

# **PARTNERING FOR SUCCESS: BIDIRECTIONAL DATA EXCHANGE IN OREGON**



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# Bidirectional Data Exchange

## Background



### □ 2011

- ▣ Added SOAP web service as a transport method, allowing for real-time data exchange
- ▣ Implemented bidirectional messaging (HL7 2.4)
- ▣ Funded via ARRA HITECH grant for Enhanced Interoperability

### □ 2012

- ▣ Implemented HL7 2.5.1 messaging (including QBP for query) as part of the Data Exchange Improvement Project

# Bidirectional Data Exchange

- 349 bidirectional interfaces
  - ▣ Facilitated by 13 sending orgs/vendor hubs
  - ▣ One retail pharmacy chain
- Four EHR systems support these interfaces:

immsLink

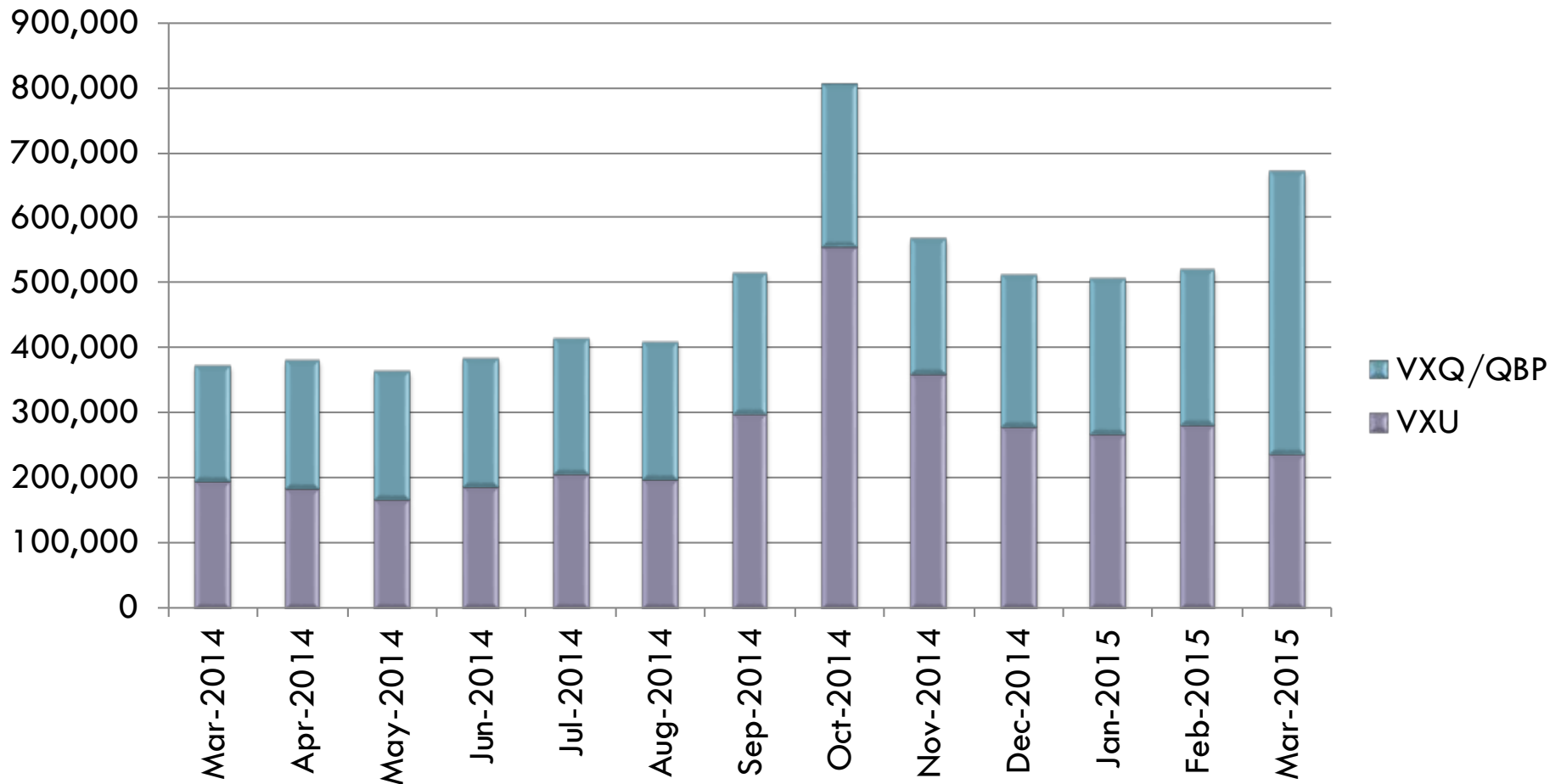
*Epic*

 Cerner

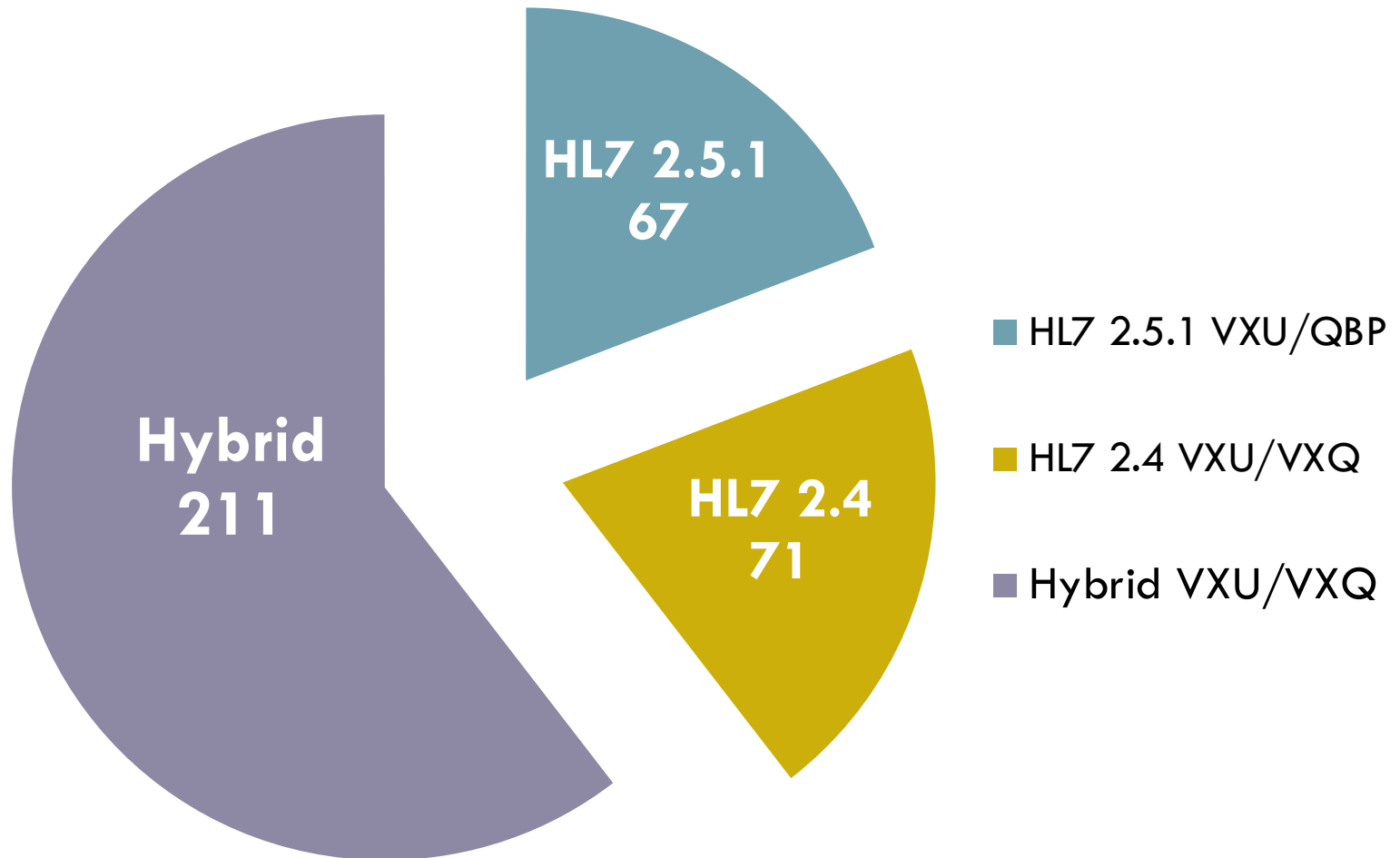
 athenahealth

# Inbound Messages

**HL7 Inbound Messages: March 2014 - March 2015**  
(n = 6.4 million)

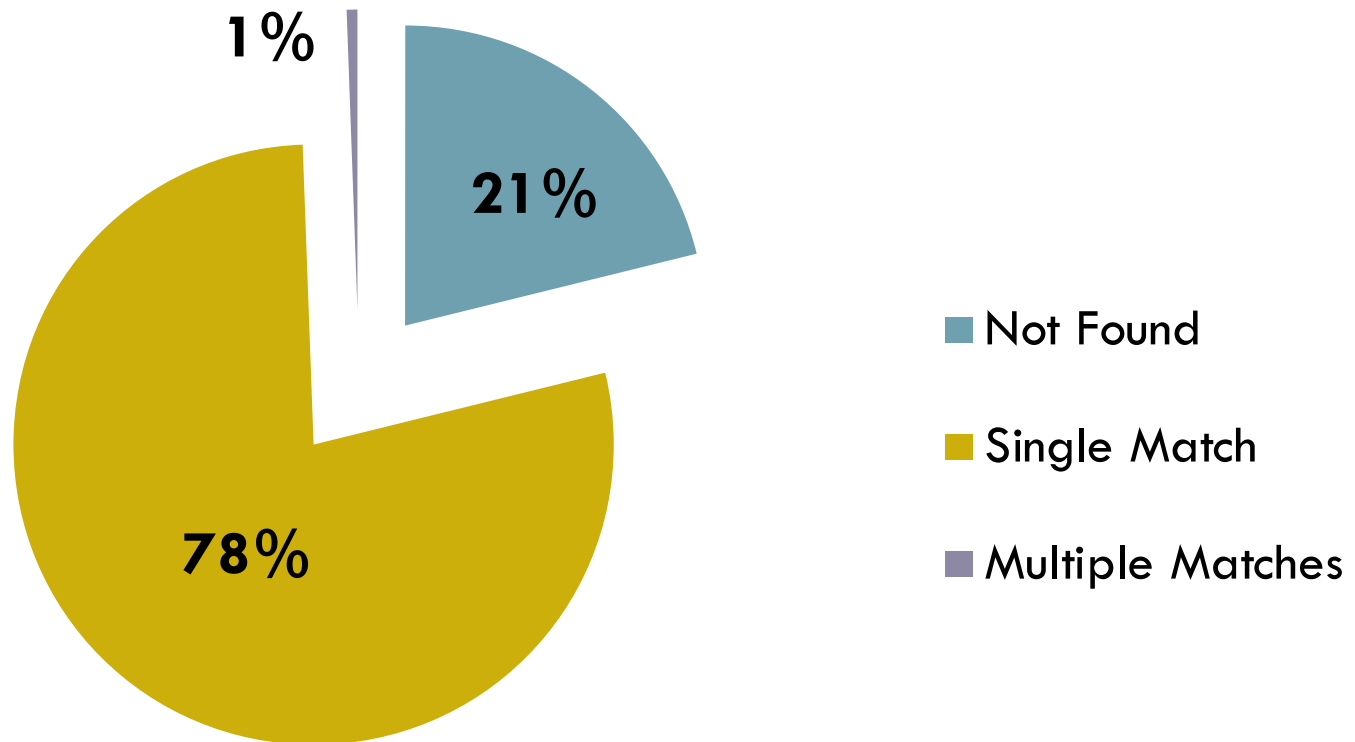


# Bidirectional Data Exchange



# How Do We Measure Success?

## HL7 RT Query Responses: March 2015 (n=434,080)



# Partnering for Success

- First query message partner was OHSU (Oregon Health & Science University), July 2011
  - ▣ Large teaching hospital, with 32 hospital and community-based clinics
  - ▣ Sends ~2,000 query messages/wk



# Partnering for Success

- Code sets need to match in both systems
  - CVX, MVX codes
  - Accented characters in names
- Patients returned are verified on name and date of birth; still chance that OHSU will not accept
- Upcoming Considerations:
  - Trigger batch of queries to ALERT IIS to populate EHR as new clinics come onboard
  - Returning history of disease/evidence of immunity in query response; how will they use that data in EHR

# Partnering for Success



*“It has been really helpful to have the interface with ALERT... the vaccine rules are complex enough and change often enough that it is difficult for the residents to stay on top of them... Also we get kids caught up during sick visits because the system tells us that the kid is due for such and such an immunization. Two thumbs up from our practice for this interface.”*

*~An OHSU practice*

# OnBoarding / Testing Process

## Sending Org/Vendor

Kick off call

Connect to web service

Send VXUs, to insert patients/imms to test environment

Send queries for test patients

Continue testing until no errors received and all scenarios successfully completed

## ALERT IIS Analysts

Provide test scenarios

Available for questions & troubleshooting throughout process

## Go/No Go

Go live call with ALERT IIS data exchange analyst

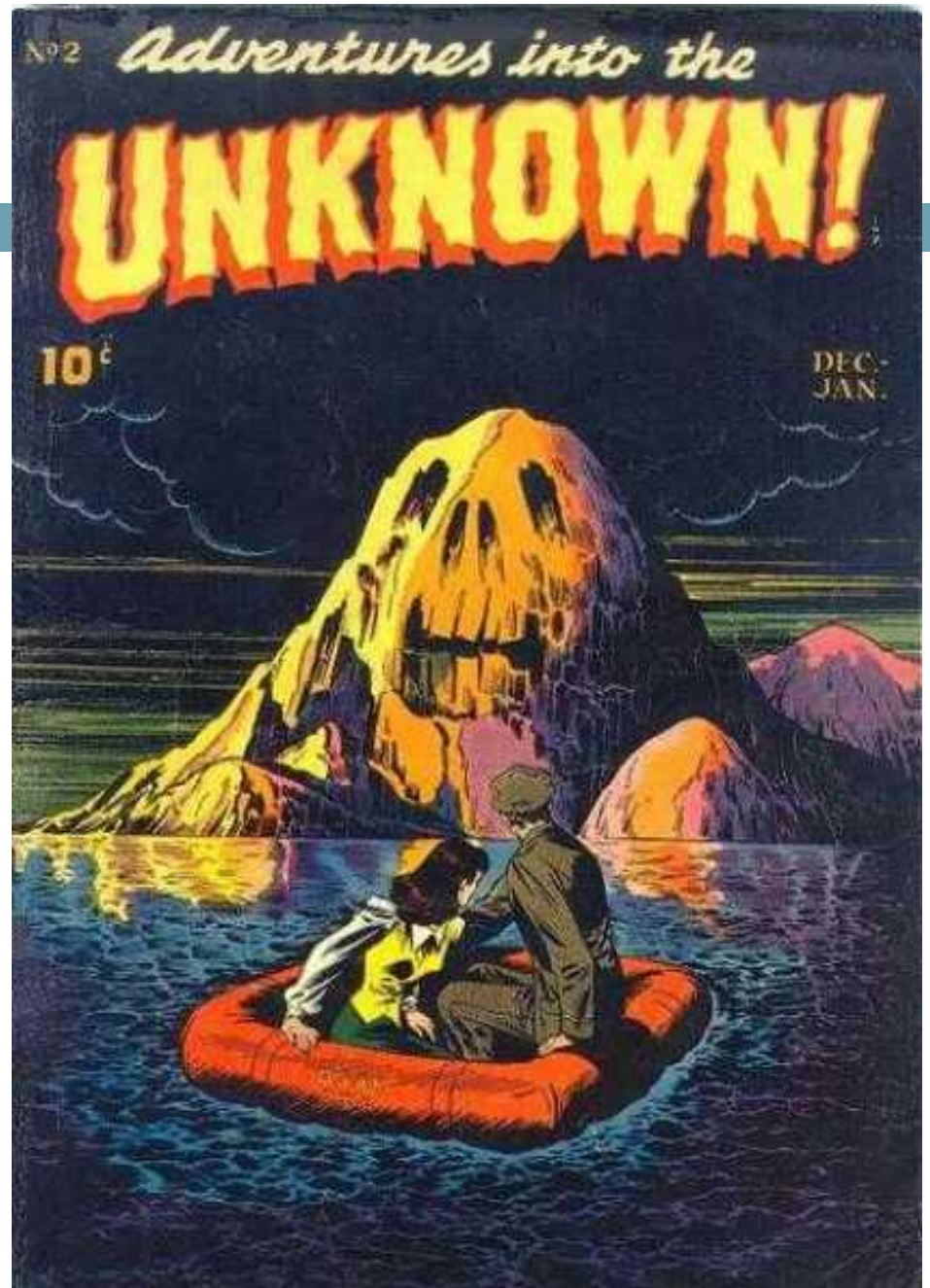
Review testing results, discuss sender/clinic responsibilities

# Kick Off Call

- HL7 message version?
- When are queries triggered?
  - ▣ At check-in?
  - ▣ Automatically when patient record look up?
  - ▣ Manually, clinician clicks 'get' button?
- Anticipated query volume?
- How/does the EHR dedupe/import history from ALERT IIS?
- Manual reconciliation process by the clinician?
- How will the ALERT IIS forecast be used/displayed?
- How does your EHR process each of the three possible responses to a query?
  - ▣ Single match found
  - ▣ Multiple matches found
  - ▣ None found?

# Challenges

We are building the car while driving it... into uncharted territory.



# Challenges

- We need standards and best practices
- Limited details on how the EHR will parse/present the data back to the clinician
  - ▣ Getting better as we're learning what to ask
- Limited access to source files due to volume
  - ▣ Working on ideas around capturing some valuable details out of the source files, to assist with data quality
- Keeping up with incentive programs as they expand to include bidirectional interfacing with IIS

# Next Steps



- Develop and implement a plan for monitoring query message volume and results
- Better understand clinic partner satisfaction with query functionality
- Update our technical guidance and outreach materials to support & promote query messaging
- Go-live with Cross-Jurisdictional Data Exchange with Washington State
- Preparing for Stage 3 Meaningful Use

# Thank you!

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## HP Oregon Team





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