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Indiana NBS Lead Case Management Module

The NBS Lead Case Management Module is the newly developed online case management, reporting, and case surveillance system for lead case management activities conducted in the state of Indiana. It is the required avenue for receiving and documenting all lead case management activities, and functions as the single place for reporting and documenting the elements of case management services which are provided to children who have elevated blood lead levels.

With the implementation of the NBS Lead Case Management Module, although the way in which case management activities are being documented at the local and state levels have changed, the blood lead testing and reporting requirements, the case management expectations at the local health department level, and the medical management guidelines of children with elevated blood lead levels have not.

General NBS Use Resources

For direction on the steps for the general use of NBS, follow the instructions listed in the Indiana NBS User Guide, which can be accessed on the ISDH NEDSS Base System (NBS) resource webpage. A variety of other resources, including a Glossary of Terms, a FAQ document, and the Local Health Department General Training Video can also be found on this website.

An important note about the resources found on the NBS resource webpage: The resources were developed using the procedures and instructions that are appropriate and unique for the use of NBS with general communicable diseases. Some of the instructions will differ from those that you are directed to follow for the use of NBS for lead case management. However, most of the information provided is consistent with the guidelines and requirements of the use of NBS for lead case management, and will therefore be helpful in learning to navigate NBS.

Accessing the Indiana NBS System

The Indiana NEDSS Base System (NBS) Lead Case Management Module can be accessed through the Indiana State Department of Health State Health Gateway at the following URL:

https://gateway.isdh.in.gov/Gateway/SignIn.aspx

If you are a new user to Indiana NBS or need assistance with the system, please contact the NBS help desk by clicking on “Help” at the top of the Gateway sign in page listed above.
NBS Dashboard & Navigating the System

The dark blue navigation bar appears on the top of every page and includes the following:

- **Home** - Brings you back to the NBS Dashboard
- **Data Entry** – This functionality will NOT be used. To enter data please first search for the patient via the “Patient Search” box on the home screen.
- **Open Investigations** - Shows all your open investigations for your jurisdiction and conditions
- **Reports** - Allows users to export data and perform analysis
- **Help** - Opens a pop-window with CDC-developed Help screens
- **Logout** - Exits you from the system. It is important to use this every time you exit NBS.
- **User** – NBS will display what username you are logged in under, which is your ISDH Gateway username

The NBS Dashboard contains several tiles:
Patient Search – Allows you to search for a patient in NBS by name, DOB, current sex or ID

- **My Queues** – Lists of items that need action or attention. Each queue will turn purple when there are items on the list and the number of items will be shown in parentheses
  - **Open Investigations** – List of all open investigations for your county/jurisdiction. To open an investigation, click on “Open Investigations”, then “Lead” in the “Condition” column of the patient.
  - **Rejected Notifications Queue** – List of investigations that were submitted to ISDH and were rejected due to incomplete or incorrect information that needs additional attention by LHD staff
  - **Documents Requiring Review** – List of new lead labs that have not been reviewed and require your action. **LHD staff is expected to review the labs in this queue and act on them as they would with a lab previously received in a Manifest.**
- **My Reports** – Reports developed by ISDH and can be personalized to access data
- **News Feed** – Queue not in use
- **Cases Created - Last 7 Days** – Queue not in use
- **Notices** – Direct link to help desk for technical assistance and system messages are displayed here

**Tips for Navigating & Entering Data in NBS**

- **Keyboard short-cuts are useful when navigating in NBS:**
  - **Tab** - Moves you forward one field
  - **Shift-tab** - Moves you back one field
  - **Enter** - Submits the record
  - **Backspace** - Moves you back one character within a field
- **Internet Browser “Back” button - Do not use this button.** It will kick you out of the system without saving your work!
  - Use the Navigation Bar at the top of the page or look for a “Return to ...” link in the top right corner on certain pages.
• Click the **Submit** button to **save** your information. Click **Cancel** to stop editing the page WITHOUT saving the data entered.

• The NBS System will time you out after 30 minutes of inactivity. If you have not clicked the **Submit** button, your work will be lost.

• Click the **Edit** button to make changes to previously submitted items.

• Date fields can be entered by typing in the date manually or selecting the calendar icon to the right of the field and clicking on the desired date.

• To select more than one item in a list press the CTRL button and click on the desired items. To select all items between two points/items in a list or dropdown menu, select the first item, hold shift and select the second item.

• A red asterisk sign indicates that the information requested for that field is required

  * First Name: George

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**Searching For a Patient**

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![Patient Search](image-url)
1. A demographic search allows for a patient’s record to be accessed in the system by searching by first or last name, date of birth, or current sex.
   i) Searching by date of birth helps to identify possible spelling errors or duplications in NBS.
2. An identifiers search is done by using an identifier (Event ID Type or Patient ID(s)) assigned to a patient by NBS to find their information again. This search option will rarely be used for lead cases.
3. To search for a patient:
   a) Click Last Name and enter the first 3-4 characters of last name. If name is common, also enter 3-4 characters of First Name, or
   b) Click DOB and enter date of birth, or
   c) Click Event ID Type or Patient ID(s) and enter identifiers.
4. Click Search.
5. Once all data fields (see below) are completed, click Submit. (Cancel button will not save data)
6. If the person you are searching for already exists in the database, click on the Patient ID hyperlink to open the record.
7. If the person is NOT in the system, you will need to add them (see Adding a Patient).

Viewing the Patient’s File

The Patient File page displays the patient’s file information. It provides a single view of all public health data available for the patient and includes the following items:

1. **Summary Tab (Click on + to open each subsection)**
   a) Patient Summary: The most current demographic information entered.
b) Open Investigations: You can open the investigation by clicking the link under **Start Date**.

c) Documents Requiring Review: New Lab for that patient.

2. **Events Tab**

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigations</td>
<td>Public health investigations for a reportable condition</td>
<td>Both open and closed investigations will show here</td>
</tr>
<tr>
<td>Lab Reports</td>
<td>Laboratory reports for the patient</td>
<td>Both manually entered labs and electronically received labs will show here</td>
</tr>
<tr>
<td>Vaccinations</td>
<td>Patient’s vaccinations</td>
<td>Not being used in Lead</td>
</tr>
<tr>
<td>Treatments</td>
<td>Patient’s treatments for reportable conditions</td>
<td>Not being used in Lead</td>
</tr>
<tr>
<td>Documents</td>
<td>Electronically received case reports</td>
<td>Not being used in Indiana NBS</td>
</tr>
<tr>
<td>Contact Records</td>
<td>Contact investigations for reportable conditions</td>
<td>Not being used in Lead</td>
</tr>
</tbody>
</table>

3. **Demographics Tab**

a) The most recent information will be displayed at the top under Patient Summary

b) Each demographic variable will be shown newest to oldest by “As of” date.

<table>
<thead>
<tr>
<th>Data Field</th>
<th>Description</th>
<th>Notes for Data Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Patient’s last, first, and middle name</td>
<td>Different types available (i.e. legal, alias, maiden)</td>
</tr>
<tr>
<td>Address</td>
<td>Patient’s address (zip and county field used to determine jurisdiction)</td>
<td>It is very important to enter county field.</td>
</tr>
</tbody>
</table>
### Phone and Email
Patient’s phone number, email, and/or website address
If area code is missing, system will accept 000.

### Unique Identifiers
Various types of patient’s unique identifiers
Options include driver’s license number, Medicaid number, medical record number (MRN) and others

### Race
Patient’s race
If no information provided, enter unknown. OK to enter multiple races

### Ethnicity
Patient’s ethnicity
If no information provided, enter unknown

### Sex and Birth Information
Patient’s DOB, Sex, and birthplace information
If no information provided, enter unknown

### Mortality
Patient’s vital status and death information
Date of death as well as location of death can be entered, if applicable

### General Patient Information
Patient’s occupation, marital status, education, language and residence information
Other appropriate information can be added

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### Adding a Patient

If you are unable to find the patient you are looking for by searching, you will need to add a patient using the following procedure. It is important to have search thoroughly before entering a new patient to avoid duplicate records:

1. Click **Add New** in the upper right corner of the Search Results page.
2. Enter the patient’s information into the Add Patient – Basic page and click **Submit** to save.

### Editing Patient Information

1. Search for the patient and view the patient file.
2. Click on the **Demographics Tab**.
3. Click **Edit** to display the Edit Patient page.
4. To edit existing information, click the edit icon for the values you want to edit.
5. Click **Update** to save the updated information.
6. Click the 🗑 delete icon to remove the information in the section. *(Please only delete information if it is known to be incorrect; deleted information is removed from the system and history).*
7. Click **Submit** to save all changes.

### Managing an Electronic Lab Report

- All Laboratories, clinics, hospitals, and physicians are required to report blood lead test results to ISDH and those results are reported into Lead Data Flow (LDF). All lead lab results in LDF are then routed into NBS.
- LHDs do not have the ability to enter labs into NBS. Any **blood lead lab results received by the LHD**
from a laboratory, physician, etc., must be sent to ISDH by fax or secure email so that it can be entered into LDF to ensure that the results have been reported appropriately to ISDH, to then be recorded into the record of NBS, and then be routed to the LHD for appropriate action.

1. Electronic lab test results are received and displayed in the Documents Requiring Review Queue available on the NBS homepage. (**LHD staff is expected to review the labs in this queue and act on them as they would with a lab previously received in a Manifest.) Click on the Lab Report link under Document Type to open the report.

2. If the lab report requires an investigation, check if a case investigation has been created by opening the Events tab in the Patient File.

3. If an investigation has not been created for this occurrence of a reported elevated blood lead level, from within the lab report, select Create Investigation to create the case investigation and associate the lab with the new investigation. (See “Creating a Case Investigation” for more information)

4. For situations when a case investigation already exists, and the lab is related to the investigation in question (i.e. second specimen that determines if this is a confirmed case or not, or additional labs done at the designated intervals for retesting or other purposes), you can associate the lab report with the investigation. The lab report needs to be added to the case investigation as it is an important part of the management and evaluation of the patient’s status and progress. (See “Associate Lab Report to Investigation” for more information)

5. If a lab report does not require an investigation (i.e. test results for a child over the age of seven and for adults, for an initial test result <5 µg/dL) click the Mark as Reviewed button at the top of the page.

Associate Lab Report to Investigation

- This action is used when a patient has an open case investigation, and a lab report with information important to the progress of the case has been received in NBS and is displayed in the Documents Requiring Review Queue. The lab can be associated with the investigation in two different ways.

Option 1:

1. Open a lab report and click on the Associate Investigation button at the top of the page (see below).
2. Select the check box next to the lab you have selected. Then click Submit.
Option 2:
1. Open the case investigation to which you want to associate the new lab report and click the Manage Associations button at the top of the page. (See below)
2. Select the check box next to the lab you have selected. Then click Submit.
Creating a Case Investigation

Definition

❖ “Case investigation” has two meanings within the context of addressing case management activities for lead toxicity. When conducting a “case investigation” (an investigation), a Case Manager/PHN gathers information concerning the discovery, diagnosis and medical management of a child with an elevated blood lead level. The tool used to document the information that has been gathered is the “Case Investigation” in NBS, which will be opened and completed by the Case Manager/PHN.

Opening a Case Investigation

❖ An investigation is opened in accordance with the guidelines for lead case management as stated in 410 IAC 29 and the Lead Screening and Medical Management Recommendations.

❖ A Case Investigation must be opened in NBS for all patients who will require any kind of case management activities, regardless of the blood lead level. This will include those patients with a blood lead level of 5-9.9 µg/dL. The Case Investigation is needed as it is the primary location for the documentation of all case management activities, including those of patients.

1. There are two options for ways to create a case investigation
   a) From within a lab report
   b) From the Events tab of the Patient File
2. To create an investigation from within a new lab, click on the Create Investigation button at the top of the page, select “Lead” as the Condition, and click Submit. Complete the sections of the investigations
3. To create an investigation from the patient file, search for the patient in NBS. If the patient is not in NBS, create the patient. (See Searching For a Patient)
4. If the patient is in NBS, check to see if an investigation for this condition has been entered previously by clicking on the Events Tab.
5. If not, from the Events Tab click on Add New in the Investigations section to open an investigation in NBS.
   a) Note: If an investigation exists for the condition, do not create a new investigation, but add the new lead lab to the existing investigation by using the manage associations button. (See instructions for Associate Lab Report to Investigation)
Completing a Case Investigation

The NBS Lead Case Management Case Investigation Module consists of six tabs. Each tab contains information important to the investigation into the cause of the child’s elevated blood lead level, as well as the medical and public health interventions undertaken on behalf of the patient. It is important to provide as much information as possible in each tab.

The following represents specific important points to consider for each section of the case investigation.

*Tip:* Click the Edit button in the upper right corner to allow for changes to be made to the fields within the case investigation. Hold the cursor over the white box field to receive prompts for the information being requested.

- **Case Information Tab:**
  - **Initial Jurisdiction** – This field represents the county where the case investigation was initiated. This information will be used in reporting purposes.
  - **Case Manager** – PHN/Case Manager name
  - **Case Status** – Required field that is determined by PHN/Case Manager based on the information available. As more information is gathered (e.g. confirmatory lab results received), status choice is changed.
  - **Next Pbb Due Date:** Not a prepopulated date to allow for the flexibility of physician testing within the designated timelines. The Lead Screening Requirements and Medical Management Recommendations (aka Rainbow Chart) is used to determine the minimum date to be used in the field. This field will be used for reporting purposes.
  - **Laboratory Information** – Information is entered by PHN/Case Manager. Associated lab can be found in the Supplemental Information tab
  - **Clinical Reporting Facility and Physician** – Information is entered by PHN/Case Manager

- **Case Management Tab:**
  - **Follow-up Event/Action** – Major case management activities are documented here through the selection of items in the drop down menu. After selecting the activity and providing the other requested information click Add. Additional case management actions can and should be continuously added to this section as they are provided throughout the time that the case remains open.
  - **Case Notes** – All written documentation and notes concerning the services provided in the case are kept in this section of the case investigation. Each entry should begin with the date of the action being documented. The date posted with the entry in the system represents the date that the entry was added to NBS.

- **Case Overview Information Tab:**
  - This tab provides an overview summary of the information gathered during the home visit. It is not meant to replace the home visit form.
• Address History Tab:
  o Historical information of all addresses occupied by the patient are maintained in this tab. Information is entered by the PHN/Case Manager. Environmental related information is also maintained on this tab as a resource for the PHN/Case Manager. It is not meant to replace the information entered into ILead by the Environmental Investigator.

• Supplemental Info Tab -
  o Attachments – A copy of the completed Home Visit form is attached to the case investigation in this location. Attaching this form is a requirement for each home visit that is conducted.

Creating an Activity Notification

An Activity Notification “Notification” is an alert submitted by the LHD to notify the ISDH Case Coordinators about certain designated activities that have taken place by a local health department PHN or case manager. A notification should be created by the LHD/Case Coordinator for specific reasons (listed below). The ISDH Case Coordinator reviews the Notification and the information submitted and responds with appropriate response and instructions for the LHD to follow.

1. From the case investigation, click on the Create Notifications button at the top of the screen.
2. Complete the General Comments box. (example language: “Case investigation completed; submitting for review”)
3. Click on Submit when complete.

After a Notification has been sent and before it has been reviewed by ISDH:

- Notification Status – (in the Case Investigation) will be labeled “PEND_APPR”
- Notification History – (in Supplemental Information tab of the Case Investigation) will be labeled “PEND_APPR”. Comments from Notification are included
- Open Investigations Queue – (In Notifications column) will be labeled “Pending”

After a Notification has been sent and it has been reviewed by ISDH and approved:

- All of the above labels are changed to “Approved”

After a Notification has been sent and it has been reviewed by ISDH and rejected:

- Notification Status – will be labeled “Rejected”
- Notification History – will be labeled “Rejected” and comments as to reason for rejection and instructions from ISDH are included
- Open Investigations Queue – (in Notifications column) will be labeled “Rejected”
- Rejected Notifications Queue – (in My Queues on Dashboard) will become an active link, showing the number of records in “Rejected” status. Click on the link to be taken to “Rejected Notifications Queue” page. The comments provided by ISDH as to why the case has been rejected are seen.
• LHD reviews the comments submitted by ISDH, takes action to address those comments and resubmit the Notification to ISDH for additional review and a repeat of the procedure.

Reasons for submitting a Notification:

<table>
<thead>
<tr>
<th>When Do I Submit a Notification?</th>
<th>How Do I Document?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Home visit is concluded and completed Home Visit Report Form is attached to the CI</strong></td>
<td>1)Attach Form in “Attachments” (Supplemental Info tab of CI); 2)Document in “Case Notes” that visit is concluded, and the Form is attached; 3)Document in Notification General Comments box that visit complete and Form attached</td>
</tr>
<tr>
<td><strong>Follow up activities related to each “Next PbB” (aka. Blood Lead Level) due date (e.g. next PbB is 1/13/20, letter sent to home 1/9/20 as reminder of due date)</strong></td>
<td>1)Document activity taken in the “Case Notes” (e.g. “Reminder letter sent home); 2)Document activity that was taken in the Notification General Comments box</td>
</tr>
<tr>
<td><strong>Transferring Jurisdiction</strong></td>
<td>1)Document case transfer activities in “Case Notes”, including a notation of contact made (i.e. call, secure email or fax) to the receiving jurisdiction; 2)Document case transfer activities in the Notification General Comments box</td>
</tr>
<tr>
<td><strong>Case Closure - For activities according to the requirements listed in 410 IAC 29; “Case Complete”, “Administratively Closed”</strong></td>
<td>1)Document all case closure activities and attempts according to requirements listed in 410 IAC 29 in “Case Notes”; 2)Document activities that were taken in the Notification General Comments box and submit the case for review by ISDH</td>
</tr>
<tr>
<td><strong>Initial contact made with family to notify of need for confirmation BLL test</strong> (For patients with ≥10 µg/dL, capillary, awaiting confirmation)</td>
<td>1)Document activity taken in the “Case Notes”; 2)Document activity that was taken in the Notification General Comments box</td>
</tr>
<tr>
<td><strong>Results received for patients with initial ≥10 µg/dL capillary test, confirming them as a case</strong></td>
<td>1)Document activity taken in the “Case Notes” including status change to now being a confirmed case; 2)Document activity that was taken in the Notification General Comments box</td>
</tr>
<tr>
<td><strong>Case Investigation closed as “Not a Case” following confirmed BLL &lt;10 µg/dL for patients with initial ≥10 µg/dL, capillary test</strong></td>
<td>1)Document activity in CI, in “Case Notes”; 2)Document activities that were taken in the Notification General Comments box and submit the case for review by ISDH</td>
</tr>
</tbody>
</table>

**Transferring Jurisdiction**

When patients move from one county to another the open investigation will need to be transferred to the new county of residence. Every attempt should be made to discover the new patient address so that it can be added to the patient record.
Open Investigations

1. Navigate to the open investigation under the Events tab in the Patient File or by selecting from the Open Investigations Queue.
2. Make sure all of the relevant lab reports have been associated with the investigation to be sure they also transfer.
3. Select Edit in the investigation and update the demographic information in the Patient tab to reflect the address for the other jurisdiction. As a reminder, change the demographics in the investigation and NOT in the Demographics tab of the Patient File. The demographics you enter in the investigation will transfer to the Demographics tab.
4. Click Submit to save the changes.
5. Select Transfer Ownership and select the new jurisdiction from the drop down.
6. Click Submit to save the transfer.
7. Notify the receiving jurisdiction (e.g. telephone call, secure email, fax) of the transfer
8. Send a Notification to ISDH