



NEDSS Base System

6.0.13 - GA Release Notes

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Centers for Disease Control and Prevention
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Version History

Version #	Author	Reviewed By	Revision Date	Revision Notes
1.0	Christi Hildebrandt	Sebastian Byczkowski, Akshar Patel, Jennifer Johnson, Jay Nelson	11/18/2022	Release Notes for NBS Release 6.0.13-GA (production release).



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1 Introduction

This document contains the Release Notes for the 6.0.13 Release of the NEDSS Base System (NBS), which is a patch release addressing the enhancements and defects allocated by the NBS Change Control Board (CCB). The primary purpose of this patch is to implement high-priority upgrades/fixes that were originally coded for delivery in 6.3, as well as to deliver the TB/LTBI module in Page Builder technology. The following upgrades/improvements are included:

- TB/LTBI in Page Builder with VERCRT
- Merge Patients Upgrade (from 6.3)
- ETL Fixes/Enhancement (from 6.3)
- Small Defect Fixes (from 6.3)

1.1 Prioritized Enhancements

The following enhancements are included in the NBS 6.0.13 release. Detailed information about each of the prioritized enhancements, along with information on how to perform basic verification of the upgrade, can be found in the [Enhancements](#) section of this document.

ID	Component	Enhancement
5372	TB/LTBI	Tuberculosis Page: Migrate TB Module to Page Builder Page Based on TB 2020RVCT/v3 of TB MMG
15402	Patient Merge	Patient Merge: Migrate the Legacy Patient Merge Pages from XSP to JSP Architecture
11766	Patient Merge	System Identified Merge: Merge Results: Group Results Together
8990	Patient Merge	Patient Merge: Ability to Skip a Match Candidate and Return to It Later
962	Patient Merge	Add ability to skip duplicate matches
8989	Patient Merge	Patient Merge: See Additional Information on Candidates to Determine If They Are a Match
15395	ETL	ETL/Master ETL: Further Enhance ETL Performance for Master ETL (Reduce ETL Run Time) for CASE_LAB_DATAMART

1.2 Prioritized Defects

The following defect fixes are included in the NBS 6.0.13 release. A detailed list of these prioritized defects, along with information on how to perform basic verification of the defect fix, can be found in the [Resolved Defects](#) section of this document.

ID	Component	Enhancement
15029	Investigation	Entity ID: Deleting an entry from an investigation does not fully delete the entry
14833	Patient Merge	Patient Merge: Need to Change Field Length from 20 to 256 for the merge_user_id Column in the person_merge table
15037	ETL	HEPATITIS_DATAMART stored procedure issue in 6.0.11 (Step -29 -Error converting data type varchar to numeric.)
11925	ETL	RDB: Incorrect values written in the RDB when the same question uses different code sets on two different pages



2 Enhancements

ID	Component	Enhancement	Description/Upgrade	Upgrade Verification
5372	TB/LTBI	Tuberculosis Page: Migrate TB Module to Page Builder Page Based on TB 2020RVCT/v3 of TB MMG	<p>REQUEST: Requested by CDC and multiple states. TB is currently implemented in the NBS as a 'hybrid' module (i.e., it spans legacy and page builder technologies). Currently, on the TB Investigation Page, states are not able to add Page Builder Questions (states can only add LDFs). States would like the ability to add Page Builder Questions (including Participations such as Provider and Organization).</p> <p>When migrating to page builder, the page will be updated to version 3.1 of the TB MMG based on the 2020 RVCT and TBLISS forms.</p> <p>RESOLUTION: The following updates were made as part of Part 1 of the implementation of this ticket:</p> <ul style="list-style-type: none"> Created Page Builder page to support TB and LTBI alignment with the v3.1 of the TB MMG (2020 RVCT). Added two new NBS specific codes to support data collection for MMWR 2023 cases, using the new join TB/LTBI page. Implementation of VERCIT calculations to auto derive case verification and case status, based on data entered within the investigation. Created action buttons to aid in auto-populating of Drug Regimen and Drug Susceptibility questions. <p>For more information on the TB/LTBI updates included in this release, along with a detailed implementation guide, please access the following location in NBS Central: Tuberculosis and Latent Tuberculosis Infection (LTBI) - 2020 RVCT and TBLISS - NBS Standard Page Builder Templates - NBS Central (cdcncscentral.com)</p>	<p>Investigation Workflow</p> <ul style="list-style-type: none"> Verify the ability to create investigations for TB and LTBI using new condition codes. Verify the ability to use the full suite of page builder to add, edit, delete questions, subsections, value sets, business rules, etc., as needed. Verify the ability and accuracy of the Quick Action buttons to auto-populate Drug Regimen and Susceptibility questions. Verify the ability to associate laboratory results, vaccinations, and treatments. Verify the ability to use the contact tracing module. <p>Lab Workflow</p> <ul style="list-style-type: none"> Verify the ability to create an investigation for TB and LTBI from a laboratory result in the Documents Requiring Review Queue (DRRQ).
15402 11766 8990 962 8989	Patient Merge	Patient Merge: Migrate the Legacy Patient Merge Pages from XSP to JSP Architecture	<p>REQUEST: This ER was requested by multiple jurisdictions and was originally implemented in NBS 6.3. Jurisdictions have asked that the Legacy Patient Merge Pages are migrated from XSP to JSP so that the user experience is consistent throughout the NBS.</p> <p>Also included within this upgrade are the following enhancements:</p> <ul style="list-style-type: none"> Enhancement #11766: Raised by NM. It would be nice if we had the option to order the items on the system-identified merge queue, so they are 	<ul style="list-style-type: none"> Verify general sort and filter functionality. Verify merge functionality works as it has prior, including the surviving ID functionality. Verify that the Telephone and ID are broken into two different columns on the Merge Candidates screen with SSN values at the top with the ability to sort (per ER# 11766).



ID	Component	Enhancement	Description/Upgrade	Upgrade Verification
			<p>grouped together and in the same order every time--with the Social Security number at the top of the list for each of the people in the display. Break the Telephone and ID into two different columns on the Merge Candidates screen with SSN values at the top with the ability to sort.</p> <ul style="list-style-type: none"> • Enhancement #8990: Requested by AR and AL and seconded by additional states on an SME call. When patient merge candidates are presented, the state must decide about a particular merge scenario before moving on to the next one. If they skip over it, the system will remove it from the list of merge candidates. States want to be able to skip a merge scenario and return to it later. • Enhancement #962: Nevada has asked to add the ability to skip over a potential match if there is not enough information to determine if there is a match or not. An alternate would be to have the "No Merge" flag removed if the demographic information is updated after the duplicate was selected as not being a duplicate. The reason behind this is that sometimes there are potential matches where one or more does not have an address, DOB, phone, or other information to help determine if it is a duplicate. They would like to be able to skip over the duplicates at that time and come back to it again if more information is entered. <p>RESOLUTION: The entire Patient Merge module is moved from legacy XSP to JSP. As a part of this, all the requested ERs (listed above) related to patient merge are implemented.</p>	<ul style="list-style-type: none"> • Verify the ability to skip merge candidate groups (via 'No Merge' or 'Skip' options) (per ER# 8990). • Verify the ability to indicate a patient as 'Remove from Merge' – this is for patients who come up repeatedly in Merge Candidate lists due to poor quality demographic data. This flags the patient NOT to be included in merge logic until/unless the patient record is updated (per ER# 962). • Verify the ability to view the Patient Event screen for each patient in the 'Merge Candidate' List by clicking on the Patient ID link, which shows related labs and other events, as well as demographic data, without losing context (per ER# 8989). • Verify print and download options. <p>See Appendix: Patient Merge for more detail.</p>
15395	ETL	ETL/Master ETL: Further Enhance ETL Performance for Master ETL (Reduce ETL Run Time) for CASE_LAB_DATAMART	<p>REQUEST: Multiple states have requested the following: With the massive increase in data with COVID, the NBS ETL process is taking even. Need to upgrade the ETL process to run more efficiently.</p> <p>The goal is to migrate the following Master ETL processes from SAS to SQL:</p> <ul style="list-style-type: none"> • CASE_LAB_DATAMART <p>This process was determined to be a bottleneck in the overall process.</p> <p>RESOLUTION: The CASE_LAB_DATAMART process is moved from SAS to SQL in release 6.0.13 and is now incremental. Several defects were also addressed as a part of this upgrade.</p>	Run the ETL process prior to upgrade, and note ETL run time. Upgrade to 6.0.13 and then re-run the ETL process. A decrease in ETL run-time should be noted.



3 Resolved Defects

ID	Component	Enhancement	Description/Upgrade	Fix Verification
15029	Investigation	Entity ID: Deleting an entry from an investigation does not fully delete the entry	<p>ISSUE: This issue was discovered while troubleshooting partner service file errors with Alabama. Deleting an entry or multiple entries from the Entity ID block of an investigation does not entirely delete the entries. If the user deletes entries from the investigation, deletes the same entries from the master patient record (MPR), then edits and submits the investigation, the deleted entries reappear in the MPR. They do not reappear in the investigation. This is creating a significant public health impact in the event a user populates more than one Partner Services Identification number as all PSID entries are then being pulled into the partner services file and, since they won't fully delete, the user is unable to make the necessary corrections to create an accurate partner services file.</p> <p>RESOLUTION: Code is updated to ensure deleted entries remain deleted.</p>	<ol style="list-style-type: none"> 1. Open an STD investigation > Edit 2. Enter more than one line item in the Entity ID repeating block 3. Submit the investigation 4. Edit the investigation and delete the entries created in step 2 > Submit 5. View File > Demographics tab > Edit 6. Delete the entries that you created and deleted from the investigation > Submit 7. Browse back to the same investigation and click Edit > Submit 8. View File > Demographics tab <p>Expected Result: Upon Edit/Submit of investigation after deleting the entries from both the investigation and the MPR, the entries do not appear in the MPR (on the patient's file).</p>
14833	Patient Merge	Patient Merge: Need to Change Field Length from 20 to 256 for the merge_user_id Column in the person_merge table	<p>ISSUE: Texas reported the following: For Patient Merge, we need to change the field length from 20 to 256 for the merge_user_id column in the auth_user table. This is because Texas (and possibly other states) has some users with very long user IDs, and if that user(s) attempts to merge, errors are thrown as the merge_user_id column in the person_merge table only allows for 20 characters.</p> <p>RESOLUTION: The script 02_6.0.13_Migrate_ODSE_Structure.sql is modified to update the column length from 20 to 256 for the merge_user_id column in the person_merge table.</p>	This item is hard to test if your jurisdiction does not have this data scenario.



ID	Component	Enhancement	Description/Upgrade	Fix Verification
15037	ETL	HEPATITIS_DATAMART stored procedure issue in 6.0.11 (Step -29 -Error converting data type varchar to numeric.)	<p>ISSUE: Tennessee reported that when they upgraded to NBS Release 6.0.11 and they tried to rebuild the Hepatitis_datamart, the rebuild process failed with the new 6.0.11 SQL Server stored procedure for Hepatitis_datamart with the following error:</p> <p>ERROR - Inserting new entries rdb.dbo.HEPATITIS_DATAMART Step -29 -Error converting data type varchar to numeric.</p> <p>Working with TN, it was found that:</p> <ul style="list-style-type: none"> • The Hepatitis data mart was working fine as a SAS process for such a rebuild scenario. • This became an issue when TN tried to rebuild the hepatitis data mart using the SQL Server stored procedure. • There were a couple of cases that should have stored numeric values whereas we found non-numeric values, (like 'u'). This data was entered in the 2016-time frame. We believe this was an NBS UI issue that has been resolved, but some old invalid data remains in the system. • SAS was intrinsically converting text data to numeric data whenever possible. In the case where there were any issues, SAS was ignoring such text fields preventing ETL failure. <p>RESOLUTION: To fix this issue:</p> <ol style="list-style-type: none"> 1. The SQL Server stored procedure is updated to accommodate this scenario. 2. These errors are logged so states can take corrective action to update the errant data on the NBS UI. 	This item is difficult to test if your jurisdiction does not have this data scenario.
11925	ETL	RDB: Incorrect values written in the RDB when the same question uses different code sets on two different pages	<p>ISSUE: This issue was raised by VA. When the same question uses two different code sets on two separate pages, and some of the codes are the same across the two code sets, the ETL process writes incorrect translation values in the RDB tables when the same codes are selected across the two Investigations.</p> <p>For example: A question called Hair Color (HC123) exists on two pages. Page one uses a code set (HAIR_COLOR_1) with the following: A – Auburn B – Brown C – Red D – Blonde</p>	<ol style="list-style-type: none"> 1. Create a multi-select coded question and use it on different pages with two different code sets. 2. In the Investigation page in the UI, choose two or more values from the question dropdown that have the same codes as the same question on the second page (but with different descriptions). 3. Repeat the process and select two or



ID	Component	Enhancement	Description/Upgrade	Fix Verification
			<p>Page two uses a code set (HAIR_COLOR_2) with the following: A – Auburn B – Black C – Red D – Blonde</p> <p>B is black in one code set and brown and the other. The ETL process will translate all codes for HC123 using one of the two value sets (i.e., all will indicate Brown, even though on page two, B = Black).</p> <p>RESOLUTION: The ETL code is updated to ensure the proper code sets are used to translate questions that use different value sets across pages with the same codes that have different descriptions.</p>	<p>more values for the second Investigation page that share the same codes as the investigation in the step above.</p> <p>4. Submit both investigations and run Master ETL.</p> <p>Expected Result: The values displayed in the RDB tables match the values displayed in the UI.</p>

4 Known Issues

The table below provides a list of ‘known issues’ in the NBS 6.0.13 release.

Component	Known Issue	Notes
Patient Merge	<p>Defect #15618: Patient Merge (System Identified): Sorting by Name Instead of Patient ID</p> <p>Alabama identified the following as a part of 6.0.13 Beta testing: With the new merge interface, the sorting defaults to the Name column, which is not very useful. Previously, records were sorting by Patient ID, with the oldest PID (lowest number) first. This made merging easier, especially when wanting to always keep the oldest PID. Interestingly, the current interface appears to keep the oldest PID when not specifying a surviving PID, regardless of the order of the records. We recommend defaulting to sorting by the Patient ID column ascending. This would align with current user’s expectations.</p>	<p>This issue could not be addressed in the 6.0.13 release – but it is allocated for resolution in 6.0.14. Also, the following two updates (enhancements) are planned for the patient merge module in 6.0.14:</p> <ul style="list-style-type: none"> Update the Distribution of Column Space (%) in the Patient Merge (Manual Search and System Identified) Screens: Updating the column spacing for the merge candidate list to provide a wider column width to the ID column. Add Action Button(s) on Merge Candidate List Screen for ('Merge' and 'Remove from Merge') (NBS Central #15660): See image below. This will be addressed for both Manual and System-Identified merge screens. This change was discussed by the community on the 11/16/2022 NBS SME call.





5 Appendix

5.1 Patient Merge

In addition to moving the Patient Merge module from XSP to JSP technology, which includes adoption of the standard queue functionality in NBS with abilities to sort and filter, the following enhancements are implemented in the upgraded NBS Patient Merge module:

1. Telephone and ID are broken into two different columns on the Merge Candidates screen with SSN values at the top with the ability to sort (per ER# [11766](#)).

Merge Remove from Merge						Remove All Filters/Sorts	
Surviving ID	Patient ID	Name	Age/DOB/Sex	Address	Phone/Email	ID	
<input type="checkbox"/>	<input type="checkbox"/>	11224567	Legal Smith, Christi Renee, Jr. Legal Hildebrandt Alias Hot Stuff	35 years 11/20/1975 Male	Home - House 14 Willow Glen Atlanta, GA 30342 Home - House Atlanta, GA Home - House 1777 N.E. Expressway Suite 100 Atlanta, GA 30329	Cell (404) 386-3780 Home (404) 315-5364 Email childeb2@csc.com	SSN 111-11-1111 Account Number 123322341 Driver's license number 3948209734 Driver's license number 3948209735 ...

2. Ability to skip merge candidate groups (via 'No Merge' or 'Skip' options) (per ER# [8990](#)).

Merge Remove from Merge						Remove All Filters/Sorts	
Surviving ID	Patient ID	Name	Age/DOB/Sex	Address	Phone/Email	ID	
<input type="checkbox"/>	<input type="checkbox"/>	11224567	Legal Smith, Christi Renee, Jr. Legal Hildebrandt Alias Hot Stuff	35 years 11/20/1975 Male	Home - House 14 Willow Glen Atlanta, GA 30342 Home - House Atlanta, GA Home - House 1777 N.E. Expressway Suite 100 Atlanta, GA 30329	Cell (404) 386-3780 Home (404) 315-5364 Email childeb2@csc.com	SSN 111-11-1111 Account Number 123322341 Driver's license number 3948209734 Driver's license number 3948209735 ...
<input type="checkbox"/>	<input type="checkbox"/>	11224568	Legal Smith, Jay	38 years 09/05/1972 Male	Home - House Dunwoody, GA 30338 DeKalb County	Home (678)358-6119	

3. Ability to indicate a patient as 'Remove from Merge' – this is for patients who come up repeatedly in Merge Candidate lists due to poor quality demographic data. This flags the patient NOT to be included in the merge logic until/unless the patient record is updated (per ER# [962](#)).

Merge Remove from Merge						Remove All Filters/Sorts	
Surviving ID	Patient ID	Name	Age/DOB/Sex	Address	Phone/Email	ID	
<input type="checkbox"/>	<input type="checkbox"/>	11224567	Legal Smith, Christi Renee, Jr. Legal Hildebrandt Alias Hot Stuff	35 years 11/20/1975 Male	Home - House 14 Willow Glen Atlanta, GA 30342 Home - House Atlanta, GA Home - House 1777 N.E. Expressway Suite 100 Atlanta, GA 30329	Cell (404) 386-3780 Home (404) 315-5364 Email childeb2@csc.com	SSN 111-11-1111 Account Number 123322341 Driver's license number 3948209734 Driver's license number 3948209735 ...
<input type="checkbox"/>	<input type="checkbox"/>	11224568	Legal Smith, Jay	38 years 09/05/1972 Male	Home - House Dunwoody, GA 30338 DeKalb County	Home (678)358-6119	



- 4. Ability to view the Patient Event screen for each patient in the 'Merge Candidate' List, which shows related labs and other events, as well as demographic data, without losing context (per ER# [8989](#)).

The screenshot displays a patient profile for Andy Williams (Male, 01/01/1990, 30 Years, Patient ID: 76000). The interface includes a navigation bar with tabs for Patient Summary, Investigations, Lab Reports, Morbidity Reports, Vaccinations, Treatments, Documents, and Contact Records. The Patient Summary section provides demographic and contact information. The Investigations section shows two entries for Mumps and COVID-19. The Lab Reports section shows one report for HIV Antigen and RPR Titer.

Start Date	Status	Condition	Case Status	Notification	Jurisdiction	Investigator	Investigation ID	Co-Infection ID
07/01/2019	Open	Mumps	Probable	COMPLETED	Fulton County	Fulton LocalUser	CAS10007001GA01	
06/30/2020	Open	COVID-19	Confirmed	MSG_FAIL	Clayton County	PKS PKS	CAS10009003GA01	

Date Received	Reporting Facility/Provider	Date Collected	Test Results	Associated With	Program Area	Event ID
06/23/2020 12:00 AM	Reporting Facility: Piedmont Hospital Ordering Provider: DR Indiana Jones	06/15/2020	HIV Antigen: not detected RPR Titer: reactive =1:64 Ratio - (Final)			OBS10010000GA01