Increasing Newborn Screening Health Information Interoperability: A Systems Approach

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Currently in MN...

- Home-brew Oracle LIMS is 25 years old (current version 11.2.3.0)
- Began as a shared Public Health system with our Infectious Disease and Environmental labs
- Shared tables, tables upon tables
- Specimen-centric
- We have a view with the MDH Vital Records division for matching birth certificates with NBS specimens
- In the process of onboarding all of our hospitals with OZ Systems (aka: MnScreen) for our point-of-care testing (heart and hearing)
- There is not interoperability with OZ Systems & our LIMS
Out with the Old

RIP MN NBS LIMS

Mandatory and desired requirements were gathered from the following four units of the MN Newborn Screening Program:

- Laboratory
- Short-Term Follow-Up
- Genetic Counselors (Communication & Education)
- Operations

The MN.IT and MDH.IT had stringent requirements regarding security and accessibility.
Top Requirements for the New and Improved MN LIMS

• Vendor Hosted
• Software-as-a-Service (SaaS)
• INTEROPERABILITY
Interoperability

• Definition of *interoperability*
  
  *noun in·ter·op·er·a·bil·i·ty*
  
  : ability of a system to work with or use the parts or equipment of another system

• *in·ter·op·er·a·ble*
Minnesota’s Definition:

• The ability to securely exchange electronic health information using uniform standards to share and synchronize patient data across systems. Uniform standards may include, but are not necessarily limited to, HL7 exchange standards, LOINC and SNOMED vocabulary standards, and applicable security standards.
Interoperability

• Why
• Who
• What it means for us, for our customers and partners
In with the New
(just months away)

• Natus Medical Incorporated will be our new Vendor Hosted, Software-as-a-Service LIMS
• Interoperability With: OZ systems, Vital Records
• Improving of the interface with lab instruments due to interoperability
• Remote Diagnostic Entry
• Secure Remote Viewing of results
## Future of MN Interoperability

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<th>Phase ONE</th>
<th>Phase TWO</th>
<th>Phase THREE</th>
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<td>DEMOGRAPHICS AND SPECIMEN INFORMATION FROM EMR</td>
<td>EHDl AND CCHD RESULTS FROM DEVICES</td>
<td>EMR</td>
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<td>NANI</td>
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**Natus**

- Data Entry Module in MSDS
- Table in MSDS Viewable in the Secure Remote Viewer
- BLOODSPOT RESULTS AND OVR FIELDS FROM MSDS and VRR
This project has been brought to you by:

**MDH NBS Staff**
- Carrie Wolf - Lab
- Jill Simonetti - Ops
- Amy Gaviglio - STFU
- Mark McCann - Manager
- Myra Kunas - Assistant Division Director

**MN.IT**
- Mary Ruth Harsha
- Kathy Grantham

**MDH Vital Records**

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