New York City’s Journey Away from Paper Requisitions and towards an Electronic Test Ordering System

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The Zika Outbreak of 2016!

Challenges experienced at the onset of the outbreak

• The Public Health Laboratory (PHL) began receiving hundreds of orders on paper requisitions daily
• Most requisitions are completed by hand
• Missing information and
• Hard to read hand written orders
• Significant delays entering test orders into LIMS (STARLIMS)
• PHL and DOHMH handling large volumes of calls and questions
The Zika Outbreak of 2016!

Action Taken

• Division Of Information and Informatics (DIITT) quickly gathered requirements and implemented first version of the eOrder application.
• Zika Call Center staff were able to quickly handle questions and order tests for labs and other clinical providers.
• Interfaced Zika eOrder with LIMS
The Zika Outbreak of 2016!

Benefits Realized

• Eliminated 95% of back and forth communication between submitters and DOHMH and PHL staff.
• Reduced tremendous workload on the data entry team
• eOrder handled more than 10,000 Zika test orders (PCR, NAAT, IgM) for serum and urine specimens.
• Health Equity!!!
What is eOrder?

**eOrder host two applications**

**eOrder for Clinical Test**
Healthcare providers can submit test orders and view results online based on their Profile (License type).
Submitter can designate one or multiple site admin to manage facility locations and users based on roles.
Test Configuration with specimen

**BT eOrder for Bio Terrorism Test**
The department of health Emergency Preparedness staff can submit bioterrorism test orders and view results on DOHMH reporting Portal.

It does manage Play books, Manage Groups/ Division, Work Orders and Order tests for BT Application.
Basic Requirements:

Separate both application users and functionalities.

Used a data-driven approach to customize eOrder to reflect what PHL has historically received.

Generate Submitters profiles on the fly.

Develop secured and flexible application, DO NOT stop anyone to order test in an event of outbreak.

Created pop-up messages that would remind users to call for authorizations or any other tasks required to order a specific test.

Meet with NYC new public facing applications security standards and infrastructure.
Login Process

User can access to eOrder ONLY through NYC web Portal.

Create and verify NYC portal account.

Complete PHL eOrder application registration.

Send test order.

Submitters credentials and user verification performed manually by PHL staff.
My Orders

Samples Received: 9
Order Sent: 10

View Details

My Results

Preliminary Report: 0
Final Report: 0
Corrected Report: 0
Amended Report: 0

View Details

New users pending eOrder access – needs follow-up from Site Administrator

Pending: 8

View Details
Order Clinical Tests
PHL eOrder Workflow

Order Test

Create NYC ID account → Verify email address → Login to eOrder → Provide Submitter Info with License # → Create Facility and Location

Physical sample received at PHL → Transmit Data to LIMS (STARLIMS) → Preview Order Information and Submit Order → Enter Patient Information → Order Tests

Status Updated in eOrder → Testing Completed at Lab and Result Reported → Result Posted in eOrder → Status Updated in eOrder

Review Result
Implementation and Feedback

Testing performed by Internal DOHMH users and External Submitters.

Reached out to variety of submitters for testing.

Pre Populate submitters information for testing facilities

Sign off security from NYC Infrastructure and security teams.

Going Live with External Submitters

Trained External staff if required
Thank you