MERGING PATIENT AND DISEASE RECORDS MANUAL

Revised November 2020

WISCONSIN phin PUBLIC HEALTH INFORMATION NETWORK

WEDSS
WI ELECTRONIC DISEASE SURVEILLANCE SYSTEM

WISCONSIN DEPARTMENT *of* HEALTH SERVICES

Publication number P-02856

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Purpose of this Document

The purpose of this document is to provide an overview of how to identify and merge duplicate records in the Wisconsin Electronic Disease Surveillance System (WEDSS).

Types of Duplicates

This document explains the process for local health department staff to merge:

1. Patient Records
2. Disease Incidents

Whenever necessary, Patient Records must always be merged before Disease Incidents.

Please contact DHSWEDSS@wisconsin.gov for assistance with merging other types of duplicate records, such as Outbreaks or Animal Reports.

Why Merge Duplicate Records?

Merging is used to combine two Patient Records or two Disease Incidents into a single record. Duplicate records in WEDSS, whether Patient Records or Disease Incidents, can result in incorrect disease-count information and unnecessary follow up. So, duplicate records should be identified and merged.

1. Merging Patient Records

How can I Identify Potential Duplicate Patient Records?

Duplicate records can be identified with a WEDSS Person search or a SQL Server Reporting Services (SSRS) report.

Using a Person Search

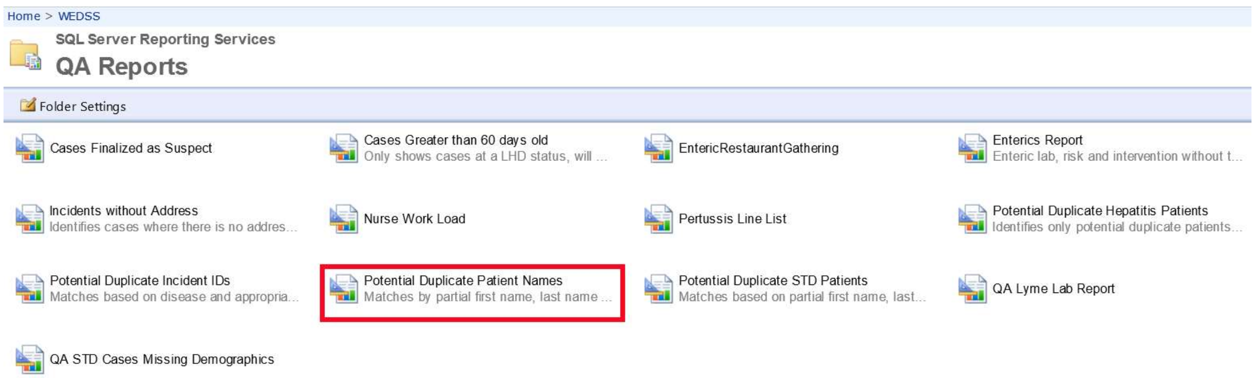
Potential duplicate Patient Records can be identified by looking at the Current column within a Person Search. In the example below, there are two Patient Records with the same Last Name, First Name, DOB (Date of Birth), and a "Y" in the Current column. The "Y" indicates the record is a Current Person Version, meaning the record has the most current demographics. Each patient should only have one Current Person Version, so these are potential duplicate Patient Records.

If a patient has multiple person versions, but only one version is listed as current, (noted by a "Y" in the current column) and the other version(s) are non-current (noted by an "N" in the current column) those records are not duplicates and cannot be merged. The non-current versions reflect previous demographics for the same patient.

Note: When merging records for a patient with several Non-Current Person Versions, it may be helpful to hide those versions by unselecting the “Show All” checkbox before searching. This will cause the search to only display Current Person Versions.

Using SSRS Reports

There is an SSRS report (https://healthreports.wisconsin.gov/Reports/Pages/Folder.aspx) available to help find potential duplicate Patient Records. The report is in the “QA Reports” folder and is named “Potential Duplicate Patient Names”.



The “Potential Duplicate Patient Names” report identifies Patient Records that have the same DOB and the same first three letters of the patient’s first name and first four letters of the patient’s last name.

Process to Merge Patient Records

1. Before starting a merge, review both Patient Records:

    a. Note which record should be kept as the “Current Person Version” (the one with the most recent Disease Incident); and

    b. Note whether both record versions need to be kept. Keep both patient’s version histories if either:

    - The person has changed demographic information. For example, they have moved or changed name; OR
    - The older patient record has one or more “Non-Current Person Versions” connected to it.

    Sometimes when you search for a name, there are multiple Current and non-Current versions listed and it will be necessary to check to see if the older patient record has non-Current Person Versions.

    To determine which Current person version a non-Current person version is connected to, note the “Patient ID” column on the left. In the example below, the non-current person version (row 1) is connected to the Current person version in row 3 as they share the same patient ID.

Role(s)	Patient ID	Name (Last, First)	DOB	Future Client No.	MRN	Address	Current
P	5087801	Ingersoll, Irma	05/12/1966		View...	1 W Wilson St, 250, Madison, WI, 53703	N
P	5087802	Ingersoll, Irma	05/12/1966		View...	200 N Jefferson St, 511, Green Bay, WI, 54301	Y
P	5087801	Ingersoll, Irma	05/12/1966		View...	200 N Jefferson St, 511, Green Bay, WI, 54301	Y

It's important to remember that non-current person versions are not necessarily listed next to their associated current person versions. To determine which Patient ID is the older patient record, note the dates on the disease records listed below; the older patient record is the one with the earliest date listed on an associated disease record.

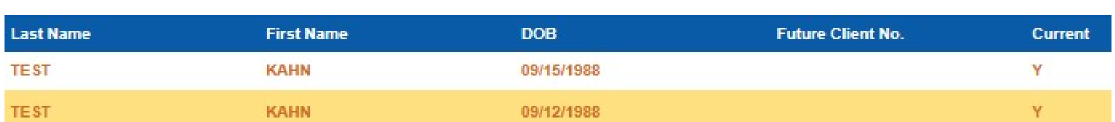
In this example, patient ID 507801 has a most recent disease date of 10/21/2020, while patient ID 507802 has a most recent disease date of 10/05/2020, so patient ID 507801 is the most current patient record:

It's important to check the associated disease dates because the oldest patient ID does not necessarily have a lower patient ID number. In the example above, note that the most current patient ID has a non-current person version, so both record versions need to be kept when merged.

2. Be sure to select the **most current** patient record first. It will be kept as the "Current Person Version." Then click the "Mark for Merge" button, near the search bar. The font color will turn red.

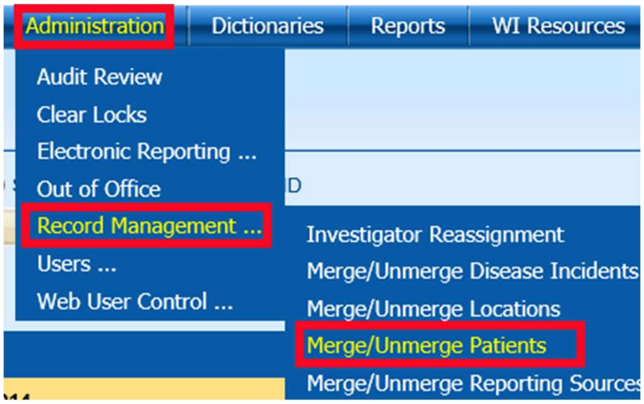
3. Next, select the **older** Patient Record and click the "Mark for Merge" button.

When both Patient Records have been marked for merge, the font color will turn orange, and a pop-up will appear with notification that the records have been marked for merge.



4. Click the "OK" button in the pop-up window.

5. Click on the "Administration" menu and navigate to the "Record Management" submenu, and select the "Merge/Unmerge Patients" option.



6. Search for the Patient Records marked for merge and select them from the results by clicking on the name in the Patient 1 column. Ignore patient records marked for merge by other users.
7. Click the "Continue" button, or click the "Select Details" tab, as shown.

The "Select Details" tab will open. The first Patient Record marked for merge will appear on the left, as "Patient 1." The second Patient Record marked for merge will appear on the right, as "Patient 2." The center column, "Patient – Final," will be populated with the selections made during the merging process, and become the resulting "Current Person Version."

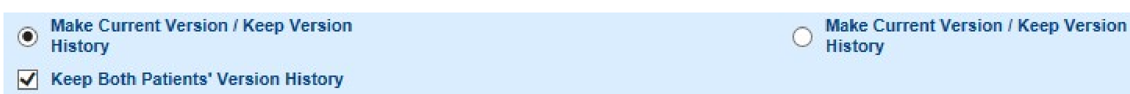
If desired, the individual Patient Records can be viewed during the merging process by clicking on the printer icon located near the column headers. Each printer icon will generate a pop-up that shows the respective Patient Record.

8. To select the fields that will be retained in the new Current Person Version, select the radio buttons next to each of the fields (Last Name, First Name, etc.).

   Note: Items can be selected from either column. Near the bottom of each column is a "Use this Patient's Demographics" checkbox that will select all of the radio buttons in that column. The individual selections may still be edited after checking one of these checkboxes.

9. At the bottom of each column are two radio buttons and a check box to determine how to maintain person versions. Make a selection for the version history to keep by selecting one of the "Make Current Version/Keep Version History" radio buttons.

   Note: WEDSS can keep one or both of the person's versions histories when merging. By default, "Keep Both Patients' Version History" is checked and the "Make Current Version/Keep Version History" radio button is selected for Patient 1. The displayed example will create one "Current Person Version" associated with Patient 1 and one "Non-Current Person Version" associated with Patient 2.



   Select "Keep Both Patients' Version History" if either:

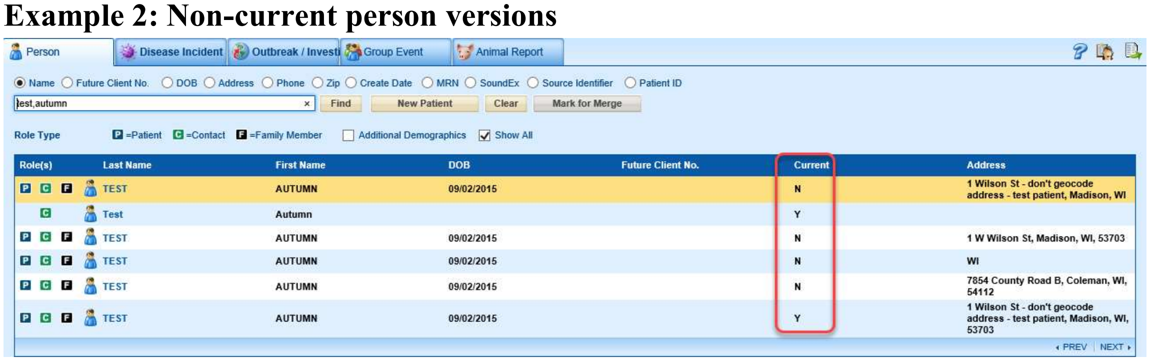
   a. The person has changed demographic information. For example, Patient 2 has a different address, name or other demographics than Patient 1; OR
   b. Patient 2 has one or more "Non-Current Person Versions" that should be maintained.

   If none of the above is true, uncheck the "Keep Both Patients' Version History" box. Doing so will retain the information from the middle Patient-Final column only and not the previous demographic data from the other columns.

Example 1: Patient moved

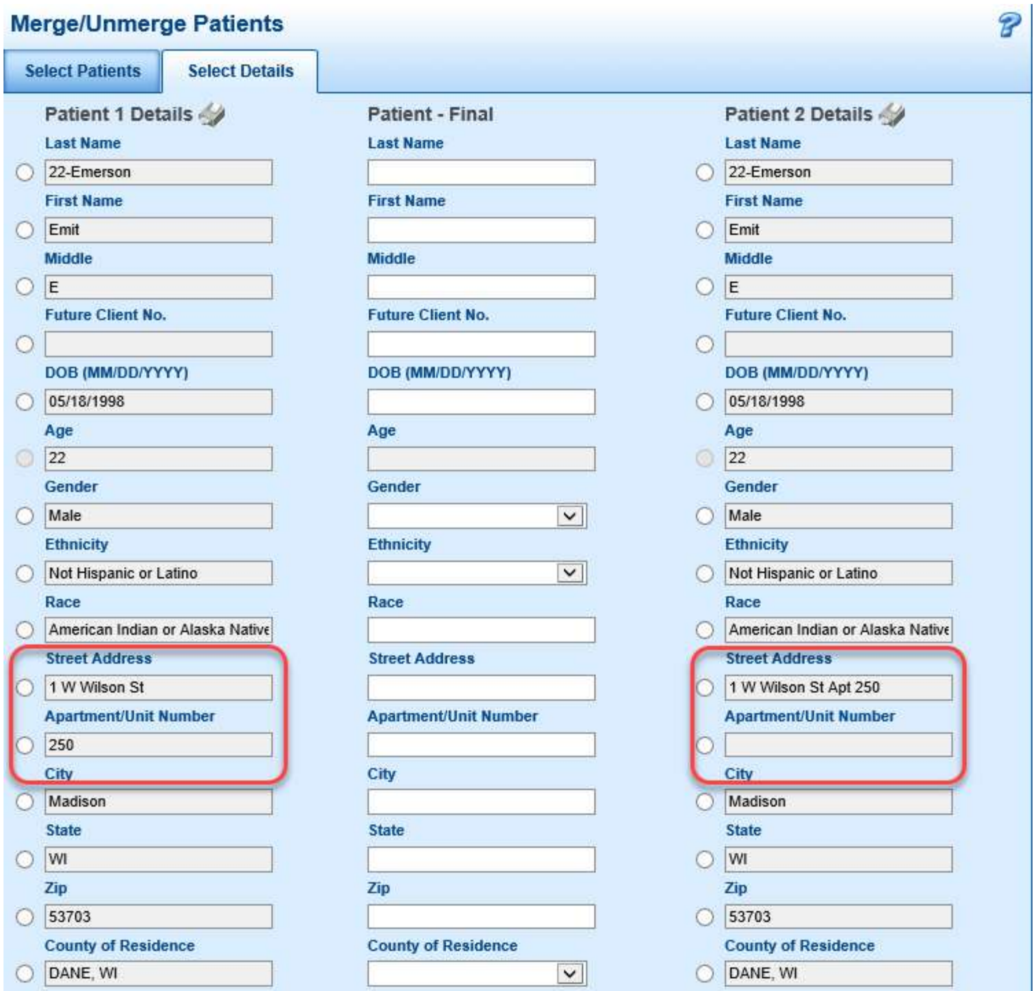
In Example 1, the patients have different demographics, so “Keep Both Patient’s Version History” box should be checked.

Example 2: Non-current person versions



In Example 2, the patient has non-current person versions, so “Keep Both Patient’s Version History” box should be checked.

Example 3: Duplicate information



In Example 3, the addresses are the same, but entered differently, so click "use this Patient's Demographics" for the accurate record (patient 1 in this case), click "Make Current Version / Keep Version History" for Patient 1, and if there are no non-current versions of Patient 2 unclick "Keep Both Patient's Version History."

Example 4: more accurate demographics

In example 4, the demographics for Patient 1 are more complete than the demographics for Patient 2, so click “use this Patient’s Demographics” for Patient 1, click “Make Current Version / Keep Version History” for Patient 1, and if there are no non-current versions of Patient 2 unclick “Keep Both Patient’s Version History.”

10. When all of the selections are made, click the “Save” button.

Two pop-ups will appear, one asking for confirmation to proceed with the merge and one indicating that the merge was completed.

UNDOING PATIENT MERGING MISTAKES

Mistakes made when merging patients can be corrected. How the mistake is corrected depends on when the mistake is discovered. There are three difference scenarios:

1) Two patients marked for merge incorrectly, and the mistake is discovered before they’re merged;
2) Two patients merged incorrectly, and the mistake is discovered immediately after the merge;
3) Two patients merged incorrectly, and the mistake is not discovered until later.

SCENARIO 1: MISTAKE IS DISCOVERED BEFORE THE MERGE.

This is a very common mistake. For example, perhaps the two patients “Test,Jon” and “Test,John” were marked for merge because they were thought to be the same person with a misspelled first name:

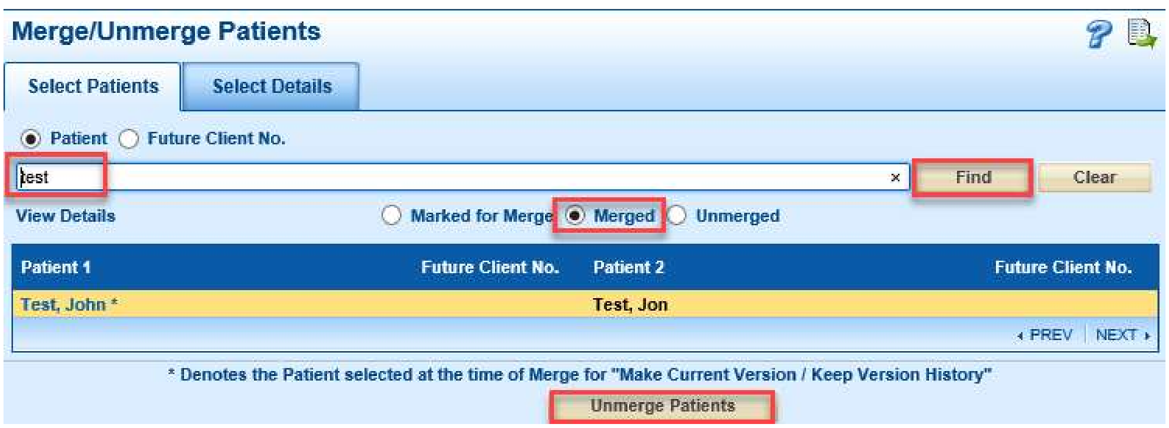
When the Continue button is pressed, the patient details such as the dates of birth and address are compared, it’s clear they’re actually separate people who should not be merged:

When that happens, click the “Select Patients” tab at the top to go back to the previous screen. Then click “Unmark Patients” to unmark them.

SCENARIO 2: MISTAKE IS DISCOVERED IMMEDIATELY AFTER THE MERGE

This is also a common scenario, where just after two patients are merged, the user notices that it was a mistake. For example, patients can be merged with the "Keep Both Patient Versions" option unchecked, so that non-current person versions were accidentally lost. Fortunately, WEDSS retains all this information. If this mistake is noticed right away, before any other WEDSS user goes in and makes changes to any of the patient record, users can easily correct this mistake themselves.

In the Administration, Merge/Unmerge Patient screen, select the "Merged" radio button, type in the name of the patients, and click the Find button:



A pop-up window will then displaying confirmed that the records have been unmerged.

SCENARIO 3: MISTAKE IS NOT DISCOVERED UNTIL LATER

If two patient records are merged in error, and then changes are made to the record, LHD users can no longer unmerge them. However, the information is not lost and State WEDSS staff can unmerge the records. In this scenario, email the patient record number to dhswedss@wisconsin.gov for unmerging. If the mistake is not discovered for hours or days after the merge, assume changes may have been made and ask WEDSS staff to complete the unmerge, just to be safe.

2. Merging Disease Incidents

Guidelines on Merging Disease Incidents

There are different guidelines for when it is appropriate to merge disease incidents depending on the disease in question. Before merging disease incidents, always check to make sure the two incidents fit within those guidelines. For example, some of the more frequently used guidelines are:

- For COVID-19 disease incidents:
  - If both disease incidents are "Not a Case," merge them as explained below.
  - If a disease incident is shown as "Suspect" but has a negative COVID-19 lab test result, it should have been changed to "Not a Case" but was overlooked. Such cases can be merged with a "Not a Case" disease incident and the result set to "Not a Case."
  - For COVID-19 disease incidents with a status of "Confirmed:"
    - Merge a Confirmed disease incident with another Confirmed disease incident if the test results are within 90 days of each other, as explained below.
    - If a patient has a second Confirmed disease incident but the test results are over 90 days apart, do NOT merge them. Keep the disease incidents separate and use the "CORONAVIRUS, NOVEL 2019 (COVID-19) REINFECTION INVESTIGATION" disease for the newer incident.
    - Never merge a Confirmed disease incident with anything except another Confirmed disease incident, and never change the status of an existing Confirmed case.
- Always merge Hepatitis C incidents – patients should only have one disease incident in their lifetime.
- Chlamydia – merge disease incidents with Episode Dates within 30 days of each other. Do not merge disease incidents with Episode Dates more than 30 days apart.
- Lyme disease – merge disease incidents with Episode Dates within one year of each other, unless they have a new onset and new Erythema Migrans Rash (EM) during tick season.

To find the appropriate timeframe within which to merge disease incidents consult the New Disease Incident Timeframes document.

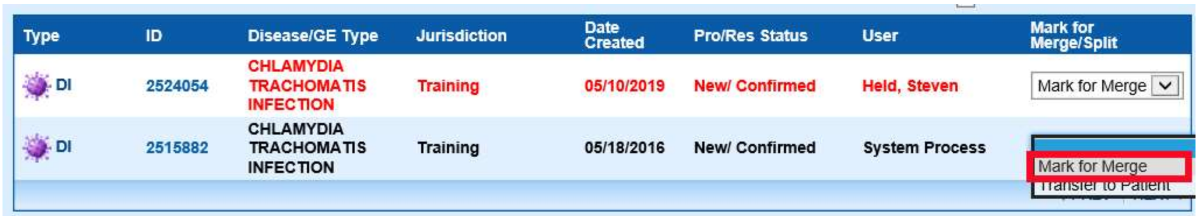
When in doubt, consult with the appropriate Communicable Diseases Contact.

How can I Identify Potential Duplicate Disease Records?

Duplicate records can be identified with a WEDSS Person search or an SQL Server Reporting Services (SSRS) report.

Using a Person Search

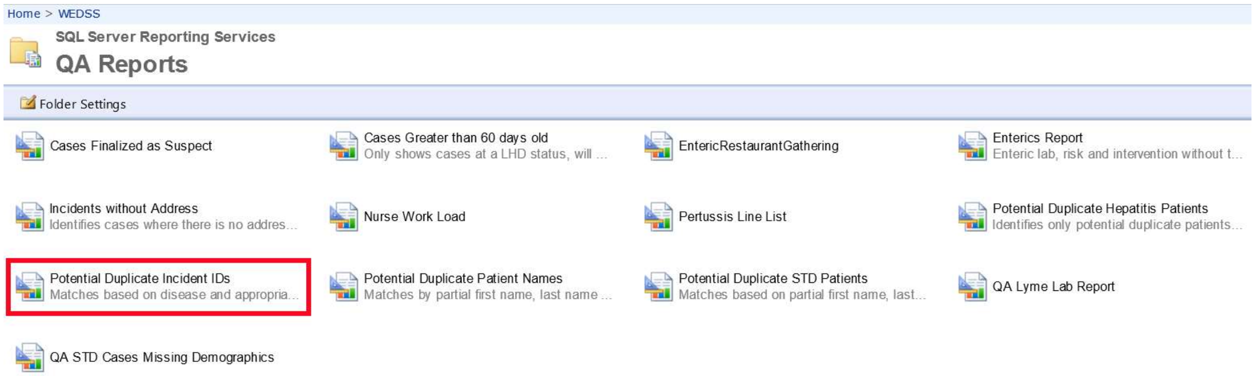
Potential duplicate Disease Incidents can be identified by looking at the Disease Incident listing within a Person Search. In the example below, there are two Disease Incidents with the same Disease and similar Create Date. These are potential duplicate Disease Incidents.



Type	ID	Disease/GE Type	Jurisdiction	Date Created	Pro/Res Status	User	Mark for Merge/Split
DI	2524054	CHLAMYDIA TRACHOMATIS INFECTION	Training	05/10/2019	New/ Confirmed	Held, Steven	Mark for Merge
DI	2515882	CHLAMYDIA TRACHOMATIS INFECTION	Training	05/18/2016	New/ Confirmed	System Process	Mark for Merge

Using SSRS Reports

There is an SSRS report available to find potential Disease Incidents (https://healthreports.wisconsin.gov/Reports/Pages/Folder.aspx). The report is in the "QA Reports" folder and is named "Potential Duplicate Incident IDs".



The "Potential Duplicate Incident IDs" report identifies Disease Incidents that are associated with the same Patient Record and have one of the following conditions:

- Any multiple Hepatitis B or Hepatitis C Disease Incidents.
- Chlamydia or Gonorrhea Disease Incidents with Episode Dates within 30 days of each other, or within 45 days if one of the Disease Incidents was created by a Web Report.
- Pertussis and related diseases with Episode Dates within 30 days of each other.
- Arboviral illnesses, Q-fever, Lyme disease, Ehrlichia/Anaplasma, or Tuberculosis Disease Incidents with Episode Dates within 365 days of each other.
- All other Disease Incidents with Episode Dates within 60 days of each other.

Note: the SSRS QA reports identify potential duplicate disease incidents; however, please follow the guidelines discussed above to confirm the incidents are suitable for merging.

Process to Merge Disease Incidents

The process to merge Disease Incidents is similar to merging Patient Records. Disease Incidents can only be merged if they are attached to the same Patient Record, so merging Patient Records might be required before the Disease Incidents can be merged.

Before starting a merge, review both disease incidents side by side to confirm that they are duplicates and determine what details should be kept from each record. To do this, open the incidents in two separate browser windows (not tabs). See Appendix A for instructions.

When comparing incidents side by side, remember that any data in a discarded tab will not be retained. Also note that data cannot be copied from one incident to the other in the Merge Disease Incidents screen. Therefore, relevant data should be copied from one incident to the other to prevent data loss prior to starting the Merge Disease Incidents process. Keep in mind the following:

- Each selection is at the tab level, not the individual sections.
- If a data element that should be kept exists in the same tab for both incidents, copy and paste the element from the less complete Disease Incident tab to the other. For example, it is common for both incidents to have notes on the Investigation tabs. In this instance,

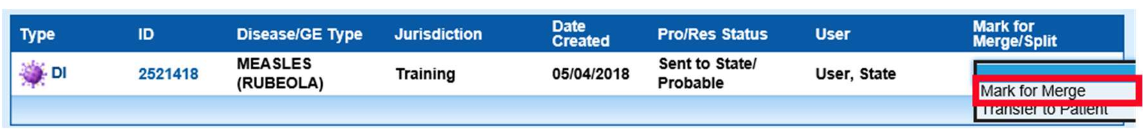
copy the notes from the Investigation tab that is being discarded and paste them onto the Investigation tab that is being retained or that information will be lost.

- Any data in a system section, indicated by system in parenthesis after the name (including the "Laboratory Information w/Provider & Facility (system)" or "Contacts (system)" sections), or uploaded documents in the Electronic Filing Cabinet will be kept from *both* Disease Incidents during a merge so there is no need to copy and paste information from them.

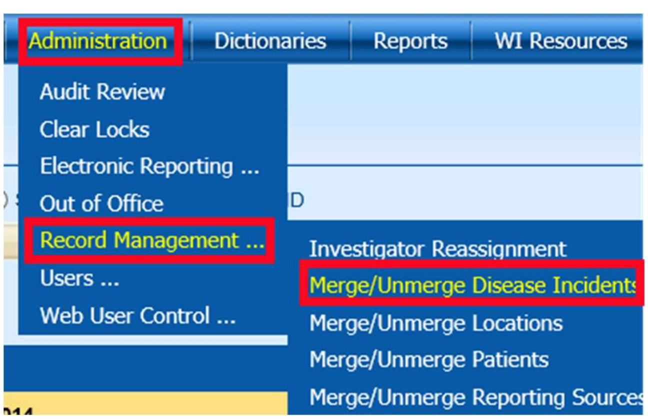
If one Disease Incident is in a jurisdiction outside of the user's jurisdiction grouping access, the user will not be able to complete the merge. In this case, send a merge request to DHSWEDSS@wisconsin.gov including the duplicate Disease Incident IDs for assistance completing the merge.

To merge Disease Incidents:

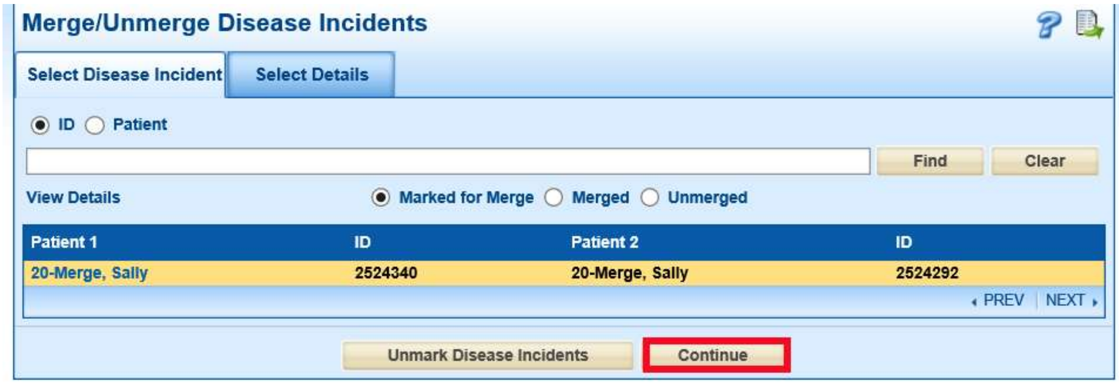
1. Search for and select the patient and locate the potential duplicate Disease Incidents in the list of Disease Incidents.
2. Review each Disease Incident to confirm they are duplicates and determine what information to keep from each.
3. Select the Disease Incident that has the most information to be kept and select the "Mark for Merge" option from the "Mark for Merge/Split" drop down list as shown.



4. Repeat Step 3 for the second duplicate Disease Incident.
5. Click on the "Administration" menu and navigate to the "Record Management" submenu, and select the "Merge/Unmerge Disease Incidents" option.



6. Search for the records marked for merge as shown.
7. Select the row from the results and click the "Continue" button or the "Select Details" tab.



8. The “Select Details” tab will open. The first Disease Incident marked for merge will appear on the left, as “Disease Incident 1.” The second Disease Incident marked for merge will appear on the right, as “Disease Incident 2.” The center column, “Disease Incident – Final,” will be populated with the information that will be kept in the merged Disease Incident.

To review the Disease Incidents during the merge:

Click on the printer icon located near the column headers to view information on the Patient and Investigation tabs for each Disease Incident.

Click on the file folder icons as shown above to view the disease specific tabs for both Disease Incidents. These will display as shown below.

9. To select the fields that will be retained in the merged disease incident, select the radio buttons next to each of the rows.

   Items can be selected from either column. Near the bottom of each column is a "Use this Disease Incident Completely" checkbox that will select all of the radio buttons in that column. The individual selections are able to be edited after checking one of these checkboxes. For example, some tabs are being kept from each disease incident.

   Note: It is best practice when merging Disease Incidents to select the radio button for the lowest ID number and the radio button for the earliest "Investigation-Date Created" in the final Disease Incident. Select the tabs that contain the most complete data, including any data that was copied over earlier in the process.

10. At the bottom of each column is a set of radio buttons labeled "Keep this Incident's History." Selecting this option keeps the information from the "Investigation" tab and some other data from that incident, including:

    - Jurisdiction Assignment
    - Process Status
    - Resolution Status
    - Nurse Investigator
    - Notes
    - Date Information (except for Create Date and Collection Date)
    - Report Sources

- Hospitalization Information
- Final Disposition
- Audit Data
- Condition History
- Jurisdiction History
- Link to Animal Report
- Medical Record Numbers
- Process Status History
- Record Level Alerts
- Resolution Status History
- Task Lists and Associated Data
- User-defined sections on the Demographics and Investigation tabs
- Version History

11. When all of the selections are made, click the "Save" button.

Two popups will appear, one asking for confirmation to proceed with the merge and one indicating that the merge was completed.

Undoing Disease Incident Merging Mistakes

Scenario 1: Mistake is discovered before the merge.

If two disease incidents are marked for merge incorrectly, and have not yet been merged, follow this procedure to unmark them for merge:

1. Enter disease incident ID or click the Patient radio button and enter Patient name, and then click Find
2. If necessary, click on the row (will highlight in yellow)
3. Click Unmark Disease Incidents.

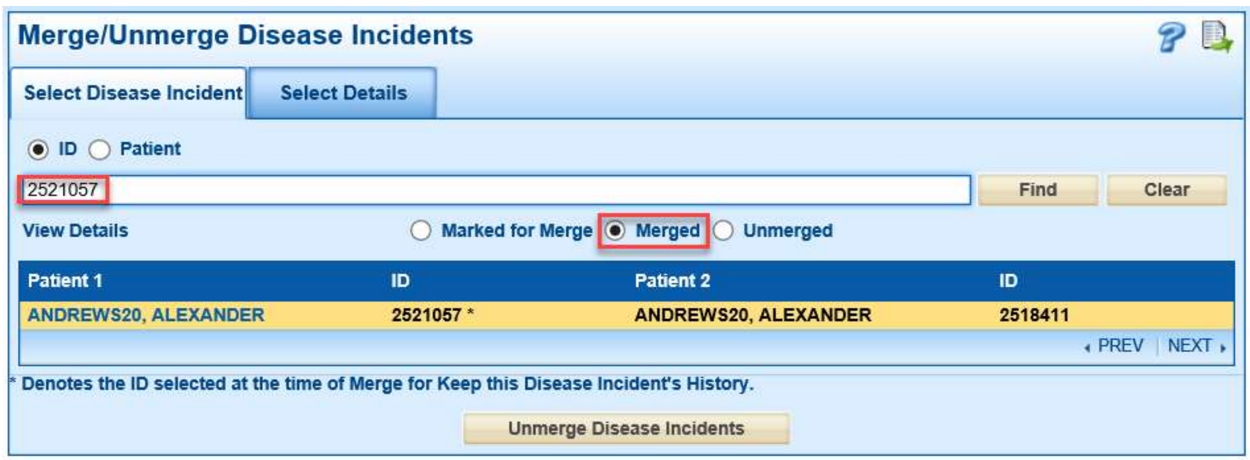
Scenario 2: Mistake is discovered immediately after the merge

If Disease Incidents are merged by mistake, they can be unmerged only if no changes have been made to the merged record. If the merged DI has been changed, email dhswedss@wisconsin.gov to get them unmerged.

If no changes have been made to the merged DI, follow this procedure to unmerge them:

1. From the navigation menu choose Administration – Record Management – Merge/Unmerge Disease Incidents.

2. Enter ID or Patient name and select the Merged radio button, then click find



3. If necessary, click on the row (will highlight in yellow)
4. Click Unmerge Disease Incidents.

Note: After unmerging, the two records will both be in WEDSS live as separate disease incidents.

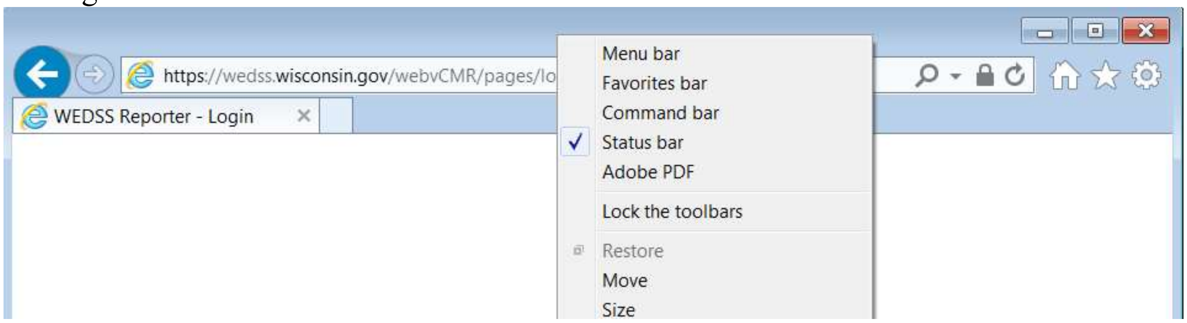
Scenario 3: Mistake is not discovered until later

If two disease incidents are merged in error, and then changes are made to the record, LHD users can no longer unmerge them. However, the information is not lost and State WEDSS staff can unmerge the records. In this scenario, email the merged disease incident number to dhswedss@wisconsin.gov for unmerging. If the mistake is not discovered for hours or days after the merge, assume changes may have been made and ask WEDSS staff to complete the unmerge, just to be safe.

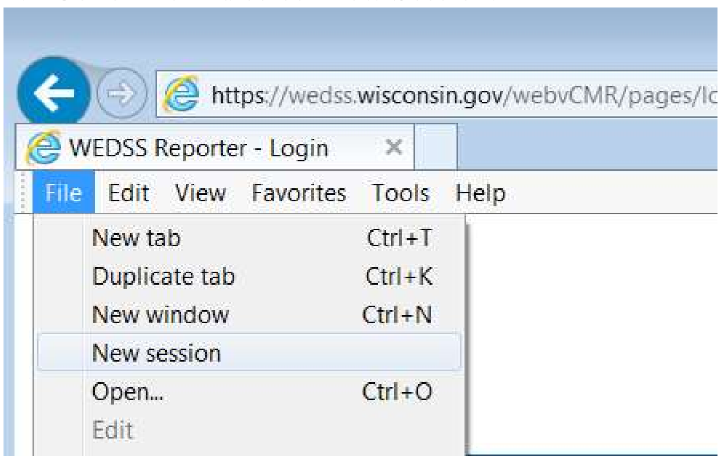
Appendix A: Opening a Second Browser Session

Internet Explorer

1. Open Internet Explorer.
2. Right click in the area near the address bar.



3. Select “Menu bar” in the dropdown list.
4. Go to File and select New Session.



Google Chrome

1. Open Google Chrome.
2. Click on the three dots in the upper right
3. Select “New incognito window”.