

Electronic Test Orders and Results:

Informatics Solutions to support ARLN stakeholders

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Synopsis

- AR Informatics initiatives
- ETOR Identified Need
- Challenges
- Solution
- What's Next?
- Questions?



ARLN Informatics Initiatives

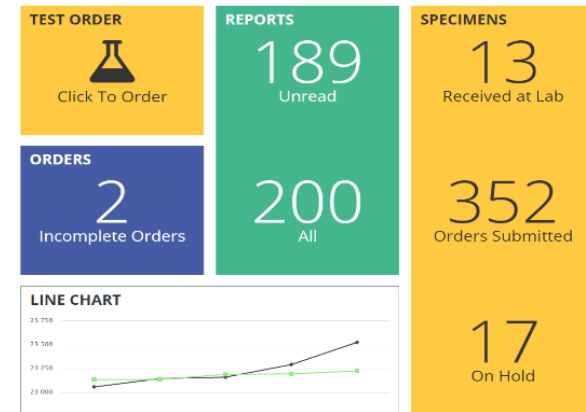
- Develop National reporting solution
- CRE Colonization Electronic Test Order & Result solution
- Provide Cloud-based Infrastructure
- Provide Technical Assistance



Reporting Portal



Lab Web Portal



AIMS

ETOR Need- Timely Result Reporting



DETECT



REPORT



RESPOND



Timely CRE Colonization Result Reporting from ARLN regional laboratories

- Minimize impact to the Laboratory Workflow
- Support cross jurisdictional partners
- Increase communication across a network of clinical and public health partners



AR ETOR Challenge



Lab Capacity Building



Informatics Solutions



Developed in parallel

Capacity Building Challenges

- Tight timeline for implementation
- Different Lab Information systems in use
- Costly to deploy for each Regional Lab
- Scalable Informatics Solution to support ARLN evolution



Proposed Approach



Selected competitively



LIMS agnostic



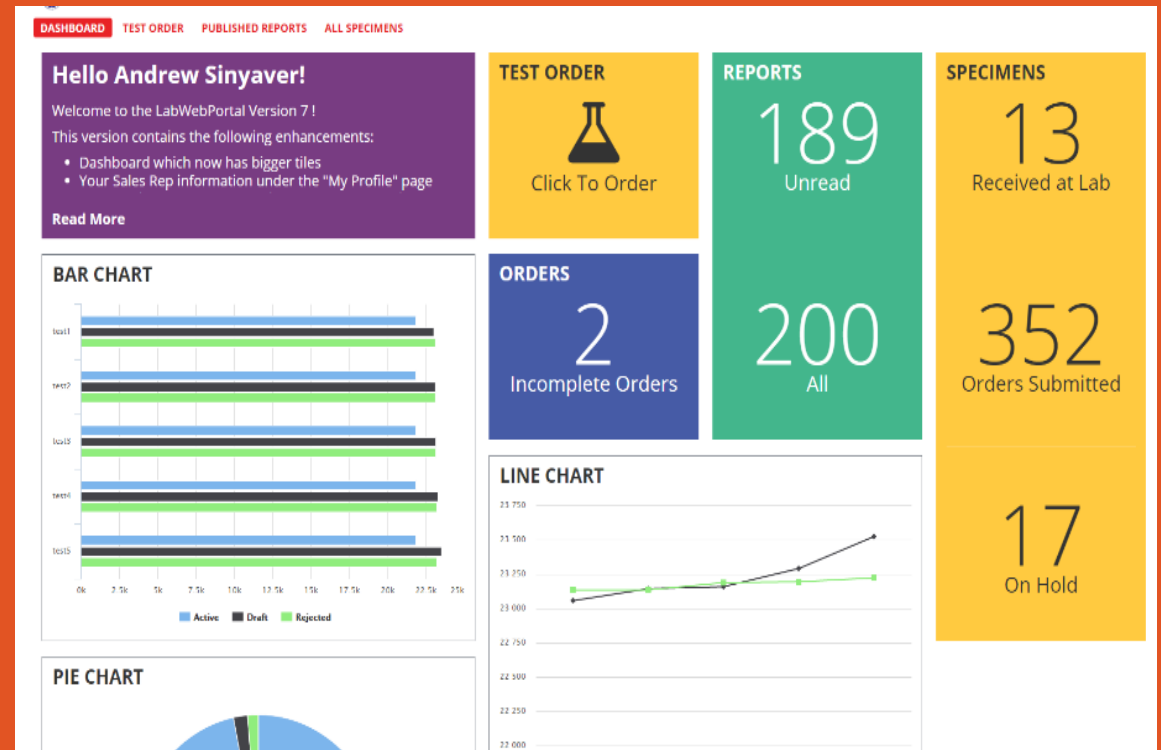
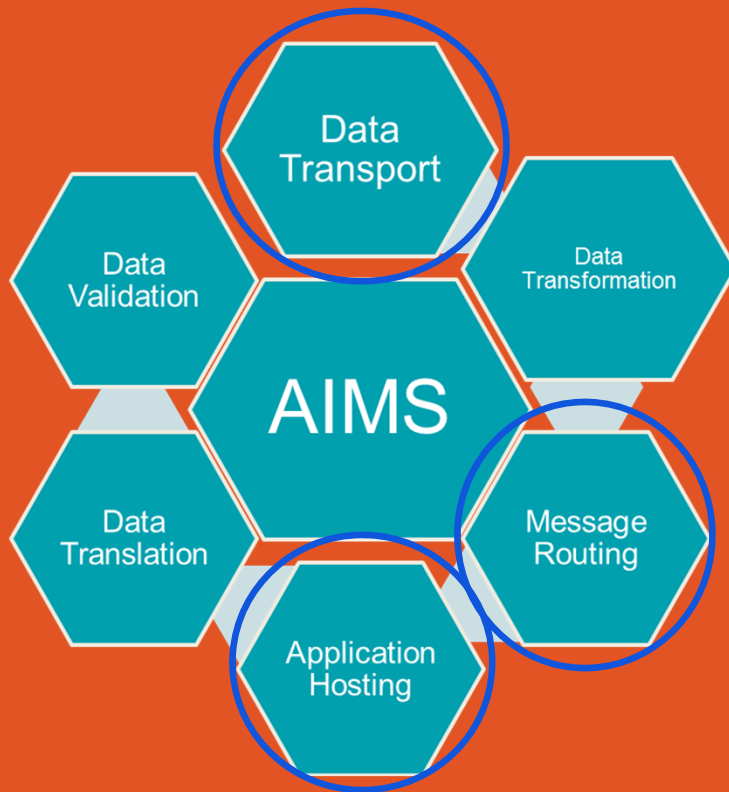
Centrally hosted

Approach Realized

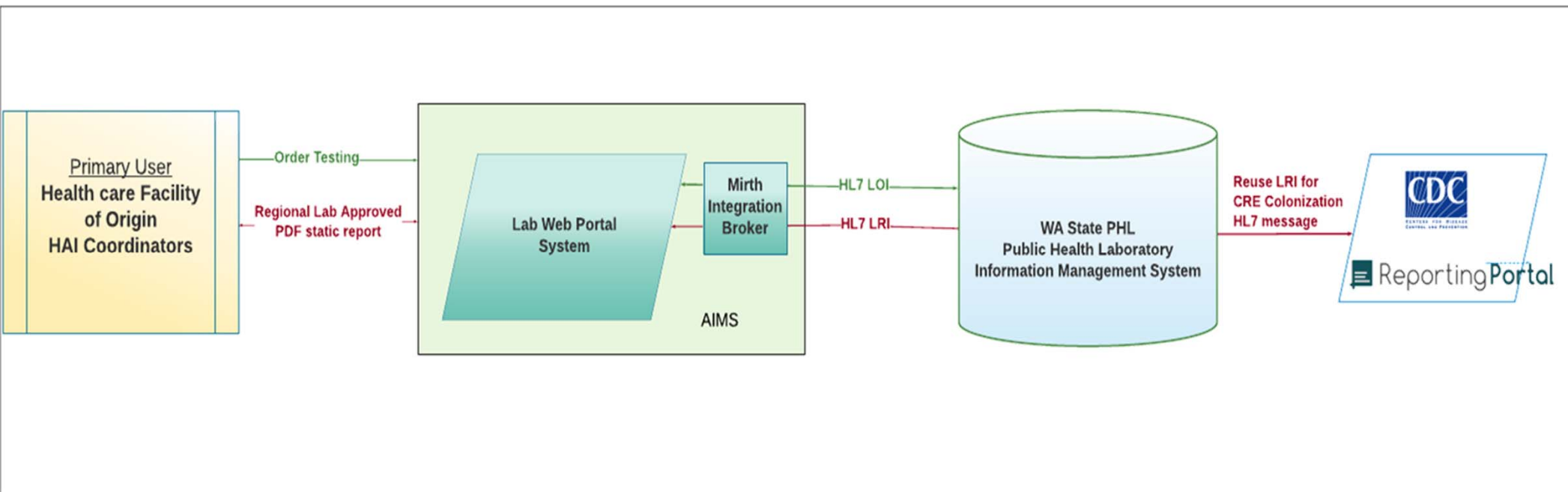
- Requirements Defined
- RFP released and awarded
 - iConnect Lab Web Portal (LWP)
- 5 out of 7 ARLN selected LWP
- LWP deployed on AIMS



Solution



Phase One context diagram



Implementation highlights

- HL7 LOI/LRI standards in use (portal to LIMS)
- ARLN regional labs can manage access
- Intuitive front end
- CRE colonization Test Requisition Form configured
- Data entry features optimized



Hello Andrew Sinyaver!

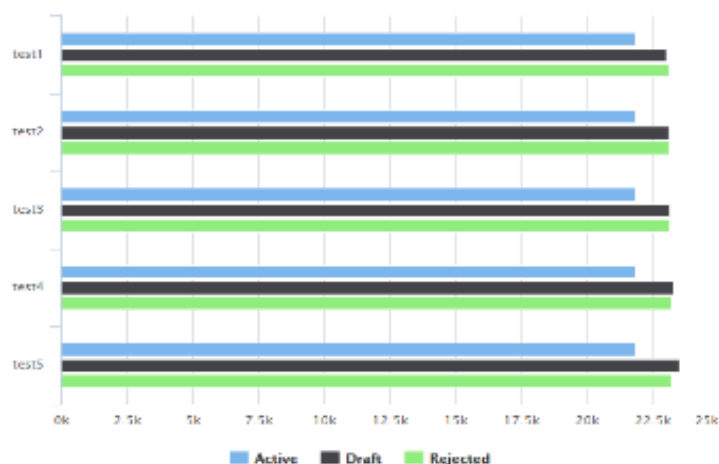
Welcome to the LabWebPortal Version 7 !

This version contains the following enhancements:

- Dashboard which now has bigger tiles
- Your Sales Rep information under the "My Profile" page

[Read More](#)

BAR CHART



PIE CHART



TEST ORDER



Click To Order

ORDERS

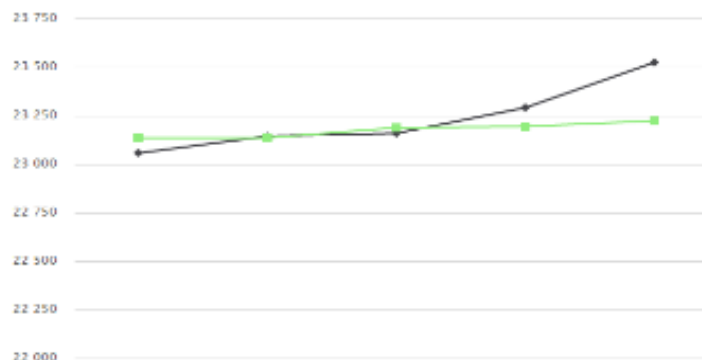
2

Incomplete Orders

REPORTS

189
Unread

LINE CHART



SPECIMENS

13
Received at Lab

352
Orders Submitted

17
On Hold



Western Regional ARLN: CRE Colonization Screening Requisition

If Submitting from California, please enter your Local Health Jurisdictional Lab Specimen ID in the first section above as the following: Submitting State PHL Specimen ID/ Local Health Jurisdictional Lab Specimen ID.

Hospital or Reference Lab Specimen ID

Facility Point of Contact

Last Name	God of Mischief	First Name	Loki
Street Address	4256 10th Ave NE		
City	Seattle	County	King
State	WA	Zip Code	98101
Phone Number	Email Address		
(206) 480-1456	loki@aaasgardurgentcare		
	Secure/Confidential Fax Number		
	(206) 478-6521		

Clear Values Save Order Submit

File

Edit

View

Favorites

Tools

Help

Repo...

ID-C...

Info...

https://aphlweb.labwebportal.com/wa/#/test-order/wa-trf

LWPv8.AIMS.WA - Test Order

Home

Star

Settings

File

Edit

View

Favorites

Tools

Help

Repo...

ID-C...

Info...

Page

Safety

Tools

?

Washington State Department of Health

DASHBOARD

TEST ORDER

INCOMPLETE

Western Regional ARLN: CRE

State

NV

Gender

Female

Date of Birth

02/02/1972

Date of Death

01/02/2012

Patient Medical Record Number/Submitting Facility

Recent Travel History

Sample Collection Facility

* Facility Name

HELP

TEST TEST

Select a company from the list below

Search...

Name	Address	City	State	Zip Code	Phone Nur
Aasgard Clinical Hospital	12485 Rainbow Bridge Way	Shoreline	WA	98155	
Aasgard Urgent Care	4256 10th Ave NE	Seattle	WA	98101	
Agile Nursing Services	123 Blue Street	Alameda	CA	94501	
Jack London Center for the Elderly	1245 B Street	Oakland	CA	94619	
Marvel Nursing Home	1478 Sunset Avenue	Anaheim	CA	93478	

<

>

1

2

10 items per page

Apply

Add New

Edit

Close

Clear Values

Save Order

Submit



DASHBOARD TEST ORDER INCOMPLETE ORDERS ALL SPECIMENS

Western Regional ARLN: CRE Colonization

Submitting Facility/Public Health Department Request

Name of Person ordering this test

* Last Name

test

Job title

test

* State/LHJ/Facility Name

WA Sub



Street Address 10 sunny dr

Street Address 2

City Seattle

County

State WI

Zip Code

76767

Clear Values

Save Order

Submit

Order Placed



Your test order **OIDWA180000083** has been successfully submitted. Please check the Specimens section of your Dashboard for status updates.

Click Print button below to view/print the completed submission form.

Click Copy Order button to apply current order information to the new order.

Print

Copy Order

Ok

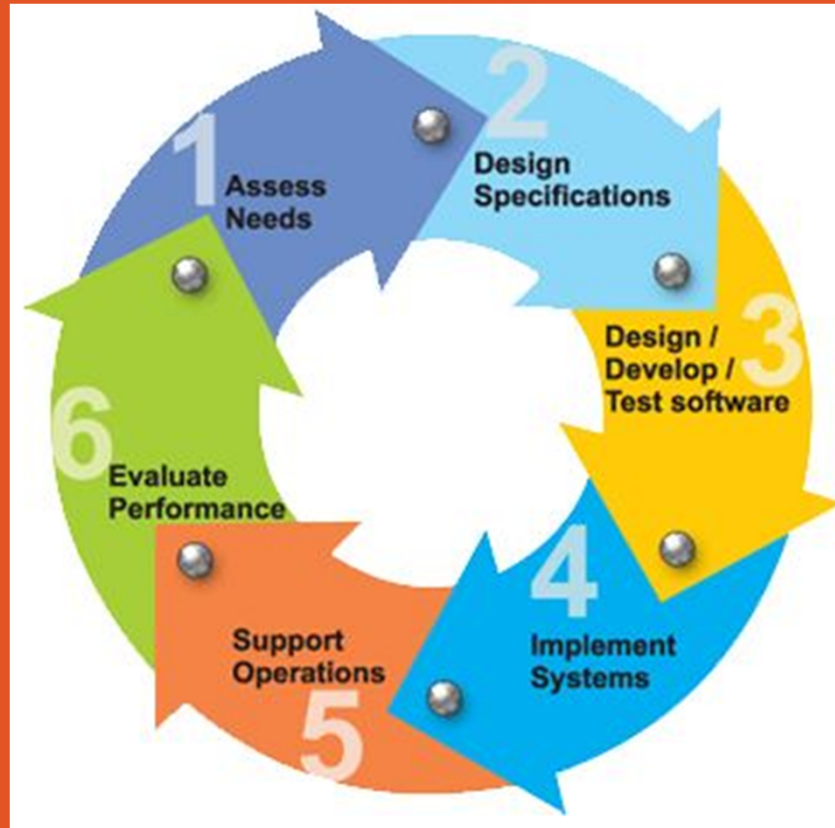


Challenges

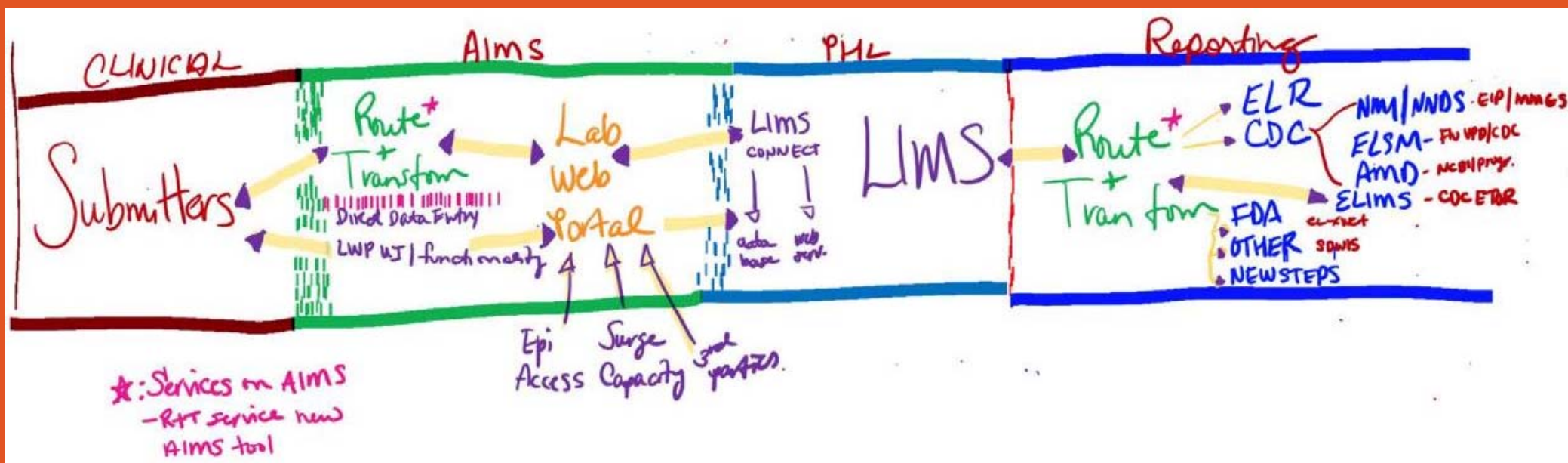
- Hybrid portal solution vs. LIMS integration
 - Full functionality not being used
- Waiting for CRE colo. methods and data elements to be finalized
 - System configuration & terminology dev was a lot of work
- Lengthy AIMS security review & audit
 - ensure compliance: HIPAA & FISMA moderate



What's Next?



Continued system evolution

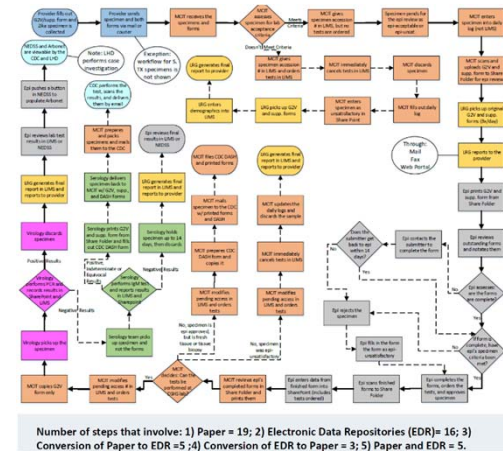


Project synergies

- TB Drug Susceptibility National Reference Center (CDPH)
 - PHL to PHL coordination
- HHS Office of the National Coordinator ETOR initiative
 - Expand use of LWP to support Lab/Epi Coordination
 - Expand use of LWP to support emerging infectious disease use case.



ONC ETOR Project Problem Statements



- Clinical submitters lack an efficient way of ordering tests, retrieving status and receiving results for suspect Zika cases.
- Current tools to capture epidemiological significant questions when a specimen is submitted for Zika testing (known as Ask at Order Entry questions), are too cumbersome and “after the fact” to help with testing prioritization.
- Epidemiologists do not have an efficient way to assist in the testing process to authorize, sort and prioritize testing based on submitter provided information and national case definitions.

Wireframes & Requirements

DASHBOARD TEST ORDER INCOMPLETE ORDERS ALL SPECIMENS PUBLISHED REPORTS

All Specimens 15

Previous 1 Next 25 ▾

Key	PatientName	Patient DOB	DateCollected	Status	DateSubmitted	DateReceived	Review	Priority	Comment
OIDCA170000027	Ion, Pop J	02/02/2000	11/28/2017 07:00 PM	InTransit	11/29/2017 07:17 PM	12/31/0000 07:00 PM			
OIDCA170000026	Joe, Doe K	01/01/2000	11/24/2017 11:14 AM	InTransit	11/24/2017 11:16 AM	12/31/0000 07:00 PM			
OIDCA170000025	Ion, Pop J	02/02/2000	11/24/2017 11:14 AM	InTransit	11/24/2017 11:15 AM	12/31/0000 07:00 PM			
OIDCA170000023	Ion, Pop J	02/02/2000	11/23/2017 12:28 AM	InTransit	11/23/2017 12:29 AM	12/31/0000 07:00 PM			
OIDCA170000022	ana, maria	01/01/2000	11/21/2017 06:39 AM	InTransit	11/21/2017 06:40 PM	12/31/0000 07:00 PM			
OIDCA170000021	Ion, Pop J	02/02/2000	11/15/2017 07:00 PM	InTransit	11/15/2017 11:26 PM	12/31/0000 07:00 PM			
OIDCA170000020	Ion, Pop J	02/02/2000	11/14/2017 07:00 PM	InTransit	11/15/2017 09:42 PM	12/31/0000 07:00 PM			
OIDCA170000019	Ion, Pop J	02/02/2000	11/15/2017 09:48 AM	InTransit	11/15/2017 09:49 AM	12/31/0000 07:00 PM			
OIDCA170000018	Ion, Pop J	02/02/2000	11/12/2017 07:00 PM	InTransit	11/13/2017 09:35 PM	12/31/0000 07:00 PM			
OIDCA170000017	Ion, Pop J	02/02/2000	10/27/2017 11:54 AM	InTransit	10/27/2017 11:55 AM	12/31/0000 07:00 PM			
OIDCA170000016	Ion, Pop J	02/02/2000	10/24/2017 08:00 PM	InTransit	10/25/2017 02:32 PM	12/31/0000 07:00 PM			
OIDCA170000015	Ion, Pop J	02/02/2000	10/24/2017 08:00 PM	InTransit	10/25/2017 12:18 PM	12/31/0000 07:00 PM			
OIDCA170000009	Ion, Pop J	02/02/2000	10/17/2017 07:39 AM	InTransit	10/17/2017 06:39 PM	12/31/0000 07:00 PM			
OIDCA170000008	Ion, Pop J	02/02/2000	10/15/2017 08:00 PM	InTransit	10/16/2017 09:45 PM	12/31/0000 07:00 PM			
OIDCA170000007	Ion, Pop J	02/02/2000	10/10/2017 08:00 PM	InTransit	10/11/2017 10:22 AM	12/31/0000 07:00 PM			

Batch functionality: Review and Priority buttons enabled when multiple samples selected (using checkmarks at left). **Please feel free to use existing multiselect/batch functionality if available.

Finish (or Submit) button sends test order on to lab; Sample is removed from view. 'Review' must be populated for all samples; 'Priority' is required as defined for each program.

Search...

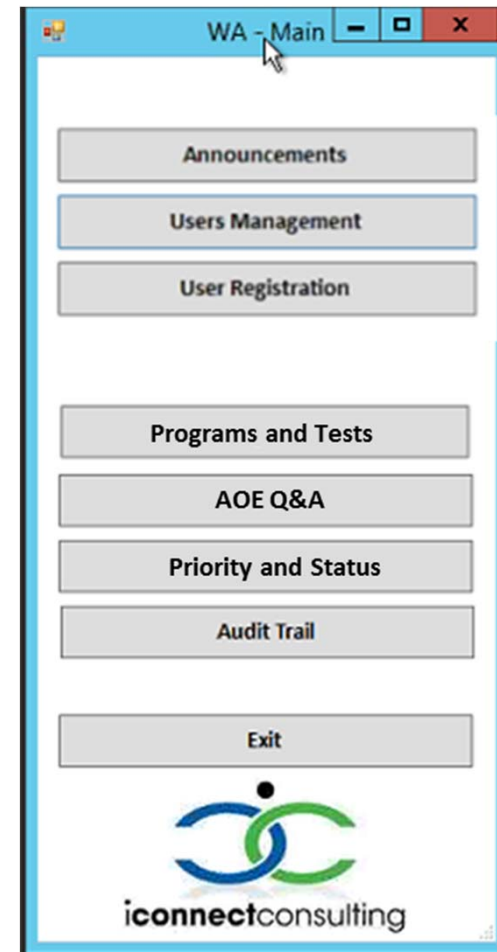
Set Review Set Priority Finish

Dropdowns display jurisdiction specified statuses for Review and Priority

Expands to allow EPIs to leave free text comment

HELP

- B1.1 Users can view a listing of all samples awaiting review
- B1.2 Worklist will default to display samples where the associated ordered test has been designated as eligible for EPI review and the approval status is null.
- B1.3 Users can edit default grid view to include other statuses, etc.
- B1.4 Users can select which columns should be displayed on the worklist
- B1.5 Users can change the position of displayed columns (i.e.. Move left or right)
- B1.6 Users can sort and filter displayed columns
- B1.7 Users can query existing samples
- B1.8 Users can view relevant dates such as "sample collected on" and "submitted on"
- B1.9 Epi User can add notes or comments to a specimen
- B2.2 Users can review samples in batch (multiselect samples and apply status to entire block)
- B3.2 Users can populate priority in batch (multiselect samples and apply status to entire block)
- B2.5 Actions taken by Epi user will flow through to lab and provider (status, priority, etc.)



ONC ETOR Epi Pilot- New Features for ARLN!

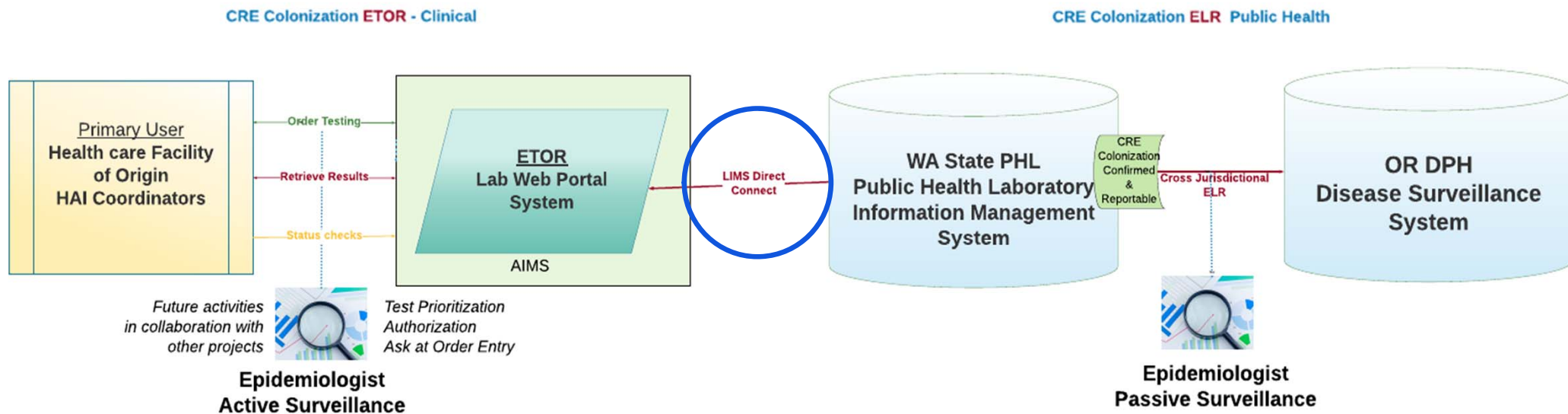
Workflows:

- Scenario 1: Manual order entry via the LWP
- Scenario 2: Manual order entry directly into lab LIMS (bypassing LWP)
- Scenario 3: HL7 order entry into AIMS/LWP

Deliverables:

- Deliverable 1: New EPI portal functionality and admin tool expansion
- Deliverable 2: StarLIMS to LWP sync-up
- Deliverable 3: EMR to LWP Order Interface

Review use of Standards- barrier to full portal functionality



Questions?

