

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic visual effect.

A National Look at Data Exchange Variation and Improvement Initiatives

Greg Faber

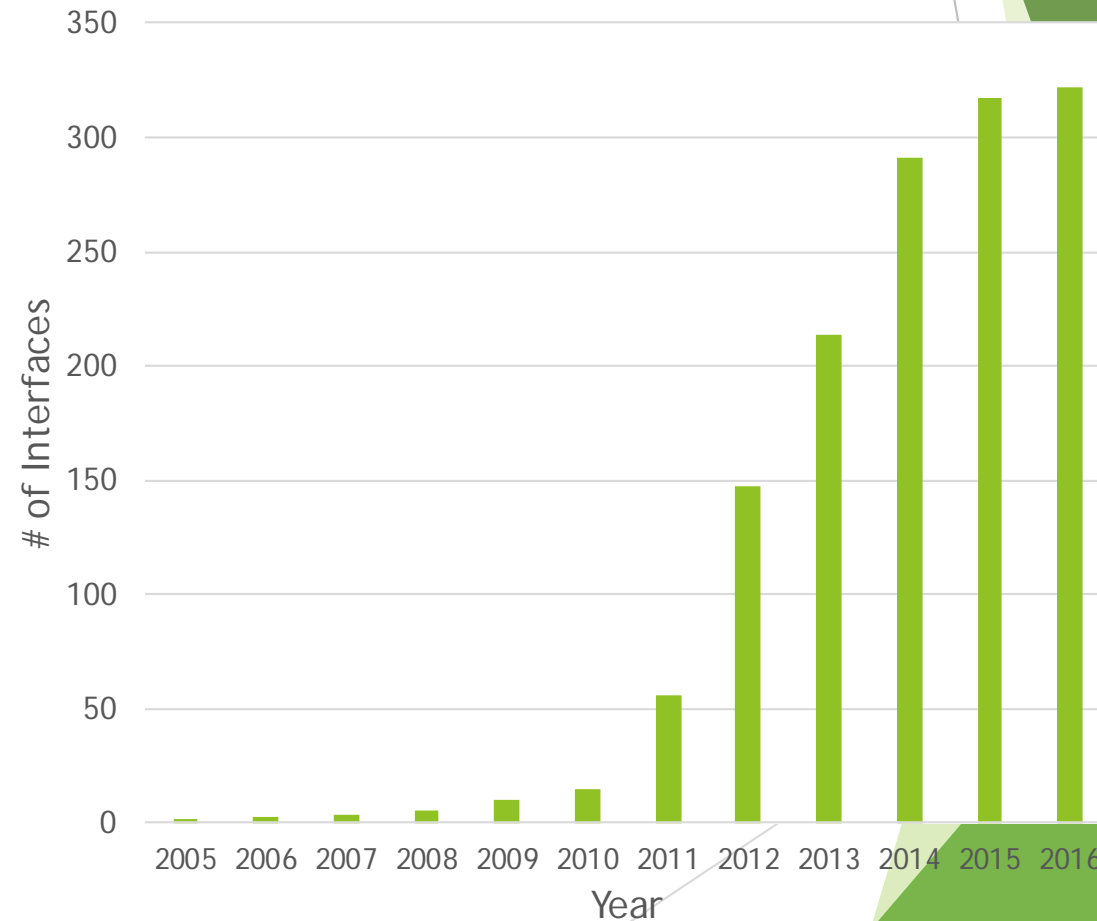
Nell Lapres

Overview of Epic

- ▶ 340 Total Live Organizations (National and International)
 - ▶ 50 States
- ▶ First Interface Go-Live:
 - ▶ Vaccination Administration - December 21, 2005
 - ▶ Vaccination Query - October 1, 2009
- ▶ Waived interface licensing fees

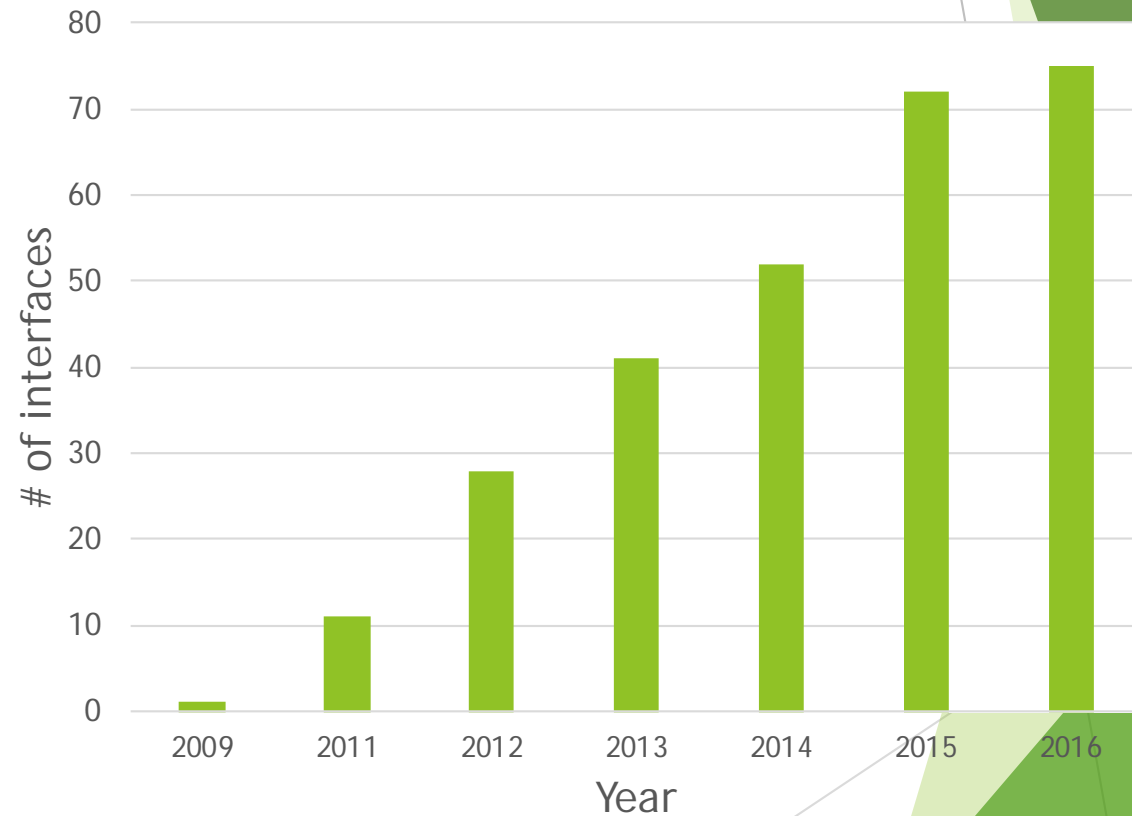
Interface Statistics – Vaccination Administration

- ▶ 322 Live Interfaces
 - ▶ California
 - ▶ Illinois
 - ▶ Ohio
 - ▶ Washington
 - ▶ Wisconsin
- ▶ 48 State Registries
- ▶ 4 City Registries
- ▶ >110 Million messages sent a year



Interface Statistics - Vaccination Query

- ▶ 75 Live Interfaces
 - ▶ Oregon
 - ▶ Pennsylvania
 - ▶ Wisconsin
- ▶ 24 State Registries
- ▶ 1 City Registry
- ▶ >75 million queries sent a year



Multiple Registry Integration

- ▶ Vaccination Administration
 - ▶ 47 Organizations
- ▶ Vaccination Query
 - ▶ 5 Organizations

Epic Goals

- ▶ Healthy Patient Population
 - ▶ Complete and Accurate Patient Immunization Record
- ▶ Provider Decision Support Tools
- ▶ Streamlined and Intuitive End User Workflows
- ▶ Standard “Out-of-the-Box” Interfaces
 - ▶ Easy Integration with Registries
 - ▶ Simplified Support of Interfaces

Immunization Registries are an example
of what is going right in Public Health.

Standardization

- ▶ CVX
- ▶ CDC WSDL
- ▶ NIST Tool

Message Content 4s

Validate Load Example Browse Clear

```
1 MSH ^~&|NISTEHRAPP|NISTEHRFAC|NISTIISAPP|NISTIISFAC|20150624073733.994-0500||VXU^V04^VXU_V04|NIST-IZ-AD-1.1_Send_V04_Z22|P|2.5.1|||ER|AL|||z ^
2 PID 1|3123^NIST-MPI-1^MR||Richardson^Russell^Clint^L|Billington^M|20150415|M||1002-5^American Indian or Alaska Native^CDCREC|543 Blc
3 PD1 |||||02^Reminder/recall - any method^HL70215|N|20150624|||A|20150415|20150624
4 NK1 1|Richardson^Maria^Elizabeth^L|MTH^Mother^HL70063|543 Blount Drive^Bozeman^MT^59715^USA^P|^PRN^PH^406^5557690
5 NK1 2|Richardson^John^William^L|FTH^Father^HL70063|543 Blount Drive^Bozeman^MT^59715^USA^P|^PRN^CP^406^5558299
6 ORC RE|3140^NIST-AA-IZ-2|38766^NIST-AA-IZ-2|||7824^Jackson^Lily^Suzanne^NIST-PI-1^L^PRN||654^Thomas^Wilma^Elizabeth^NIST-PI-1^L^
7 RXA 0|1|20150624|49281-0560-05^Pentacel^NDC|0.5 mL^mL^UCUM||00^New Record^NIP001|7824^Jackson^Lily^Suzanne^NIST-PI-1^L^PRN|^NIST-Clini
8 RXR C28161^Intramuscular^NCIT|RT^Right Thigh^HL70163
9 OBX 1|CE|30963-3^Vaccine Funding Source^LN|1|VXC50^Public^CDCPHINVS|||F||20150624
10 OBX 2|CE|64994-7^Vaccine Funding Program Eligibility^LN|2|V04^VFC Eligible - American Indian/Alaska Native^HL70064|||F||20150624||VXC40^pe
11 OBX 3|CE|69764-9^Document Type^LN|3|253088698300017211111108^Polio VIS^cdcgs1vis|||F||20150624
12 OBX 4|DT|29769-7^Date Vis Presented^LN|3|20150624|||F||20150624
13 OBX 5|CE|69764-9^Document Type^LN|4|25308869830000591112020^Hepatitis B VIS^cdcgs1vis|||F||20150624
14 OBX 6|DT|29769-7^Date Vis Presented^LN|4|20150624|||F||20150624
15 OBX 7|CE|69764-9^Document Type^LN|5|253088698300003511070517^Diphtheria/Tetanus/Pertussis (DTaP) VIS^cdcgs1vis|||F||20150624
16 OBX 8|DT|29769-7^Date Vis Presented^LN|5|20150624|||F||20150624
17 ORC RE|8681^NIST-AA-IZ-2|65138^NIST-AA-IZ-2|||7824^Jackson^Lily^Suzanne^NIST-PI-1^L^PRN||654^Thomas^Wilma^Elizabeth^NIST-PI-1^L^
18 RXA 0|1|20150624|00006-4047-20^RotaTeq^NDC|2.0 mL^mL^UCUM||00^New Record^NIP001|7824^Jackson^Lily^Suzanne^NIST-PI-1^L^PRN|^NIST-Clinic
19 RXR C38288^Oral^NCIT|
20 OBX 1|CE|30963-3^Vaccine Funding Source^LN|1|VXC50^Public^CDCPHINVS|||F||20150624
21 OBX 2|CE|64994-7^Vaccine Funding Program Eligibility^LN|2|V04^VFC Eligible - American Indian/Alaska Native^HL70064|||F||20150624||VXC40^pe
22 OBX 3|CE|69764-9^Document Type^LN|3|253088698300019611150415^Rotavirus VIS^cdcgs1vis|||F||20150624
23 OBX 4|DT|29769-7^Date Vis Presented^LN|3|20150624|||F||20150624
24
```

Message Validation Result Help

Remove Duplicates Report

0 Errors

10 Warnings

55 Alerts

Opportunities for Feedback

- ▶ HL7 Immunization User Group Meeting
- ▶ HL7 Public Health and Emergency Response Work Group
- ▶ Standards and Interoperability Steering Committee Technical Workgroup



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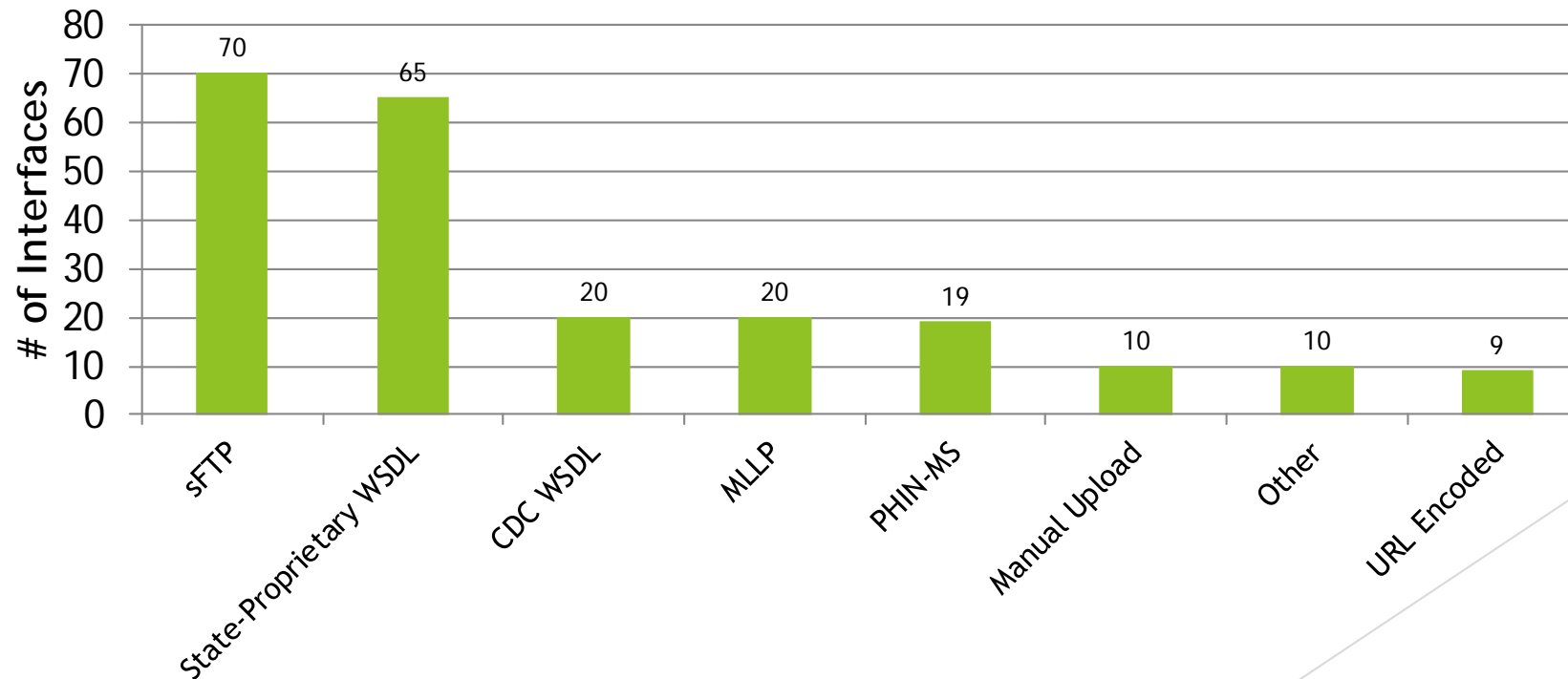


Areas for Improvement - Standardization

- ▶ OBX Requirements
 - ▶ VFC for Adults
 - ▶ Adverse Reaction
 - ▶ Contraindications
- ▶ Opt In vs Opt Out

Areas for Improvement - Technical

- Communication Methods
 - CDC WSDL vs. State-Proprietary WSDL
 - Batch Files/Manual Processes



Areas for Improvement - Technical

- ▶ Specificity of Immunization Identifiers
 - ▶ Improvement when using NDC and CVX
 - ▶ Trade Name Complications

Areas for Improvement - Technical

- ▶ Registry Downtimes
 - ▶ Scheduled Downtimes
 - ▶ Improved Communication

Areas for Improvement - Workflow

- ▶ Providing Efficient Physician Workflows
 - ▶ Filing Query Response to Patient Record
 - ▶ Flu Clinic
 - ▶ Decision Support

Areas for Improvement - Workflow

- ▶ Provider Workflow Improvements
 - ▶ Lot Number
 - ▶ Vaccine for Children status
 - ▶ Baby Names



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