PA Case Management System (iCMS)
SaaS Implementation

Audiologists Training
What is iCMS?

- Internet Case Management System (iCMS), a web-based software application
- Used by the Pennsylvania Department of Health's Division of Newborn Screening and Genetics (DNSG) for case management, tracking and managing the follow-up of newborn filter paper and point-of-care (POC) screening results for infants born/residing in PA
- Developed and supported by Neometrics, a division of Natus
Service Vendor

- Neometrics, a Division of Natus, incorporated in 1978
- Based in Hauppauge, NY
- Staff has over 100 years of experience in newborn screening and data management
- Market leader in newborn screening software for:
  - Testing, reporting and case management
  - Electronic data transfer (via HL7)
  - Federal reporting
Implementation Coordinator and Trainer

Lisa Hudson, Applications Systems Analyst II and Certified HL7 Control Specialist, has over 20 years of public health systems experience.

Responsibilities include:

• Provide assistance and training to existing clients (users and IT staff)
• Provide technical expertise on application, network and database issues
• Create user manuals, documentation and training materials
• Training

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PA DNSG

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Training Plan

• Complete Webinar Training
• Answer Webinar Review Questions
• Submit Answers and Request for Login
• Go Live!
Implementation Goals

Provide a *single comprehensive* data system that:

- supports the newborn metabolic, hearing and critical congenital heart defects (CCHD) screening follow-up programs
- supports unlimited DOH and external users, with different scopes and levels of access based on their roles
- provides fast and accurate identification of infants and their newborn screening results
- provides a secure interface for exchanging protected health information (PHI) with the contracted laboratories, submitters and treatment centers
- increases timeliness and efficiency of follow-up and reporting
Implementation Plan

✓ **Phase I**: Laboratories are able to send newborn filter paper screening data to iCMS, using HL7 messaging. DOH users are able to perform newborn screening follow-up activities and run reports in iCMS. An ad-hoc reporting tool is also provided for DOH to build custom reports, as needed.

✓ **Phase II**: Treatment Centers (TCs) are provided access to iCMS for specified diagnostic follow-up activities and hospitals, midwives and birthing centers are able to manually enter or electronically submit hearing screening data to iCMS.

**Current Phase**

• **Phase III**: Audiologists, Cardiologists and other health care professionals working with the newborns are provided access to iCMS for specified inpatient and outpatient diagnostic evaluation follow-up activities.
Phase III Objectives

• Bring the Pennsylvania newborn screening and genetics program *ahead* of other newborn screening and genetics programs across the country.

• Eliminate the need for the current email of workbooks between state and all Health Care Professionals (HCP)s.

• Provide HCPs and other outside providers direct access to referred cases for easy and quicker reporting of diagnostic results, leading to timely follow-up and treatment.
Data Entry Learning Objectives

• Be able to access and log into the PA iCMS
• Be able to search and find a newborn in the system
• Use PA iCMS to view the results from newborn’s screenings
• Use PA iCMS to view a newborn’s case information, such as, contacts, appointments, referrals, diagnoses etc.
• Use PA iCMS to track and complete referrals
• Use PA iCMS to track and complete diagnostic evaluations
• Learn how to create user accounts in PA iCMS for other users
• Be prepared to train other users on how to use the system
• Feel comfortable using PA iCMS
iCMS Concepts

- Work grids
- PHI and emails (trusted sender Neometrics.com)
- Individual logins
Let’s Get Started...
Referral-Diagnosis Work Flow

**Current Process**
- CHN creates and enters status for a referral in iCMS and emails a workbook to the Audiologist
- Audiologist submits diagnostic workbook via email and CHN enters it into iCMS

**To-Be Process**
- CHN creates the referral in iCMS and an automatic email notification is sent to the Audiologist
- Audiologist completes the referral or cancels it in iCMS
- Audiologist enters the diagnostic results directly in iCMS
New Referral-Diagnosis Work Flow

- The MS Excel workbooks will no longer be needed
- Audiologists will have direct access to the system, to provide status update and enter diagnostic results for assigned cases
- Audiologists will be notified by an automatic email when a new referral is assigned to their facility
- Expected response time for status updates and final diagnosis will vary based on the disorder

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Max # of Days to Update Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing</td>
<td>within 4 days of referral</td>
</tr>
</tbody>
</table>

- Audiologist users will have the ability to log into iCMS at any time to access new and pending referrals, cases that need final diagnosis and completed cases for their facility
Referral Email

Referral creation will send an automatic email to all affiliated designees.

“Click here” will open the iCMS login page.

Please note the email is from: customersupport@neometrics.com
Defining Users, Affiliations and Designees

• Every user is affiliated to the provider(s)
• Every user is assigned a role that limits what they can see and do
• Not every user is a designee
• Designees receive the referral emails (Limit 5)
• Administrator users for a provider can configure new users for that provider
URL For Production: https://nbs.pa.gov/toolbar/login.aspx

IE must be run in compatibility mode:
Tools -> Compatibility View Settings
Add this website -> Click “Add”
Password Criteria

• Passwords must have 8 characters including an uppercase, lowercase, numeric and a symbol
• Password can not be one that was previously used within last 180 days
• Users can only change their password 1 time every 15 days
• Audiologist Administrators can reset a user’s password at any time
• Temporary password is good for 14 days
• Password reset is required every 60 days
User Terms and Conditions

- Users must agree to these terms and conditions to access iCMS.

Attention

Pennsylvania Internet Case Management System
User Terms and Conditions
By using the Pennsylvania Internet Case Management System (PA ICMS), you attest to the following:

AUTHORIZED ACCESS
1) I attest that the information I provided during registration is my own and is true and accurate to the best of my knowledge.
2) I attest that I am legally authorized to access the PA ICMS.
3) I understand that PA ICMS usernames and passwords are assigned to individuals and not to facilities. All authorized users must have their own accounts using their own credentials. Usernames and passwords cannot be shared. Any violations of username and password security may result in revocation of direct access.
4) I understand that I am only permitted to use the PA ICMS for the reasons explicitly stated in the Infant Hearing Education Assessment, Reporting and Referral (IHEARR) Act, 11 P.S. §§ 871-1 et seq.; the Newborn Child Testing Act, 35 P.S. §§ 621 et seq.; 28 Pa. Code Chapter 28; and, the Newborn Child Pulse Oximetry Screening Act, 11 P.S. §§ 878.1 et seq.
5) I agree to report any suspected breach or unauthorized access of the system to the Pennsylvania Newborn Screening Program immediately.

CONFIDENTIALITY
6) I understand that the data from the PA ICMS is protected patient health information and any information accessed must be treated as confidential as required by the authority cited in paragraph 4 above.
7) I understand that any person who unintentionally or intentionally makes an unauthorized disclosure of information from the PA ICMS may be subject to civil and criminal penalties.
8) I agree to abide by all rules and regulations set forth in the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and any subsequent amendments.

GENERAL TERMS AND CONDITIONS
9) I accept the above conditions and certify that I am a healthcare professional authorized to access the PA ICMS.
Landing Page

Top Toolbar:

- **Home (Landing Page)** – Daily tasks and system options
- **Release Notes** – Training Materials
- **Contact Us** – Newborn Screening home page
- **Logout** – Exit out of iCMS
Pending Referrals

- Link to all new and pending referrals
- Records based on role and affiliation, so users only see babies/referrals assigned to their facility for their disorders
Pending Referrals

- Displays all referrals assigned to the Audiologist, awaiting an update
- Defaults to referrals created in the past 90 days
- Overdue cases highlighted in yellow
- Use the filter options on the top to change the default settings
The filter and sorting options described for this grid can be used throughout iCMS.

The “Export to Excel” will take all data displayed on the grid and create an excel file. This option also appears on all iCMS grids. When selected, a popup message will display at the bottom of the screen:

Do you want to open or save Export_8_5_2017_2_49_PM.xls from 10.24.3.131?
Pending Referrals

- Click “Select” to complete or cancel a referral
Pending Referrals

- The referral opens in edit mode
- Red asterisks (*) indicate mandatory fields
- Blue asterisks (*) indicate conditionally mandatory fields
The header of a case has several components:

- The center, blue banner identifies the infant
- The left-side navigation menu includes links for other case details
- The top-right corner allows for system navigation
  - **Cancel** - Return to the previous screen
  - **Retry** - Return to the grid from where you selected the case
  - **Prev** and **Next** - Allow you to view additional filter papers for the case
Pending Referrals

Mandatory data for Save
Conditionally mandatory
Option drop-down
Calendar drop-down

Auto-filled
Select Referral Received OR Referral Cancelled and Reason Cancelled

- Click “Save” to update the referral
- Click “Cancel” to exit the record without updates
Pending Referrals

- If mandatory data is missing or incorrect, error message(s) will display at the top of the screen when you click “Save”
- Fill in the required details correctly and click “Save” again
Accepting a Referral

- Check the “Referral Received” box
- Click “Save”
- A Dx record will be created and listed on the Final Diagnosis Needed grid
Cancelling a Referral

- Check the “Referral Cancelled” box
- Select a “Referral Cancelled Reason” from the dropdown
- Click “Save”
- The state will receive an action indicating referral cancelled – no further steps needed for the user
- The DX will not be created or if one already exists, it will no longer appear on the Final Diagnosis Needed grid
Once saved, the screen is redirected back to the Referrals summary page.

If the referral is accepted, the Status will be updated to “Completed”, the referral will be removed from the Pending Referrals grid and added to the Final Diagnosis Needed grid.

If the referral is cancelled, the referral status will be updated to “Cancelled” and the referral will be removed from the Pending Referrals grid.

To view and edit a referral, click “Select” next to it.
Final Diagnosis Needed

- Link to completed referrals for which a final diagnosis has not been entered yet
Final Diagnosis Needed

- Lists all completed referrals that are awaiting a final diagnosis
- Defaults to cases requiring a final diagnosis within the past 366 days
- Use the filter options on the top to change the default settings
- Click “Select” to view and edit a record
Final Diagnosis Needed

• Final Diagnosis is expected to be updated within the requirements below:

<table>
<thead>
<tr>
<th>Disorder</th>
<th>DX Due in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing</td>
<td>Within 10 business days after diagnosis</td>
</tr>
</tbody>
</table>

• The diagnosis forms will match the workbook previously emailed to you by the CHN
Final Diagnosis Needed

- Diagnostic Results form opens in edit mode
- The form matches the current workbook format
- Mandatory field indicators (\* and \*) and drop-downs function the same way as they do on the “Edit Referral” form
- If diagnostic findings are incomplete, provider should select 'incomplete findings' under right/left ear results.
Final Diagnosis Needed

- If it is the final diagnosis, check the box
- Click “Save” to update
- Click “Cancel” to exit without saving changes
- If unable to save, scroll to the top of the screen for warnings and errors
- If you have any additional comments, add it to the Notebook
- For “Incomplete Findings”, check the final diagnosis box then enter a future appt.

Note: To cancel a diagnostic result, go to the “Edit Referral” screen and cancel it.
Outpatient Screening Performed

- If an Outpatient (OP) screen was performed instead of a diagnostic evaluation, check the “Only OP Screening Performed” box and blank out the Date of Diagnostic Evaluation.
- Check the “Final Diagnosis” box at the bottom of the form.
- Click “Save” to update.
- Select IP/OP Screening Results from the left navigation menu.
- Add the OP Screening results.
Final Diagnosis Needed

- If “Final Diagnosis” was checked, the “Evaluation Status” will be updated to “Completed”, else it will stay as “In Progress”
- The record will be removed from the Final Diagnosis Needed grid and added to the Completed Evaluations grid
- To view and edit a record, click “Select” next to it

<table>
<thead>
<tr>
<th>Select</th>
<th>Evaluation Status</th>
<th>Only OP Screening Performed</th>
<th>Diagnosis Date</th>
<th>Referred Date</th>
<th>Diagnostic Provider</th>
<th>Hearing Results - R</th>
<th>Hearing Results - L</th>
<th>Created Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select</td>
<td>Completed</td>
<td>No</td>
<td>05/09/2019</td>
<td></td>
<td>Aberdeen Audiology</td>
<td>Normal Hearing</td>
<td>Unknown Loss</td>
<td>05/09/2019</td>
</tr>
<tr>
<td>Select</td>
<td>In Progress</td>
<td>No</td>
<td>05/13/2019</td>
<td></td>
<td>Aberdeen Audiology</td>
<td>Normal Hearing</td>
<td>Normal Hearing</td>
<td>05/09/2019</td>
</tr>
<tr>
<td>Select</td>
<td>In Progress</td>
<td>No</td>
<td></td>
<td></td>
<td>Aberdeen Audiology</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Completed Evaluations

- Link to all completed cases
Completed Evaluations

- Allows quick review of completed cases
- Lists only the records that have the “Final Diagnosis” checkbox marked

**Note**: Cases where OP screening was performed instead of diagnostic evaluations will not be listed on this grid.

- By default displays records with a final diagnosis date in the past 30 days
- To view a record, click “Select” next to it
Case Management

- Allows users to search for specific cases based on selected criteria
Case Management

- To find a record, enter a value in one or more of the fields and click “Search”
  - A combination of fields can be used, e.g. Infant Last Name and DOB
  - Wildcard cards can also be used, e.g. Infant Last Name as “SM*”
- Click “Reset” to clear the search
- If the search returns more than 10,000 records, a warning message will be displayed
Case Management

- Click “Select” to view a record from the search results
- If the baby is not found, try alternate criteria
To search by Birth Facility or Submitter, click the ellipsis
Click “Select” from the list displayed of your affiliated sites
Case Management

The header of a case has several components:

- The center, blue banner identifies the infant
- The left-side navigation menu includes links for other case details
- The top-right corner allows for system navigation
  - Cancel - Return to the previous screen
  - Retry - Return to the grid from where you selected the case
  - Prev and Next - Allow you to view additional filter papers for the case
Case Menu

- **Demographics** – current demographic data for the case
- **Appointments** – all appointments for the case
- **Referrals** – all referrals for the case
- **Notebook** – all notes for the case
- **Document Capture** – lab reports and other case documents; .doc, .docx, .xls, .xlsx, .pdf, .jpg, .gif and .png files
- **Laboratory Results** – filter paper results
- **Lab Demographics** – demographics from the filter paper
- **IP/OP Screening Results** – all hearing screening results
- **Hearing Risk factors** – the set of risk factors for the case
- **Hearing Diagnostic Evaluation** – the Hearing DX form
- **Early Intervention** – the EI enrollment status
- **CHD Screening Results** – all CHD screening results
**Case Demographics**

- Displays the most recent demographic information in view-only mode

- If you have more recent demographic information, please email it to the CHN assigned to this case
Appointments

- If a future follow-up appointment is required, it should be entered when it is confirmed with the family
- To add or view, click the Appointments tab from the left-navigation menu
- To add a new appointment, click “Add New Appointment”
Appointments

- Select the appointment type to be scheduled:
  - Hearing Outpatient Screening
  - Hearing Diagnostic Evaluation
  - Hearing Other
- Enter the appointment date and other data as needed
- The provider defaults to your facility
- Click “Save” to update and the appointment will be added to the grid
Appointments

• After you see a baby and enter the DX result, if a follow-up visit is required then add a new DX appointment

• A new Hearing DX form will be generated when the new Hearing DX appointment is added and it will appear on the “Final Diagnosis Needed” grid
Notebook

- The notebook is where you can add any comments related to the case
- To add or view, click the Note Book tab from the menu
- To add a new note, click “Add Note”
Notebook

- Select the note type “Hearing”, then enter the note
- Click “Spell Check” if needed
- Click “Save” to update and the note will be added to the grid
• Click “Add New File” to add a scanned document to the case

• Click “Browse” to open search window to locate your document

• Click “Open” from the search window when the file is selected
Document Capture - Add

- Enter the document description then Click “Upload”
- File types supported: .doc, .docx, .xls, .xlsx, .pdf, .jpg, .gif and .png
If system accepts the image type and description, you will be prompted to “Submit”
Document Capture - View

- To view an existing document, click search icon.
Laboratory Results

<table>
<thead>
<tr>
<th>Select</th>
<th>Group</th>
<th>Disorder</th>
<th>Mnemonic</th>
<th>Comment</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select</td>
<td>T4 and TSH</td>
<td>T4 (CH)</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>AA</td>
<td>AA</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>AA</td>
<td>MSUD</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>AA</td>
<td>PKU</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>Gal</td>
<td>GAL</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>Gal</td>
<td>GALBEU</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>CAH</td>
<td>CAH</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>Hgb</td>
<td>HGB</td>
<td>FA</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>BIO</td>
<td>BIO</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>CF</td>
<td>CF</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>SCID</td>
<td>SCID</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
<tr>
<td>Select</td>
<td>AC</td>
<td>AC</td>
<td>WNL</td>
<td>Within Normal Limits</td>
<td>Normal</td>
</tr>
</tbody>
</table>

- “Select” the test to view the result values

- Testcode 00653 - T4 CH - 16.10
Lab Demographics

<table>
<thead>
<tr>
<th>Child’s Information</th>
<th>Submitter / Physician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn ID</td>
<td>Submitter</td>
</tr>
<tr>
<td>34343453453</td>
<td>Megee Womens Hospital of UPMC</td>
</tr>
<tr>
<td>Filter Paper #</td>
<td>Address</td>
</tr>
<tr>
<td>34343453453</td>
<td>300 Halket Street Pittsburgh PA 15213</td>
</tr>
<tr>
<td>Name TEST</td>
<td>Room 4562 LCIC</td>
</tr>
<tr>
<td>Name at Discharge</td>
<td>Phone (412) 641-1734</td>
</tr>
<tr>
<td>DNAME, DFNAME</td>
<td>Fax (412) 641-14508</td>
</tr>
<tr>
<td>Collection Date/Time</td>
<td>Physician Name</td>
</tr>
<tr>
<td>01/02/2010 @ 0000</td>
<td>Address</td>
</tr>
<tr>
<td>Med Rec Number</td>
<td>LA137-2, None</td>
</tr>
<tr>
<td>01/01/2010 @ 0000</td>
<td>City</td>
</tr>
<tr>
<td>Birth Date/Time</td>
<td>LN</td>
</tr>
<tr>
<td>Sex Female</td>
<td>State</td>
</tr>
<tr>
<td>Race Unknown</td>
<td>Zip Code</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Phone</td>
</tr>
<tr>
<td>Birth Order Not Multiple Birth</td>
<td>Phone</td>
</tr>
<tr>
<td>Birth Weight 0 grams</td>
<td>Phone</td>
</tr>
<tr>
<td>Current Weight</td>
<td>NICU</td>
</tr>
<tr>
<td>Transfused</td>
<td>Hyperal</td>
</tr>
<tr>
<td>Trans Date/Time</td>
<td>Carnitine</td>
</tr>
<tr>
<td>Specimen Age 300</td>
<td>Meconium Ileus</td>
</tr>
<tr>
<td>Specimen Type Initial Specimen</td>
<td>Antibiotics</td>
</tr>
<tr>
<td>Age of Collection 24</td>
<td>Weeks Gestation</td>
</tr>
<tr>
<td>Date Spec Received 01/17/2019</td>
<td>NICU</td>
</tr>
<tr>
<td>NICU Hyperal Carnitine</td>
<td>Meconium Ileus</td>
</tr>
<tr>
<td>Meconium Ileus</td>
<td>Antibiotics</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>Weeks Gestation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mother’s / Guardian’s Information</th>
<th>Mother’s Medical History</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother’s Name TEST, Mother’s DOB</td>
<td>Thyroid Disease</td>
</tr>
<tr>
<td>Mailing Address</td>
<td>Diabetes No</td>
</tr>
<tr>
<td>City State County Zip Code</td>
<td>On Steroids</td>
</tr>
<tr>
<td>Email Address Phone</td>
<td>Maternal Hepatitis UNK</td>
</tr>
<tr>
<td>Medical Assistance</td>
<td>Other</td>
</tr>
<tr>
<td>Emergency Contact Emergency Phone</td>
<td></td>
</tr>
<tr>
<td>Emergency Contact Info</td>
<td></td>
</tr>
<tr>
<td>Guardian’s First Name Guardian’s Last Name</td>
<td></td>
</tr>
</tbody>
</table>
IP/OP Screening Results

<table>
<thead>
<tr>
<th>Screening Type</th>
<th>Screening Order</th>
<th>Result</th>
<th>Screening Provider</th>
<th>Screen Date</th>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Hearing</td>
<td>Second</td>
<td>L - ABR: Refer, R - ABR: Refer</td>
<td>West Penn Hospital</td>
<td>05/19/2018</td>
<td>No</td>
</tr>
<tr>
<td>Inpatient Hearing</td>
<td>First</td>
<td>L - ABR: Refer, R - ABR: Refer</td>
<td>West Penn Hospital</td>
<td>05/18/2018</td>
<td>No</td>
</tr>
</tbody>
</table>

- Inpatient and Outpatient Hearing Screening results allow you to add, edit or view IP and OP screens
- Click “Select” to view the details
- Click “Add” to enter a new screening result if your test was not a diagnostic evaluation
• The screening details show date, time, method, results and malformations, if any, for the screen
Adding an OP Result

- To add the outpatient result, enter the mandatory fields and click “Save”
Early Intervention

- Early Intervention Status is view only
- Click “Select” to view the details

<table>
<thead>
<tr>
<th>Referral Date</th>
<th>Enrollment Status</th>
<th>Provider</th>
<th>Enrolled Date</th>
<th>Services Start Date</th>
<th>Entered By</th>
<th>Date Created</th>
<th>Modified By</th>
<th>Date Updated</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/01/2019</td>
<td>Pending</td>
<td>BedfordSomerset Developmental and Behavioral Health Services</td>
<td></td>
<td></td>
<td>Daniel LaGonerie</td>
<td>05/16/2019 12:09:12</td>
<td>Daniel LaGonerie</td>
<td>05/16/2019 12:09:12</td>
</tr>
</tbody>
</table>
Early Intervention

- Latest enrollment status and intervention method will be displayed
CHD Screening Results

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Pulse Ox Results</th>
<th>Date Time</th>
<th>Reason</th>
<th>Created By</th>
<th>Date Created</th>
<th>Modified By</th>
<th>Date Modified</th>
<th>Final Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>367011</td>
<td>Unknown</td>
<td>Unknown</td>
<td>HL7 Import User</td>
<td>01/29/2019 13:41:13</td>
<td>HL7 Import User</td>
<td>01/29/2019 14:32:53</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

- CHD results are view only
- Click “Select” to view the details
Hearing Result Manual Entry

Used to enter Out Patient hearing results for babies not found in Case Management lookup
### Hearing Results Manual Entry

**Demographics**

**Add Hearing Results Manual Entry**

* Indicates Mandatory Fields for Submit
** Indicates Mandatory Fields for Save or Submit

#### Patient Information

- **Medical Record #**
- **Initial FP #**
- **Infant Last Name**
- **Infant First Name**
- **AKA Last Name**
- **AKA First Name**
- **Date of Birth**
- **Gender**
- **Birth Order**
- **NICU**
- **Out of State Baby**

#### Mother's Information

- **Mother Last Name**
- **Mother First Name**
- **Mother Phone**

#### Birth Hospital Information

- **Birth Hospital**

* Mandatory data for Submit
** Mandatory data for Save or Submit

- Option drop-down
- Calendar drop-down
- Library lookup

- Enter data and **tab** between fields
Hearing Results Manual Entry

Demographics

- Enter, at minimum, mandatory data for Save
- Birth hospital indicates where the infant was born
- Search and select the birth hospital from the iCMS Provider library by clicking the ellipsis...
- For babies born outside PA, enter Birth Hospital as H98769 and select Yes in the “Out of State Baby” box
- For home births, enter Birth Hospital as M1227
### IP/OP Screening Results

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen Type</td>
<td></td>
</tr>
<tr>
<td>** Screen Provider</td>
<td></td>
</tr>
<tr>
<td>Screener</td>
<td></td>
</tr>
<tr>
<td>Date of Screening</td>
<td></td>
</tr>
<tr>
<td>Date of Screening</td>
<td></td>
</tr>
<tr>
<td>Date Screening Results</td>
<td></td>
</tr>
<tr>
<td>Received</td>
<td></td>
</tr>
<tr>
<td>Result Left Ear</td>
<td></td>
</tr>
<tr>
<td>Screening Method Left</td>
<td></td>
</tr>
<tr>
<td>IP Malformation Left Ear</td>
<td></td>
</tr>
<tr>
<td>Family Notified Date</td>
<td></td>
</tr>
</tbody>
</table>

### Screening Results

<table>
<thead>
<tr>
<th>Screen Type:</th>
<th>Screen Result:</th>
<th>Screening Method:</th>
<th>IP Malformation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient</td>
<td>Missed</td>
<td>ABR</td>
<td>None</td>
</tr>
<tr>
<td>Outpatient</td>
<td>Pass</td>
<td>OAE</td>
<td>Atresia</td>
</tr>
<tr>
<td></td>
<td>Refer</td>
<td>N/A</td>
<td>Microtia</td>
</tr>
<tr>
<td></td>
<td>No Show</td>
<td></td>
<td>Both</td>
</tr>
<tr>
<td></td>
<td>Parent Refusal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transferred</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expired</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hearing Results Manual Entry

Hearing Screen Results

Date and Time of Screening - Business Rules

**Date of Screening**
- **Missed** – Enter the date when the baby was discharged without a hearing screen
- **No show** – Enter the date of the appt. when the family was a no show
- **Parent Refusal** – Enter the date of the parent refusal
- **Transferred** – Enter the date when the baby was transferred
- **NMI** – Enter the date when it was determined that hearing screen could not be performed
- **Expired** – Enter the date when the baby expired

**Time of Screening**
- For the above non-screen results, enter the Time of Screening as 00:00.
# Hearing Results Manual Entry

## Hearing Screen Results

### Pass Result

<table>
<thead>
<tr>
<th>IP/OP Screening Results</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screen Type</strong></td>
<td>Inpatient</td>
</tr>
<tr>
<td><strong>Screen Provider</strong></td>
<td>Albert Einstein Medical Center - (Philadelphia, PA)</td>
</tr>
<tr>
<td>Screener</td>
<td>LH</td>
</tr>
<tr>
<td><strong>Date of Screening</strong></td>
<td>7/15/2017</td>
</tr>
<tr>
<td><strong>Time of Screening</strong></td>
<td>10:14</td>
</tr>
<tr>
<td><strong>Date Screening Results Received</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Result Left Ear</strong></td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Screening Method Left</strong></td>
<td>ABR</td>
</tr>
<tr>
<td><strong>IP Malformation Left Ear</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Family Notified Date</strong></td>
<td></td>
</tr>
</tbody>
</table>

| **Result Right Ear** | Pass |
| **Screening Method Right** | ABR |
| **IP Malformation Right Ear** |  |
| **PCP Notified Date** |  |

### Refer Result with a Malformation

| **Result Left Ear** | Refer |
| **Screening Method Left** | ABR |
| **IP Malformation Left Ear** | Atresia |

| **Result Right Ear** | Refer |
| **Screening Method Right** | ABR |
| **IP Malformation Right Ear** | Atresia |

### Non-Screened Result

| **Result Left Ear** | Parent Refusal |
| **Screening Method Left** | N/A |

| **Result Right Ear** | Parent Refusal |
| **Screening Method Right** | N/A |
Hearing Results Manual Entry

Appointments

- **OP Hearing Screen** - needed if IP final results are Refer or Missed
- **Diagnostic Evaluation** - needed if OP final results are Refer
- To submit appointment details, select the appointment type in the “Referred To” drop-down and enter the details
### Hearing Results Manual Entry

#### Appointments

<table>
<thead>
<tr>
<th>#</th>
<th>ID#</th>
<th>Type</th>
<th>Description</th>
<th>Last Name</th>
<th>First Name</th>
<th>Address</th>
<th>Address 2</th>
<th>City</th>
<th>Zip Code</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>aud4162</td>
<td>Audiologist</td>
<td>The Children’s Hospital of Philadelphia, Specialty Care Center-Brandywine Valley</td>
<td>Glen Mills</td>
<td>819 Baltimore Pike</td>
<td>NULL</td>
<td>19342</td>
<td>(800) 551-5480</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>aud4161</td>
<td>Audiologist</td>
<td>The Children’s Hospital of Philadelphia, Specialty Care Center-Bucks County</td>
<td>Chalfont</td>
<td>500 West Butler Avenue</td>
<td>NULL</td>
<td>18914</td>
<td>(800) 551-5480</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>aud4160</td>
<td>Audiologist</td>
<td>The Children’s Hospital of Philadelphia, Specialty Care Center-Exton</td>
<td>Exton</td>
<td>481 John Young Way</td>
<td>NULL</td>
<td>19341</td>
<td>(800) 551-5480</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>aud4159</td>
<td>Audiologist</td>
<td>The Children’s Hospital of Philadelphia, Specialty Care Center-King of Prussia</td>
<td>King of Prussia</td>
<td>950 Pulaski Drive</td>
<td>NULL</td>
<td>19406</td>
<td>(800) 551-5480</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Appointment Information**

- **Referred To**: Diagnostic Evaluation
- **Follow-Up Appt Date**: 8/15/2017
- **Follow-Up Appt Time**: 15:00
- **Referred Provider**: The Children’s Hospital of Philadelphia, Specialty Care Center-Brandywine Valley
- **Address**: 819 Baltimore Pike
- **City**: Glen Mills
- **Zip Code**: 19342
- **Phone**: (800) 551-5480
- **Referred To Name**: Dr. Smith
- **Referred To Phone #**: (215) 555-5555
### Hearing Risk Factors Entry

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Description</th>
</tr>
</thead>
</table>
| Caregiver concern regarding hearing, speech, language, or developmental delay.| Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| Family history of permanent childhood hearing loss                           | Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| Neonatal intensive care of more than 5 days or any of the following regardless of length of stay: ECMO, assisted ventilation, exposure to ototoxic medications (Gentamicin and tobramycin) or loop diuretics (furosemide/Lasix), and hyperbilirubinemia that requires exchange transfusion. | Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| In utero infections, such as CMV, herpes, rubella, syphilis, and toxoplasmosis.| Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| Craniofacial anomalies, including those that involve the pinna, ear canal, ear lobe, ear pits, and temporal bone anomalies. | Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| Physical findings, such as white forelock, that are associated with a syndrome known to include a sensorineural or permanent conductive hearing loss. | Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| Syndromes associated with hearing loss or progressive or late-onset hearing loss, such as neurofibromatosis, osteopetrosis, and Usher syndrome; other frequently identified syndromes include Waardenburg, Alport, Pendred, and Jervell and Lange-Nielsen. | Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| Neurodegenerative disorders, such as Hunter syndrome, or sensory motor neuropathies, such as Friedreich ataxia and Charcot-Marie-Tooth syndrome. | Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| Culture-positive postnatal infections associated with sensorineural hearing loss, including confirmed bacterial and viral (especially herpes viruses and varicella) meningitis. | Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| Head trauma, especially basal skull/temporal bone fracture requiring hospitalization. | Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
| Chemotherapy.                                                               | Yes - Risk exists  
No - Risk does not exist  
Not Entered - Risk is not indicated                                                                                                                                                                                                                                                                                                                                                                           |
Hearing Results Manual Entry
Prompts

- **Save** – Save incomplete data for re-editing without submitting for match
- **Submit** – Save and submit data for match with filter paper results
  
  **Note**: A record must be in “Submitted” status to be matched
- **Cancel** – Cancel data entered
- **Delete** – Delete hearing result record (non-matched results only)
- **Submit and Additional** – Submit current record and then duplicate demographics to allow quick entry of another hearing result for the same infant
- **Return To Previous Page** – Discard and return to previous screen
If a user selects “Submit” and not all mandatory data is entered, a prompt will display.

Click “OK” to return to the Hearing Results Manual Entry screen.

Scroll to the top of the screen to view details regarding the missing or incorrect data.
Hearing Results Manual Entry Prompts

- Clicking “Submit” or “Submit and Additional” will display this confirmation screen.

- Click “Submit” or “Return to Entry”.

- In case the results need to be corrected to “Pass”, clear the appointment details first, and then change the results.

---

<table>
<thead>
<tr>
<th>Patient Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Record # 1111111</td>
</tr>
<tr>
<td>Initial FP # 7777777</td>
</tr>
<tr>
<td>Infant Last Name BABYLAST</td>
</tr>
<tr>
<td>Infant First Name</td>
</tr>
<tr>
<td>AKA Last Name</td>
</tr>
<tr>
<td>AKA First Name</td>
</tr>
<tr>
<td>Date of Birth 7/15/2017</td>
</tr>
<tr>
<td>Gender Female</td>
</tr>
<tr>
<td>Birth Order Not Multiple Birth</td>
</tr>
<tr>
<td>NICU No</td>
</tr>
<tr>
<td>Out of State Baby</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mother’s Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother Last Name BABYLAST</td>
</tr>
<tr>
<td>Mother First Name MOM</td>
</tr>
<tr>
<td>Mom Phone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Birth Hospital Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Hospital Einstein Medical Center Montgomery 500 West Gannymere Pkwy, 2nd Floor Nursery East Norriton, PA 19403</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IP/IP Screening Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen Type Infant</td>
</tr>
<tr>
<td>Screen Provider Albert Einstein Medical Center</td>
</tr>
<tr>
<td>Screener LR</td>
</tr>
<tr>
<td>Date of Screening 7/15/2017</td>
</tr>
<tr>
<td>Time of Screening 10:14</td>
</tr>
<tr>
<td>Date Screening Results Received</td>
</tr>
<tr>
<td>Result Left Ear Pass</td>
</tr>
<tr>
<td>Screening Method Left ABR</td>
</tr>
<tr>
<td>IP Malformation Left Ear</td>
</tr>
<tr>
<td>Family Notified Date</td>
</tr>
<tr>
<td>Result Right Ear Refer</td>
</tr>
<tr>
<td>Screening Method Right ABR</td>
</tr>
<tr>
<td>IP Malformation Right Ear</td>
</tr>
<tr>
<td>PCP Notified Date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Appointment Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred To</td>
</tr>
<tr>
<td>Follow-Up Appt Date 8/15/2017</td>
</tr>
<tr>
<td>Follow-Up Appt Time 15:00</td>
</tr>
<tr>
<td>Referred Provider aud4102</td>
</tr>
<tr>
<td>Referred To Name Dr. Smith</td>
</tr>
<tr>
<td>Referred To Phone # (215) 333-5555</td>
</tr>
</tbody>
</table>

Submit | Return to Entry
Hearing Results Manual Entry Prompts

• Clicking “Save” and then “Submit” will display a confirmation message

• Clicking “Submit and Additional” will display a new form with the same demographics to allow you to enter a rescreen result
Non-Screened Results

- Non-Screened Results with Method (N/A)
  - Missed
  - Parent Refusal
  - Expired
  - NMI (Not Medically Indicated)
  - Transferred
  - No Show

- Expired, Transferred, Missed and No Show results will auto-fill for both ears
Unmatched Hearing Results

Displays Out Patient Hearing screens not matched to a case in iCMS
Unmatched Hearing Results

- Displays results that:
  - have incomplete data to be edited
  - have complete data but have not been matched to a filter paper
- Highlights results that are unmatched for over 10 days
- To view and edit a record, click “Select” next to it
Unmatched Hearing Results

** Edit Hearing Results Manual Entry **
* Indicates Mandatory Fields for Submit
** Indicates Mandatory Fields for Save or Submit

** Patient Information **

- Medical Record #: 200001000
- Initial FP #
- Infant Last Name: TEST
- Infant First Name: BABYGIRL
- AKA Last Name:
- AKA First Name:
- Date of Birth: 3/16/2017
- Gender: Female
- Birth Order: Not Multiple Birth
- NICU:
- Out of State Baby:

** Mother’s Information **

- Mother Last Name:
- Mother First Name:
- Mother Phone: () -

** Remember a record must be flagged as Submit to be Matched **

- The record opens in edit mode
- Make any changes needed
- Scroll to the bottom and select a response
  - Save
  - Submit **
  - Cancel
  - Delete
  - Submit and Additional
Matching the Hearing Results to the Filter Paper

• **Primary Match (Processed Overnight)**
  – The system will automatically match a hearing result to a filter paper based on Birth Hospital + MRN

• **Secondary Match (Reviewed by CHN)**
  – The CHN will review unmatched hearing results and compare demographics to find possible matches
    • Last Name, AKA Name, DOB, Gender, Birth Hospital, Birth Order, Mom Last and Mom First

• **Manual Match (Reviewed by CHN)**
  – A CHN can manually match a hearing result to any filter paper
User Administration

Audiologist Administrators can:

- Create New Users
- Unlock Users
- Reset Passwords
User Administration

• Lists all users in your affiliated facilities
• Has color coded entries for active, inactive and locked users
## Add Users

- Click “Add New User”
Add Users

- Enter the user name and full name
- Use the first name initial + last name as the user name
- If the username already exists, add a number at the end, e.g. JSMITH2
- Maximum length is 10
- Click “Next” to Continue
Add Users

- Select the user’s role, which should be limited to:
  - “Audiologist User”
  - Then click “Next”
- Note that Audiologist Admins can only create Audiologist users
Add Users

- Select the user’s affiliations by clicking “Add” then click “Next”
- Audiologist Admins can only create users with the same affiliations
- If affiliated to multiple sites, “Add” each one to the new user
Add Users

• If the user should receive the Referral email, add the provider as a Designee then click “Next”

• There is no limit to the number of users per facility, however it is suggested you have 2 to 5 designees
Add Users

- Enter the mandatory information including the Organization
- Click “Save”

If the configuration for the user account is correct, a confirmation message will display
Add Users

If any required data is missing, a red prompt will display on the top of the “User Information” Tab.

Enter the missing data, and click “Save” again.
• An email will automatically be sent to the new user with their user name and initial temporary password
• The users will have 14 days to setup their new password and security question or the Audiologist Administrator will need to reset the password for them
• Email is sent from customersupport@neometrics.com
Reset Password

- Click “Reset Password” to reset the password for a user
- A prompt will confirm the reset and an email will be sent to the user with their new temporary password
• If a user has incorrectly entered their password 5 times or their password has expired, the user is locked out and they must notify their admin user to get “unlocked”

• Click “Select” to view the user details

• Click through the configuration tabs until you get to the “User Information” tab
Unlock User

- Check the “Active” box
- Click “Save”
Inactivate User

- On the User Information tab, uncheck the “Active” box
- Select “Save”
Questions

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Slide deck created with assistance from the Pennsylvania Department of Health.
CHN List

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Kate Withjack – kwithjack@pa.gov

Note: All grids identify the CHN assigned to the record
Webinar Review Questions

#1
How are you notified that you were assigned a referral?
   a. Phone
   b. Fax
   c. Email

#2
True or False:
You can share your login with your co-workers?
Webinar Review Questions

#3
How do you reset your password?
   a. Click the “Forgot Password” button on the landing page
   b. Call the state for assistance
   c. Email the password police

#4
What are the three grids on your landing page called?
   a. Open Referrals, Open Diagnostics, and Closed Cases
   b. Nina, Pinta and Santa Maria
   c. Pending Referrals, Final Diagnosis Needed and Completed Evaluations
Webinar Review Questions

#5
What do you do to acknowledge and complete a referral assigned to your facility?

- a. Check “Referral Received” on the referral
- b. Enter a note in the notebook
- c. Call your CHN
- d. All of the above

#6
What do you do when you are assigned a referral, but the baby does not come to your facility?

- a. Check “Referral Cancelled” and the Reason on the referral
- b. Enter a note in the notebook
- c. Call your CHN
- d. All of the Above
#7
How do you communicate with a CHN about a particular case?
   a. Call your CHN
   b. Enter a note in the notebook
   c. Email your CHN with the baby information and specific details

#8
Where can you attach a scanned form to the baby’s case?
   a. Appointments
   b. Notebook
   c. Document Capture
Webinar Review Questions

#9
Where can you view the DBS filter paper results?
   a. Laboratory Results
   b. Document Capture
   c. Both a and b

#10
Can you find any baby born in the state by searching in Case Management?
   a. Yes- you have access to every baby
   b. No- you can only access a case if a referral was assigned to you or you performed any testing on the baby
   c. No- you only see babies that you completed evaluations for
Webinar Review Questions

#11
True or False:
You can revise a diagnostic form that you have previously entered?

#12
Who can add user logins and unlock users for your facility?
  a. Your facility administrator
  b. The state
  c. Both a and b
Audiologist Responsibilities

Next Steps:

• Create Email with the following:
  o Your name, your email and phone #
  o Your facility name
  o Are you an Administrator? Are you a Designee?
  o Training Course attended
  o Provide your answers to the 12 Webinar questions
    If you don’t have the answers, send email to the address below to request copy of this slide deck
• Send Email with a request for login to the address below:
  o RA-TCNBSAdmin_Fax@pa.gov
Going Live!

URL:  https://nbs.pa.gov/toolbar/login.aspx?msg=16

Make sure to:

• TURN OFF Pop Up Blocker
  Tools -> Pop Up Blocker -> Turn Off Pop Up Blocker

• Turn ON Compatibility View Setting
  Tools -> Compatibility View Settings -> Add

• Add pa.gov to your list of Trusted Sites
  Tools -> Internet Options -> Security -> Sites -> Add

• Supported Web Browser: IE v10 or Higher

• If you receive a HTTP 400 or 404 error – clear your cookies and try again