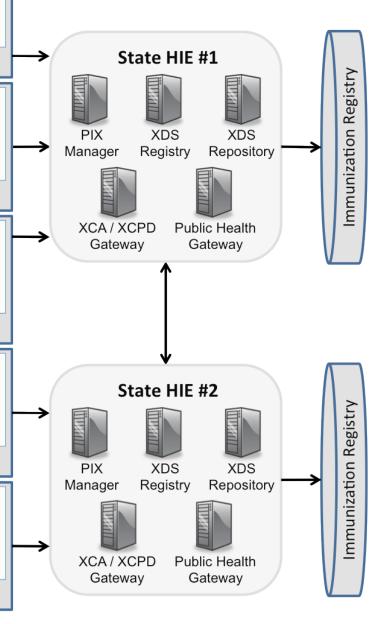
Step 4: Community B, School Nurse and PCP #2

The next year, the child needs more vaccines for school
The following year, the child sees his PCP for a checkup. The PCP, leveraging both (1) the child's original State immunization registry, and (2) the new State's immunization registry, realizes that a new vaccine is missing, and administers the new vaccine.

Step 5: Community B, PCP #2

State HIE #1

PIX Manager   XDS Registry   XDS Repository

XCA / XCPD Gateway   Public Health Gateway

Immunization Registry

State HIE #2

PIX Manager   XDS Registry   XDS Repository

XCA / XCPD Gateway   Public Health Gateway

Immunization Registry

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Use Case Steps

Step	Company	System	Community
4.1	eClinicalWorks	OTHER_ECW	AA (Blue)
4.2	Software Partners	PIX_X_REF_MGR_SWPARTNERS_1	AA (Blue)
4.3	Software Partners	PIX_X_REF_MGR_SWPARTNERS_1	AA (Blue)
4.4	General Dynamics	GATEWAY_GDIT_HIEOS	BB (Green)
4.5	NextGen	EHR_NEXTGEN_2013	BB (Green)

Infrastructure

Step	Infrastructure Role	Company	System	Community
4.0	PIX(v3) Manager, PDQ(v3) Supplier, XDSb Registry, XDSb Repository, XCA Gateway, XCPD Gateway	General Dynamics	GATEWAY_GDIT_HIEOS	AA (Blue)
4.0	XDSb Registry, XCA Gateway, XCPD Gateway	eClinicalWorks	OTHER_ECW	BB (Green)
4.0	PIX(v3) Manager, PDQ(v3) Supplier	Software Partners	PIX_X_REF_MGR_SWPARTNERS_1	BB (Green)
4.0	XDSb Repository	IGI Health	GATEWAY_IGI	BB (Green)

Acronyms

EHR – electronic health record

HIE – health information exchange

IC – Immunization Content

IHE – Integrating the healthcare enterprise

IIS – Immunization information system

PH – Public Health

PCP – Primary Care Provider

PIX – Patient Identifier cross-reference

XDS – Cross-enterprise document sharing