Epi Info Viral Hemorrhagic Fever (VHF) Application

User Guide

VHF Application version: 0.9.6.0
Version of the User Guide: 2.0
Date of last revision of the User Guide: 16 August 2016

Authors:
Erik Knudsen. Information Technologies Specialist, Centers for Disease Control and Prevention (CDC)
Ekaterina Kurbatova. Epidemiologist, Centers for Disease Control and Prevention (CDC)
Lucy McNamara. Epidemic Intelligence Service Officer, Centers for Disease Control and Prevention (CDC)
Ilana Schafer. Epidemiologist, Centers for Disease Control and Prevention (CDC).
Meredith Dixon. Epidemic Intelligence Service Officer, Centers for Disease Control and Prevention (CDC).

Contents

1 System Requirements

1) Windows Vista, 7, or 8.
2) Microsoft .NET Framework version 4.5.
3) Permissions to read, write, and execute on the desktop (Note: administrative privileges are NOT needed).

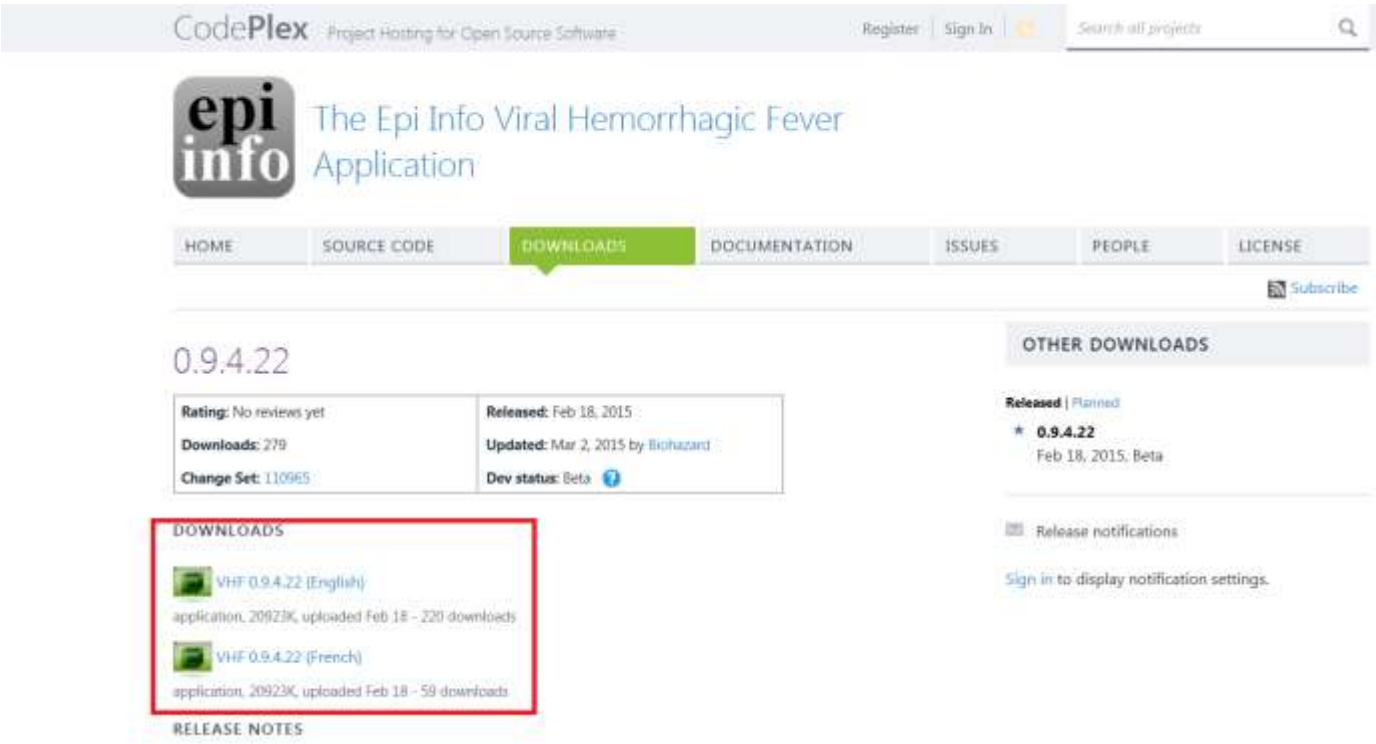
2 Overview

The Epi Info VHF Application runs on top of CDC's Epi Info 7 suite of software tools. Epi Info 7 is a general purpose software that is used all over the world for outbreak investigation and disease surveillance. It allows users to create data entry forms, rapidly enter data into those forms, carry out a variety of analyses, and generate maps.
Epi Info 7 is used for some of the data entry process and all database access and interaction for the VHF application. The VHF application adds a user-friendly front-end to the database that is designed specifically for case data management, contact tracing, and analysis of viral hemorrhagic fever outbreaks. A dynamically-generated transmission chain diagram is also provided.

3 Installation Instructions

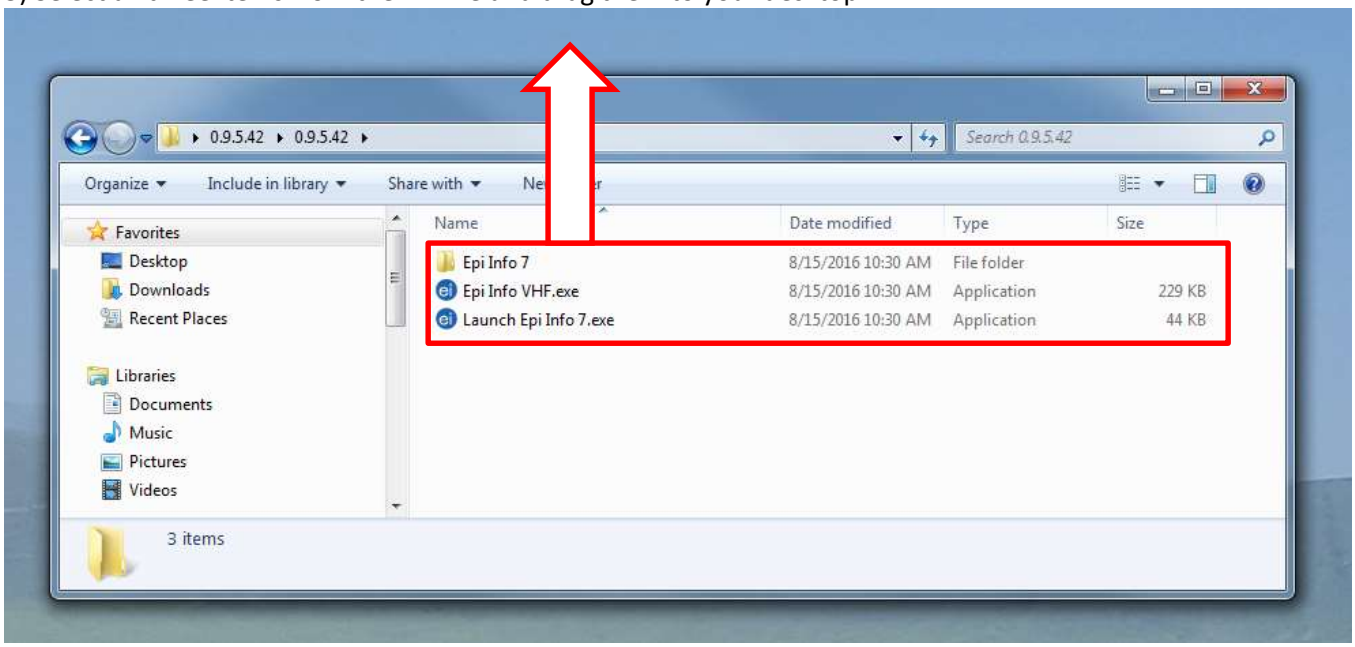
To use the Epi Info VHF application:

1) Download the VHF_Application.zip file from https://epiinfovhf.codeplex.com/releases to your computer's desktop. The currently recommended version is the one listed on the right with a star next to it.

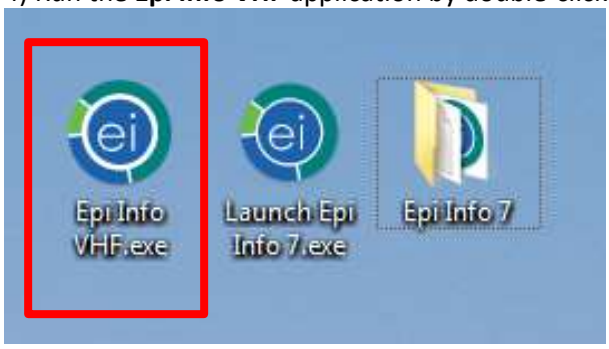


2) Open the ZIP file by double-clicking on it.

3) Select all three items from the ZIP file and drag them to your desktop.



4) Run the **Epi Info VHF** application by double-clicking on its icon on the desktop.



4 Create a New Database

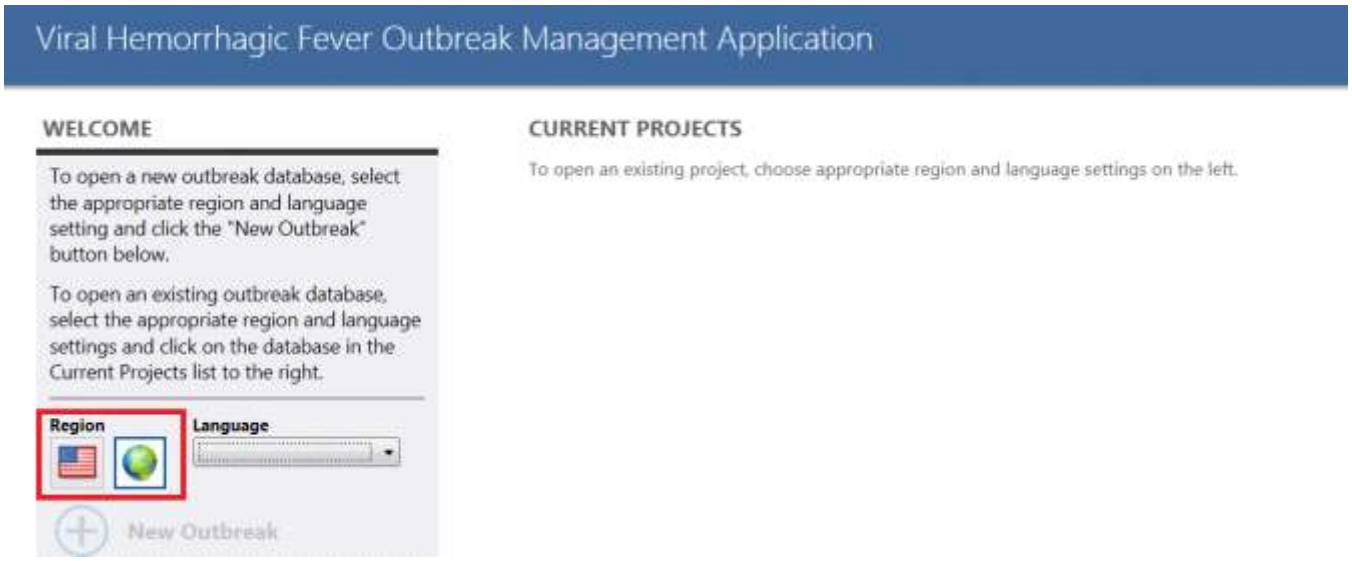
Follow the steps below to create a new database.

4.1 Region and Language Settings

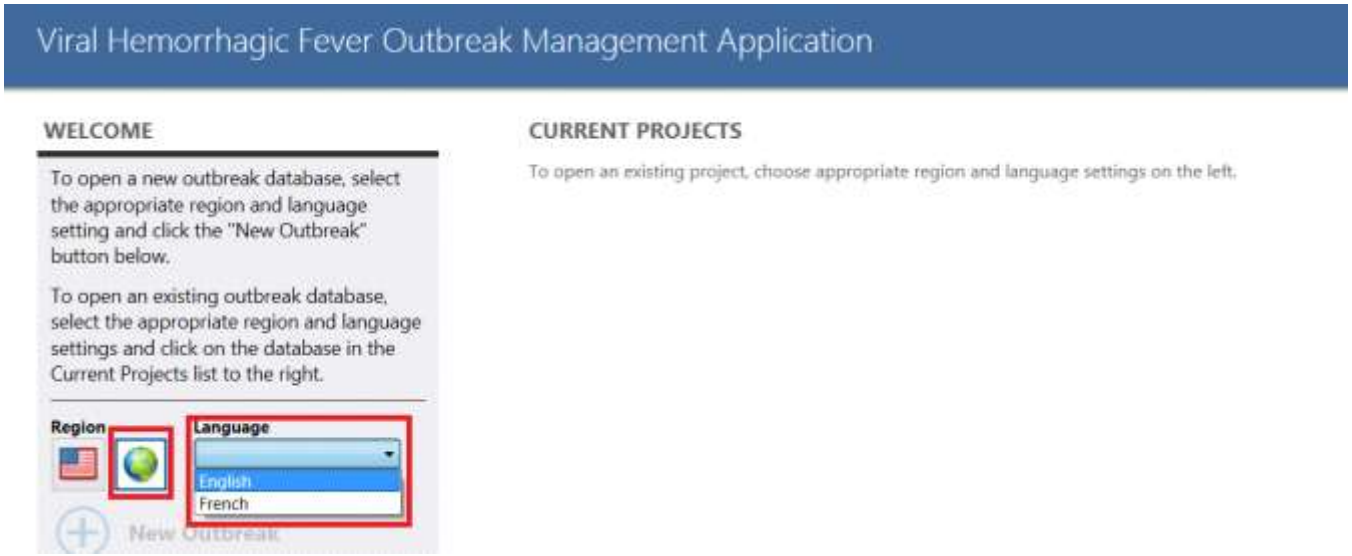
Earlier versions of VHF application had two separately downloadable versions for English and French language users. From VHF version 0.9.5.38 and forward, both languages were merged in one application and a third, U.S. version was added. To create or open an existing database, users must first select the correct region and language.

1) Run the **Epi Info VHF** application by double-clicking on its icon on the desktop. The application menu appears as shown below.

2) First choose either International or U.S. **Region** by clicking on the respective icon.



3) If the International region is selected, **Language** should next be selected (English or French) from the drop down menu. The U.S. version is in English only (no language selection is needed).

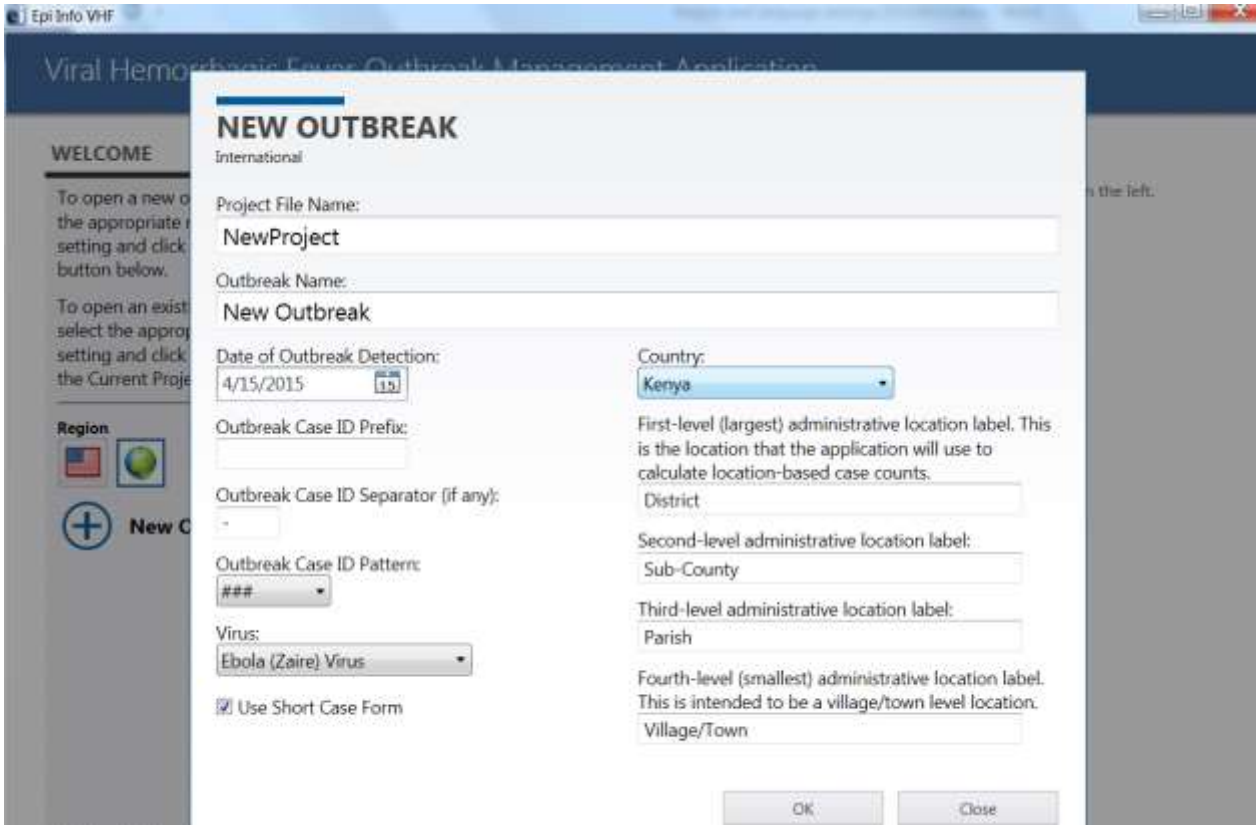


4.2 Creating a New Outbreak

4.2.1 Getting Started

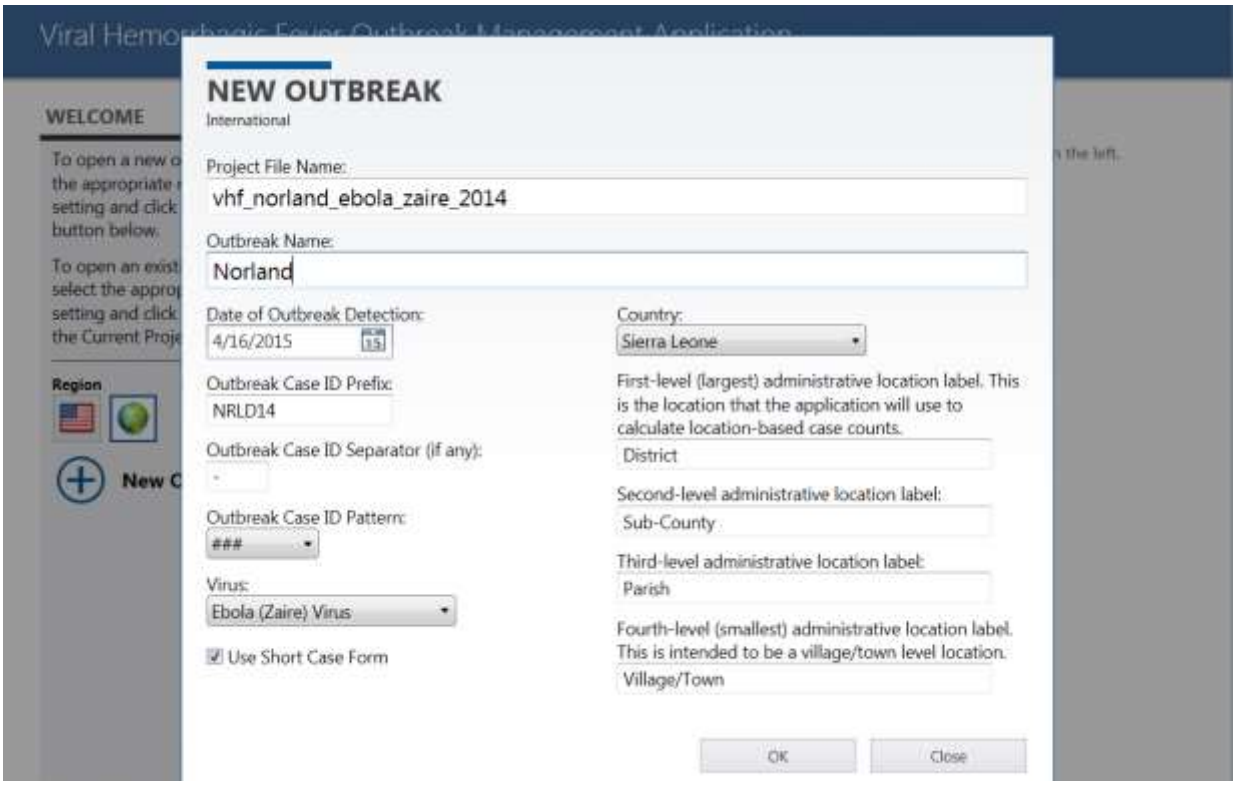
1) Once region and language are selected, click on the **New Outbreak** button.

2) The **New Outbreak** panel opens, as shown below.

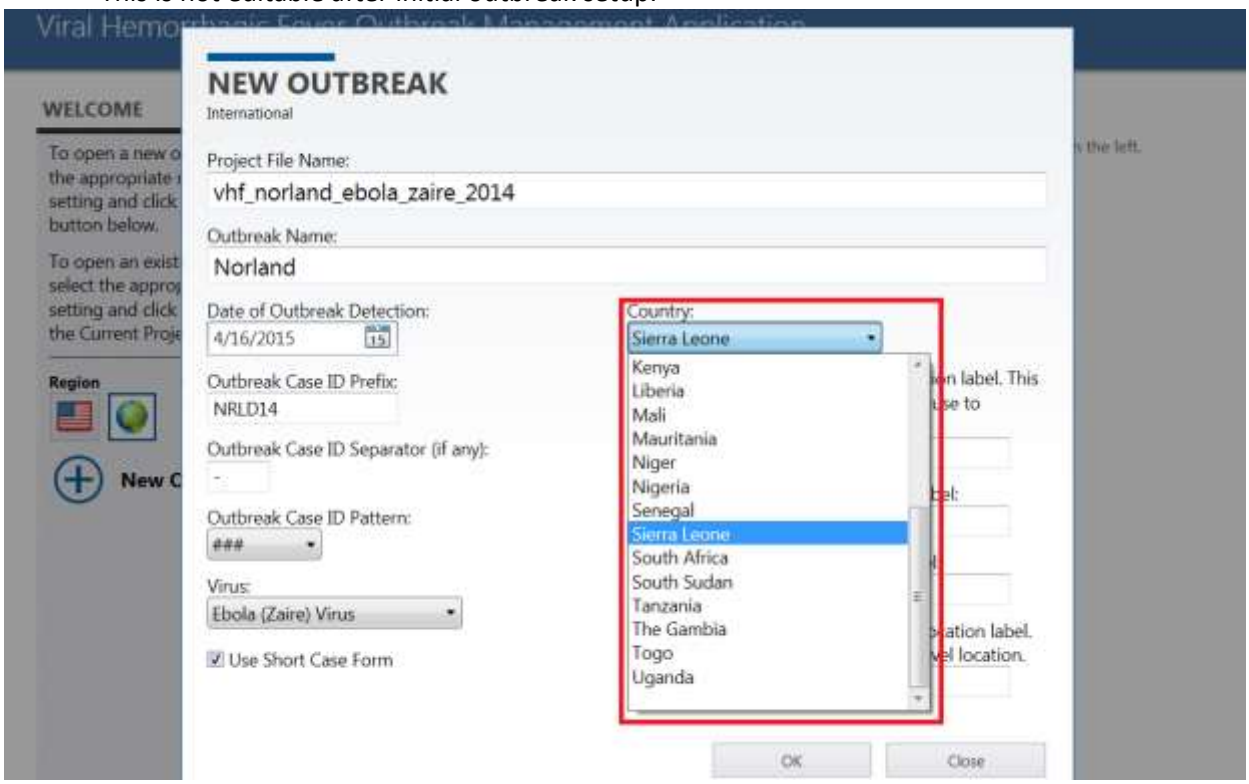


3) Fill in the desired fields with settings for your particular outbreak.

a. The **Project File Name** becomes the file name for this outbreak. The **Project File Name** cannot contain spaces or certain special characters. Note the use of underscores to simulate spaces in the screenshot below. This is not editable after initial outbreak setup.
b. The **Outbreak Name** is a more descriptive title. This is what will appear in the application itself once you open your data.
c. The **Date of Outbreak Detection** is currently used only for certain analytics.
d. The **Outbreak Case ID Prefix** represents the prefix for the case ID system you will be using. Multiple prefixes are supported; separate each valid prefix with a comma. e.g. SIER14,GUIN14,LIBR14.
e. The **Outbreak Case ID Separator** represents the character that will separate the ID prefix from the ID number.
f. **The Outbreak Case ID Pattern** represents the number of allowable digits in the case ID number. For example, a pattern of ### would allow three digits.
g. The **Virus** drop-down allows selection of a variety of supported viruses.
h. The checkbox **Use Short Case Form** will determine if the short or long form will be opened by default for case data entry. By default this box will be checked.



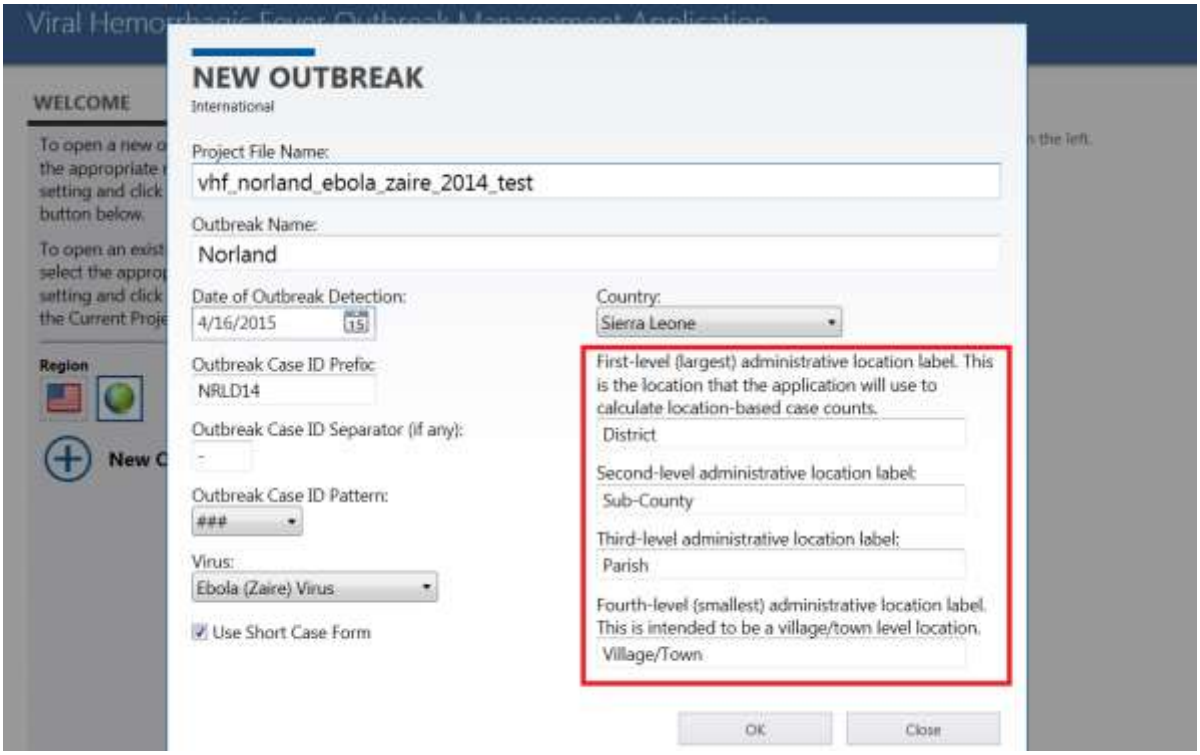
i. The **Country** allows selection of the country in which the outbreak has occurred from a drop-down list. This is not editable after initial outbreak setup.



4.2.2 Customizing Administrative Location Labels

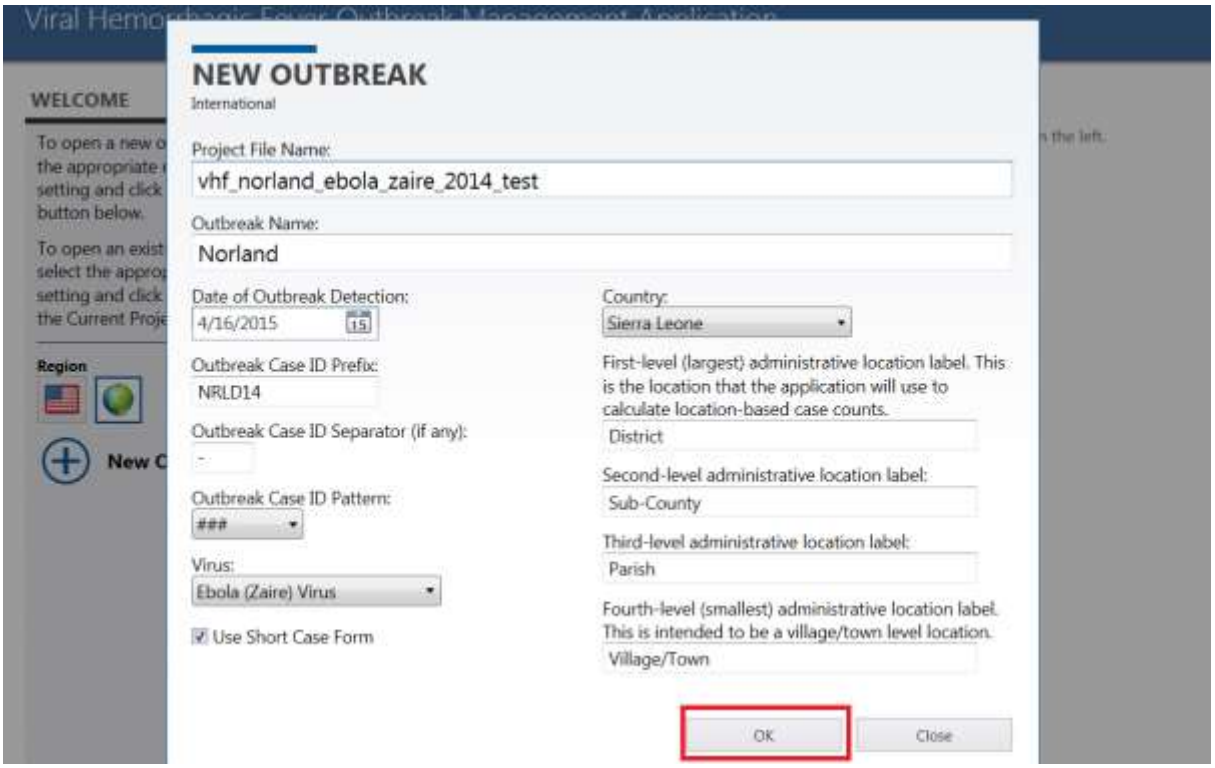
Users can customize the labels for administrative locations (i.e. county, district, village) on case forms, contact forms, and column headings throughout the application through the following steps.

1) On the right hand side of the New Outbreak box there are four fields containing the current administrative location labels for the database.



2) If you would like to change these labels:
    a. Replace the existing location labels with the ones that you would like to switch to.
    b. Be sure to read the instructions for each of the four boxes carefully – most importantly, the **first box** ("First-level (largest) administrative location label") will be the location that the application will use to calculate **location-based case counts for the country**. The fourth (smallest) administrative location label will be the location used by default to sort printed contact tracing lists.

3) Click **OK** when you are done.

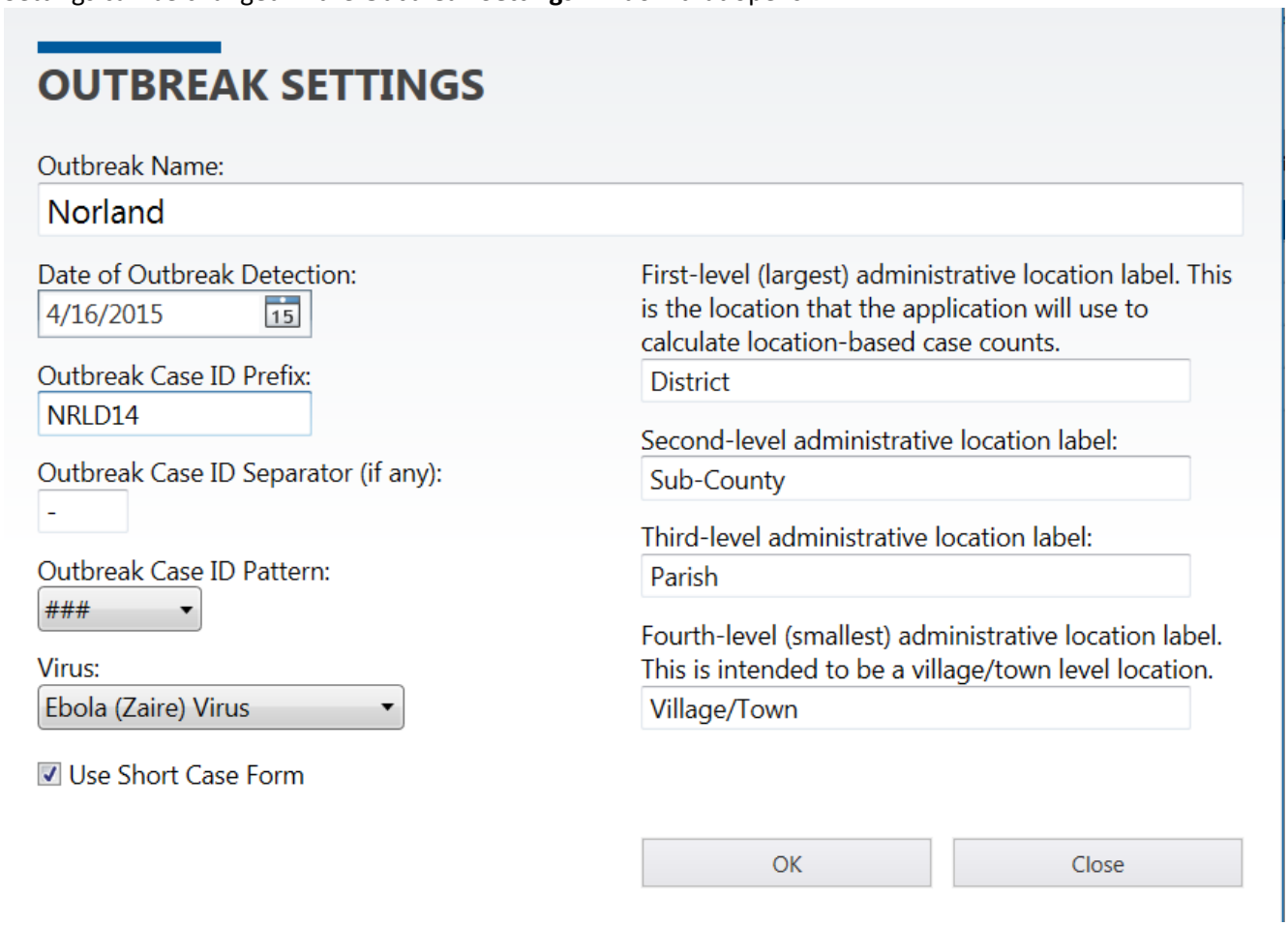


The new blank outbreak database will be created and a front-end to the database will appear, as shown below.

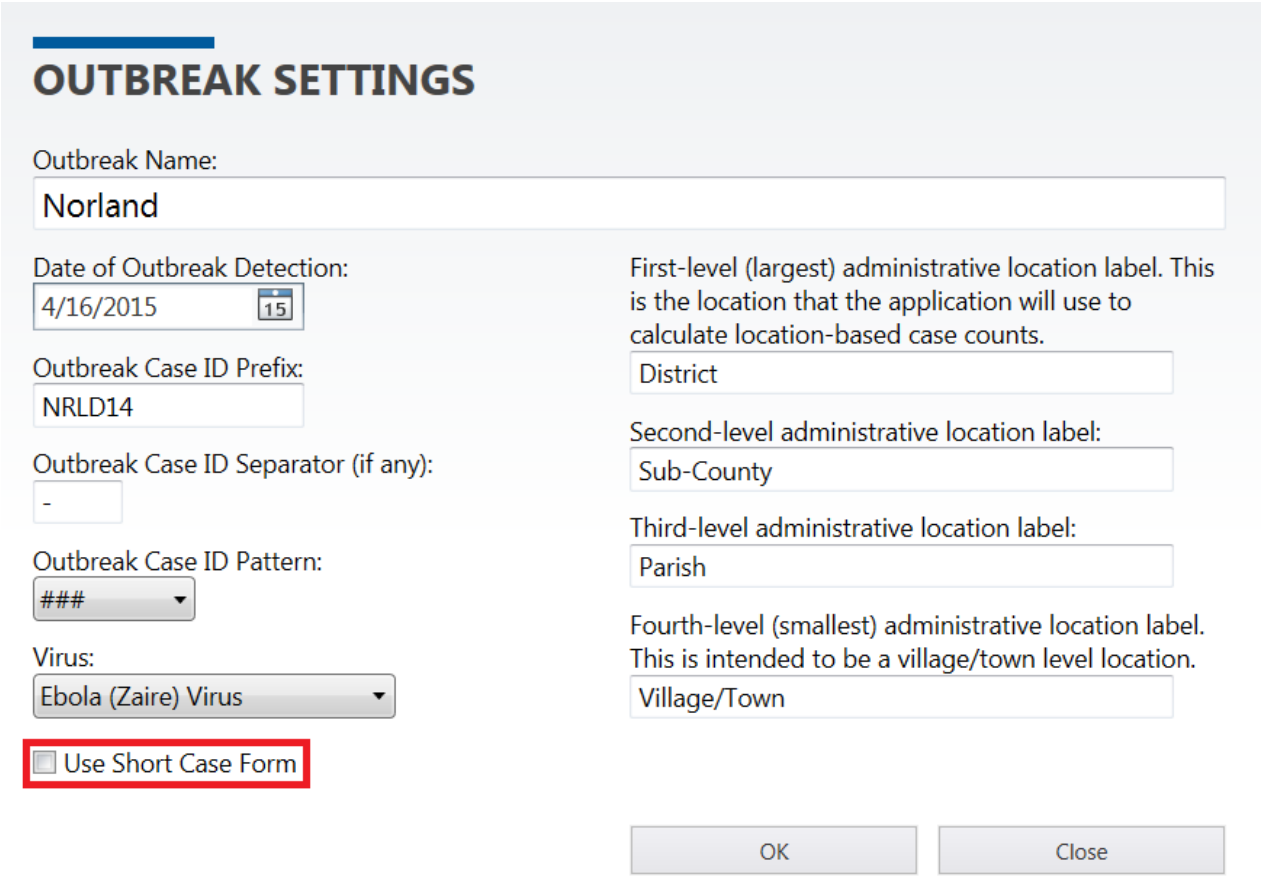
4.2.3 Edit Settings

After creating a new outbreak, outbreak settings can be revised by clicking the **Settings** button at the top right corner of the screen.

Settings can be changed in the **Outbreak Settings** window that opens.



Importantly, **Outbreak Settings** allows users to unselect the Use Short Case Form checkbox. Unchecking this box will turn off the short form and allow the user to go directly to the long form in the application.
Note. Project File Name and Country cannot be changed under settings. It is important to get those right the first time at the outbreak set up.



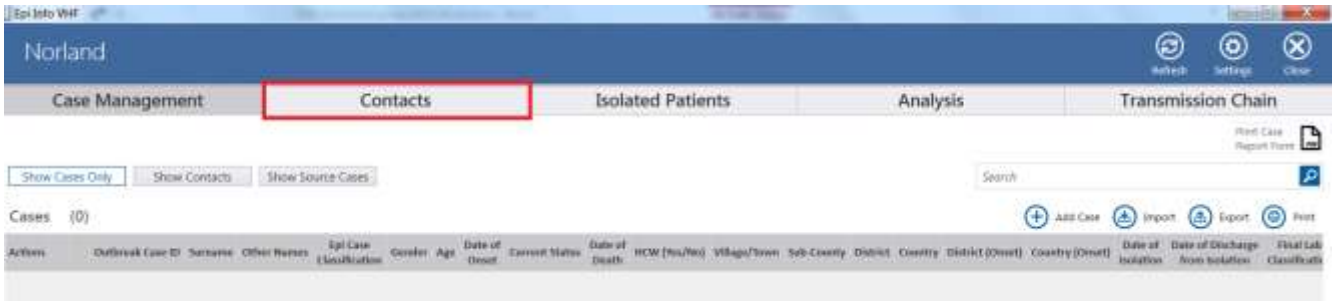
5 Application Overview

5.1 Tabs

There are five tabs at the top of the front-end database window:

1) **Case Management**. This is the tab from which you add cases, add source cases to existing cases, and add contacts for cases.

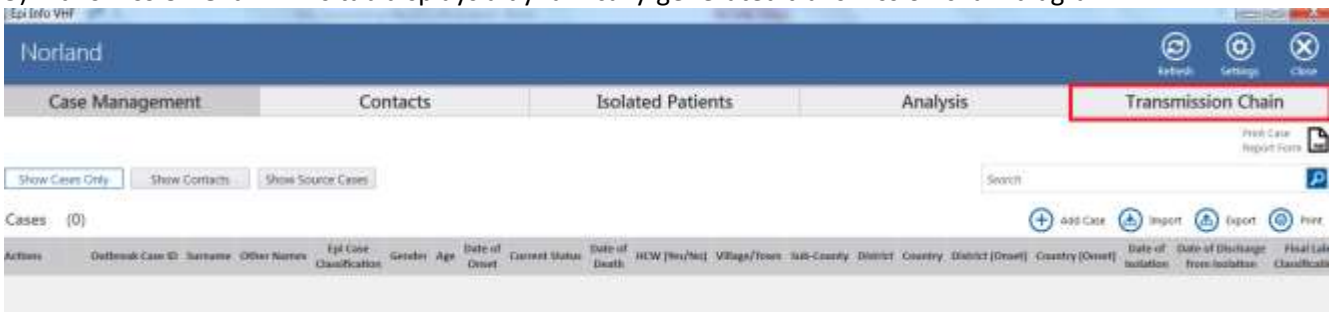
2) **Contacts**. This tab allows editing contact data and provides mechanisms to record contact follow-up.



3) **Isolated Patients**. This tab is designed to show which patients are currently in an isolation ward based on several factors (using automated routines that look at case data in the database).

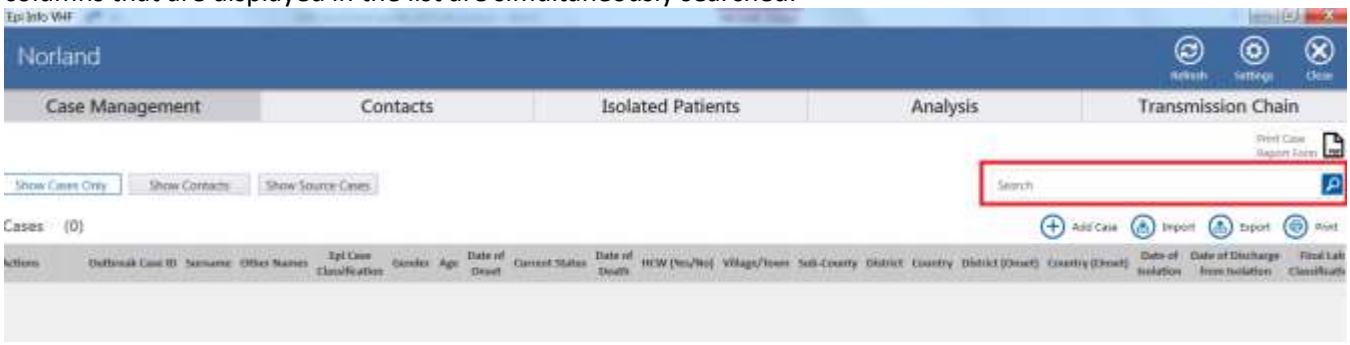
4) **Analysis**. Various pre-built analysis tables and charts are displayed here. Free-form analysis using Epi Info 7 is also provided.

5) **Transmission Chain**. This tab displays a dynamically-generated transmission chain diagram.



5.2 Searching

The search bar at the top right of the **case management**, **contacts**, and **isolated patients** tabs allows searching the respective lists. It uses a very simple "contains" algorithm, which means searching for "Male" will also return female records because the word "female" contains the word "male". The search function is also case-Insensitive. That means searching for “Conakry” will also return records that contain “conakry”. All of the columns that are displayed in the list are simultaneously searched.



5.3 Sorting

In every linelist in the application, you can sort the list by a particular field by clicking on the header for that field. For example, clicking once on the field Surname at the top will sort records by Surname in descending order. Clicking a second time will sort in ascending order.

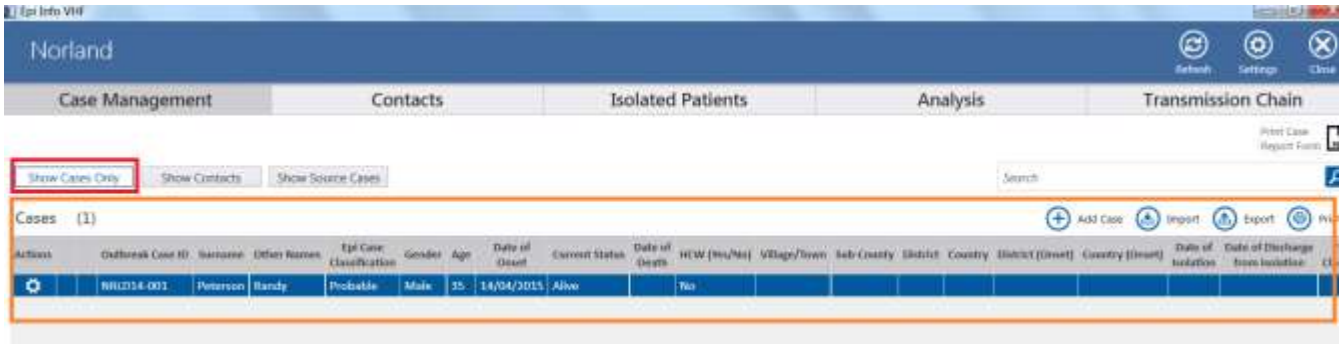
6 Case Management

6.1 Case Management Sub-Tabs

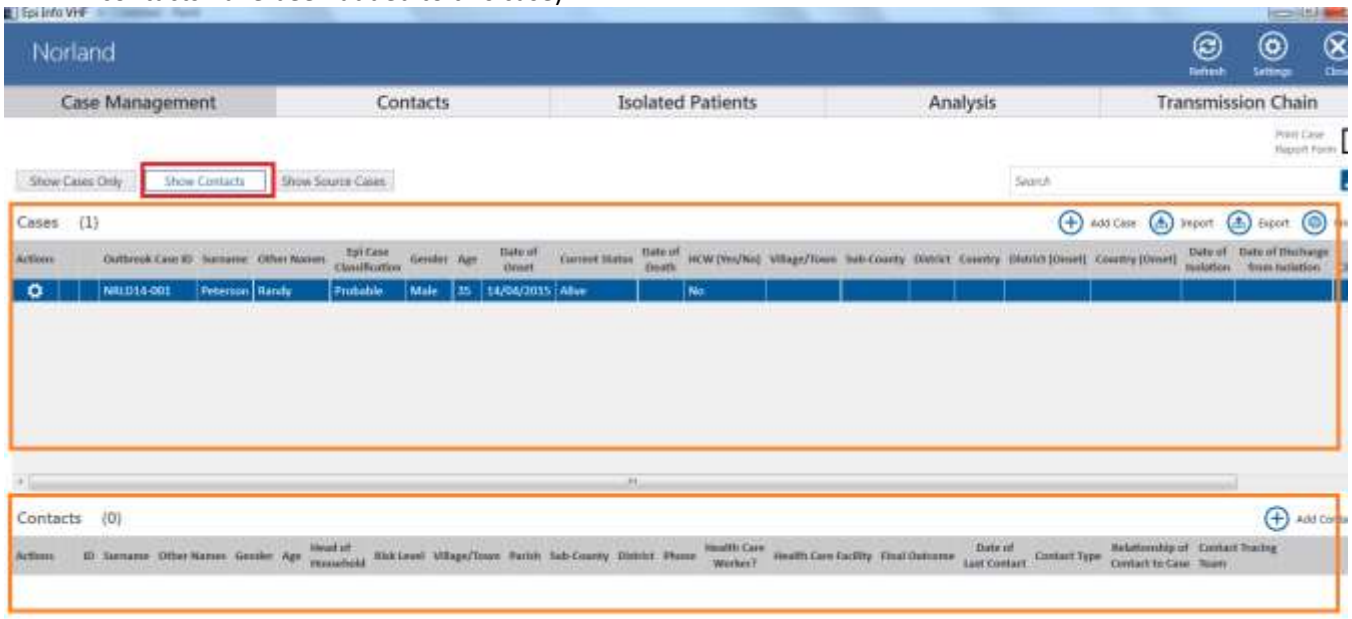
Click the **Case Management** tab to navigate to the Case Management panel.

There are three *sub-tabs* under the Case Management tab:

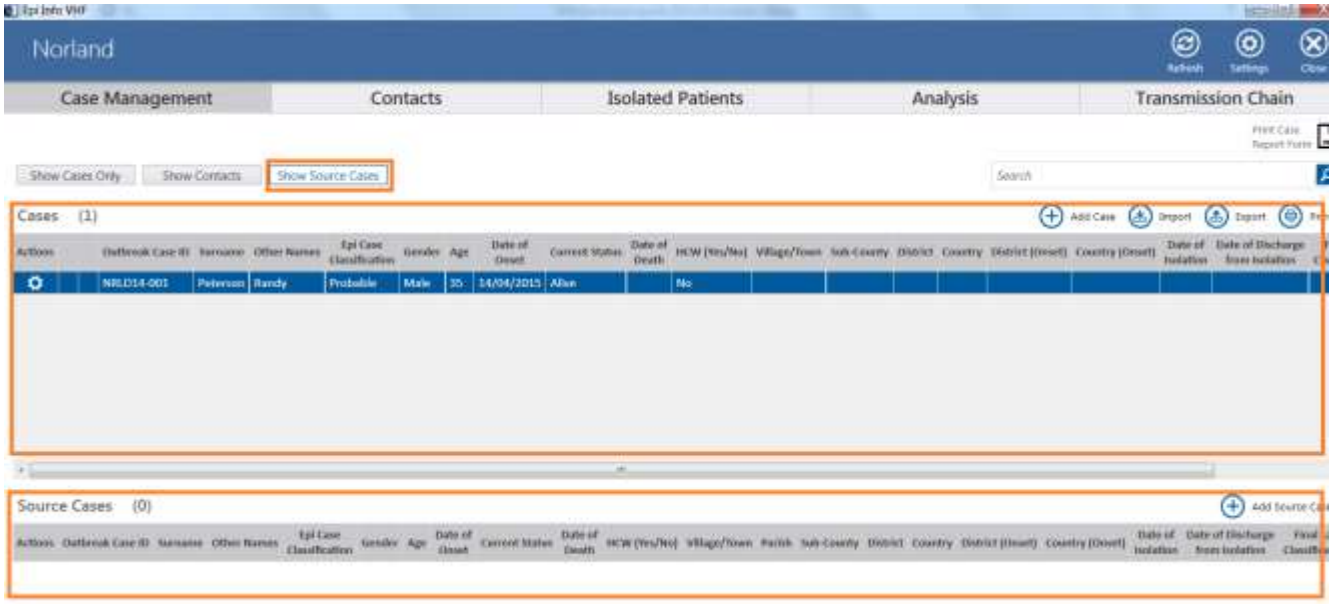
- The **Show Cases Only** sub-tab shows cases only in a single line-list.



- The **Show Contacts** sub-tab shows both cases (in the upper window) and contacts linked to the currently selected case (in the lower window). (Zero contacts are displayed here for the selected case because no contacts have been added to this case).



- The **Show Source Cases** sub-tab shows both cases (in the upper window) and source cases (in the lower window). (Zero source cases are displayed here for the selected case because no source cases have been added to this case).

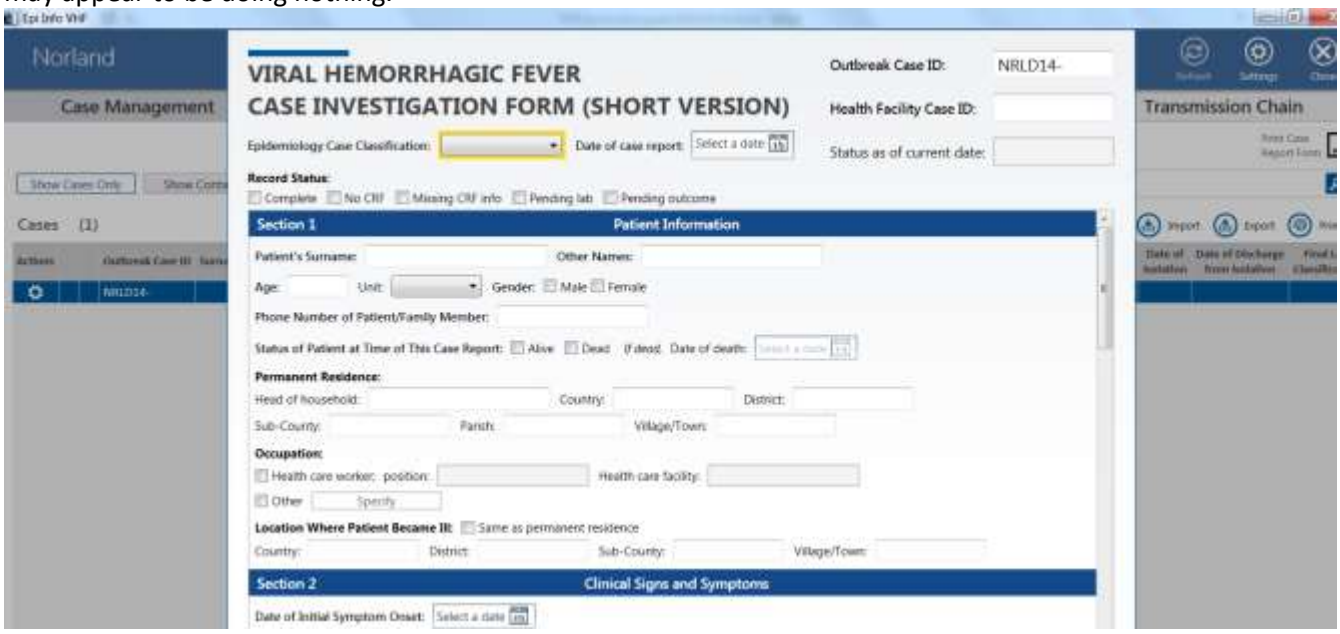


6.2 Adding Cases Using the Short Case Form

1) To add a case, click the **Add Case** button above the **Cases** table in the top right corner of the screen.

2) A blank case report form will appear (as shown below). If the "Use Short Form" checkbox was checked in outbreak setup or settings, the **Short Version** form will open by default. Otherwise, the long form will open. For the long form, note, that it may take up to four seconds to load Epi Info 7's ENTER mode during which the app

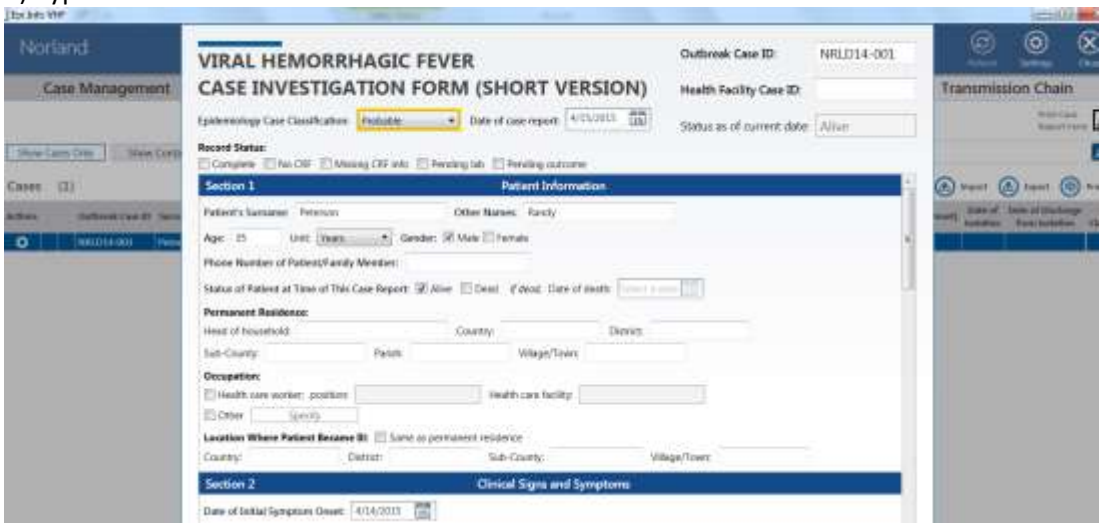
may appear to be doing nothing.



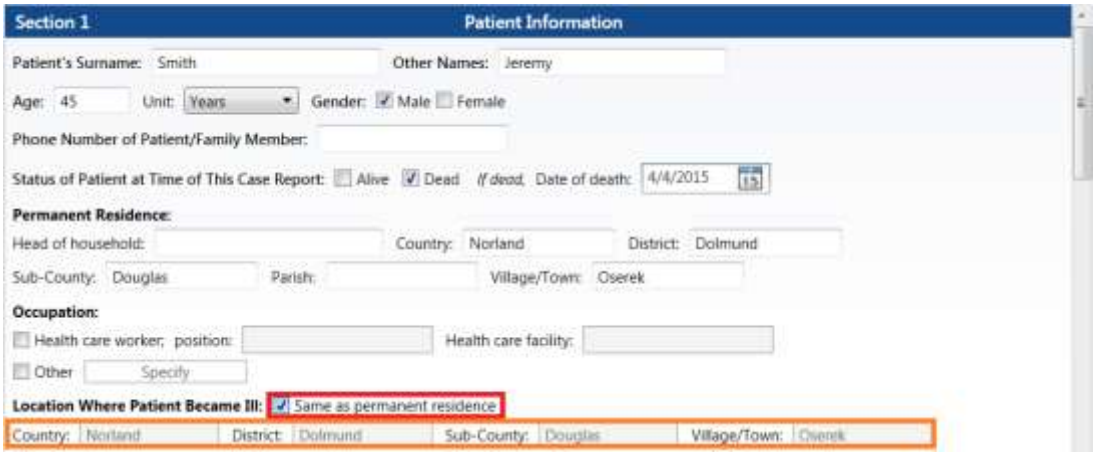
3) The only mandatory field that *must* be filled out in the data entry form is the ***Epidemiology Case Classification***.

Be sure the **Outbreak Case ID** field matches the ID settings you specified during outbreak setup.

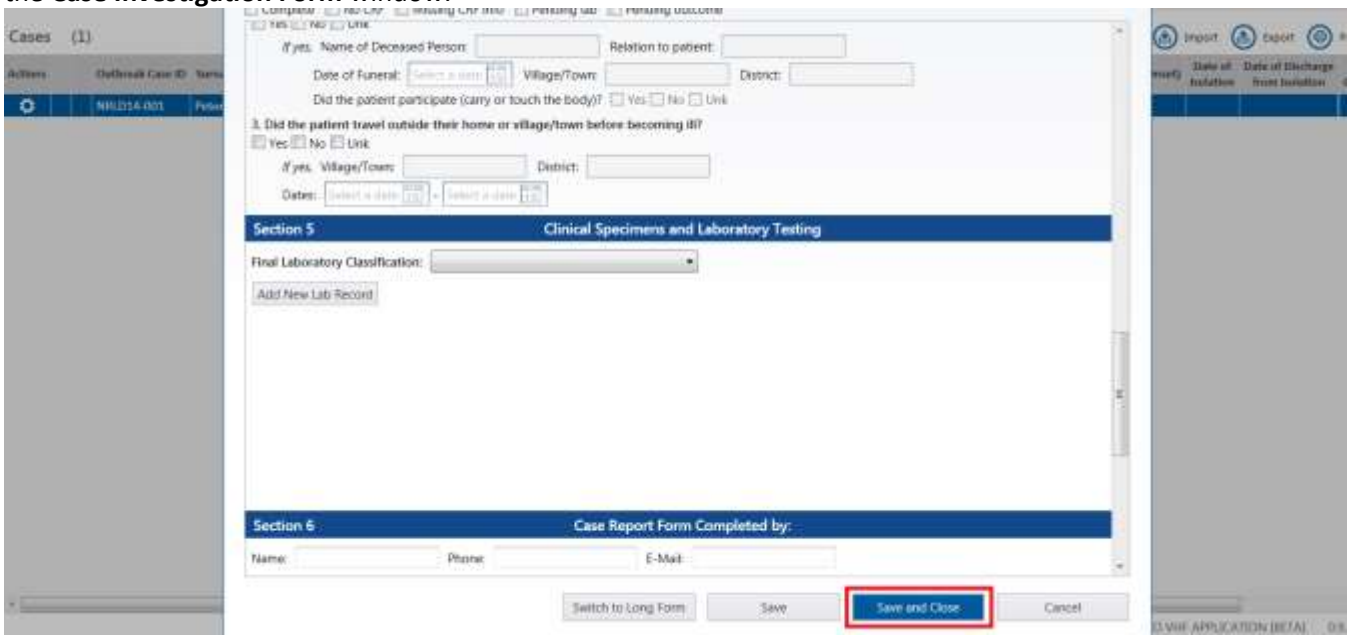
4) Type in data for the case.



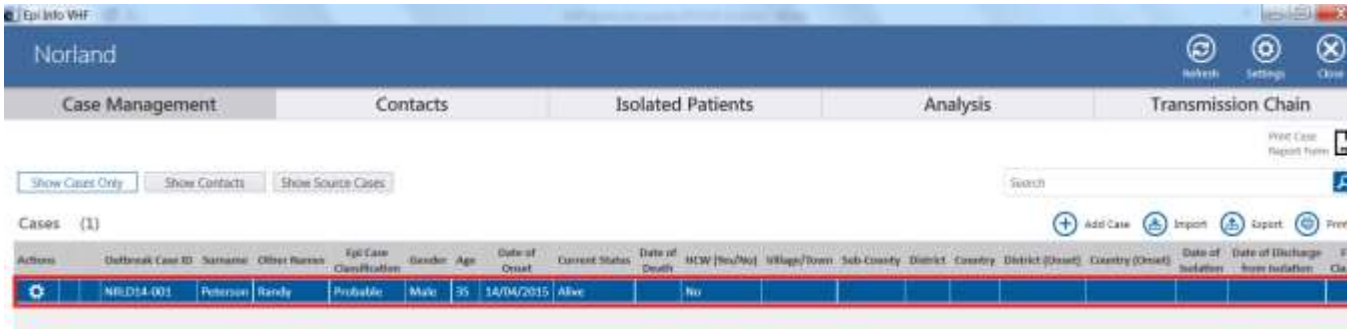
Note. In the **Patient Information** section, there is a check box for “Location where patient became ill” to specify “Same as permanent residence”. Checking this box will autofill Country, District, Sub-County and Village/Town based on the “Permanent Residence” Section.



5) To save the case record and go back to the VHF application, click the **Save and Close** button at the bottom of the **Case Investigation Form** window.



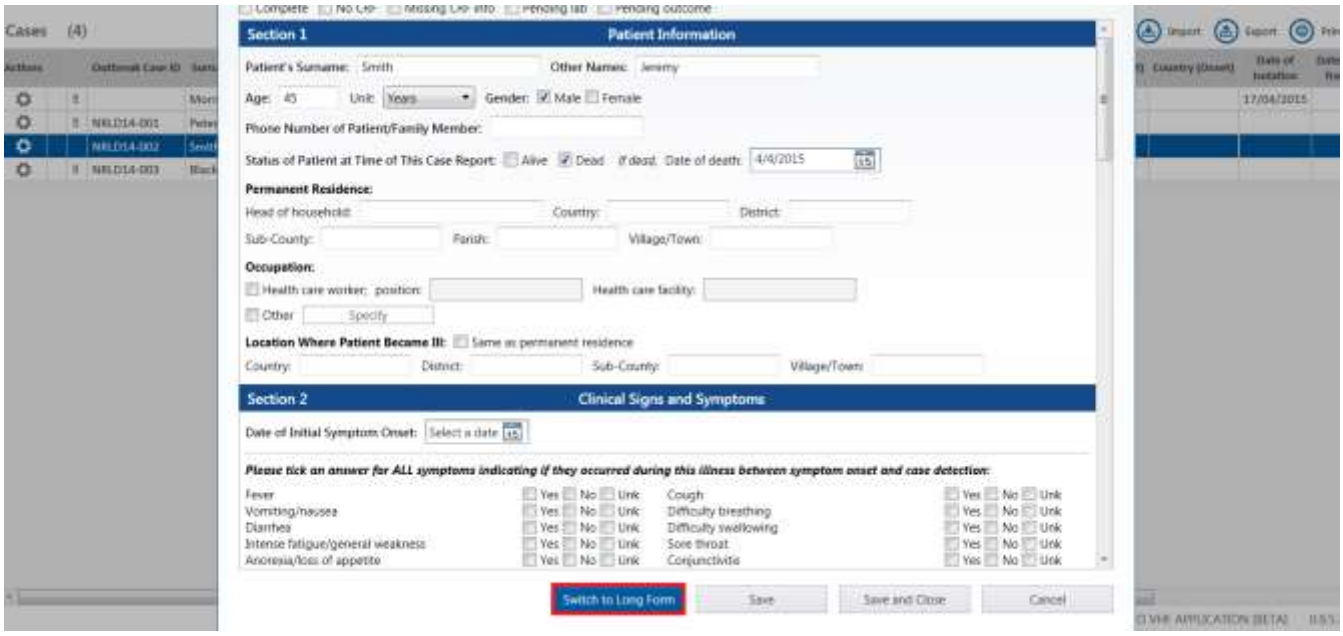
6) The record now appears in the VHF application's **Case Management** tab in the case line listing as shown below.



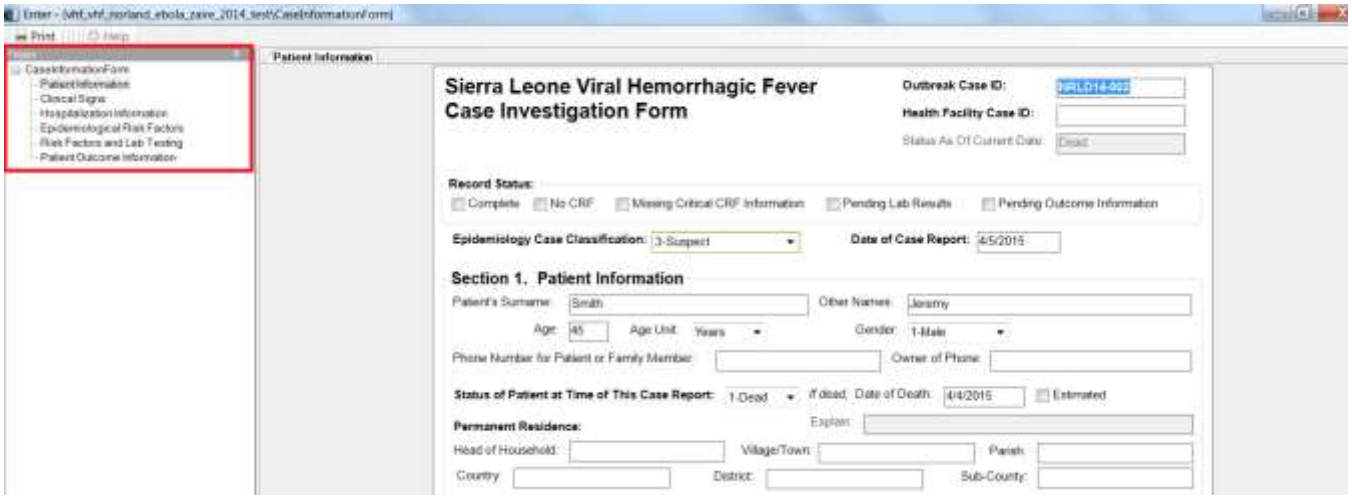
6.1 Long Case Form

As noted above, the VHF application contains both a short and a long Case Investigation form. The short form includes a sub-set of variables from the long form.

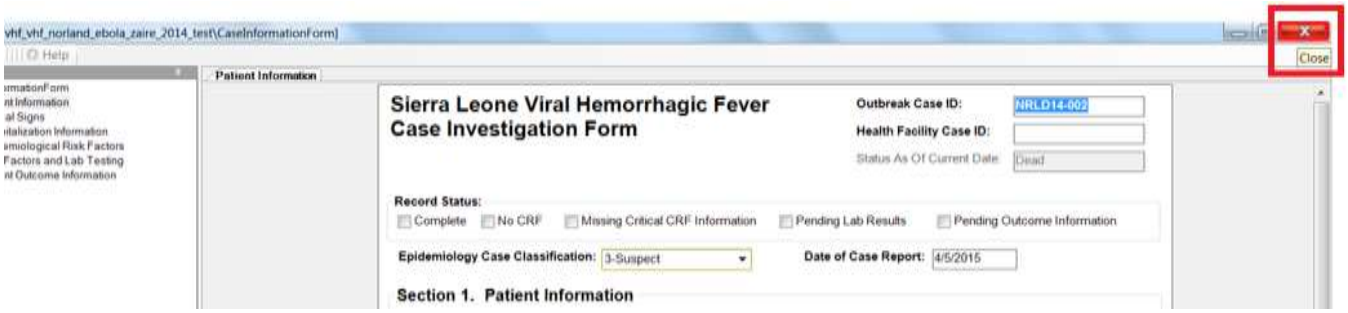
When the "Use Short Case Form" box is checked in outbreak setup or settings, the short Case Investigation form opens by default. To switch to the long form, open the case by double clicking on the line with case under Case Management tab. In the opened short form, find and click on the **Switch to Long Form** button on the bottom of the form.



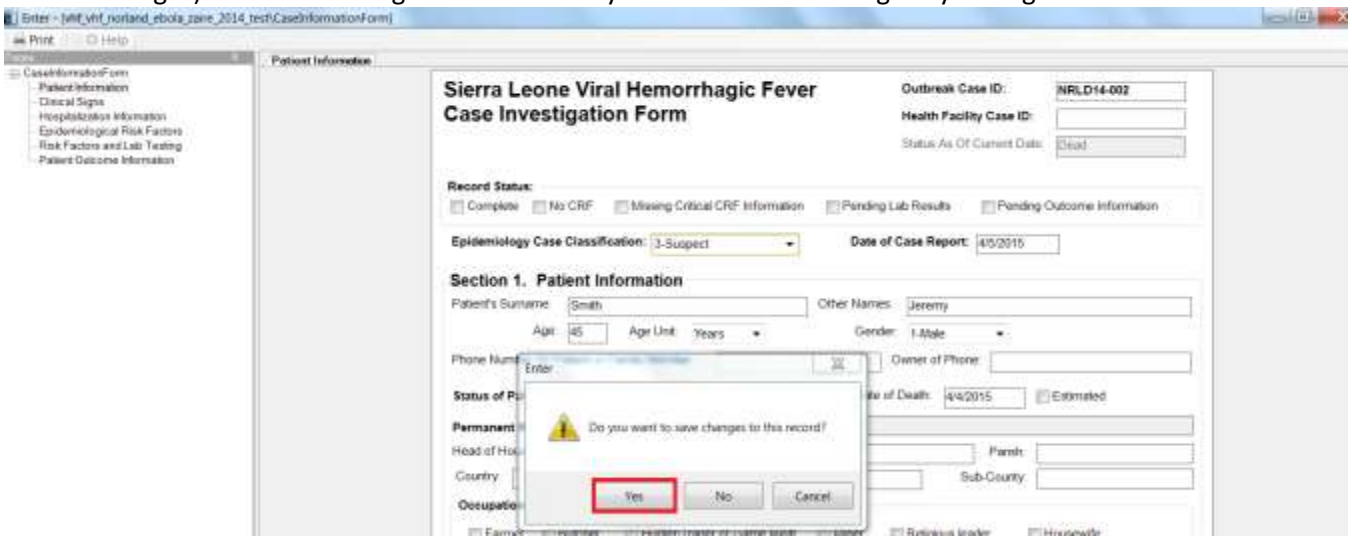
The long Case Investigation form has 6 pages. The user can move between pages using the Enter or tab key or by clicking on pages listed in the left hand window (shown below).



When data entry for particular case in long form is finished, click on red X in the upper right part of the screen.



In the opened pop up window "Do you want to save changes to this record?" select **Yes** (or **No** if you don't want to save changes) to close the long form. Note that you can also save changes by hitting ctrl-s.

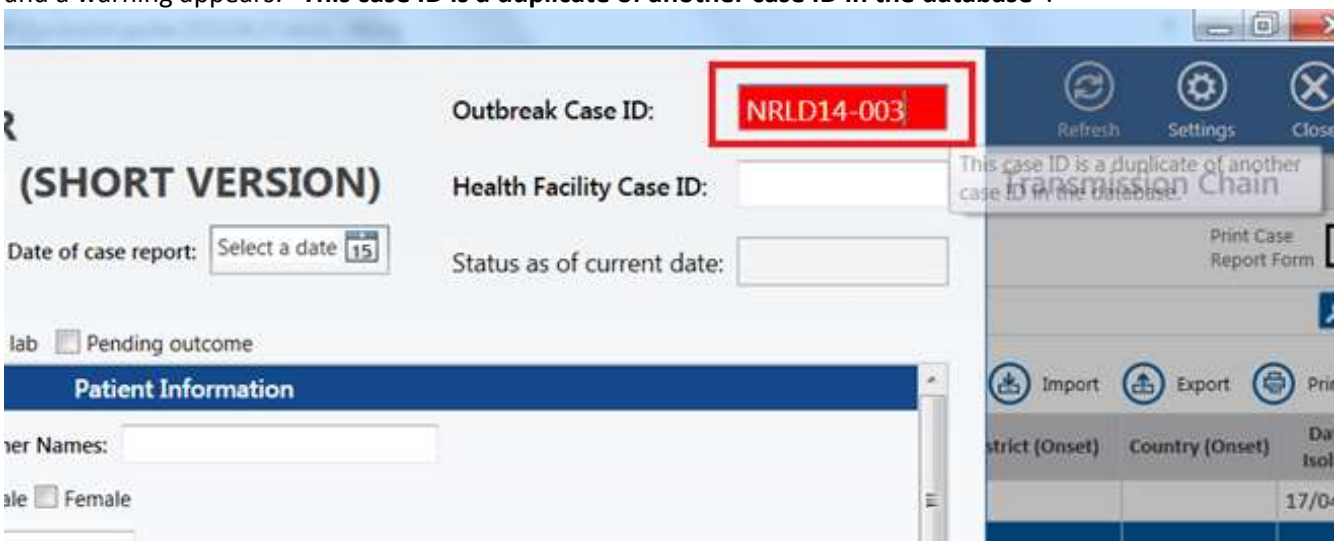


6.2 Editing Cases

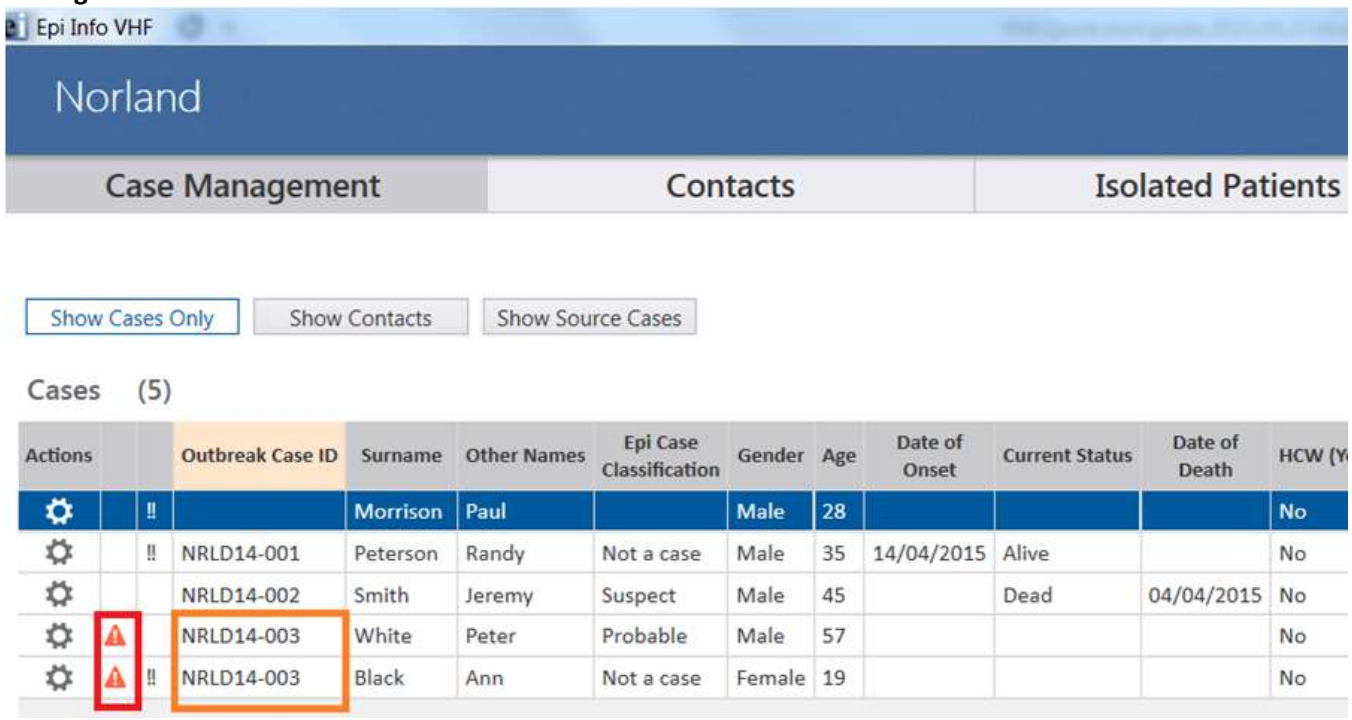
A case record may be edited by **double-clicking** on its row in the Cases line list.
Make necessary changes in the **Case Investigation Form** window.

6.3 Duplicate Cases

The VHF application has embedded checks for duplicate Outbreak Case IDs. When an Outbreak Case ID that already exists in the database is entered on the Short Version case form, the box for Outbreak Case ID turns red and a warning appears: "**This case ID is a duplicate of another case ID in the database**".



The application will not prevent the user from saving a case with a duplicate ID. Cases with duplicate IDs will be noted with an orange triangle with an exclamation mark ("hazard sign") in the case line list under the **Case Managemen**t tab.



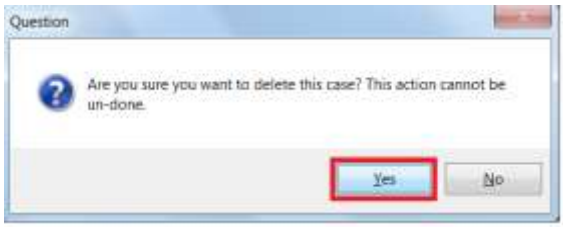
Actions			Outbreak Case ID	Surname	Other Names	Epi Case Classification	Gender	Age	Date of Onset	Current Status	Date of Death	HCW (Y
⚙		!!		Morrison	Paul		Male	28				No
⚙		!!	NRLD14-001	Peterson	Randy	Not a case	Male	35	14/04/2015	Alive		No
⚙			NRLD14-002	Smith	Jeremy	Suspect	Male	45		Dead	04/04/2015	No
⚙	⚠		NRLD14-003	White	Peter	Probable	Male	57				No
⚙	⚠	!!	NRLD14-003	Black	Ann	Not a case	Female	19				No

6.4 Deleting Cases

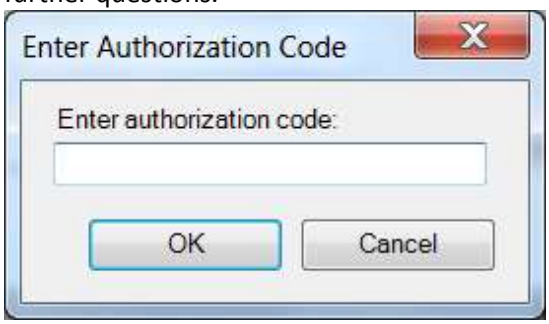
You may delete a case record by clicking the gear icon under the **Actions** column

and selecting **Delete Case**.

You will see the pop up window shown below. Deleted cases cannot be recovered! Importantly, deleting a case may also delete some or all of the contacts of that case, if those contacts are not also linked to another case. Think thoroughly through deleting a case before taking this action. If you are sure you want to delete the case, click **Yes**.



You will see pop up window **Enter authorization code**. Enter deletion authorization code. Click **Ok**.
Note. The deletion authorization code is 2468. The deletion authorization code should only be provided to people who should have the ability to delete things from the database. Please email: ***epiinfo@cdc.gov*** with any further questions.



6.5 Exporting Case Data to Excel

Case data can be exported into a CSV format (which can be opened in Excel) by clicking the **Export** icon above the **Case** list.

This export will export ALL fields on the case form from the database, including all lab records, not just the fields shown in the case line list (i.e. exported data will correspond to the “long form”). Lab records are "flattened" so that each lab record has its own set of columns in the exported file. Additional information has also been specifically added to the CSV files (specified below).

Two options are present for CSV export formats for cases: **Export as Excel Spreadsheet for Analysis** and **Export as Excel Spreadsheet for Viewing**. **Export as Excel Spreadsheet for Analysis** generates a CSV file with the exact values and column names found in the database. This may be useful for data managers and for statistical analysis in other programs. **Export as Excel Spreadsheet for Viewing** will generate a CSV file that includes more descriptive column names and data labels.

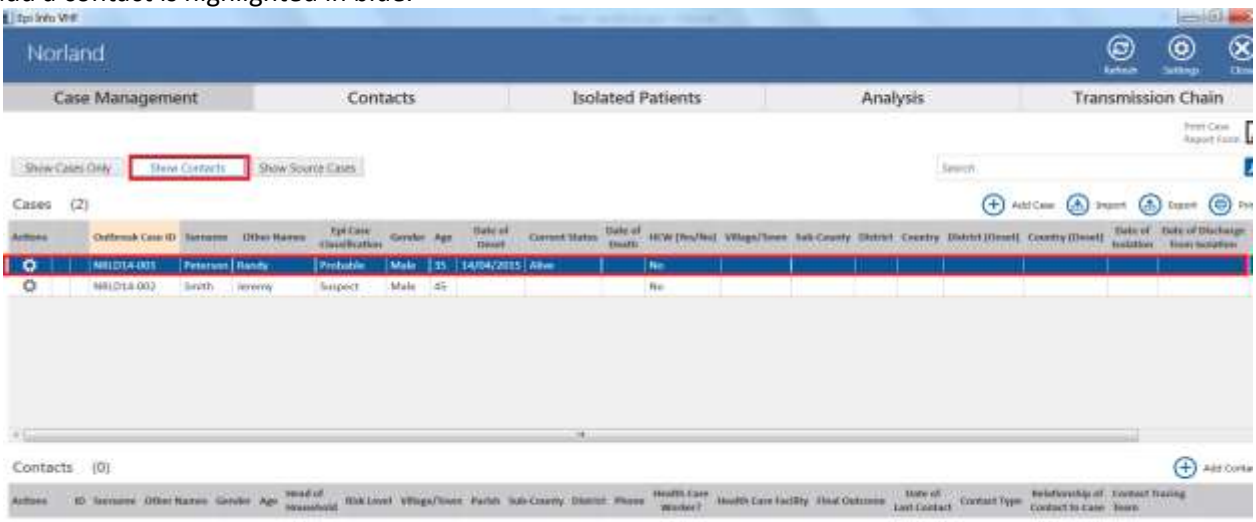
The following table summarizes the ***additional*** information in the CSV files compared to the information on the case form in VHF application.

Variable in Case CSV Export file	**Description**
GlobalRecordId	A Globally Unique Identifier (GUID), computer-generated Unique ID.
TotalContactsListed	Total number of contacts listed for this case (Summary variable).
ThisCaseIsAlsoContact	This variable notes is this case also has a contact record. “FALSE” means that this case has no contact record. “TRUE” means that this case has both a case and a contact records. “TRUE” does not distinguish whether this case was initially entered as a case and then was converted to a contact, or this case was entered as a contact, and then was converted to a case.
StatusAsOfCurrentDate	This variable shows status of patient (“Alive”, “Dead”) at time of data export to Excel. This variable summarizes data from the variable StatusReport (Patient information: Status of Patient at Time of This Case Report) and the variable FinalStatus (Patient Outcome: Final

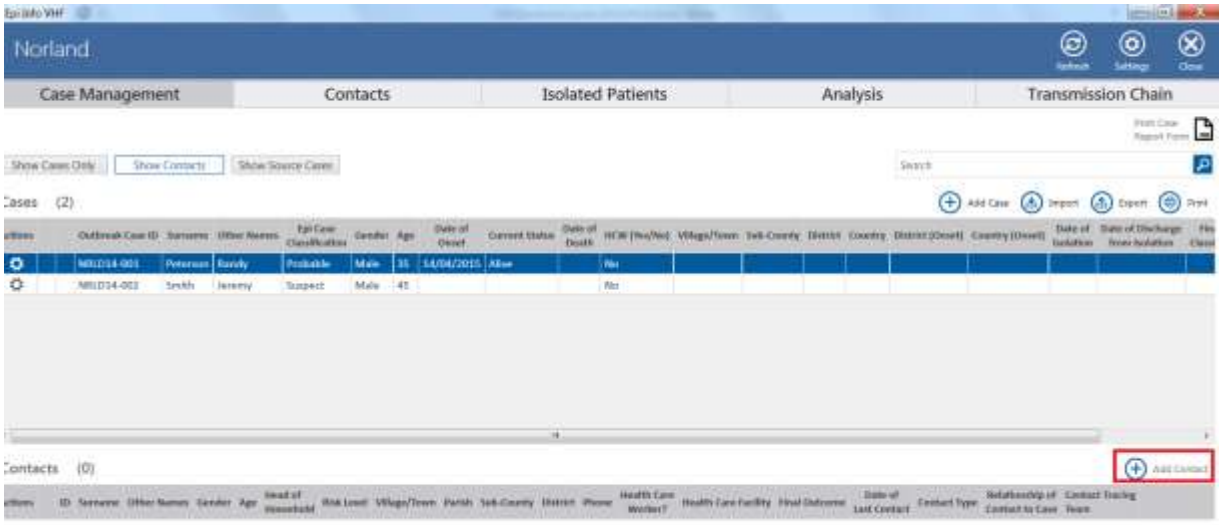
	Status of the Patient; this section is filled out at the time of patient recovery and discharge from the hospital OR at the time of patient death) as of the date of this data export to Excel. This variable should be used to calculate a case fatality rate.

6.6 Adding a Contact

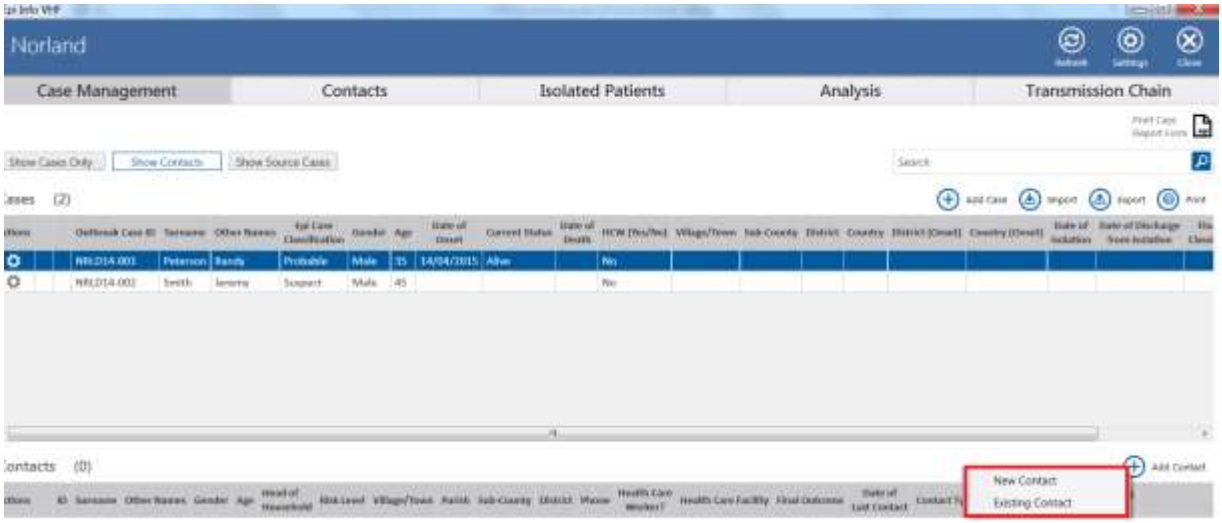
1) Click on the Show Contacts sub-tab. Select a case in the case list so that the case for which you wish to add a contact is highlighted in blue.



2) Click the **Add Contact** button.



3) You will be prompted to select an **existing contact** or a new contact.

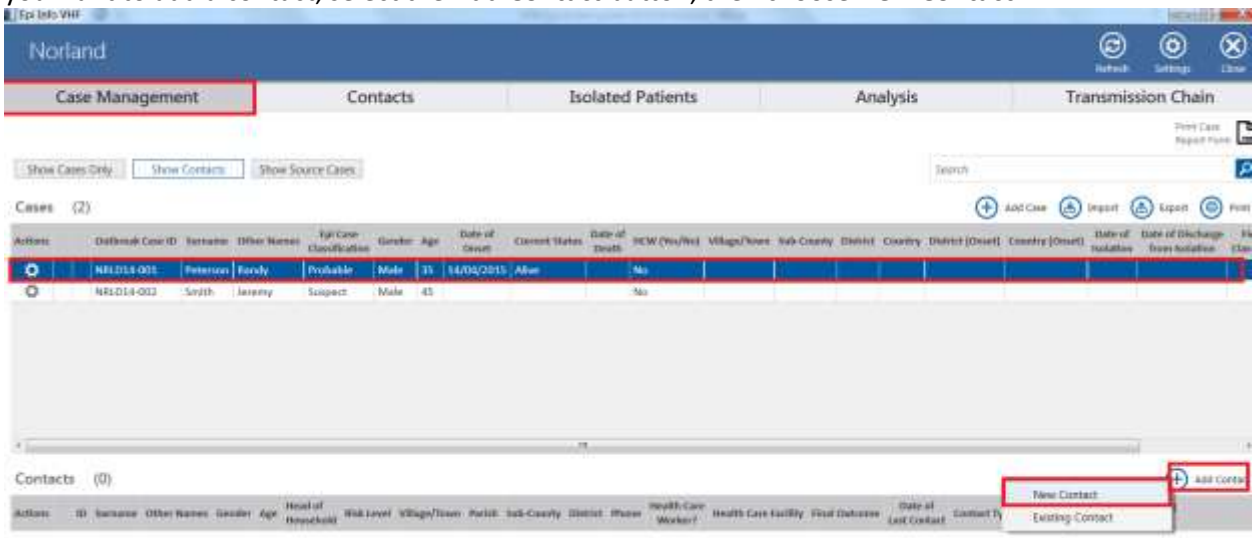


4) Always search the **existing contact** list first so as to avoid duplicates. This can be done in several ways. One way is to choose “existing contact”, then enter the family or given name of the contact into the search field. Select the contact from the list once the correct contact is identified.

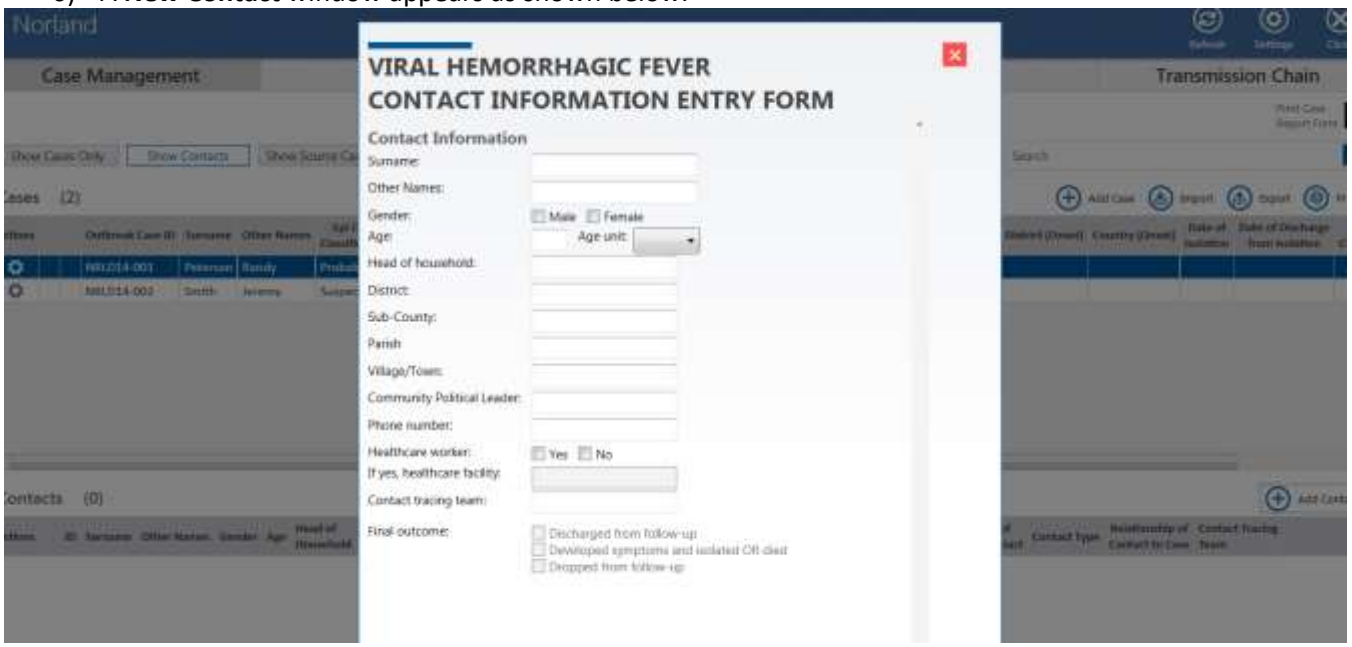
A second way to do this, which may be more efficient if you have a long list of contacts, is to go to the “contacts” tab, select the “show contacts only” button on the top left, and enter a family or given name into the search box on the top right.

Lastly, one can sort the contact list by clicking on various subheadings and searching this way. If it is unclear that a contact is already in the list, then err on the conservative side and assume that it is a new contact.

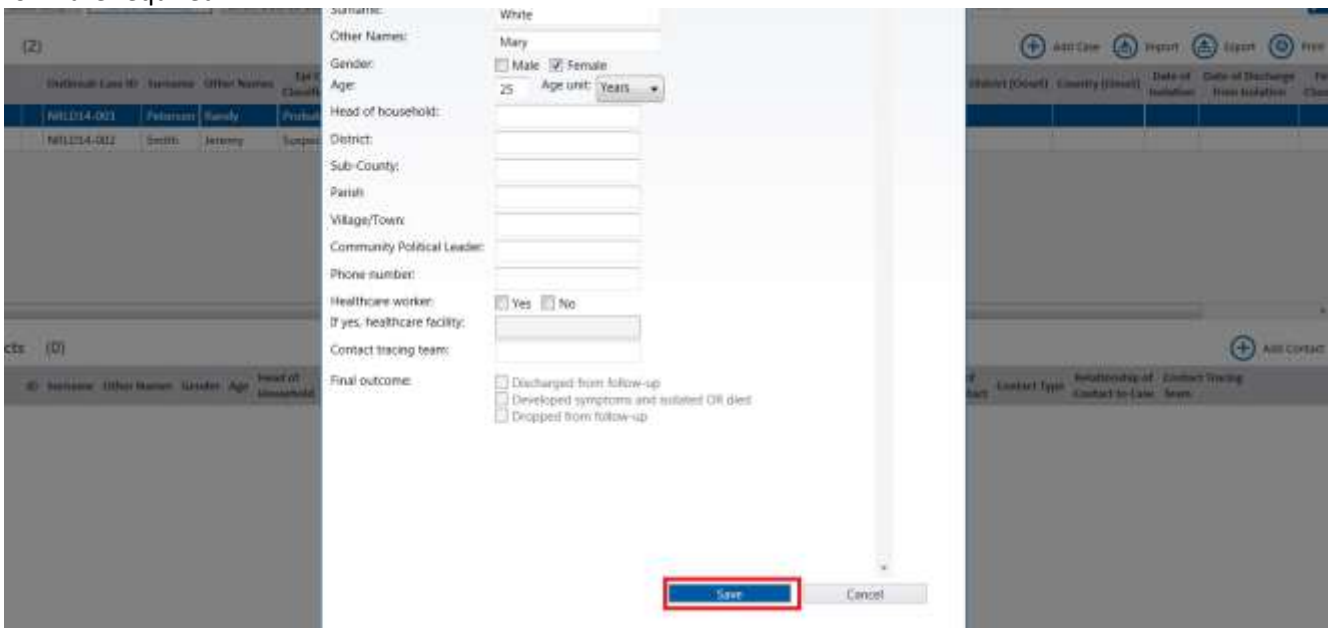
5) To enter a ***new*** contact, under the Case Management tab, Show Contacts sub-tab, click on case to which you want to add a contact, select the **Add Contact** button, then choose **New Contact**.



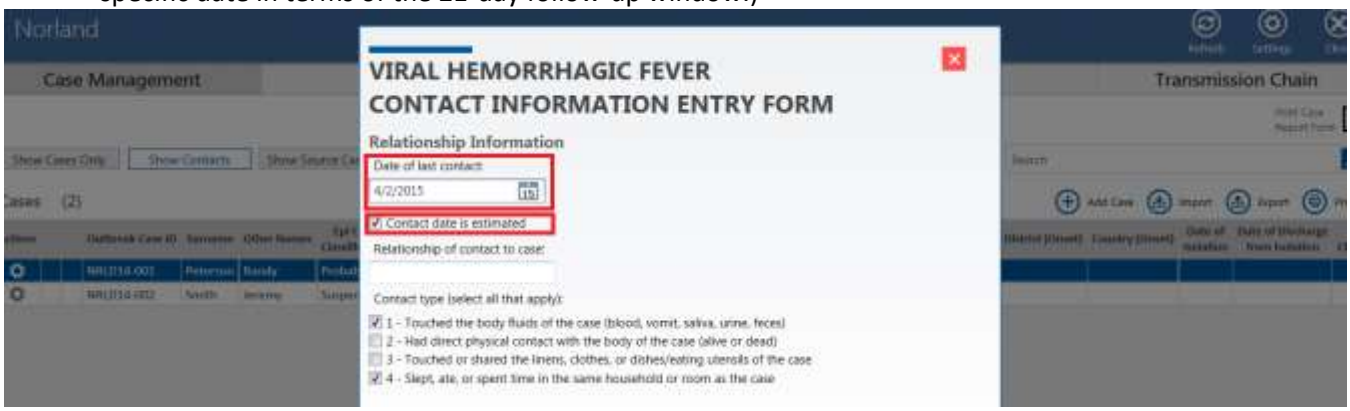
6) A **New Contact** window appears as shown below.



7) Type contact data into this window. Click on **Save** button. Note that none of the fields on the contact form are required.

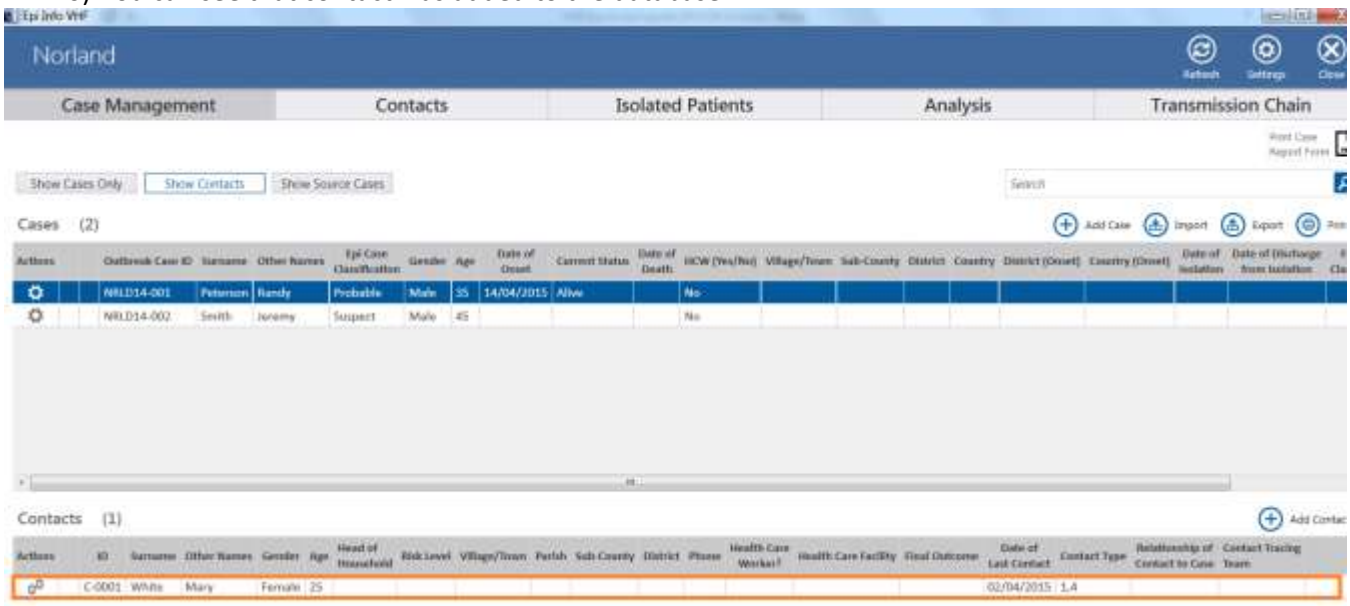


8) Clicking **Save** will bring up a screen to enter **Relationship Information** as shown below. The only *required* information is the **Date of last contact**. This is a key field because it is used to determine a contact's 21-day follow-up window. It cannot be omitted. If the exact date is unknown, estimate a date and click the **Contact date is estimated** button. (Currently, an estimated date is handled the same as a specific date in terms of the 21-day follow-up window.)



9) Click the **Save** button on the bottom of the form again.

10) You can see that contact was added to the database.



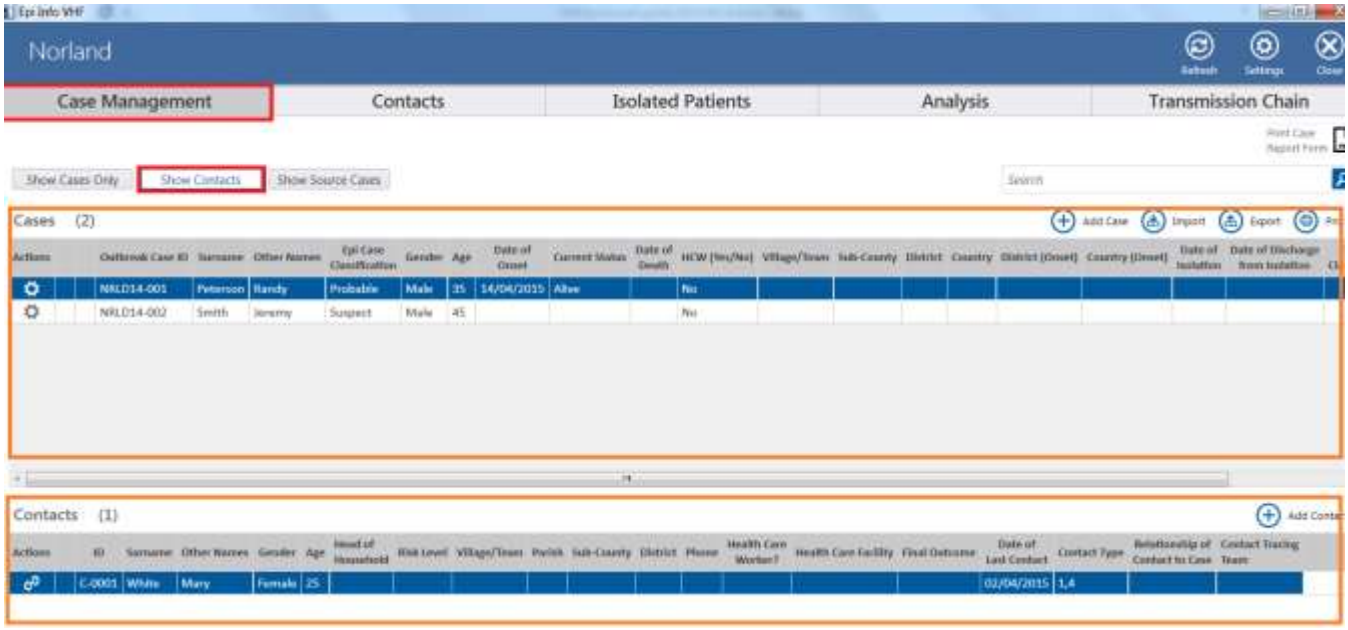
6.7 Editing Contacts

A contact can be edited by double-clicking on its row in the contact list. The Contact Information Entry form will open and data can be edited in this form.

6.8 Showing Contacts for a Case

To show contacts for a given case, under **Case Management tab** click the **Show Contacts** sub-tab. The **Contacts** list will display underneath the Cases list as shown in this image. This split view shows the case line list on the top half and ***contacts*** *of the selected case* on the bottom half.

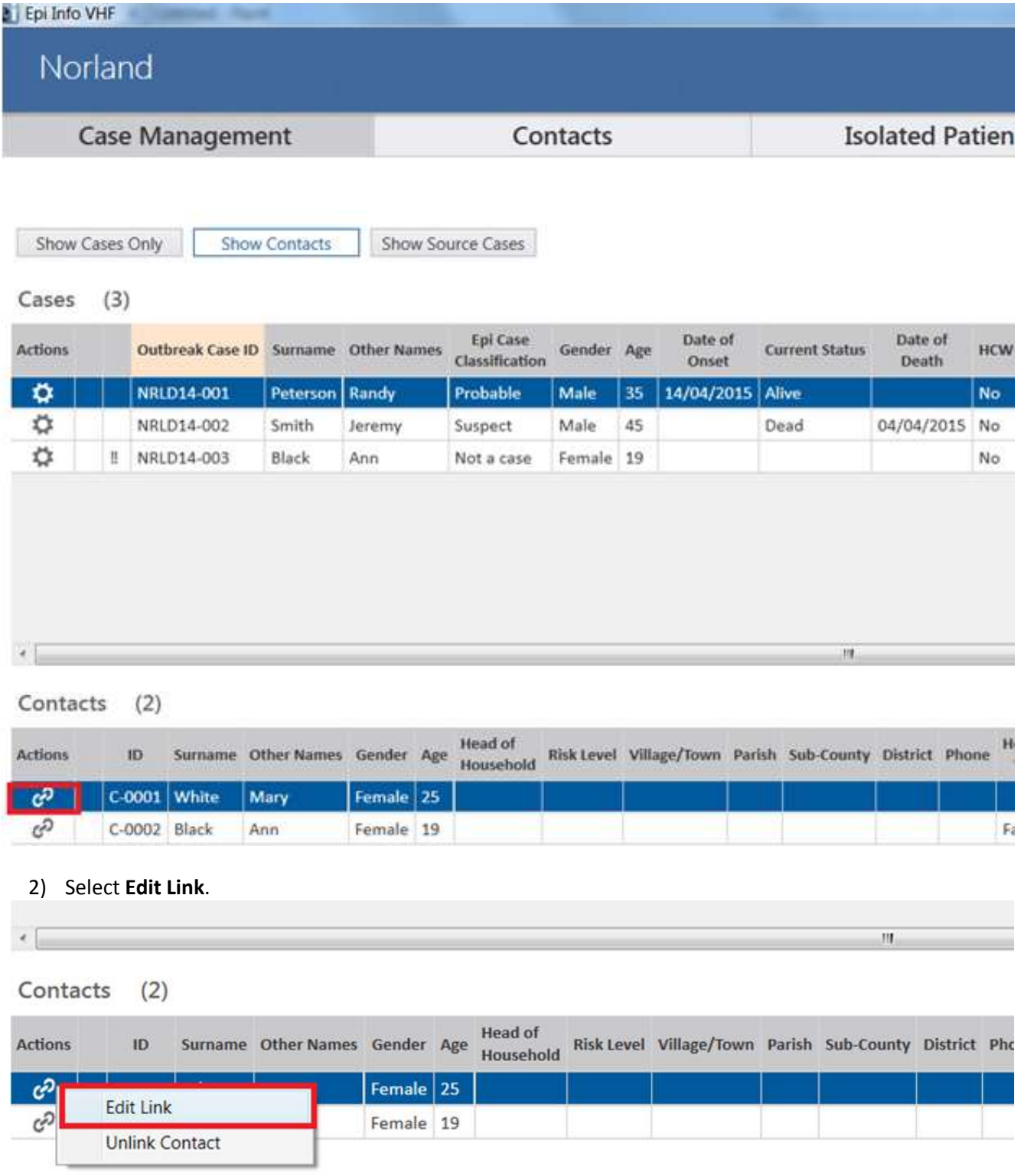
Also remember, this view will only show contacts for the *selected* case. It does not show all contacts in the database; that capability is provided elsewhere and is described later in this document.



6.9 Editing a Case-Contact Link

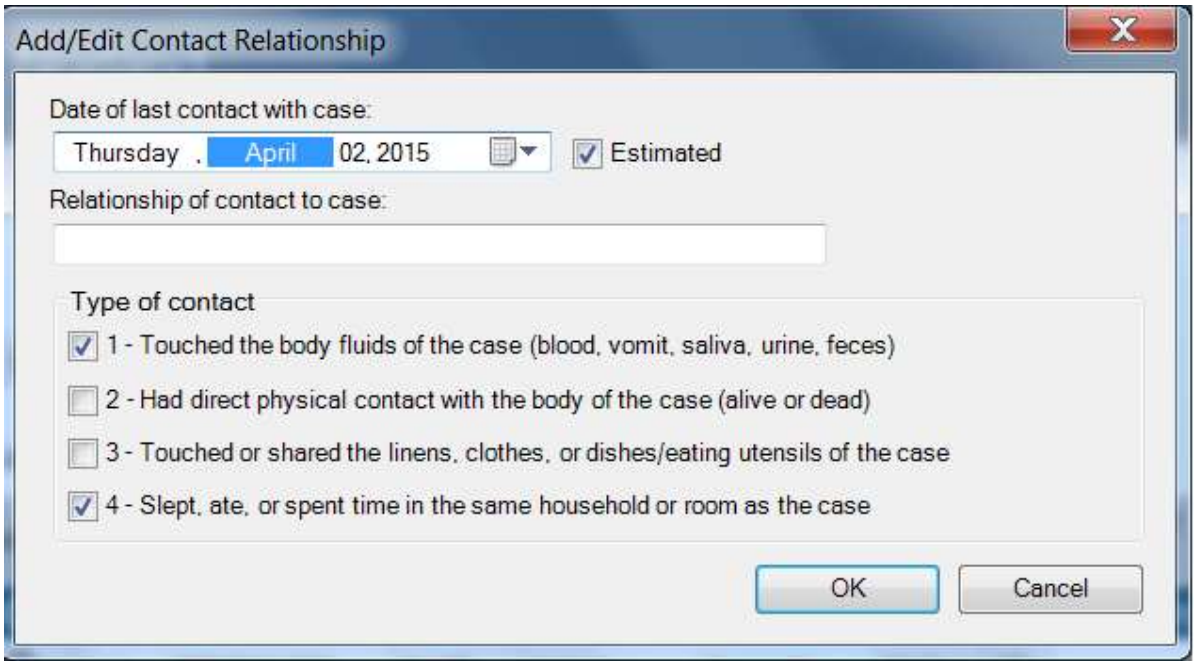
A case-contact link can be edited. To do this:

1) Under the **Case Management** tab, **Show Contacts** sub-tab, in the **Contacts** window click the chain icon under the **Actions** column.



2) Select **Edit Link**.

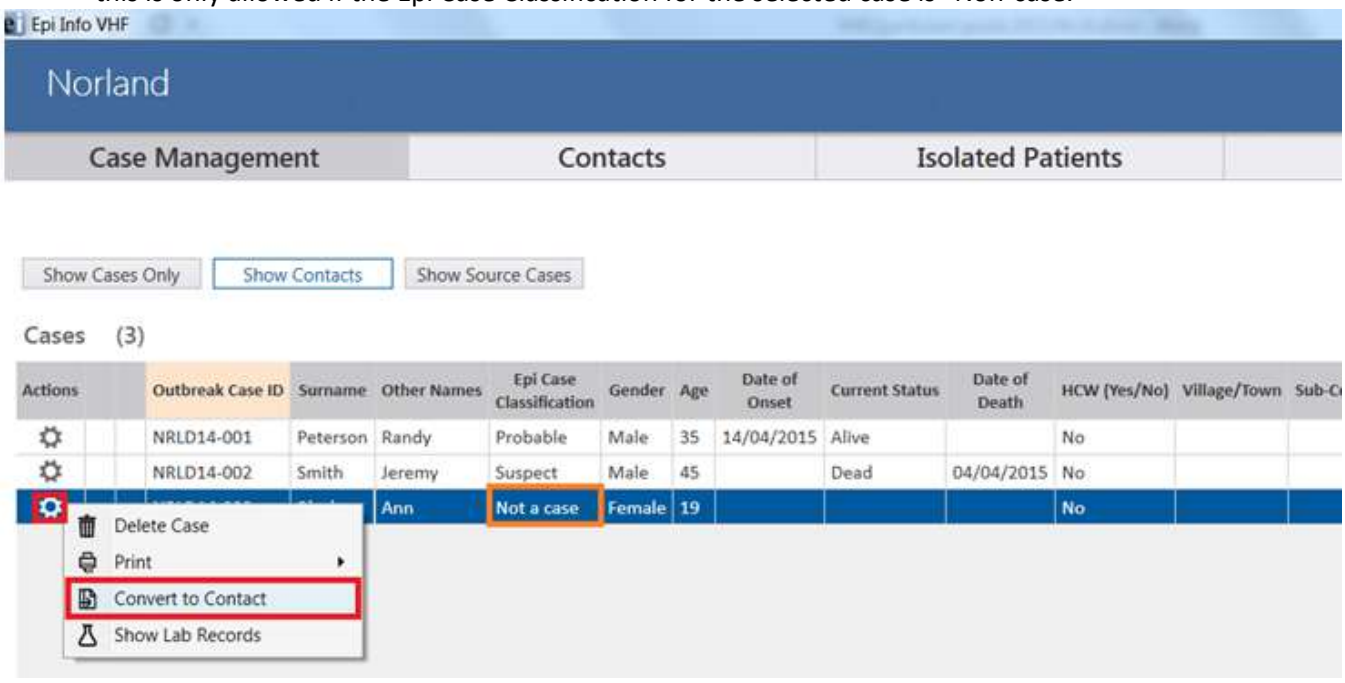
3) The **Add/Edit Contact Relationship** window will open, which allows editing the relationship between the case and the contact.



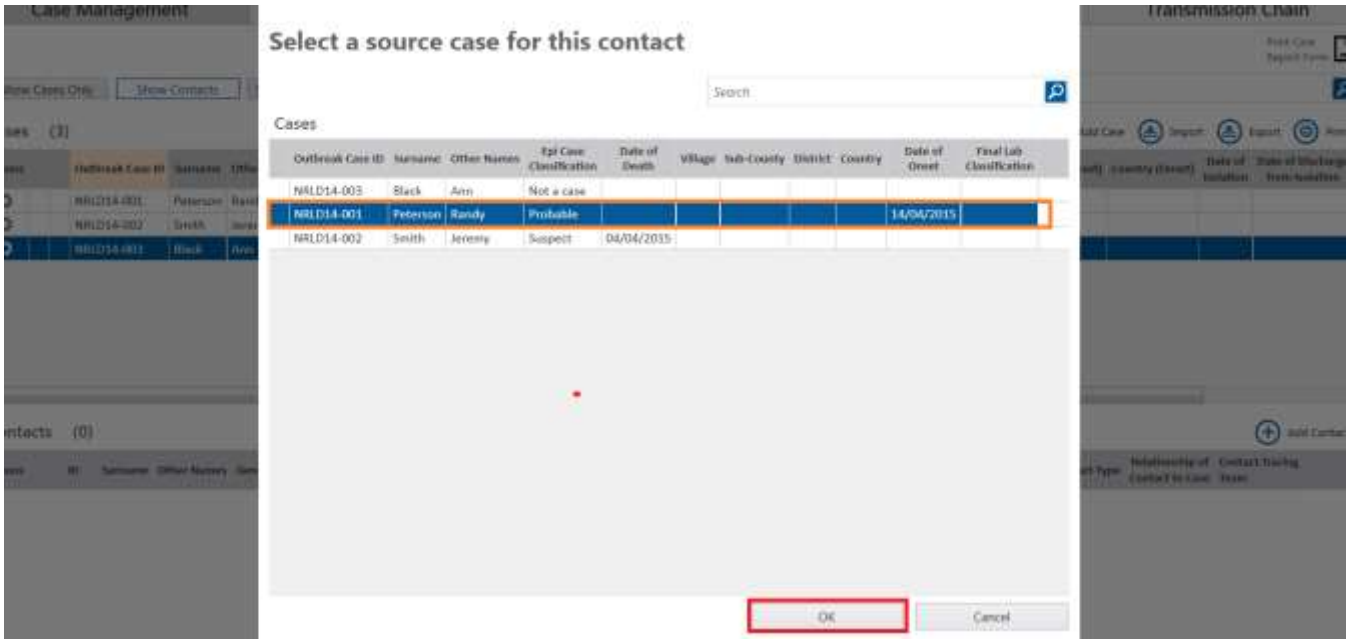
6.10 Converting a Case to a Contact

A case may be converted into a contact record, which would be needed if the case-patient tests negative Ebola but was then exposed to an infected patient.

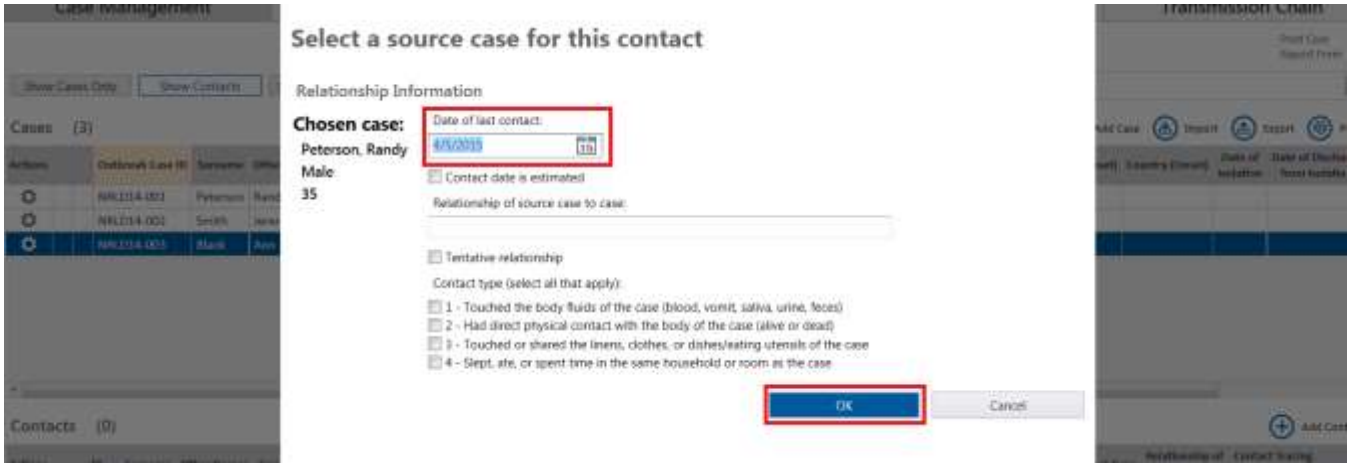
1) Click the gear icon under the **Actions** column in the main case linelist and click **Convert to Contact**. Note: this is only allowed if the Epi Case Classification for the selected case is "Non-case."



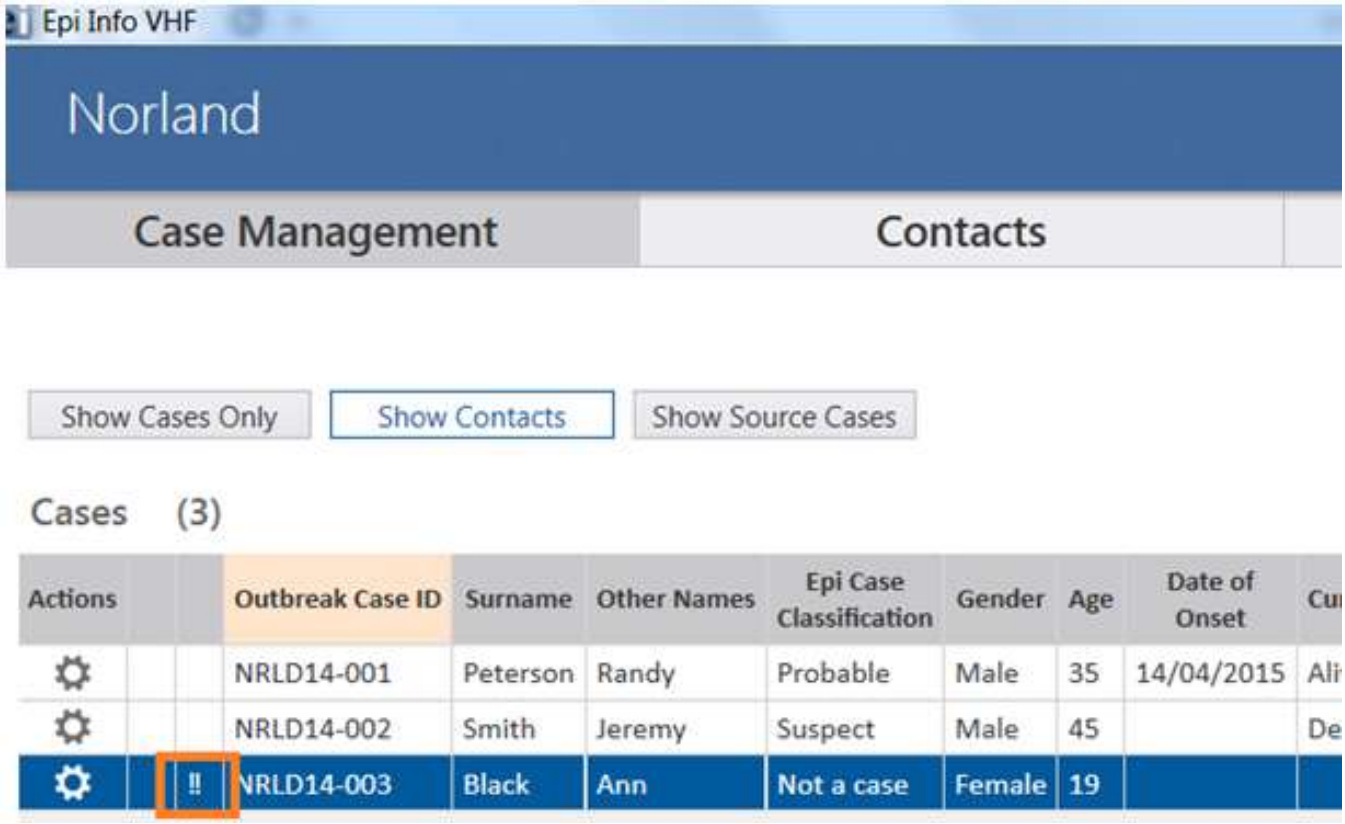
2) A window will open titled **Select a Source Case for this Contact.** Select a source case (it should be highlighted in blue) and click **Ok**.



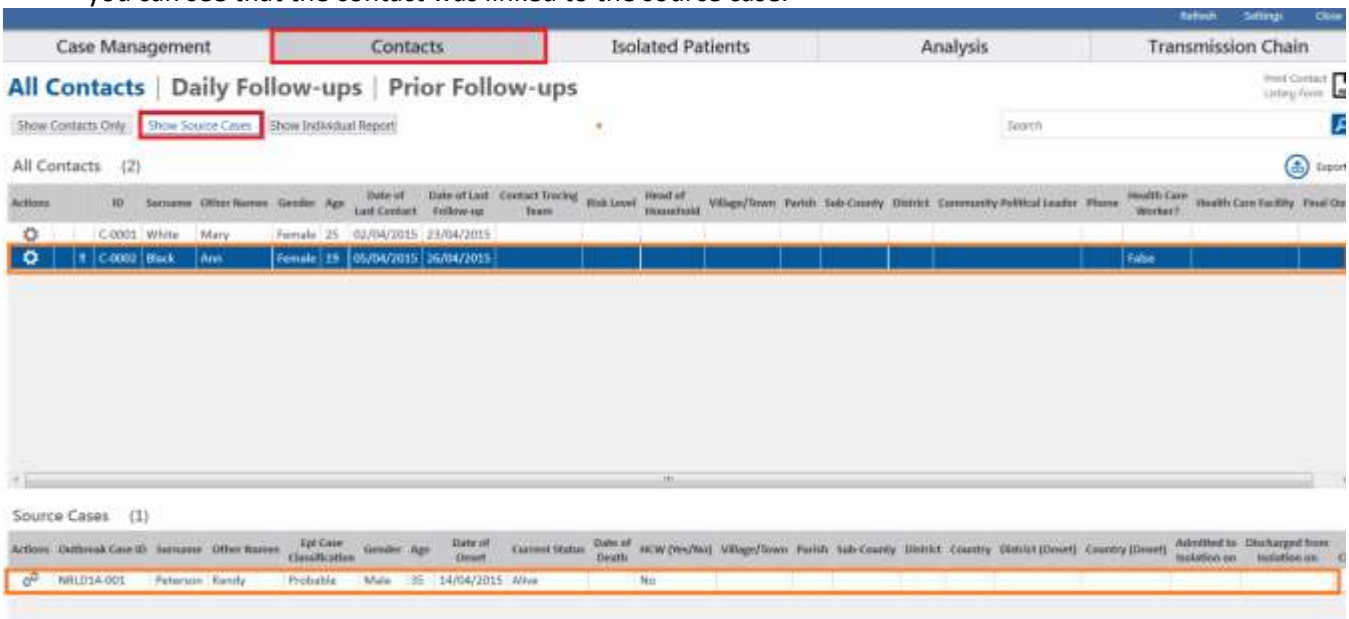
3) In the next window select a **Date of Last Contact** and fill in the other information. **Date of Last Contact** is mandatory and the record will not save if no date of last contact is provided. If the exact date is unknown, estimate a date and click the **Contact date is estimated** button. Then click **Ok**.



4) Cases that have been converted into contacts show up in the case line list with double exclamation marks **(!!)** at the left of their records, indicating that the person has both a case and contact record.



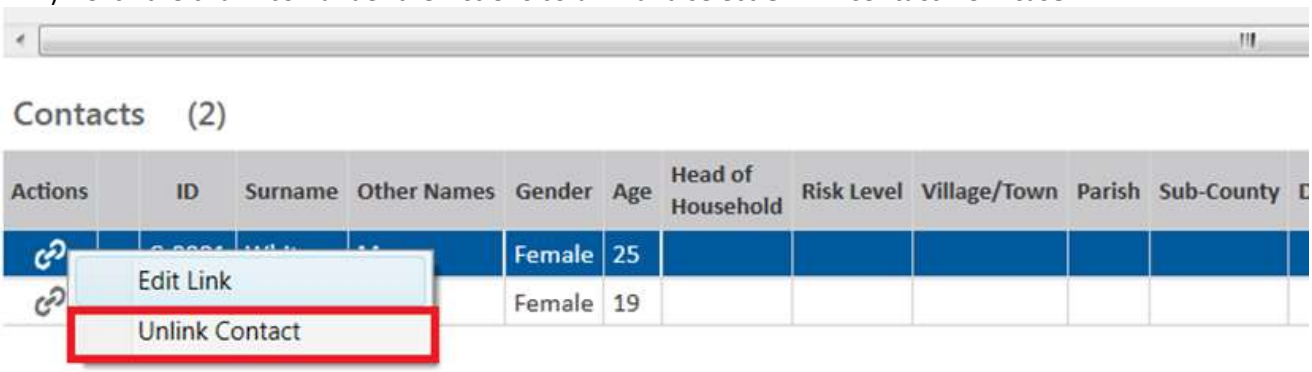
5) You can check that the case you converted to a contact now appears in the list of contacts under the **Contacts** tab. If you select this contact in the contact linelist and click on the **Show Source Cases** sub-tab, you can see that the contact was linked to the source case.



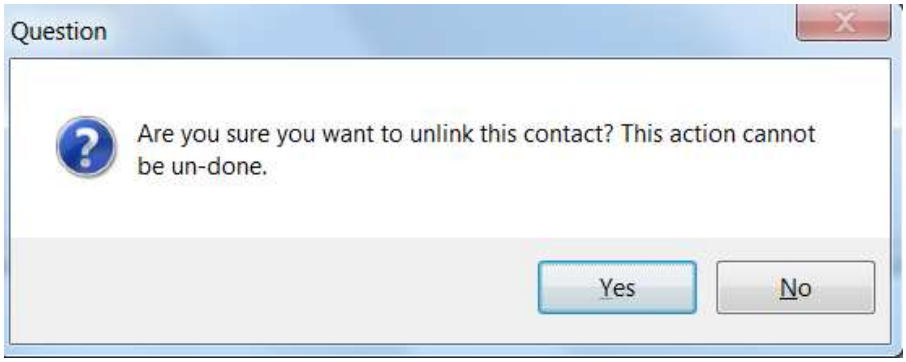
6.11 Unlinking a Contact

It may become necessary to un-link a contact from a case. To do this:

1) Click the chain icon under the **Actions** column and select **Unlink contact from case**.

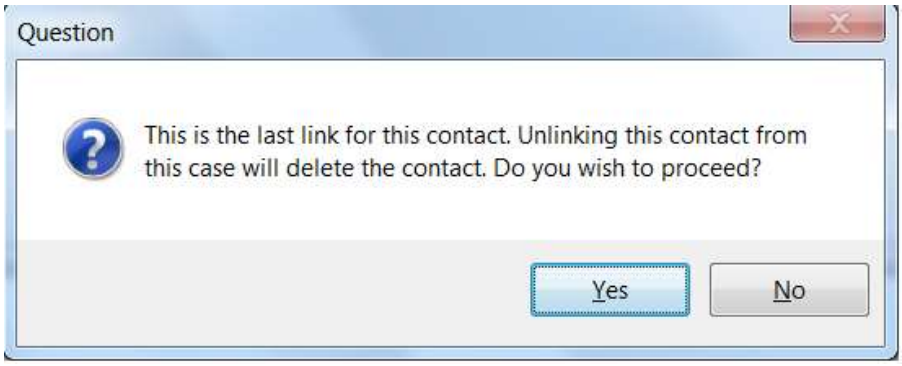


2) You will see the pop up window "**Are you sure you want to unlink this contact? This action cannot be undone**." shown below. Click **Ok**.



3) You will see pop up window **Enter authorization code**. Enter the deletion authorization code. Click **Ok**. **Note.** The deleting authorization code is 2468.

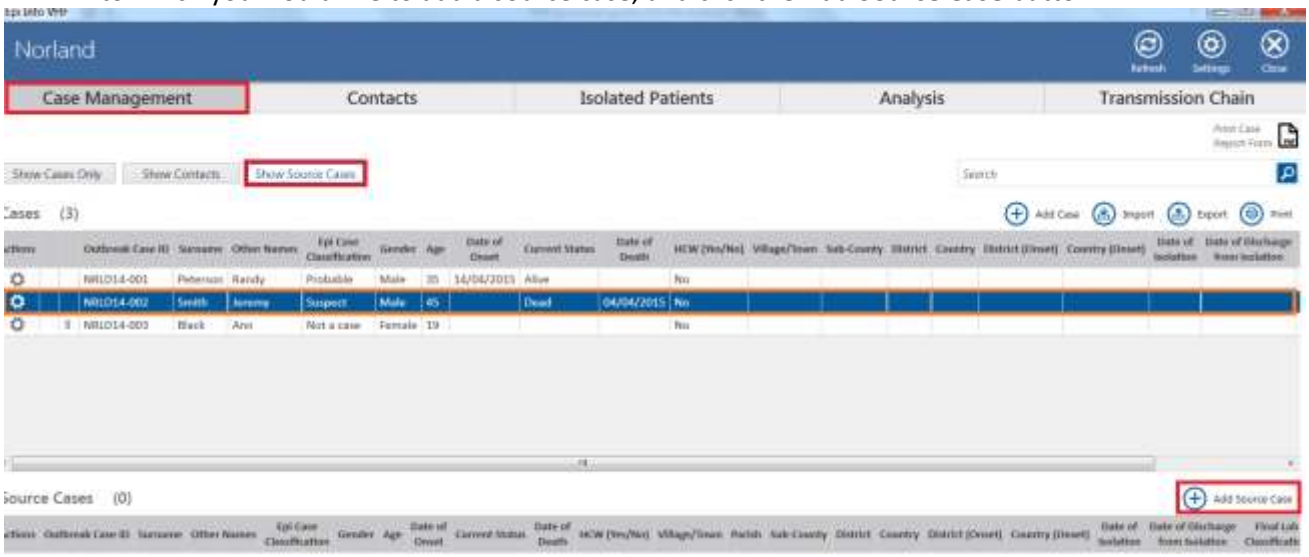
4) For a contact which is linked to only one case, you will then see an additional pop-up window telling you that this action will delete the contact, *as the application has been designed to disallow having contacts that are not linked to cases*. Click **Ok** if you wish to proceed. For a contact with links to multiple cases, you will not see this window as the unlinking action will simply remove the relationship between the currently-selected case in the **Cases** list and the selected contact, while leaving all other relationships intact.



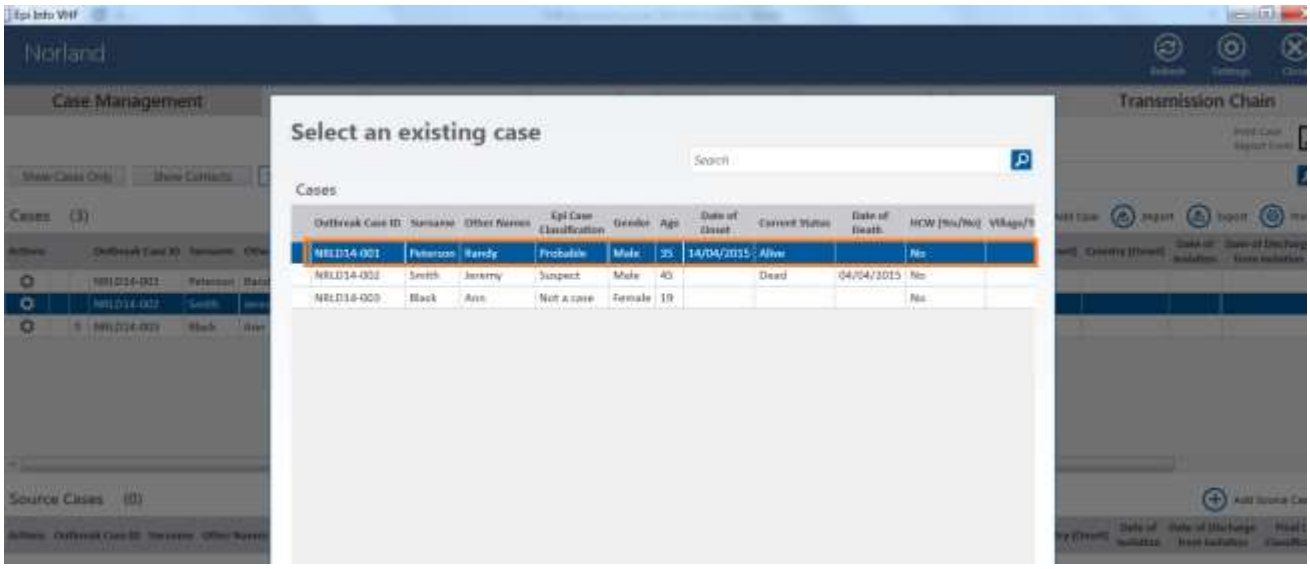
6.12 Working with Source Cases

Adding, editing, and linking/unlinking source cases works the same way as entering/editing information about contacts. Each case-source case relationship is used to generate the transmission chain.

1) To add a source case, click on the **Case Management** tab, **Show Source Cases** sub-tab, highlight the case to which you would like to add a source case, and click the **Add Source Case** button.

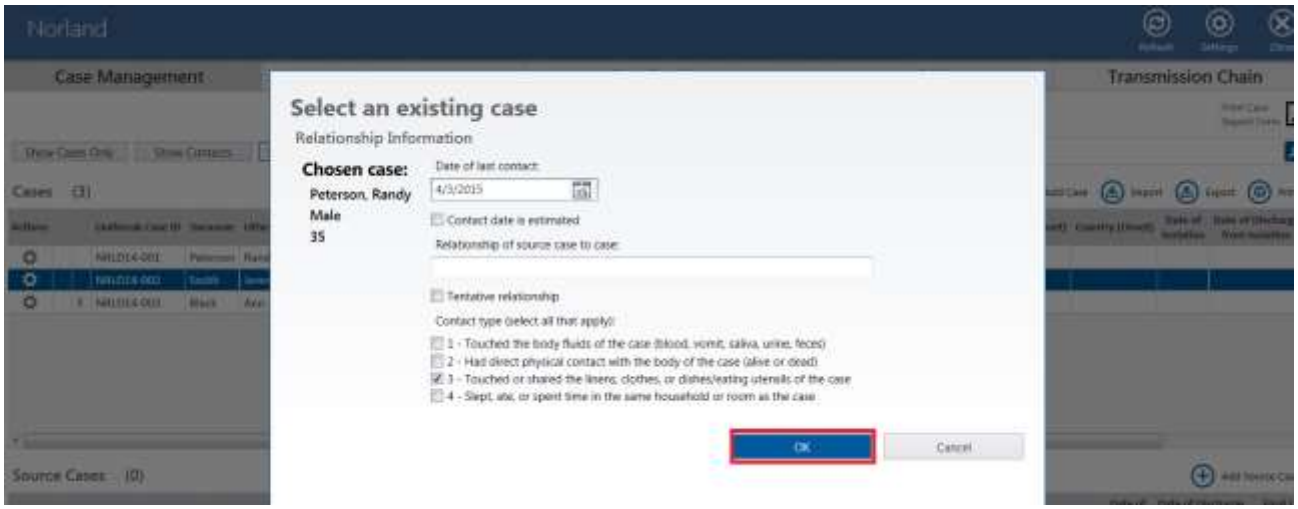


2) In the window that opens titled **Select an Existing Case**, select a source case.

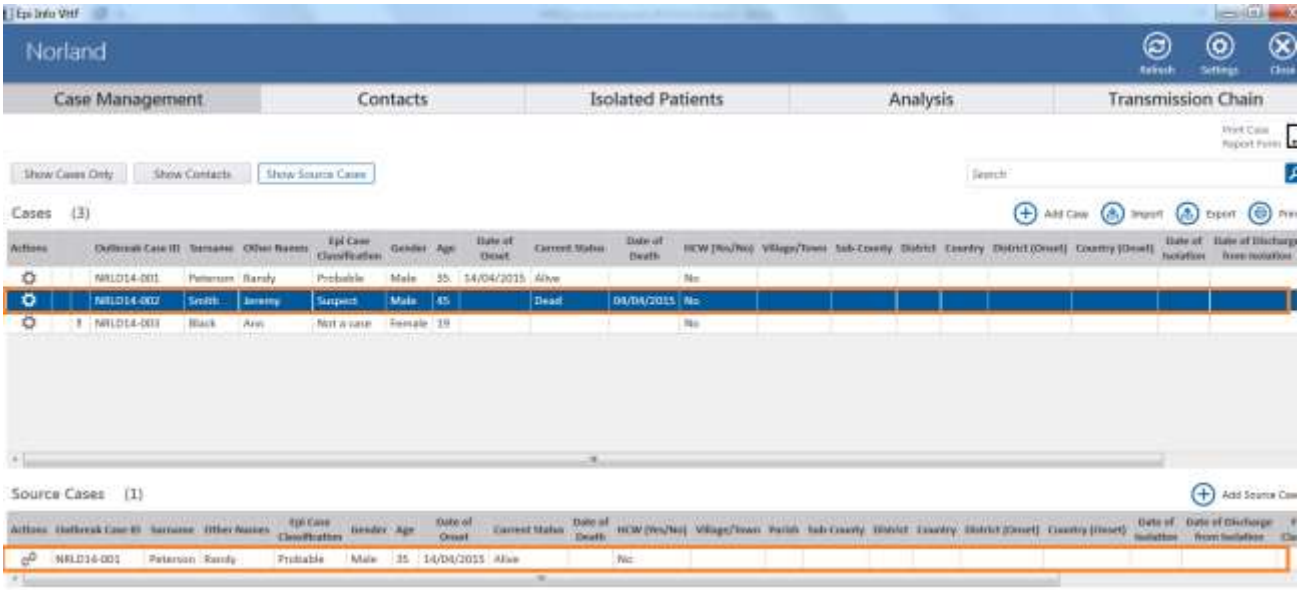


3) In the next window, relationship information will be added. Check whether the correct source case was selected under **Chosen Case**. If it is incorrect, click "Cancel" at the bottom right of the window and start over.
Select the **Date of Last Contact**. **Date of Last Contact** is mandatory and the record will not be saved if no date of last contact is provided. If the exact date is unknown, estimate a date and click the **Contact date is estimated** button.

4) Fill in the other information. Then click **Ok**.



5) The source case will now appear under the **Source Cases** window when the respective case is selected under the **Cases** window.

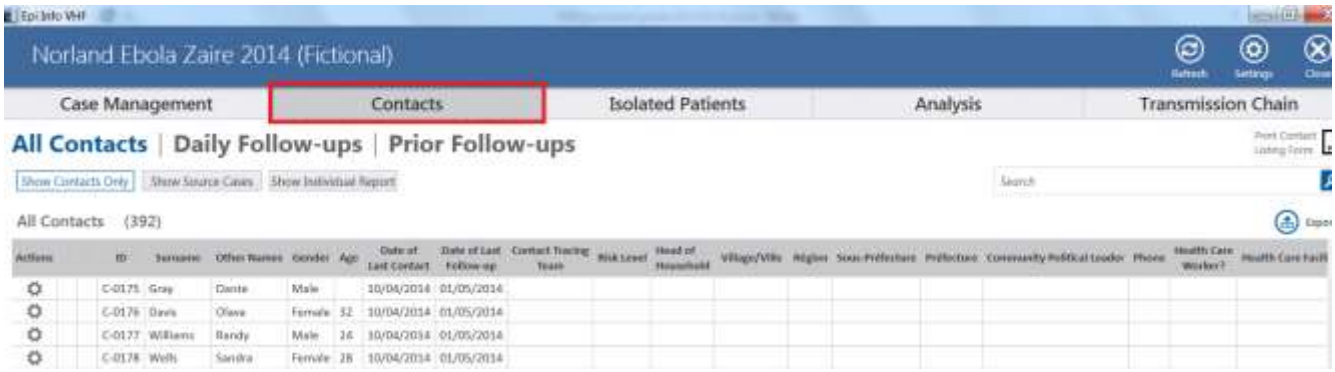


6) Please refer to chapters ***Editing a Case-Contact Link*** and ***Unlinking a Contact*** for editing, and linking/unlinking source cases (works the same way).

7 Contact Management

7.1 Contacts Sub-Tabs

Click the **Contacts** tab to navigate to the contact management panel.

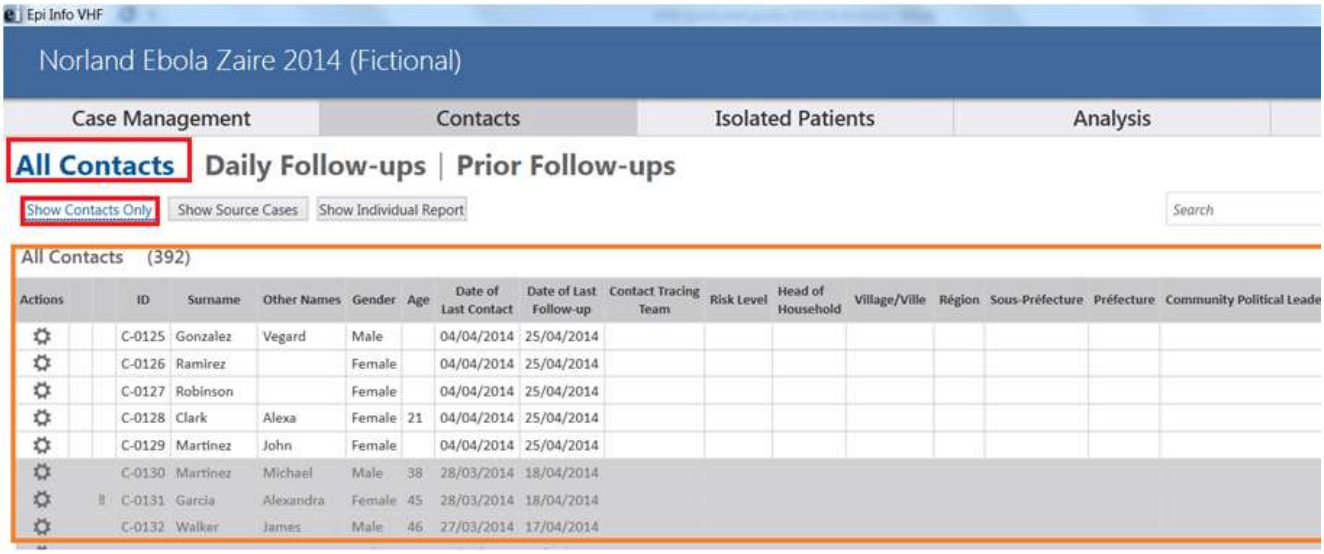


The **Contacts** tab has three *sub-tabs*:

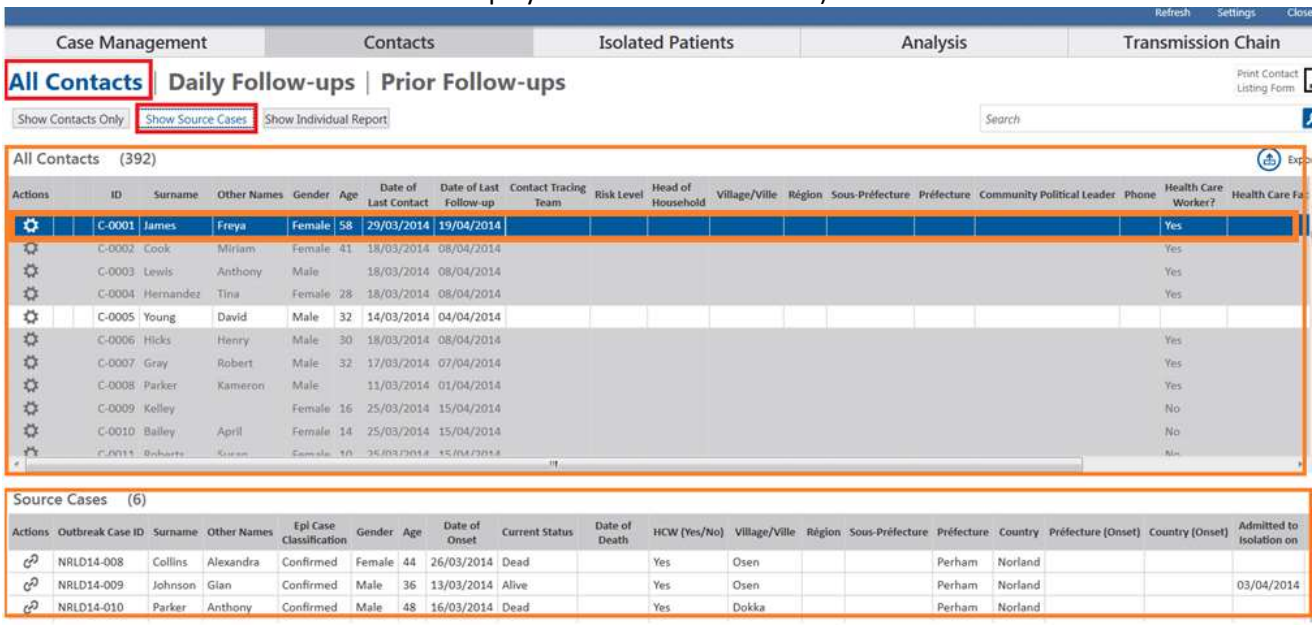
- The **All Contacts** sub-tab shows a line list of all contacts in the database. This is the only part of the application where all of the contacts are displayed at once.

It has three buttons.

- The **Show Contacts Only** button shows a contact linelist only. All active contacts (those currently under follow-up) are shown in *white* and all inactive contacts contacts (those who are no longer under follow-up) are also shown on the list but are shaded in *gray*.
  - All contacts who became cases will also be on the list, and are designated with double exclamation marks (!!) in red on the far left side of the line, indicating that they have both a case and a contact record.

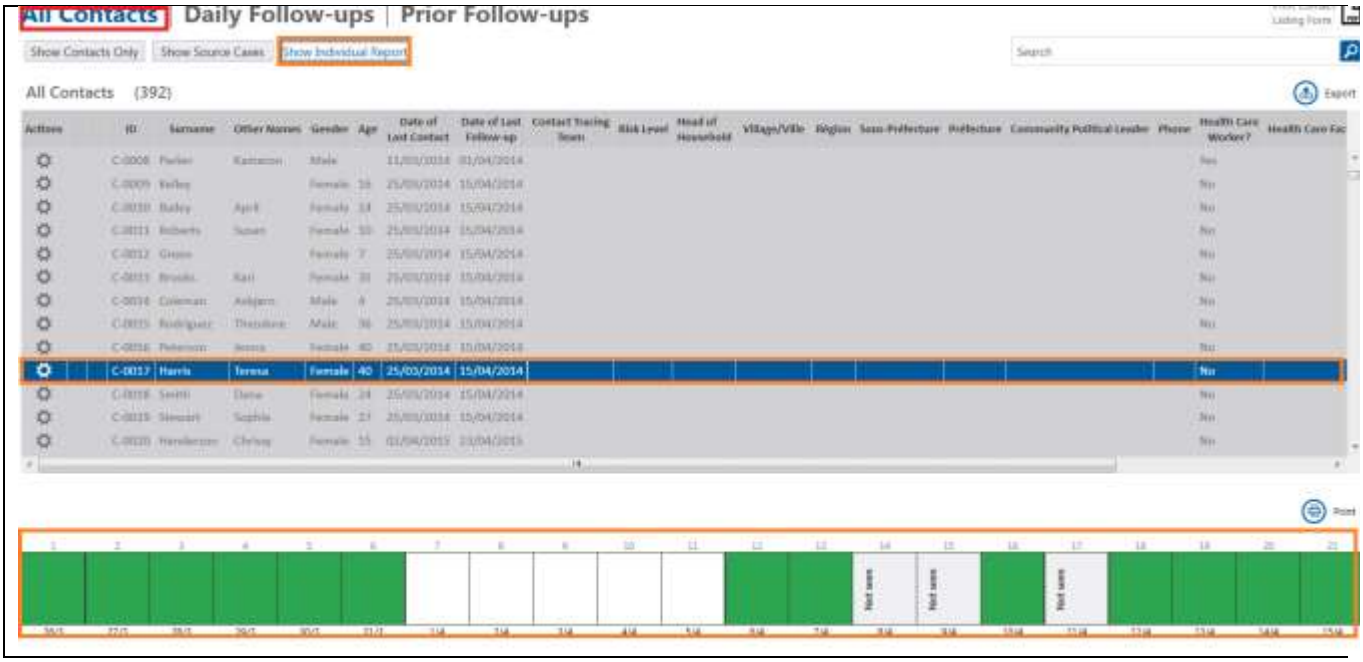


- The **Show Source Cases** button shows contacts in the upper window and source cases for the currently selected contact in the lower window (for example, the contact highlighted below in blue has 6 source cases displayed in the lower window).

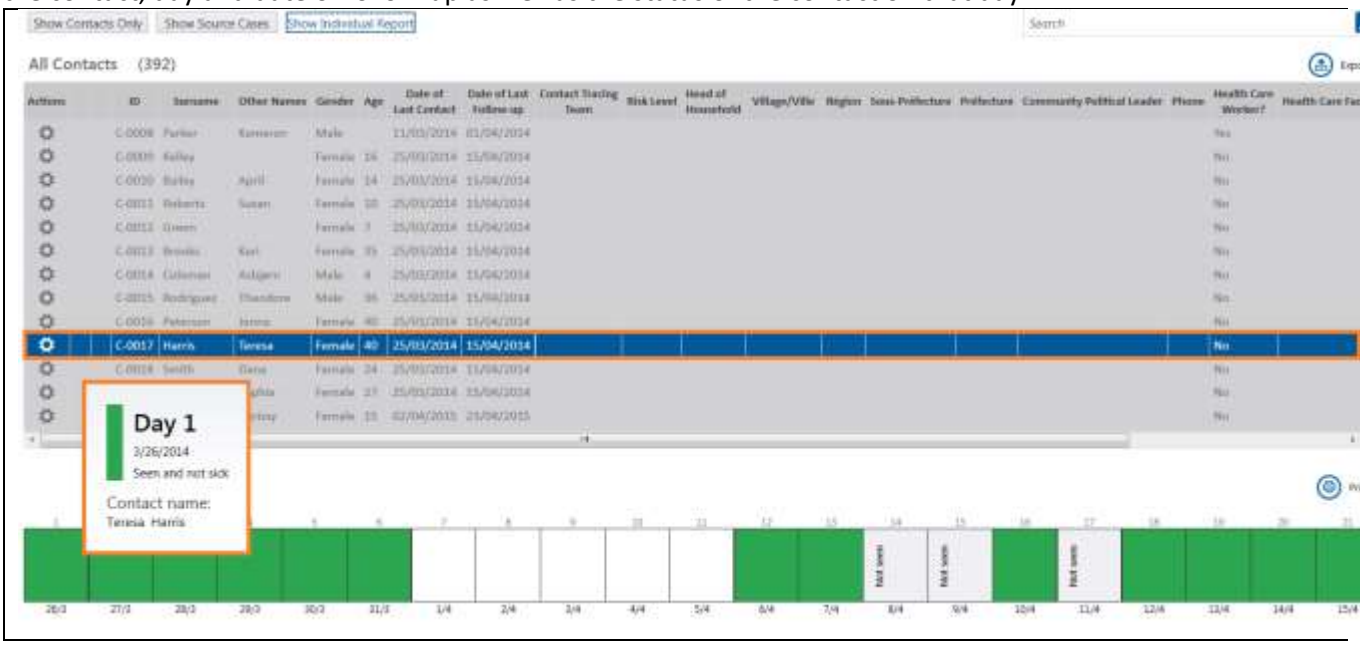


Note. Contacts can have **any number of source cases**.

- The **Show Individual Report** button will show the 21-day follow-up window for the selected contact with the status of the contact on each of those 21 days if it has been entered in the database.



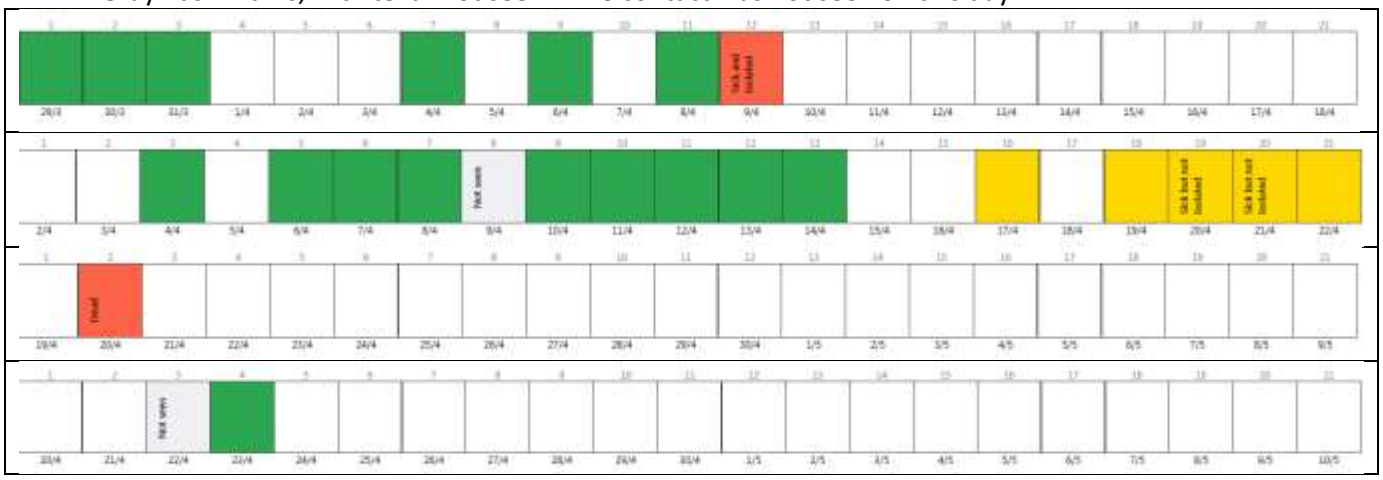
Hovering the cursor over a box for a date in the individual report graphic will bring up a box with the name of the contact, day and date of follow-up as well as the status of the contact on that day.



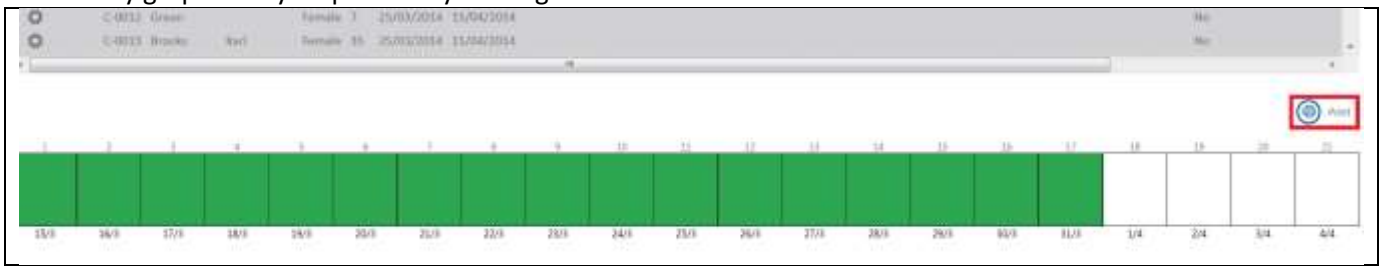
Different colors and text displays may be present in each of the 21 boxes (as in examples shown below). These combinations indicate different recorded *statuses* of the contact on the indicated day:

1. White: The contact's status is unknown (not entered or marked not reported).
2. Green: The contact was seen and healthy.
3. Yellow, no text: The contact was sick, but whether they were isolated in an Ebola treatment center or not is unknown.

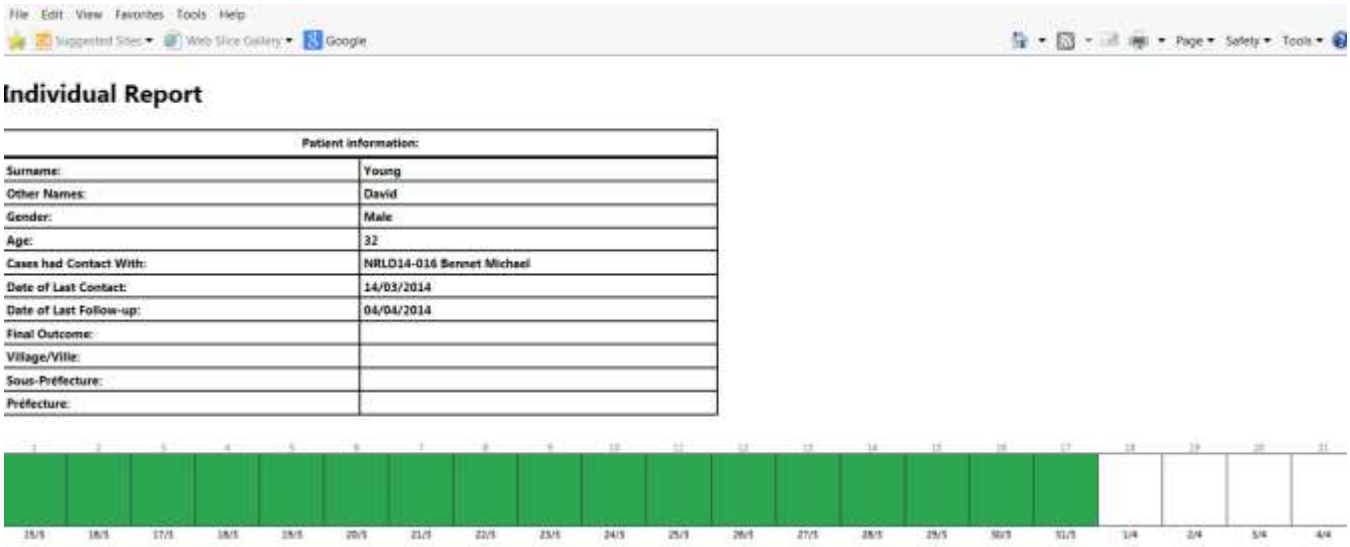
4. Yellow, with text "Sick but not isolated": The contact was sick but wasn't isolated in an Ebola treatment center.
5. Red, with text "Sick and isolated": The contact was seen, sick, and taken to isolation. The contact was converted to a case in the database.
6. Red, with text "Died": The contact was found out to have died on this day and was converted to a case in the database.
7. Gray hash marks, with text "Not seen": The contact was not seen on this day.



The 21-day graphic may be printed by clicking the **Print** button.



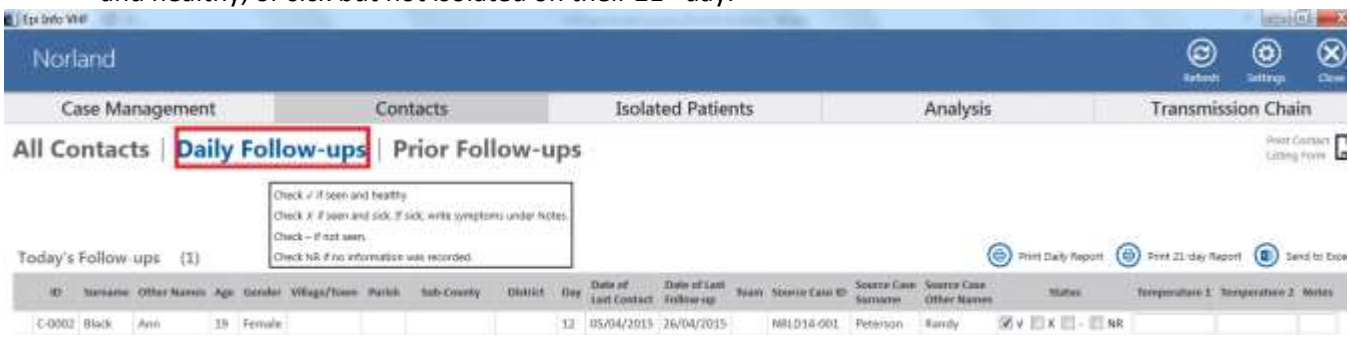
The 21-day chart **Individual Report** will be displayed in the web browser as shown below.
Warning: If Firefox is the computer's default web browser, the 21-day report may be unprintable. The report should work fine in all versions of Internet Explorer versions 9 and newer. Our team is currently aware of this issue and working on a fix that doesn't rely on web browsers to print.



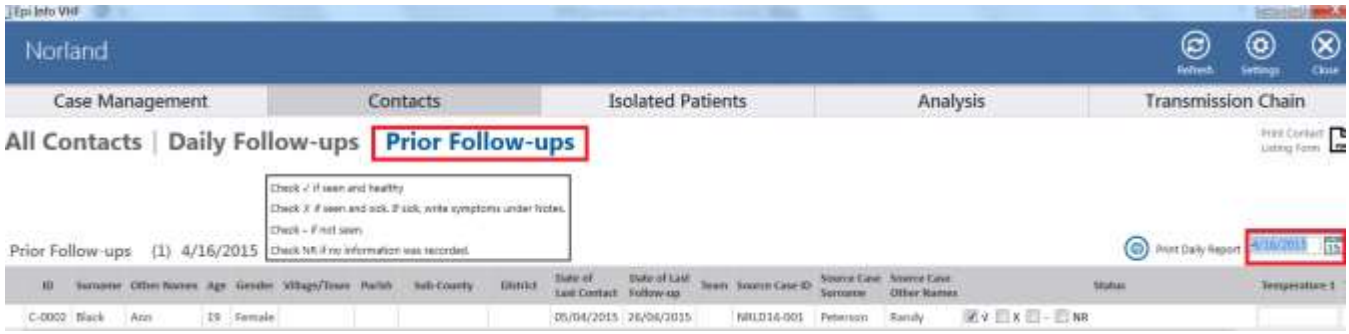
Individual Report

Patient information:	
Surname:	Young
Other Names:	David
Gender:	Male
Age:	32
Cases had Contact With:	NRLD14-016 Bennet Michael
Date of Last Contact:	14/03/2014
Date of Last Follow-up:	04/04/2014
Final Outcome:	
Village/Ville:	
Sous-Préfecture:	
Préfecture:	

- The **Daily Follow-Ups** sub-tab shows the contacts that need to be followed today and are currently in their 21-day follow-up period. It will not show those contacts that are still active/under follow-up but past their 21st day of follow-up -- these contacts would still be active if they were not checked as seen and healthy, or sick but not isolated on their 21st day.

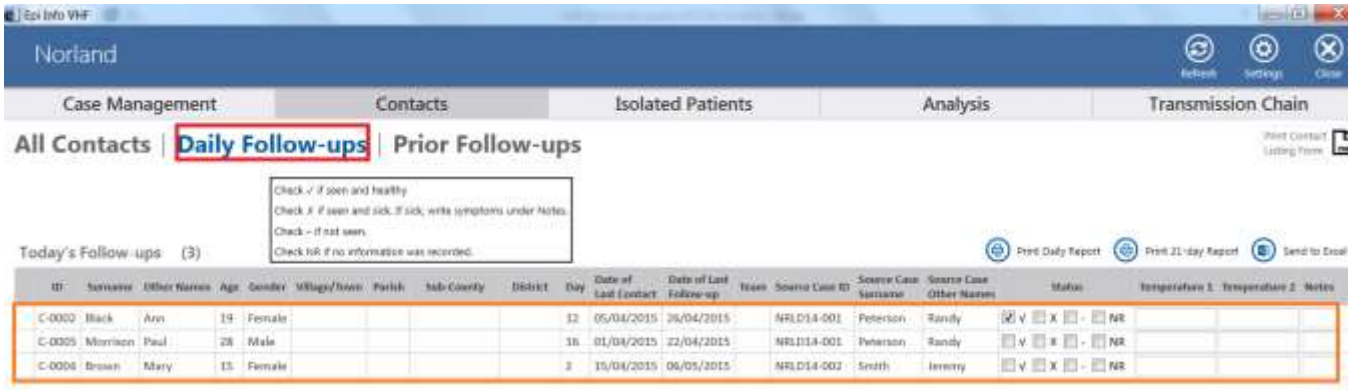


- The **Prior Follow-Ups** sub-tab allows the user to view the contacts that are currently active and in their 21 day follow-up period that needed to be followed on a specific day in the past, or one day in the future (tomorrow). It will not show those contacts that are still active/under follow-up but past their 21st day of follow-up -- these contacts would still be active if they were not checked as seen and healthy, or sick but not isolated on their 21st day.



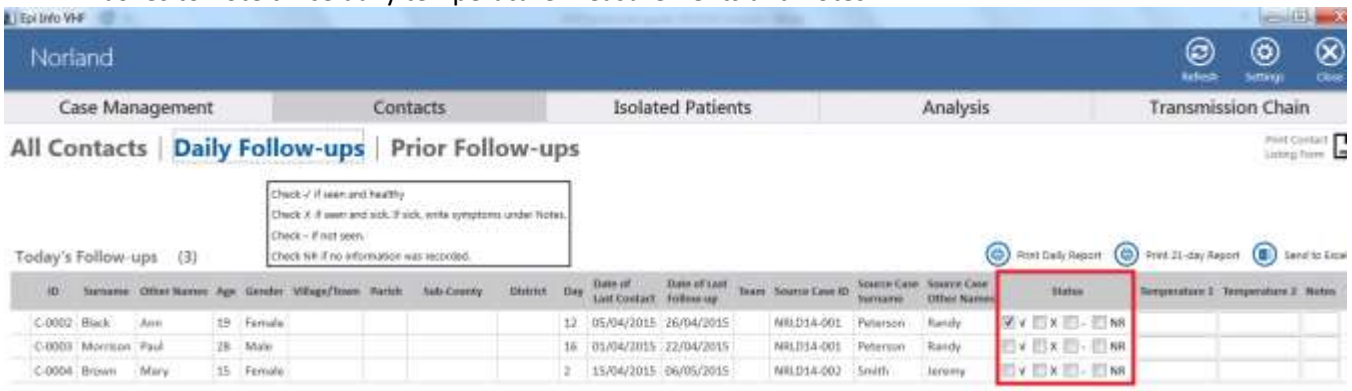
7.2 Contact Tracing

Click the **Daily Follow-Up** sub-tab. This list shows all contacts that need to be followed on the current date, as in the image below.

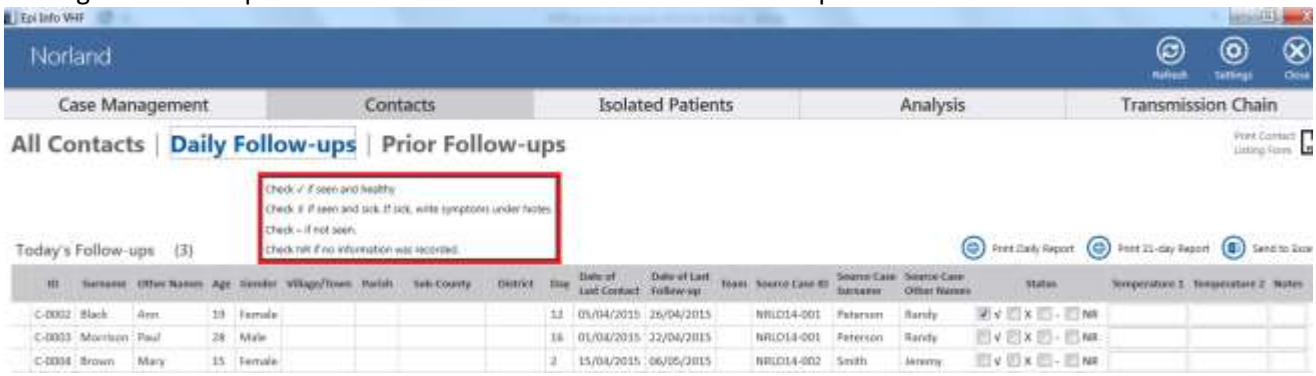


7.3 Marking a Contact's Status

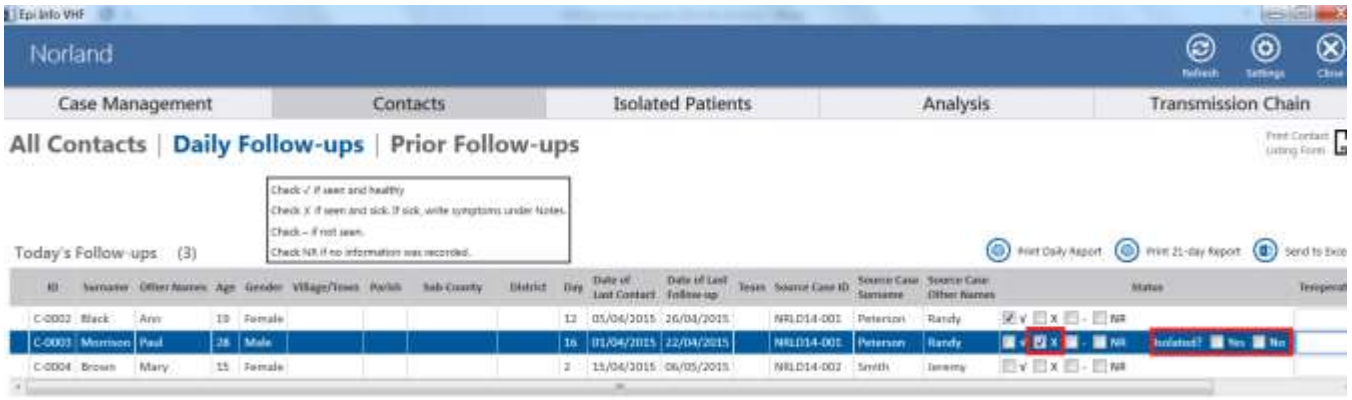
1) Click one of the checkboxes in the **Status** column to mark a contact's status for today. There are also boxes to note twice daily temperature measurements and notes.



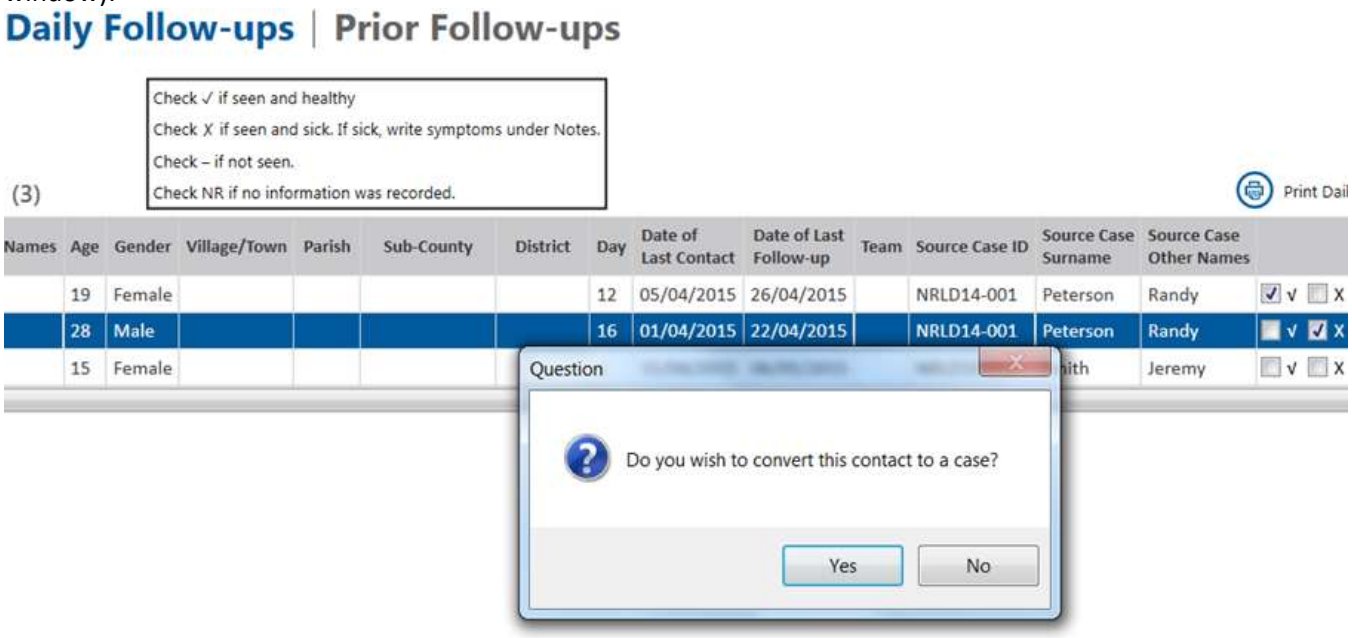
The legend at the top of the list shows what status each checkbox represents.



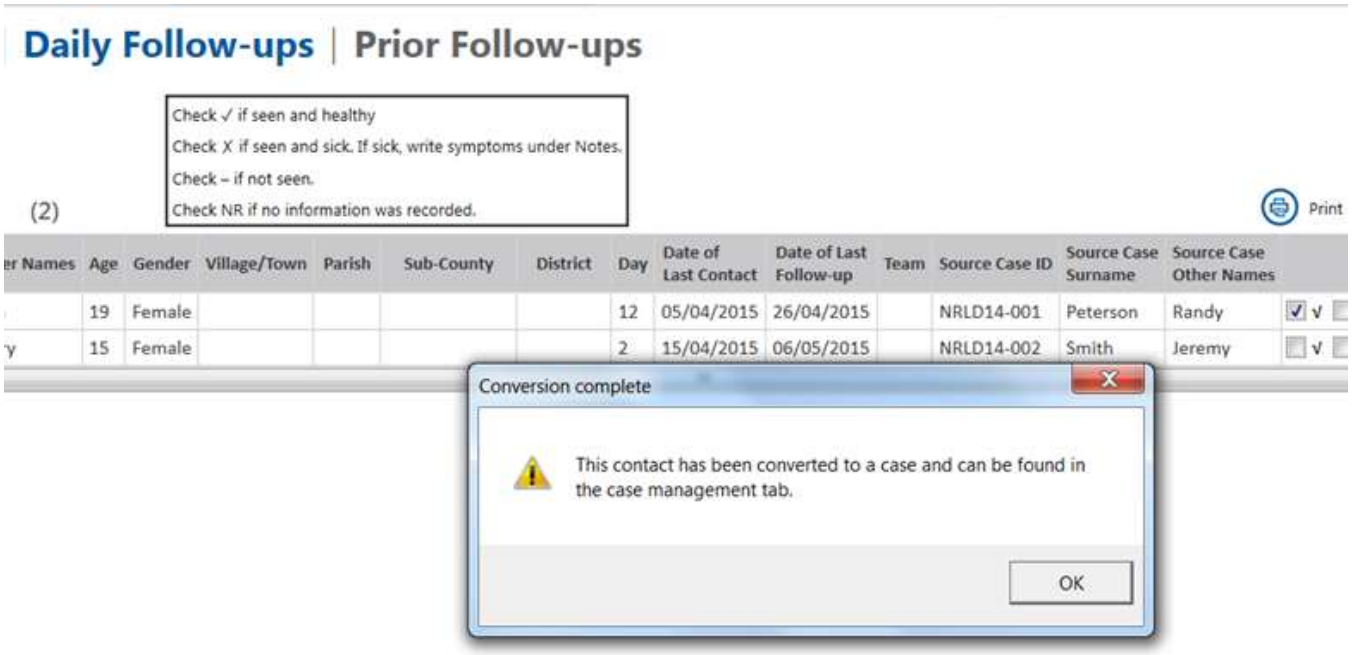
Note that marking "X" indicates a contact was seen and sick, but does not by itself specify whether the contact was brought to isolation. Marking "X" will bring up a second set of checkboxes labeled **Isolated?** asking whether the contact was isolated or not, as shown below.



Marking a contact as ***seen and sick***, and **Isolated?** as ***Yes*** will prompt you to be asked if you want to convert the contact into a case. You should do this unless you chose "Yes" for "Isolated" in error (click ***Yes*** in the pop up window).

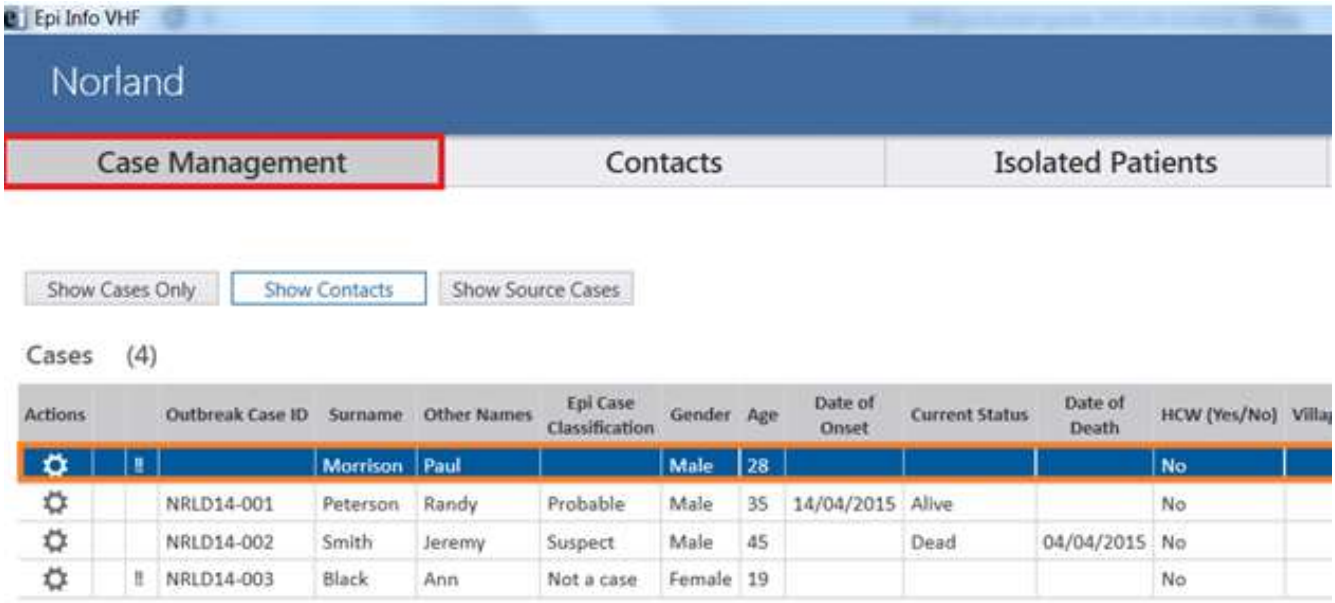


Then you will see another pop up window labeled **Conversion Complete.**



Then, the contact will be removed from the daily follow-up list. The contact will still appear in the full list of contacts but will be colored gray to represent that they no longer need to be actively followed as a contact.

You can confirm that this contact was converted to a case under the **Case Management** tab.



7.4 Printing the Daily Follow-Up List

The daily follow-up list can be printed and given to contact tracing teams at the start of each day. To do this, click the **Print Daily Report** icon above the **Today's Follow-ups** line list. The list printed will include all active contacts (those that need to be followed) whether or not they are still in their 21-day follow-up period.

The **Contact Tracing Daily Follow-up Report** will be displayed in the web browser as shown below. By default, contacts will be grouped by village when printing.

File Edit View Favorites Tools Help

Suggested Sites ▾ Web Slice Gallery ▾ Google

Page ▾ Safety ▾ Tools ▾

VIRAL HEMORRHAGIC FEVER

CONTACT TRACING DAILY FOLLOW-UP

Date: 4/17/2015

- Write ✓ if seen and healthy
- Write ✗ if seen and sick. If sick, write symptoms under Notes.
- Write – if not seen.

Team:

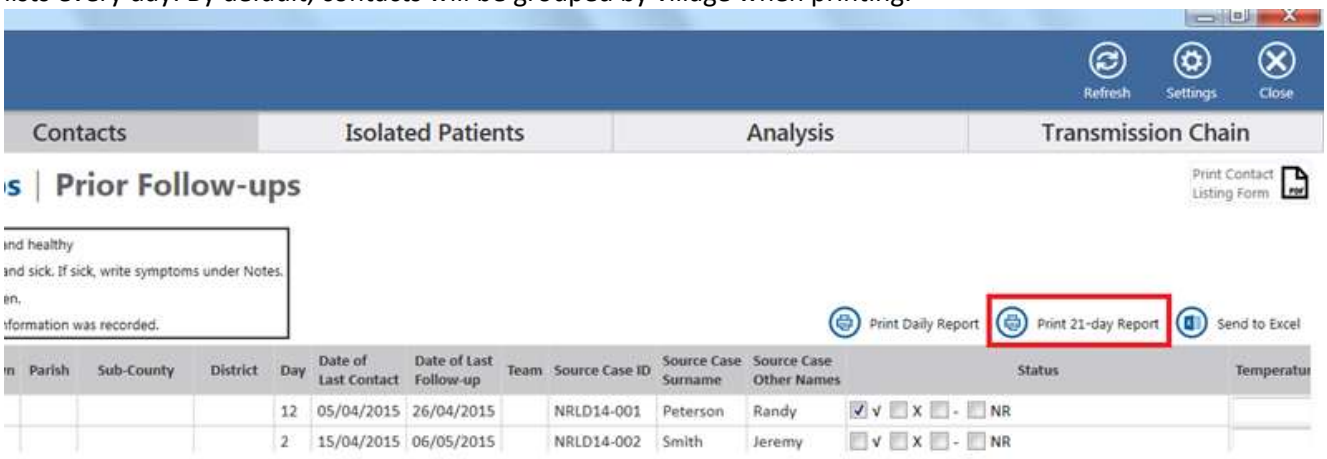
Team Leader:

Village/Town: **Sub-County** **District**
Community Political Leader:

ID	Surname	Other Names	Sex	Age	Date of Last Contact	Date of Last Follow-up	Day	Date Last Seen	Source case	Head of Household	Phone	Health Facility (if HCW)	Status	Notes:
C-0002	Black	Ann	F	18	05/04/2015	26/04/2015	12	17/04/2015	Peterson Randy					
C-0004	Brown	Mary	F	15	15/04/2015	06/05/2015	2	16/04/2015	Smith Jeremy					

* Contact is past 21st day of follow-up but was not seen on the 21st day. Please check on what the contact's health status was on their 21st day of follow-up.

Alternatively, the **Print 21-Day Report** will show the same information but for the full 21-day follow-up period for each case. The 21-day list may be useful in cases where you have limited resources and can't print contact lists every day. By default, contacts will be grouped by village when printing.



The **Contact Tracing 21-Day Follow-up List** will be displayed in the web browser as shown below.

File Edit View Favorites Tools Help

Suggested Sites ▾ Web Slice Gallery ▾ Google

Page ▾ Safety ▾ Tools ▾

VIRAL HEMORRHAGIC FEVER

CONTACT TRACING 21-DAY FOLLOW-UP LIST

Date printed: 4/17/2015

- Write ✓ if seen and healthy
- Write ✗ if seen and sick. If sick, write symptoms under Notes.
- Write – if not seen.

Team:

Team Leader:

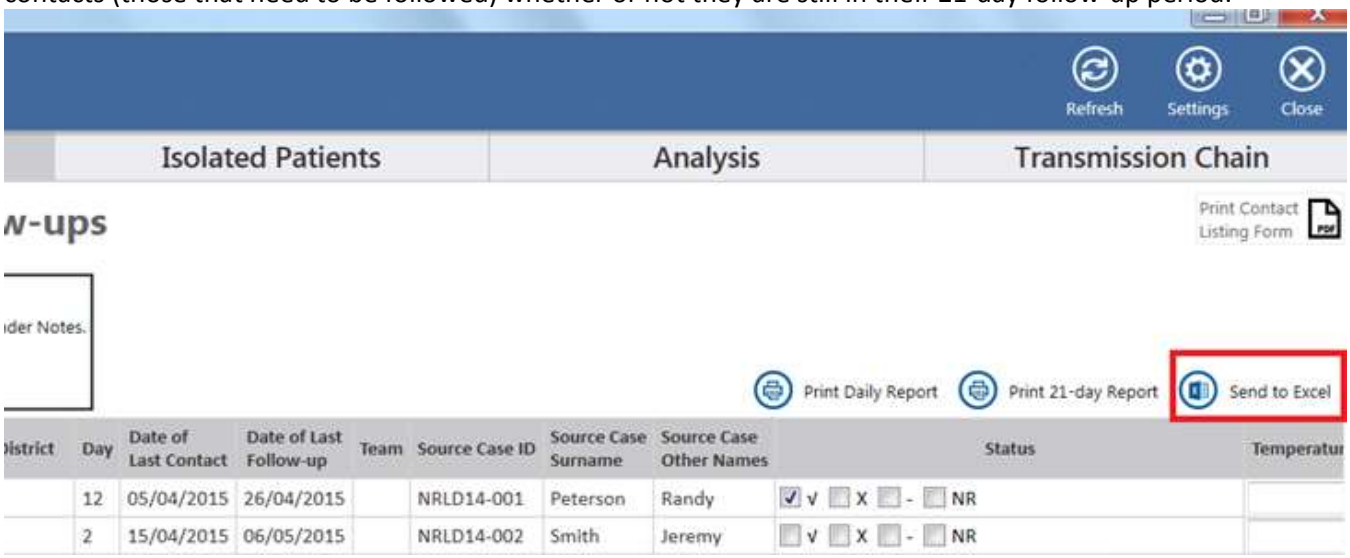
Village/Town **Sub-County** **District**
Community Political Leader:

ID	Surname	Other Names	Sex	Age	Date of last contact	Source case	Head of household	Phone	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Notes									6/4/15	7/4/15	8/4/15	9/4/15	10/4/15	11/4/15	12/4/15	13/4/15	14/4/15	15/4/15	16/4/15	17/4/15	18/4/15	19/4/15	20/4/15	21/4/15	22/4/15	23/4/15	24/4/15	25/4/15	26/4/15
C-0002	Black	Ann	F	19	05/04/2015	Peterson Randy					✓	✗	✗		✓	✓	-	✓	✗	✓									
Notes									16/4/15	17/4/15	18/4/15	19/4/15	20/4/15	21/4/15	22/4/15	23/4/15	24/4/15	25/4/15	26/4/15	27/4/15	28/4/15	29/4/15	30/4/15	1/5/15	2/5/15	3/5/15	4/5/15	5/5/15	6/5/15
C-0004	Brown	Mary	F	15	15/04/2015	Smith Jeremy			✓																				

* Contact is past 21st day of follow-up but was not seen on the 21st day. Please check on what the contact's health status was on their 21st day of follow-up.

7.5 Sending the Contact List to Excel

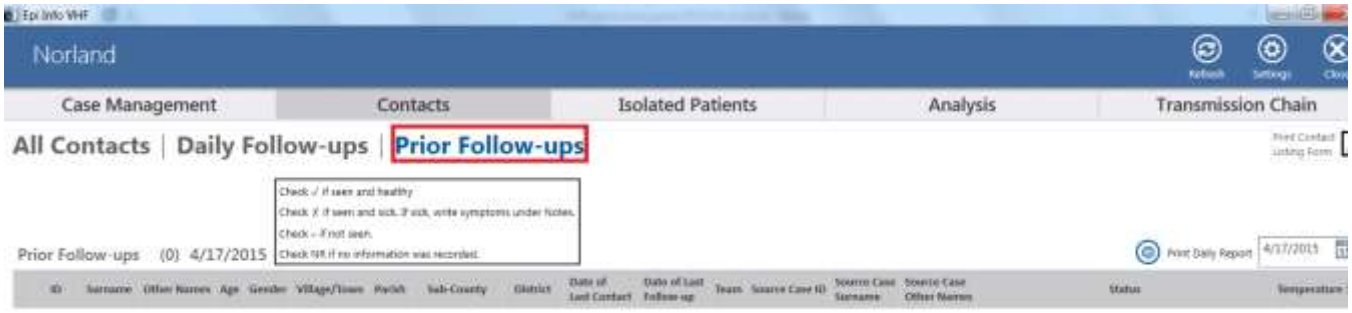
The daily follow-up list can also be sent to Excel using the **Send to Excel** button. This export will include all active contacts (those that need to be followed) whether or not they are still in their 21-day follow-up period.



Excel-based output gives end-users the ability to sort, filter, print, and otherwise manipulate the list in ways specific to their current needs.

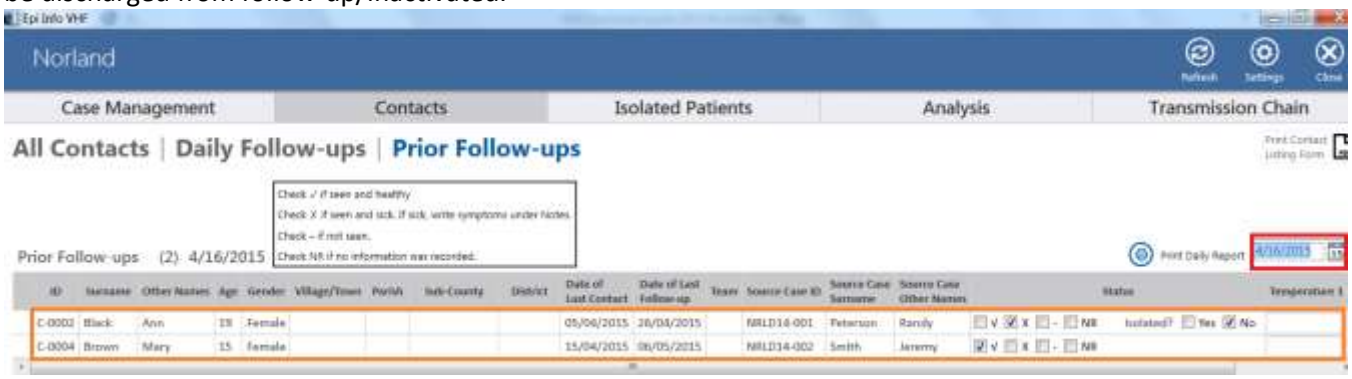
7.6 Editing a Contact's Status for Prior Days

If it is necessary to edit a contact's status for a day prior to today, you can use the **Prior Follow-Ups** sub-tab.



Select a date using the calendar on the right edge of the window. The list will update with the contacts from that date. You can then update the status of contacts for the selected date.

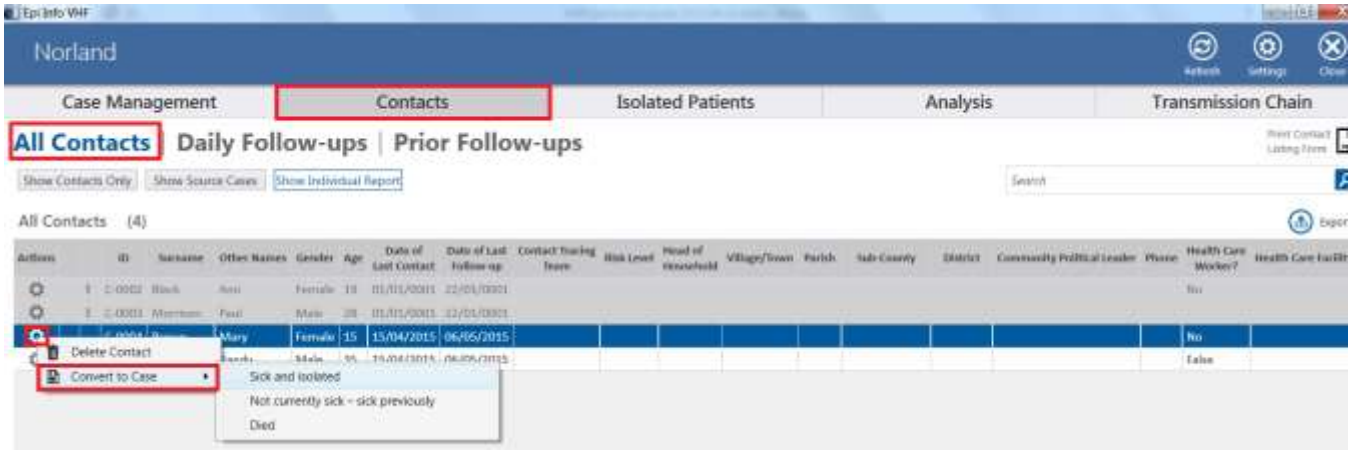
If a contact that was still be followed but was past their 21st day of follow-up (because they weren't found on their 21st day) has been found an their 21st day status verified, enter the date of their 21st day of follow-up to enter the information for that day. If a check mark or X and the answer 'No' to "Isolated?" is entered, they will be discharged from follow-up/inactivated.



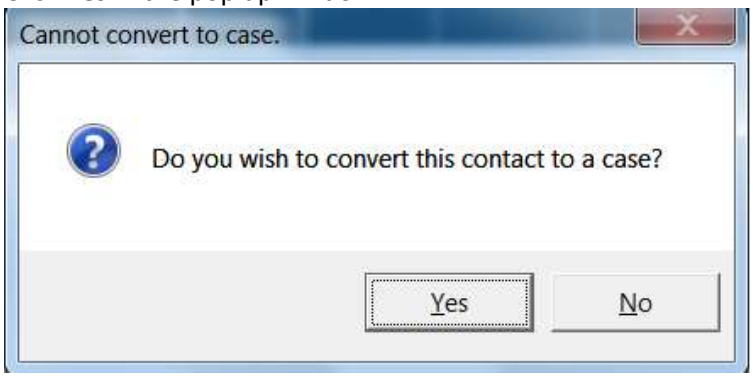
This feature can also be used to show ***tomorrow's list of contacts***, e.g. if you want to print your contact tracing reports the day beforehand. To do this, select tomorrow's calendar date on the right edge of the window and click on **Print Daily Report**.

7.7 Converting a Contact to a Case

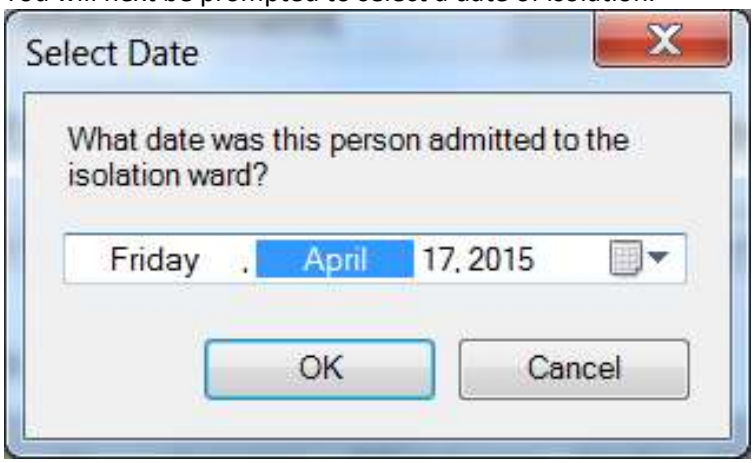
Another way to convert a contact to a case (without having to mark a contact as seen/sick/isolated in the daily or previous follow-up sub-tabs) is by opening the **All Contacts** sub-tab and clicking the gear icon under the Actions column, then selecting **convert to case** for the selected contact.



Click **Yes** in the pop up window.



You will next be prompted to select a date of isolation.

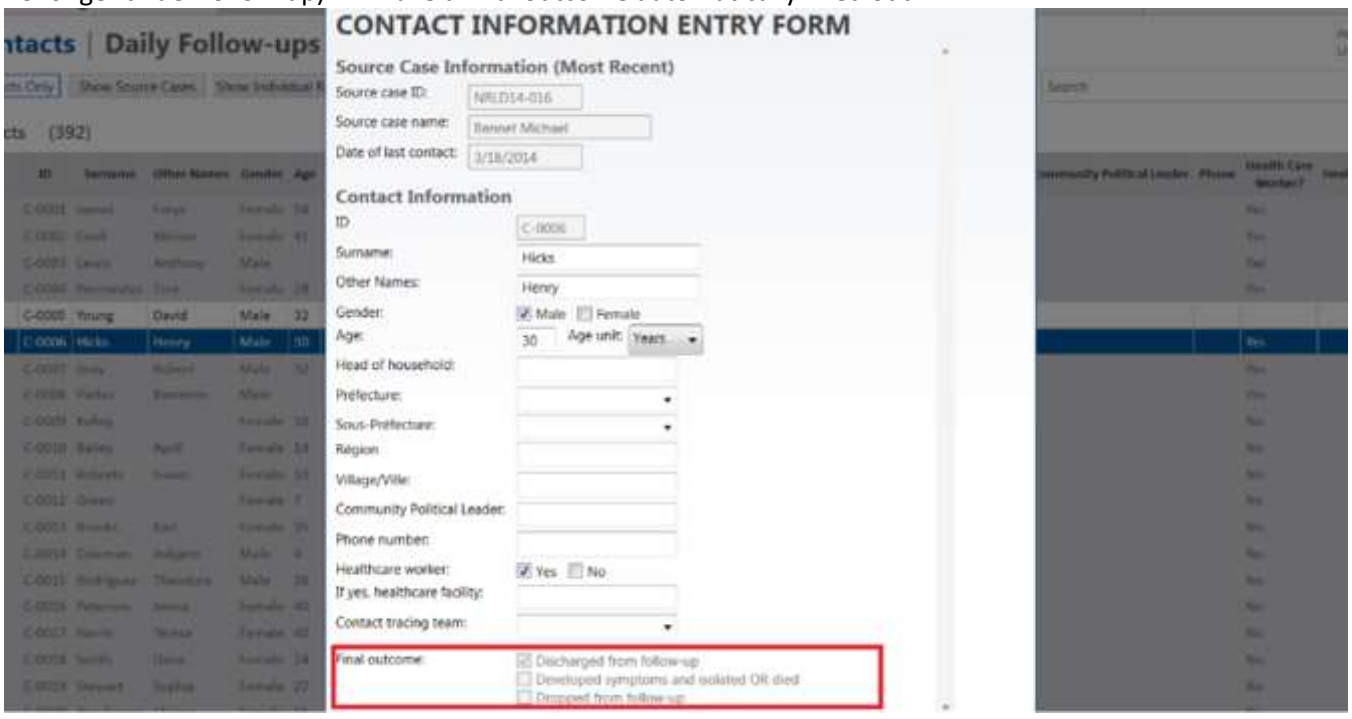


Another option in the convert to case menu that is not found in the daily or previous follow-up views is marking a contact as dead. This feature is designed for situations where a contact has died due to suspected viral hemorrhagic fever and needs to be converted into a case record. The 'isolated' status is insufficient to capture this scenario.

Manual conversions are otherwise the same as converting a contact to a case in the follow-up views.

7.8 Contact Final Outcomes

The **Final Outcome** field on the **Contact Information Entry Form** is used for behind-the-scenes data management and is considered critical to the system for contact tracing and management. It cannot be edited (except for authorized system administrators) to prevent damage to the database. All inactive contacts (those no longer under follow-up) will have a final outcome automatically filled out.



The valid final outcomes are:

- **Blank (empty).** A blank final status means a contact is either within the 21-day follow-up window, or is outside the 21-day follow-up window but wasn't seen on their 21st day, and is therefore still active/under follow-up.

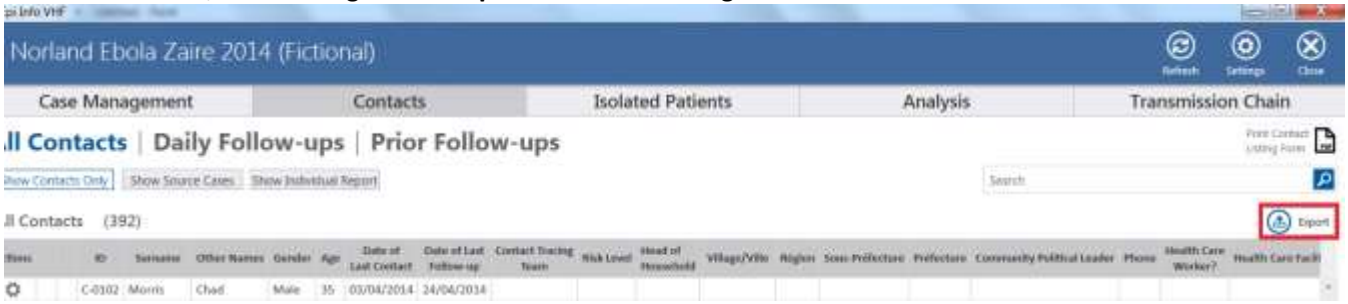
- **Discharged from follow-up.** This means the contact was seen and not sick on their 21st day of follow-up or seen and sick but not isolated, and are no longer being tracked for contact tracing.
- **Developed symptoms and isolated OR died.** This means the contact developed symptoms and was sent to isolation because they met the case definition, or they died while under follow-up. In either case, they are no longer tracked for contact tracing.
- **Dropped from follow-up**. This means all of the contact's source cases tested negative for hemorrhagic fever and the contact therefore no longer needs follow-up.

A contact with a final outcome recorded will not appear in any contact tracing or follow-up reports. Again, it is recommended to let the application handle setting these final outcomes automatically.
Here are the ways in which final outcomes are automatically set by the application:

1. Marking a contact as "seen and not sick" on their 21st day. Final status: Discharged from follow-up.
2. Marking a contact as "sick and isolated", which converts that contact to a case. Final status as a contact: Developed symptoms and isolated OR died.
3. Marking all of a contact's source cases as "not a case." If all of a contact's source cases aren't cases, the contact doesn't need follow-up and is dropped. Final status: Dropped from follow-up.
4. No marking on a contact's status on 21st day will make no final outcome appear and the contact will remain active.

7.9 Exporting Contact Data to Excel

Contact data can be exported into a CSV format (which can be opened in Excel) by going to the **Contacts** tab, **All Contacts** sub-tab, and clicking on the **Export** button to the right above the linelist.



This export will export ALL fields on the contacts form inthe database. One option is present for CSV export of contact data - **Export as Excel Spreadsheet for Analysis**, which generates a CSV file with the values and column names found in the database.

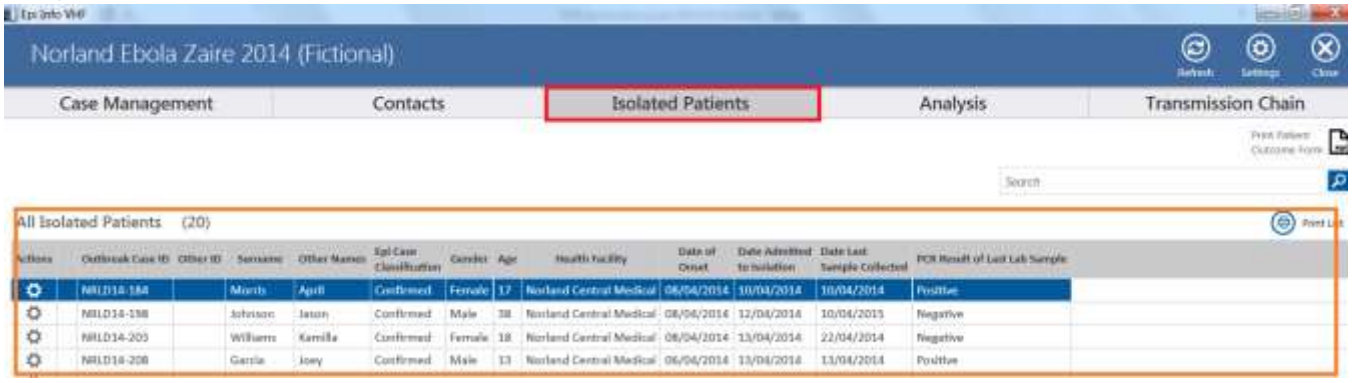
In addition, some information has been specifically added to the contact CSV file. The following table summarizes information in the CSV files that is ***in addition*** to the information on the contact form in the VHF application. Information in parenthesis in the table below denotes where in the application the information is derived from.

Variable in CSV file	Description
GlobalRecordId	A Global Unique Identifier (GUID), computer-generated Unique ID.
ThisContactIsAlsoCase	This variable denotes whether this contact also has a case record. "FALSE" means that this contact has no case record. "TRUE" means that this contact has both a contact and a case record. "TRUE" will be marked whether this contact was initially entered as a contact and then was converted to a case, or this contact was entered as a case, and then was converted to a contact.
SourceCaseID	ID of the most recent source case for this contact.
SourceCase	Most recent source case other name and surname (Contact Relationship with Source Case).

RelationshipToCase	Contact Relationship with most recent Source Case (Contact Relationship with Source Case).
ContactTypes	Type of Contact with most recent source case: 1-Touched the body fluids of the case (blood, vomit, saliva, urine, feces), 2-Had direct physical contact with the body of the case (alive or dead), 3- Touched or shared the linens, clothes, or dishes/eating utensils of the case, 4-Slept, ate, or spent time in the same household or room as the case. (Contact Relationship with Source Case).
DateLastContact	Date of last contact with most recent source case (Contact Relationship with Source Case).
DateOfLastFollowUp	Date of last follow up of the contact. (Daily follow ups).
TotalSourceCases	Total number of source cases listed for this contact (Summary variable).
DateCSVExported	Date when this Excel file was exported from the VHF application.
FollowedToday	Was contact followed today ("today" is the date in "DateCSVExported")? "TRUE" is yes, "FALSE" is no. (Daily follow ups).
FollowedYesterday	Was contact followed yesterday ("yesterday" is one day before "DateCSVExported")? "TRUE" is yes, "FALSE" is no. (Daily follow ups).
FollowedDayBeforeYesterday	Was contact followed the day before yesterday (two days before "DateCSVExported")? "TRUE" is yes, "FALSE" is no. (Daily follow ups).
Day1 – Day 21	These twenty one variables show the status of the patient on each of the 21 days of the follow up (i.e. "Seen and healthy; Seen and sick; Not seen; No information was recorded"). (Daily follow ups).
Temp1_1 – Temp1_21	These twenty one variables show the 1st temperature measurement on each of the 21 days of the follow up. (Daily follow ups).
Temp2_1 – Temp2_21	These twenty one variables show the 2nd temperature measurement on each of the 21 days of the follow up. (Daily follow ups).
Day1Notes – Day21Notes	These twenty one variables show notes for each of 21 days of the follow up. (Daily follow ups).

8 Isolated Patients

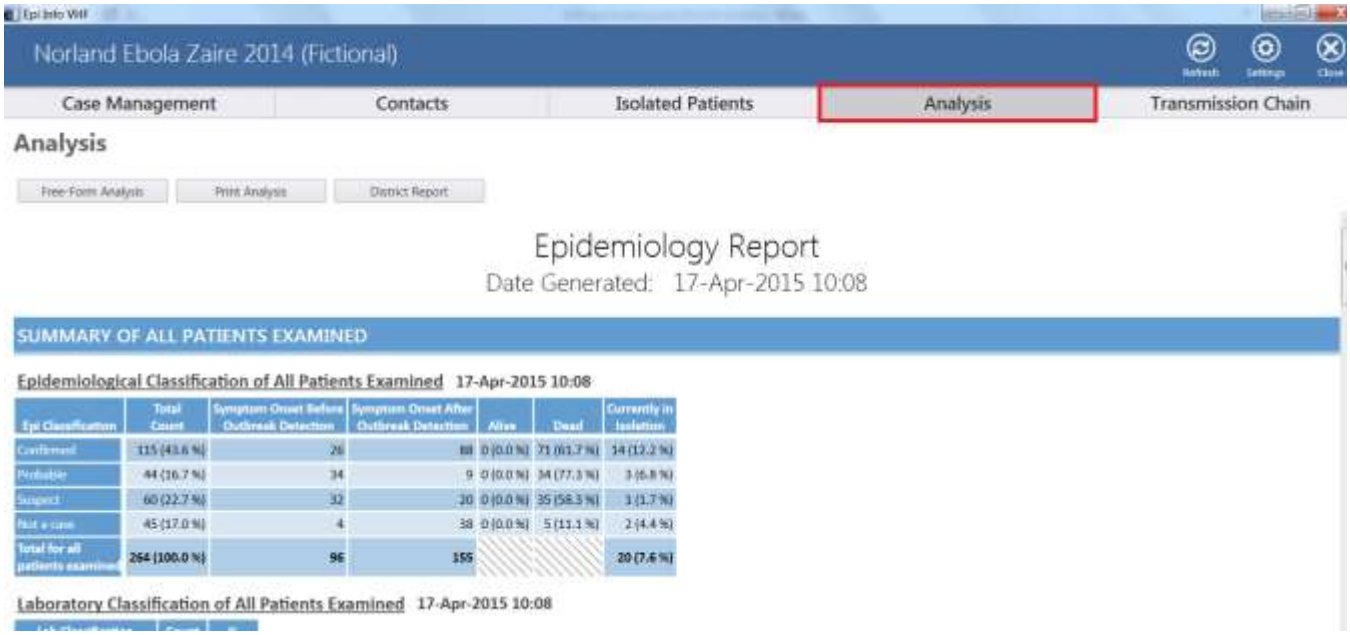
The Isolated Patients tab shows all patients currently in isolation. The application uses a special filter to determine which cases show up in this list. Any cases that have been marked as being in isolation or that have an isolation date should appear unless the case also has an isolation discharge date, a hospitalization discharge date, or a date of death.



9 Analysis

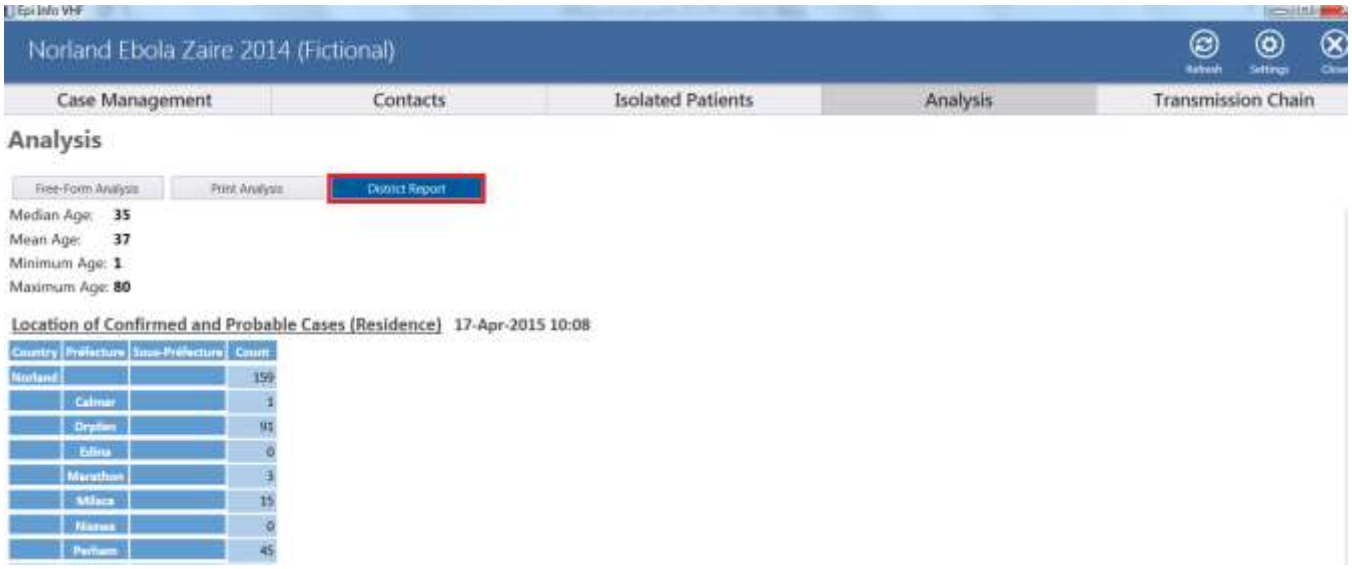
9.1 Pre-Specified Analyses

Various pre-built analyses ("canned analysis") and free-form analyses using Epi Info 7 are available in the **Analysis** tab. Several pre-defined tables and two epi curves are displayed when the user clicks on the **Analysis** tab. Please note: The epi curve charts in the analysis tab have a y-axis that by default increments by 1, until the highest value exceeds 36, in which case it will increment by 2.



The analysis tab can be printed by clicking the **Print Analysis** button.

A special district-based report can be printed by clicking the **District Report** button.



Clicking the **Free-form Analysis** button brings up several options for analyzing the data in Epi Info 7. Because Epi Info 7's analysis tools are general-purpose, you can run many different kinds of analyses that aren't otherwise available in the VHF application interface (for example, if you would like to find the median age of all probable cases, you can do this using the Epi Info 7 tools.)

9.2 Custom Analyses

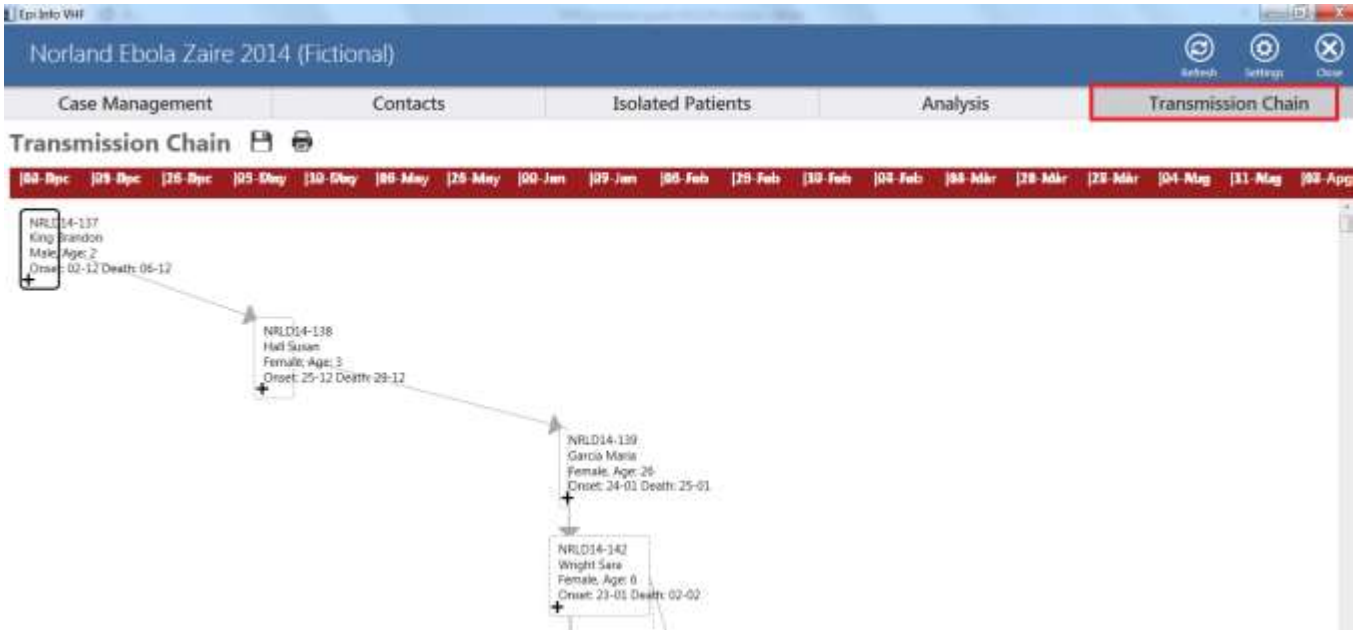
Dashboard canvas files can be run directly from the Analysis tab by navigating to **Free Form Analysis** > **Custom Analysis.** Any canvas files present in the **Epi Info 7/Projects/VHF/Canvases** folder with a file name beginning with **vhf_** will appear in the menu as shown below.

Clicking on the file name will open the Dashboard and load the specified canvas file.

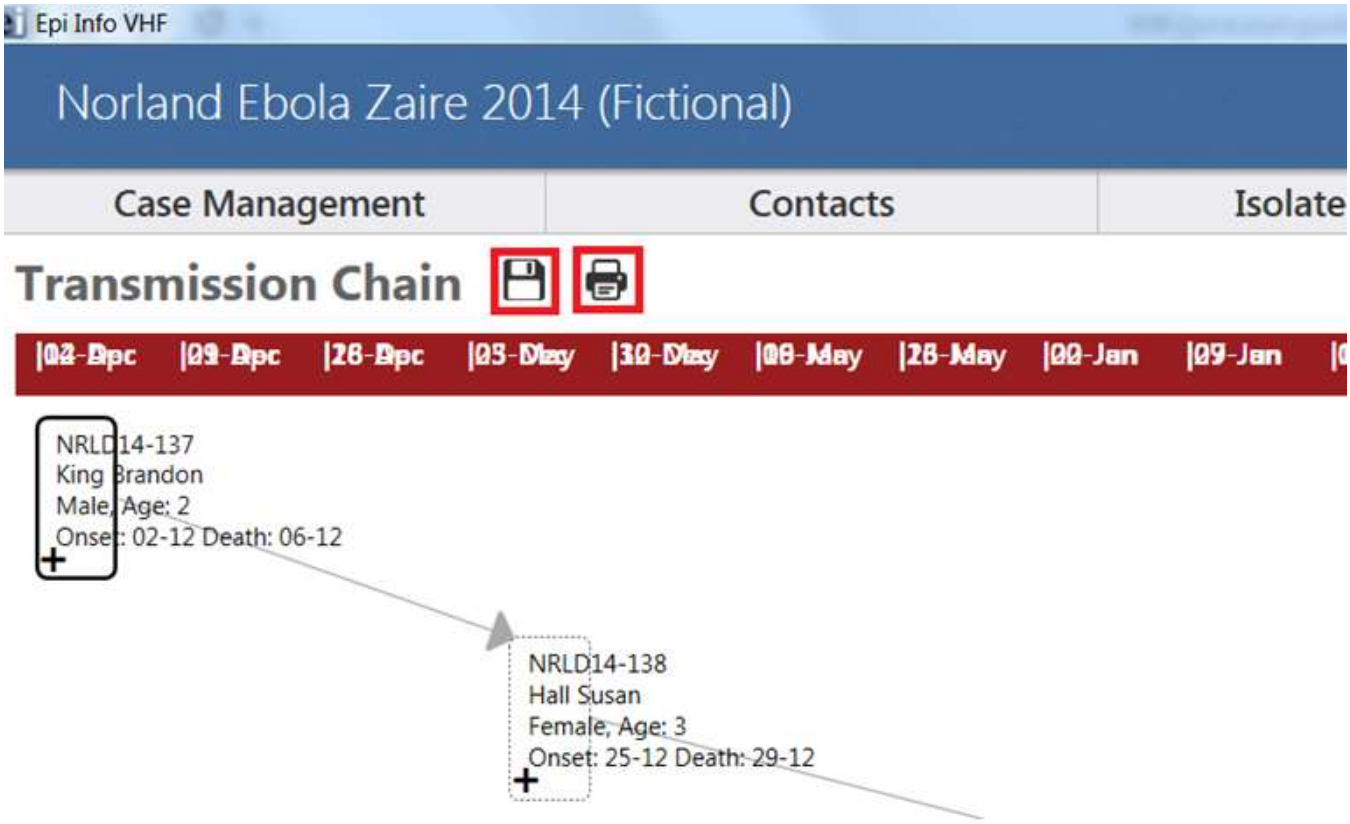
A special feature of the VHF application will make sure that no matter what canvas file is loaded, *it will always connect to the data source that is currently active in the VHF Application*. This circumvents the default Epi Info 7 behavior of canvas files, but allows multiple outbreak databases to each leverage the same statistical outputs, if necessary.

10 Transmission Chain

The **Transmission Chain** tab displays a dynamically-generated transmission chain diagram.
Transmission chains generation has only one requirement: all **source cases must have onset dates** (at least estimated if the exact dates are unknown). The transmission chain in the VHF application is time based. If a source case does not have an onset date then the application will not know where to place the node on the screen and any chain that starts with that node will not be drawn either (for example, if 99% of the cases have onset dates but an onset date is missing for the index case, the transmission chain will not be generated).



You can save or print the transmission chain diagram by clicking on the respective icons at the top left of the screen.

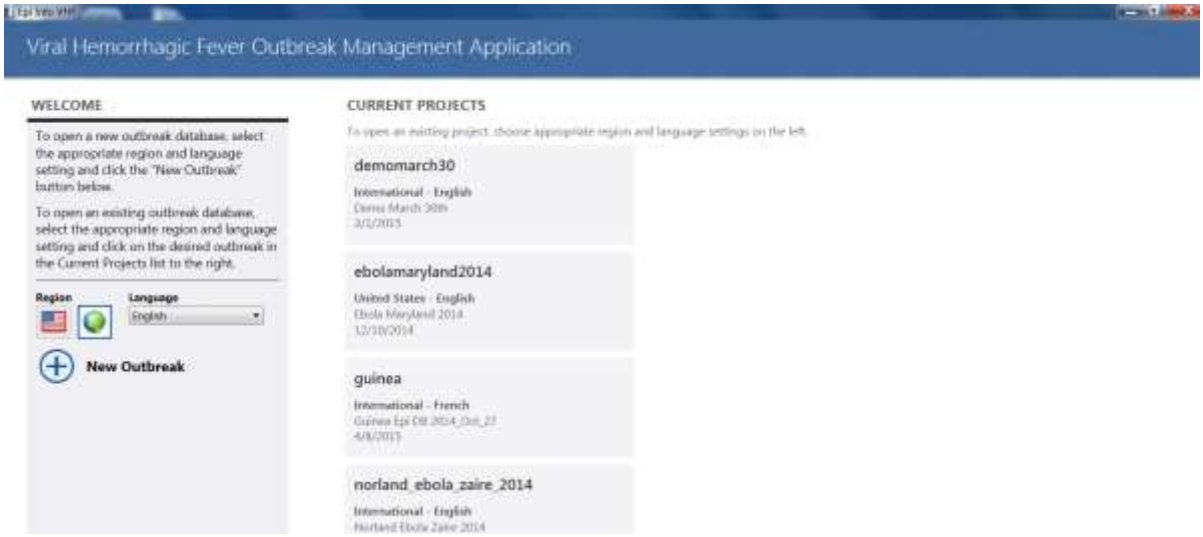


In large outbreaks, the transmission chain may take a long time to upload and provides no visual cues to the user that it's processing data.

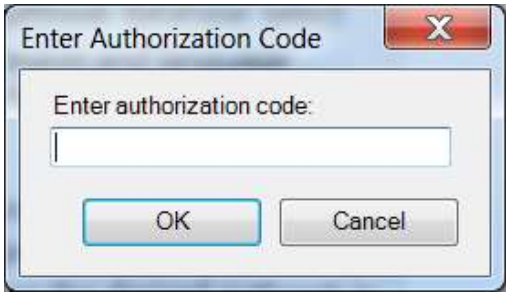
11 Super-user Mode

11.1 Switch to Super-user Mode

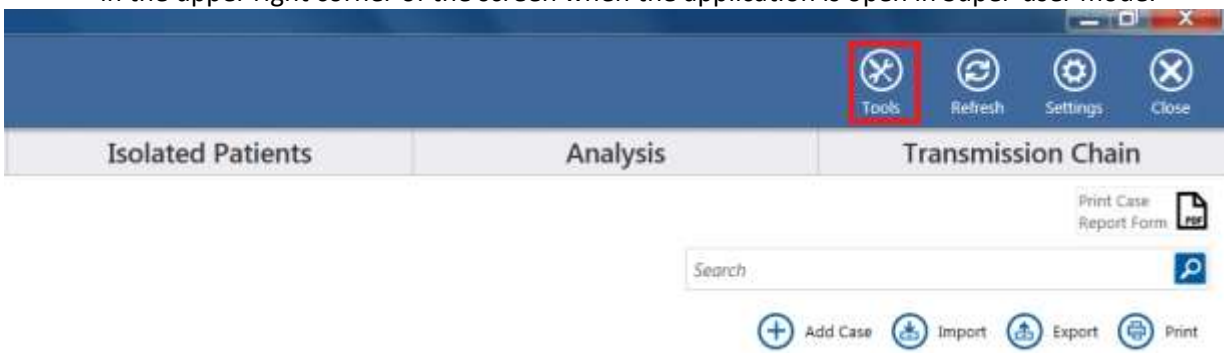
1) Close the database while keeping the application open by clicking on the "Close" button in the upper right hand corner of your open database. You will be taken back to the home screen of the application, containing a list of your current projects (databases).



2) To enter "super user" mode:
    a. Hold down the control (Ctrl) button on your keyboard and while doing so left click with your mouse on the database that you would like to modify.
    b. A box will pop up asking you to enter an authorization code. Enter the super user code and then click "OK." If you need to obtain the super user code, please email: ***epiinfo@cdc.gov***. **Please do not share this code as it is only intended for use to make executive level changes within a database**.



    c. Your database will now open in super user mode. You can observe an additional button, **Tools**, in the upper right corner of the screen when the application is open in Super-user mode.

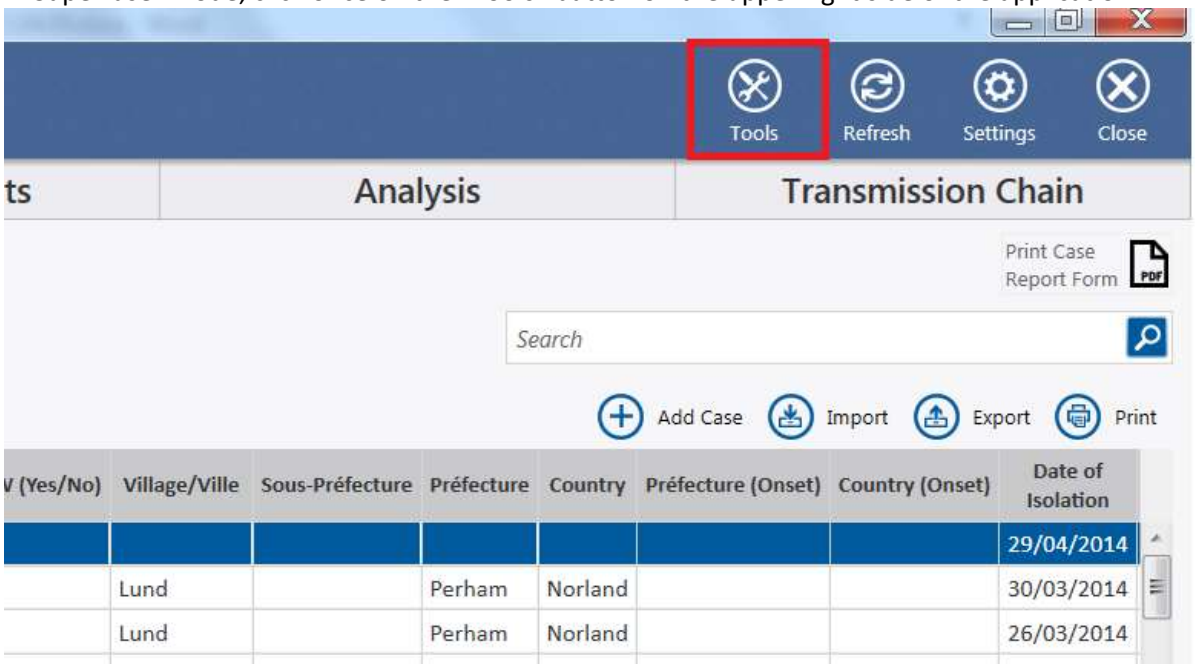


3) Once you have finished using "super user" mode, make sure to **EXIT** "super user" mode by closing the database (click on "Close" button with "x" in upper right corner of the screen).

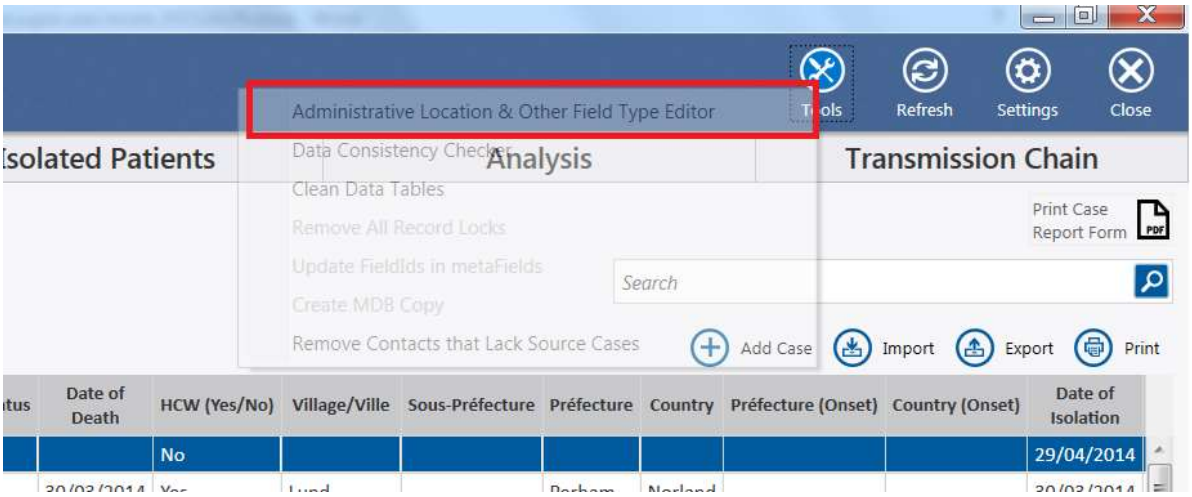
11.2 Adding Drop-Down Lists

From VHF version 0.9.5.38 users have the ability to add drop-down lists in Super-user mode for both administrative locations, and non-location variables in the case and contact forms. Previous to this version, drop-down lists could only be added for administrative location variables.

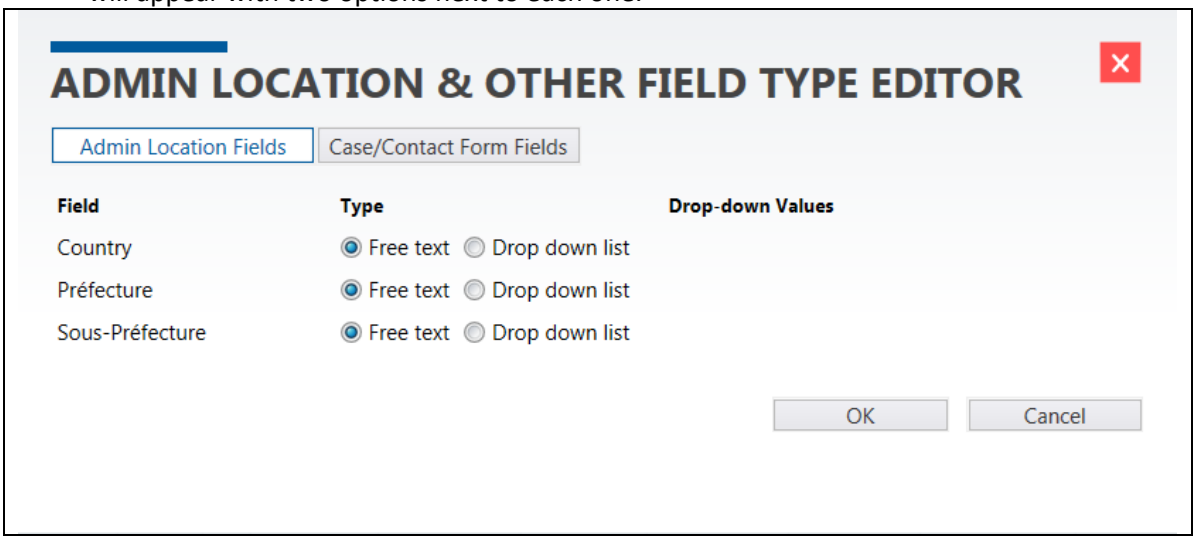
1) In Super-user mode, click once on the "Tools" button on the upper right side of the application.



   a. A list of options will appear. Click once on "Administrative Location & Other Field Type Editor" on the top of the list.



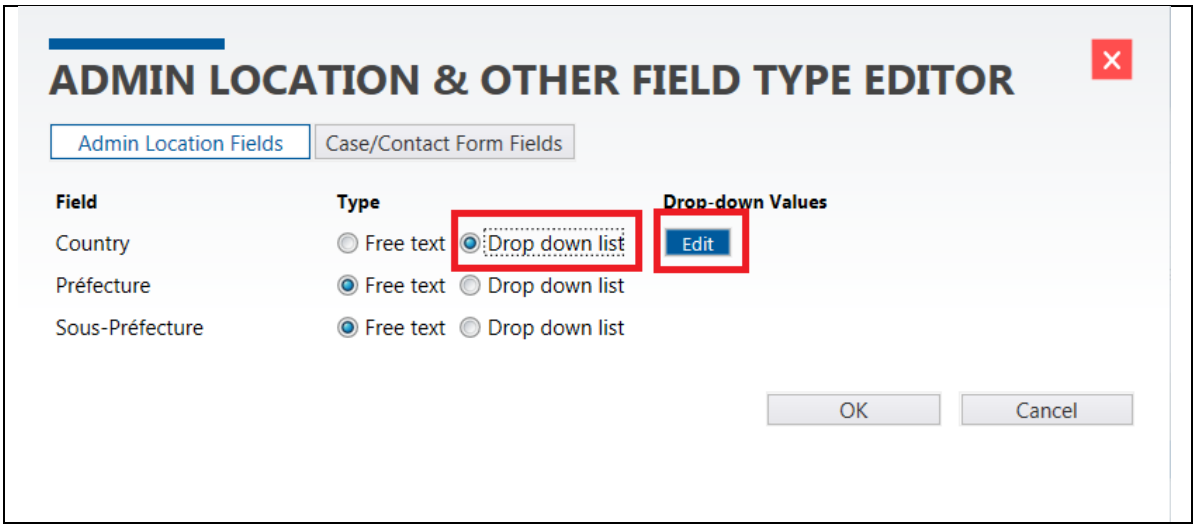
2) A box will appear entitled “Admin Location & Other Field Type Editor”
   a. If you wish to create administrative location field dropdowns, ensure that the “Admin Location Fields” tab within this box is selected.
   b. The country as well as the two largest administrative locations in the country that you named will appear with two options next to each one.



   c. Leave “Free text” selected if you would like to be able to type responses into these locations.
   d. Select “Drop down list” if you would like to set up a drop down list of pre-defined choices for these locations.

11.2.1 Drop-Down Lists for Country Field

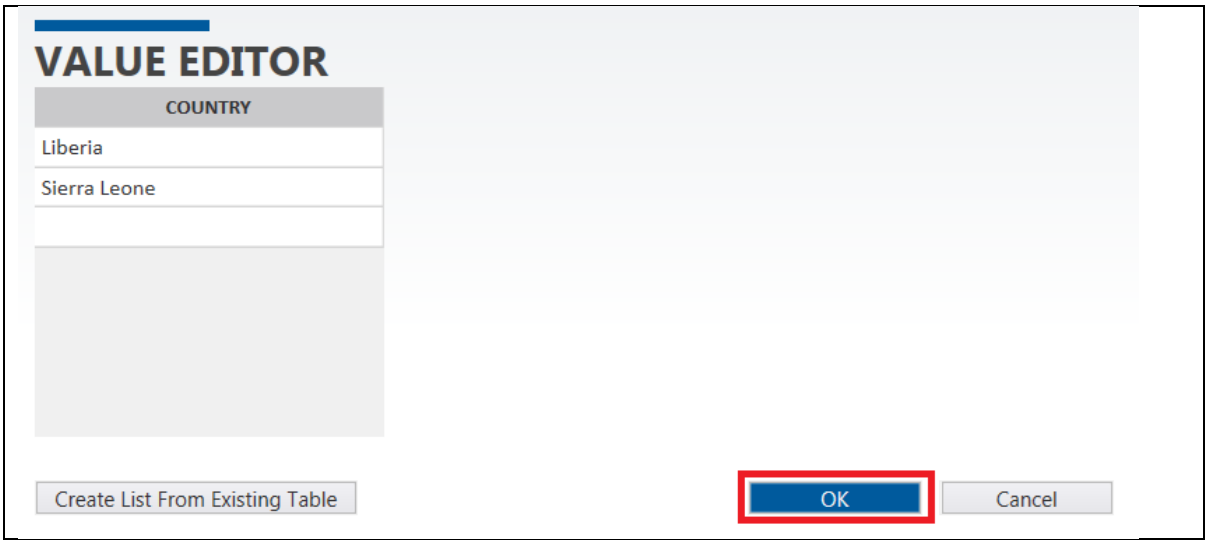
   a. To populate the drop-down list values for the Country field:
      i. Select the “Drop down list” radio button and click on the “Edit” button.



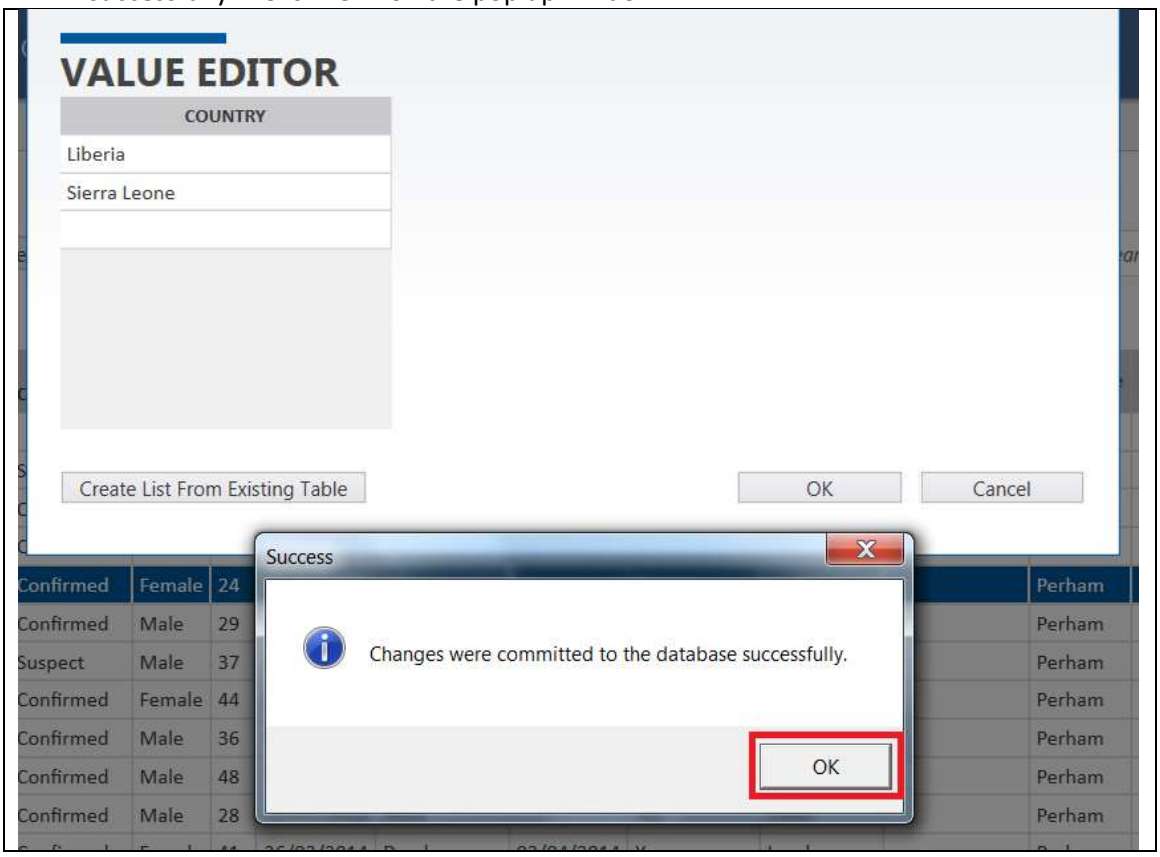
b. In the box that opens, entitled “Value Editor”, type the first country name into the table. Hit enter. A new row will be added to the table. Enter the second country.

c. Continue until all country names are added.

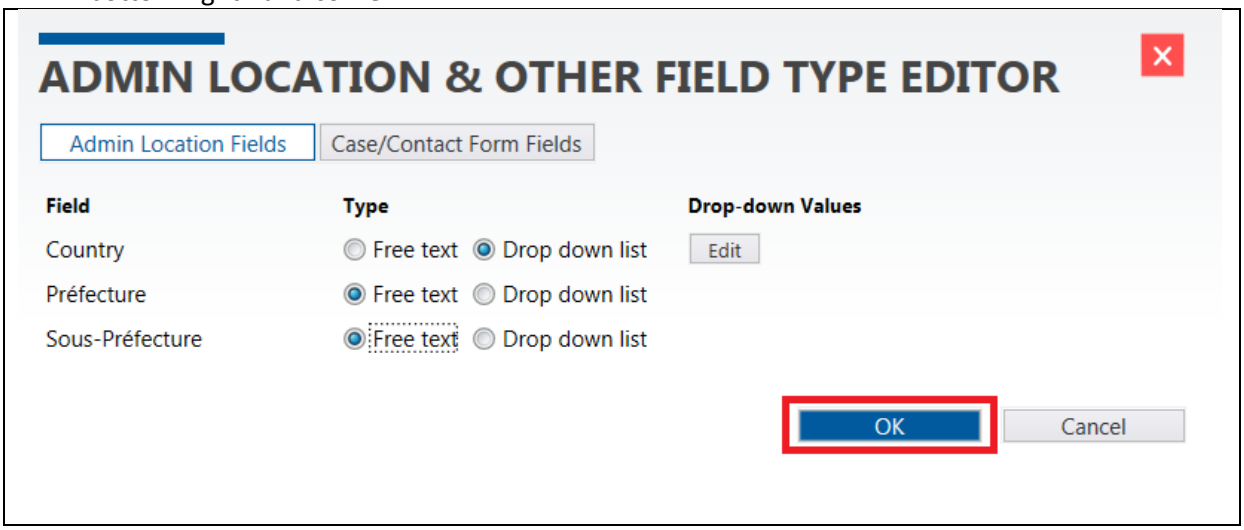
d. Once all country names desired in the drop down list have been added, hit the “OK” button in the bottom right hand corner of the box.



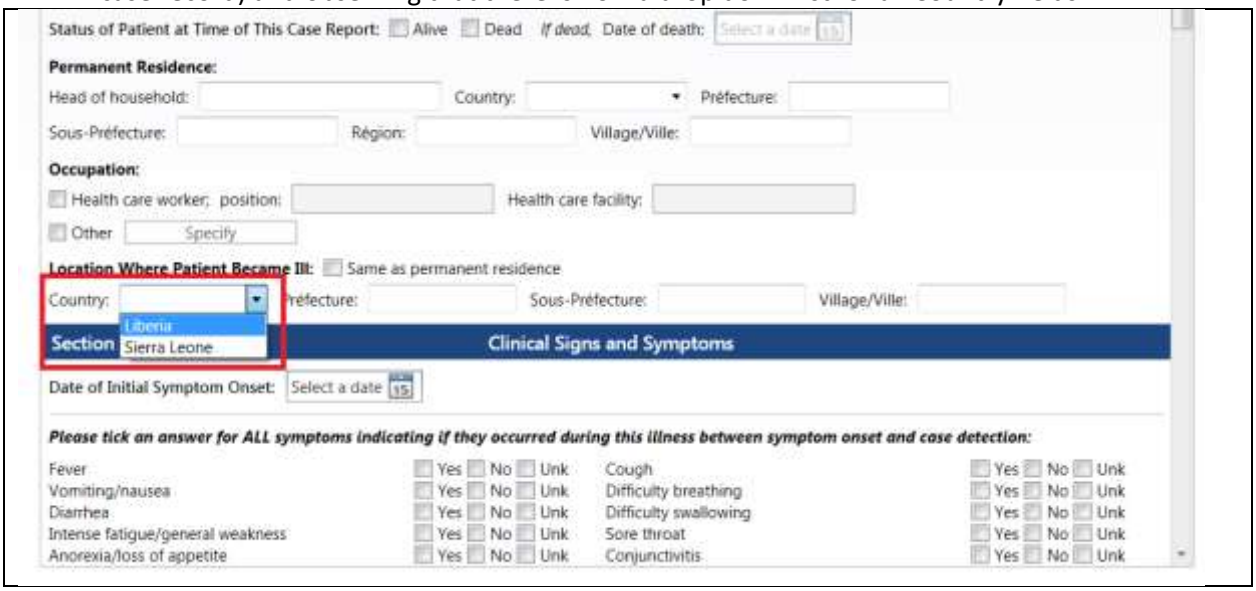
e. A pop up window will appear stating that “Changes were committed to the database successfully”. Click “OK” on the pop up window.



f. Close the "Admin Location & Other Field Type Editor" box by clicking on the "OK" button in the bottom right hand corner.

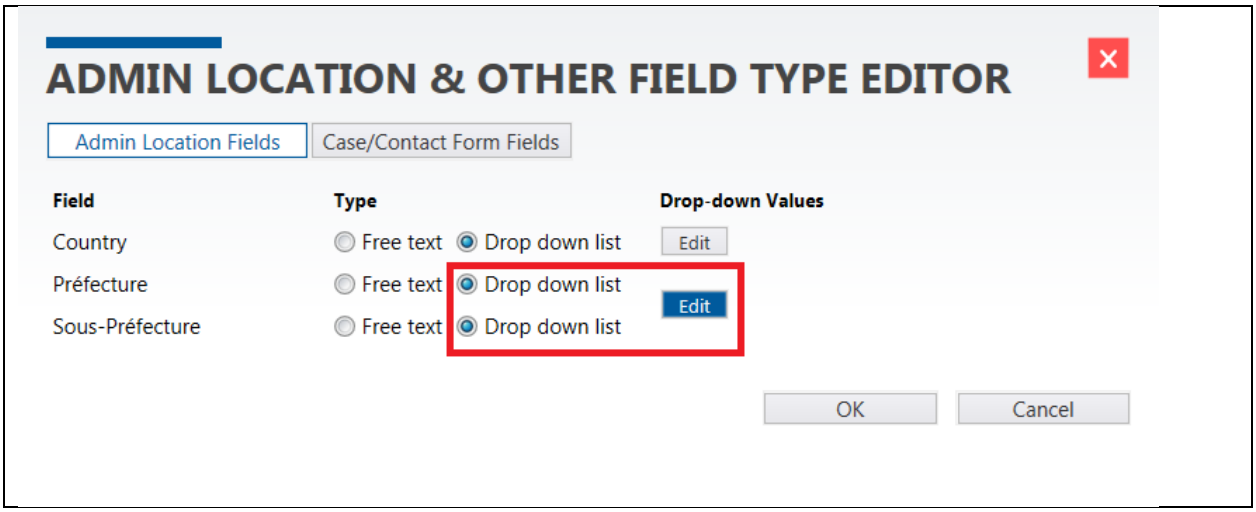


g. The drop down list you specified is now in all country fields on forms within the application. You can check this by opening a case form (either click on "Add Case" or double click on an existing case record) and observing that there is now a drop down list for all Country fields.

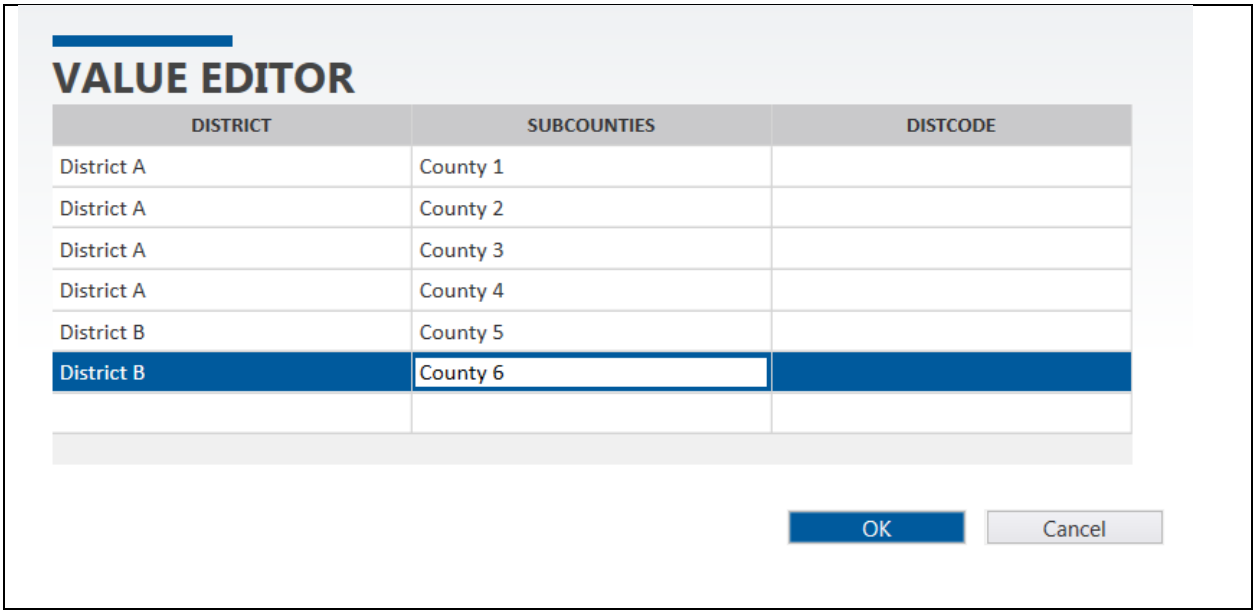


11.2.2 Drop Down Lists for First and Second Level Administrative Location Fields

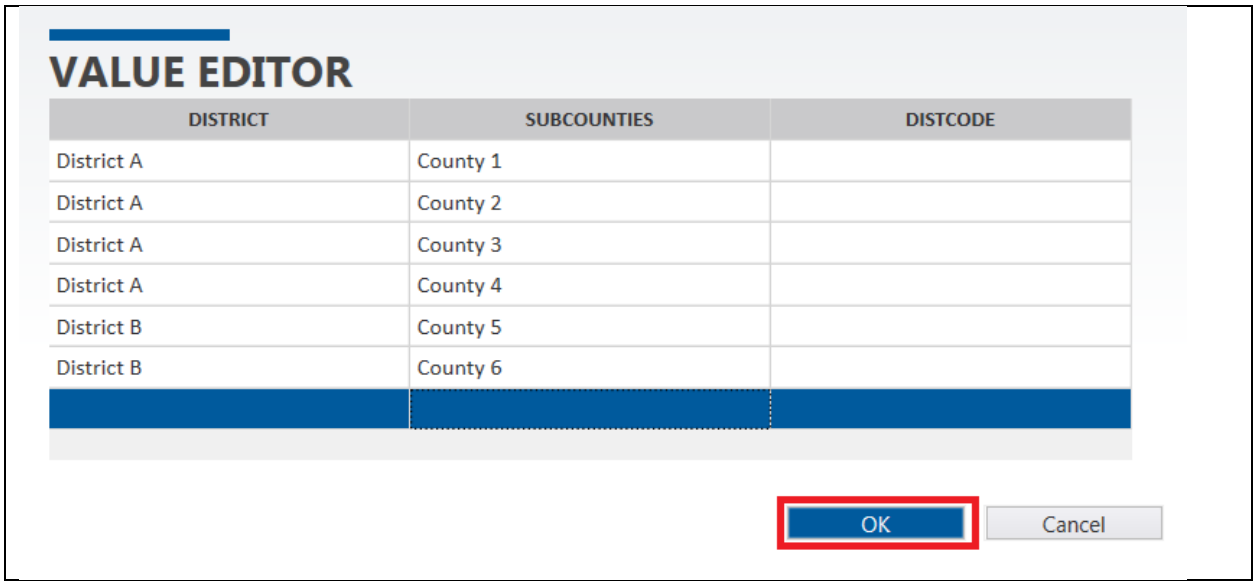
1) In the box "Admin Location & Other Field Type Editor", you can enter all of the first and second-level location values that you need in your drop-down lists for those locations. To do so:
   a. Select "Drop down list" button under the first and (if needed) second-level location values, and click on "Edit".



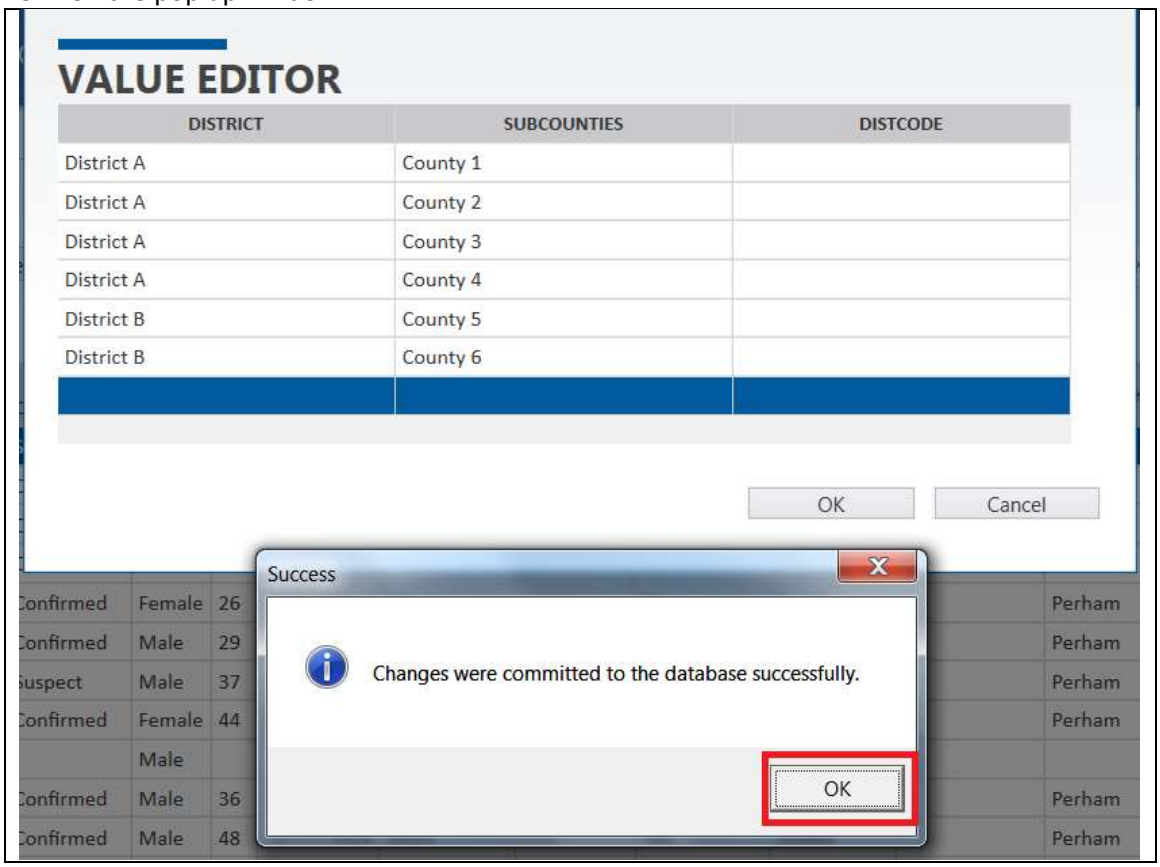
b. In the "Value Editor" box that opens, enter the name of each first-level location field in the left hand column of the table, repeating it as many times as there are second-level locations within that first-level location.
    i. For example, if in District A there are 4 counties, then District A needs to be entered under "DISTRICT" (first-level location) in 4 different rows.
    ii. **It is important to ensure that the repeated first-level location name is **spelled exactly the same** each time. You can copy and paste the name to ensure that this is true.
c. Next to the repeating first level location name, in each row, enter the value of each second-level location once.
    i. For example, in each of the 4 rows with District A entered in the left hand column, in the second column "SUBCOUNTIES" (second-level location) enter the names of the 4 counties within District A.



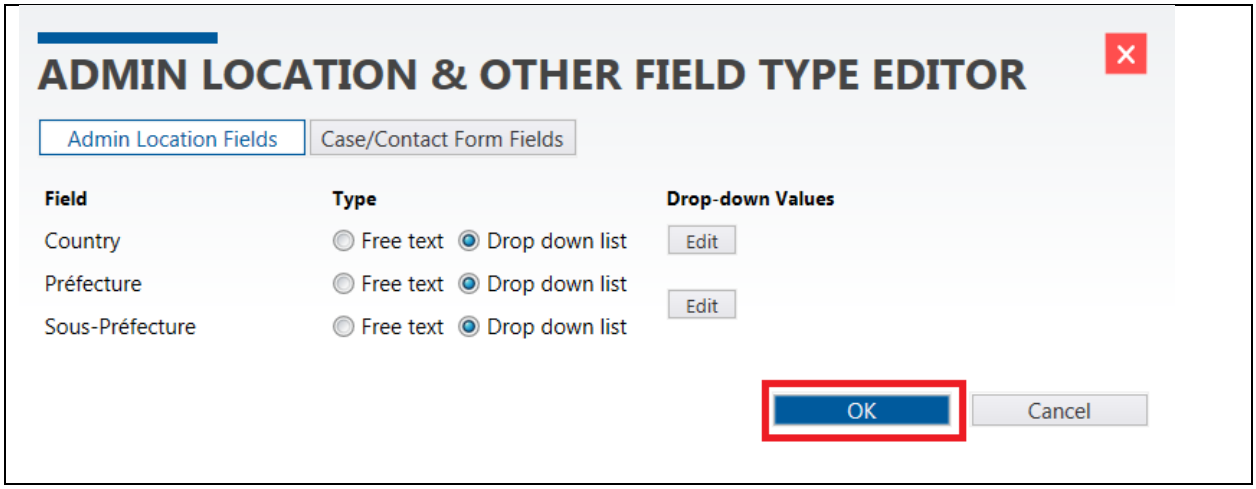
2) Once all desired first and second-level location names are added, hit the "OK" button in the bottom right hand corner of the box.



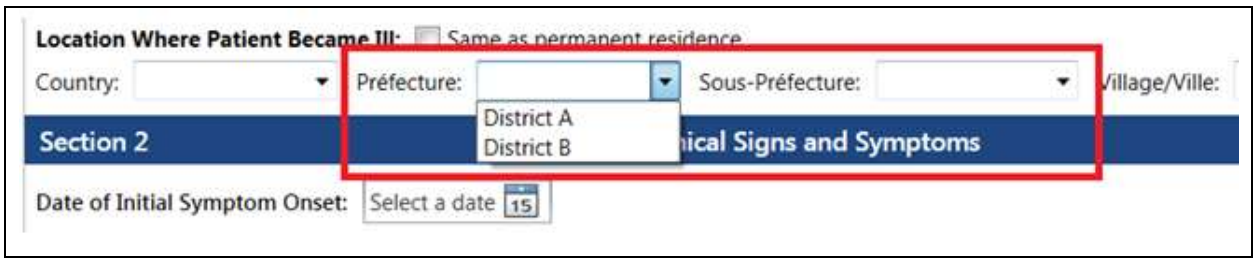
3) A pop up window will appear stating that “Changes were committed to the database successfully”. Click “OK” on the pop up window.



4) Close the "Admin Location & Other Field Type Editor" box by clicking on the "Ok" in the bottom right hand corner.



5) Cascading drop-down lists are now available for your first and second-level location fields in all case and contact forms. "Cascading" means that the selected value of the first-level location will dictate the list of options available to pick from for the second-level location. You can check this by opening a case form (either click on "Add Case" or double click an existing case record) and observing the drop down lists for the first and second-level location fields.



6) NOTE: If you only want a drop-down list for your first-level location (and not the second-level location), you only need to list each first-level location once in the left hand column of the table, and then leave the second table column blank.

11.2.3 Drop-Down Lists for Non-Location Fields

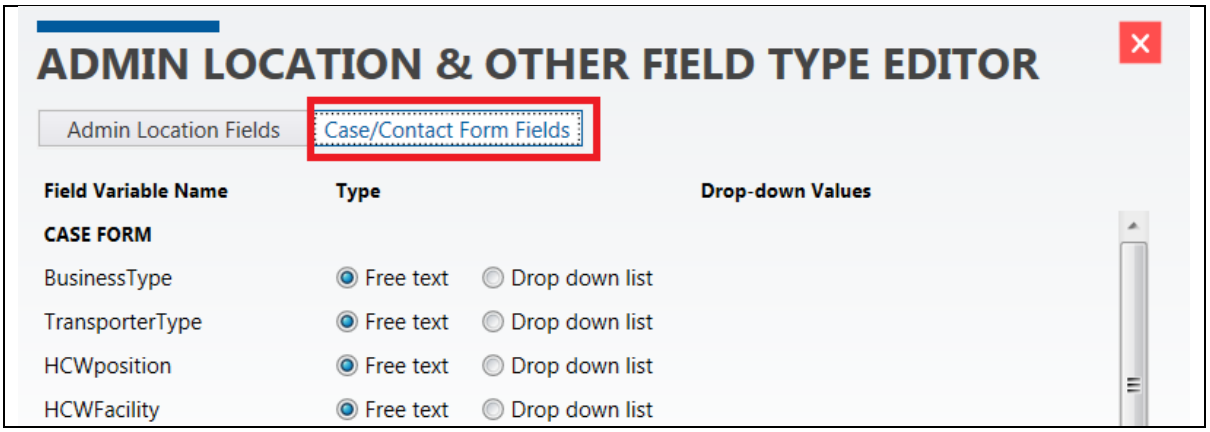
The VHF application allows conversion of the non-location text fields specified below in the case and/or contact form to drop-down fields. This may be done in order to decrease the data cleaning that is needed. For example, the field of health facility/hospital name where a patient is isolated can have a pre-defined drop down list with the names of each health facility/hospital. The table below lists variables on the Case and Contact Forms for which drop down lists can be created.

Variable Name*	Section	Question
Case Form Variables		
BusinessType	Patient Information: Occupation	Type of business
TransporterType	Patient Information: Occupation	Type of transport
HCWposition	Patient Information: Occupation	Position
HCWFacility	Patient Information: Occupation	Healthcare facility

OtherOccupDetail	Patient Information: Occupation	Please Specify Occupation
BleedOtherComment	Clinical Signs and Symptoms	Other Hemorrhagic Symptoms; If yes, please specify
SymptOtherComment	Clinical Signs and Symptoms	Other Non-Hemorrhagic Clinical Symptoms: If yes, please specify
OtherHemoFinalSpecify	Patient Outcome Information	Other Non-Hemorrhagic Clinical Symptoms: If yes, please specify
HospitalCurrent	Hospitalization Information	Health Facility Name
HospitalPast1	Hospitalization Information	Health Facility Name
HospitalPast2	Hospitalization Information	Health Facility Name
ContactRelation1	Epidemiological Risk Factors/ In the past THREE WEEKS PRIOR TO SYMPTOM ONSET	If Yes, Please Complete One Line Of Information For Each Source Case: Relation to Patient
ContactRelation2	Epidemiological Risk Factors/ In the past THREE WEEKS PRIOR TO SYMPTOM ONSET	If Yes, Please Complete One Line Of Information For Source Case 2: Relation to Patient
ContactRelation3	Epidemiological Risk Factors/ In the past THREE WEEKS PRIOR TO SYMPTOM ONSET	If Yes, Please Complete One Line Of Information For Source Case 3: Relation to Patient
FuneralRelation1	Epidemiological Risk Factors/ In the past THREE WEEKS PRIOR TO SYMPTOM ONSET	If Yes, Please Complete One line of Information for Each Funeral Attended: Relation to Patient
FuneralRelation2	Epidemiological Risk Factors/ In the past THREE WEEKS PRIOR TO SYMPTOM ONSET	If Yes, Please Complete One line of Information for 2nd Funeral Attended: Relation to Patient
HospitalBeforeIllName	Epidemiological Risk Factors	Was the patient hospitalized or did he/she go to a clinic or visit anyone in the hospital before this illness? If yes: Health facility name
InterviewerPosition	Case Report Form Completed By:	Job Title
InterviewerHealthFacility	Case Report Form Completed By:	Organization
ProxyRelation	Case Report Form Completed By:	If Proxy, Relation to Patient
SpecifyBleeding	Patient Outcome Information	Did the patient have signs of unexplained bleeding at any time during their illness? If yes, please specify:
HospitalDischarge	Patient Outcome Information/If the Patient Has Recovered and Been Discharged From Hospital	Name of Hospital Being Discharged From
HospitalDeath	Patient Outcome Information/ If the Patient is Dead	Place of Death, if Hospital, Hospital Name
PlaceDeathOther	Patient Outcome Information/ If the Patient is Dead	Place of Death, if Other please specify
Contact Form Variables		
ContactHCWFacility	Contact Information	If Healthcare Worker, Healthcare Facility
Team	Contact Information	Contact Tracing Team

*Listed in order of appearance in the case form.

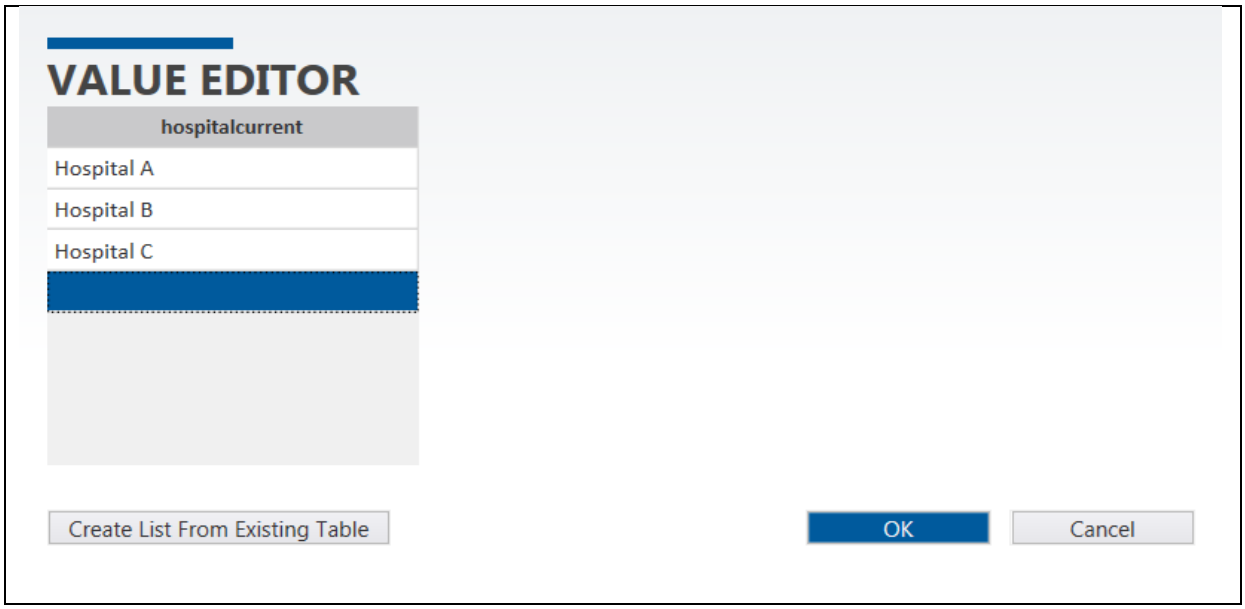
1) In the box “Admin Location & Other Field Type Editor”, click on “Case/Contact Form Fields” tab.



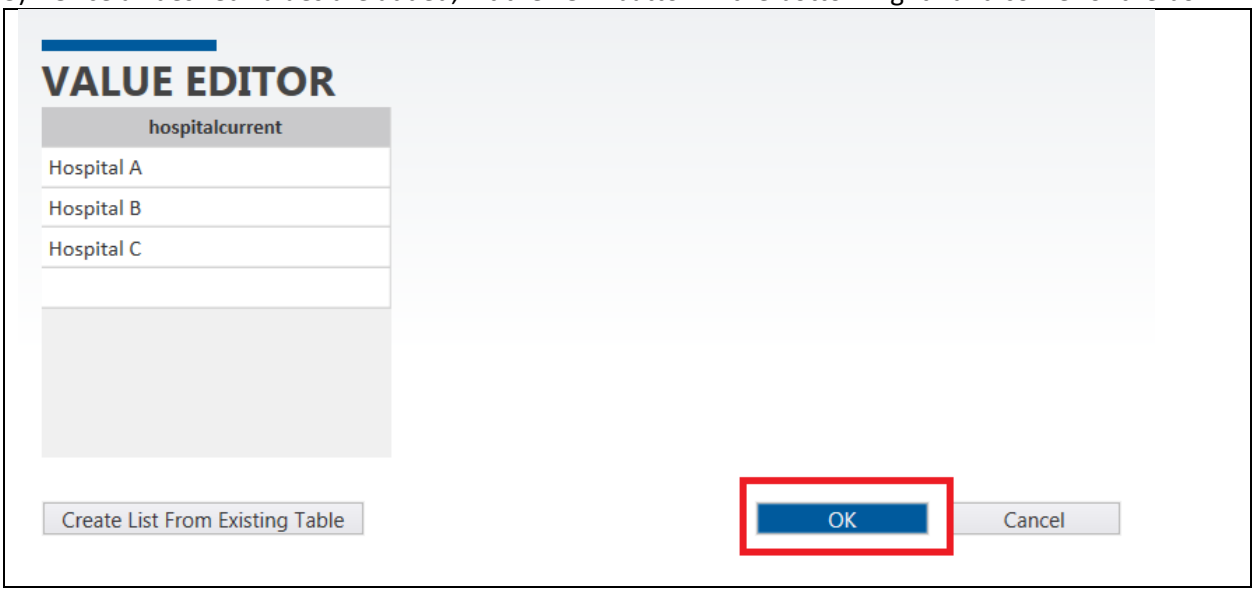
2) You can create or edit drop down lists for case and contact form fields. To do so:

   a. Select the ”Drop down list” radio button near the variable for which a drop down list of values will be created, then click on “Edit”.

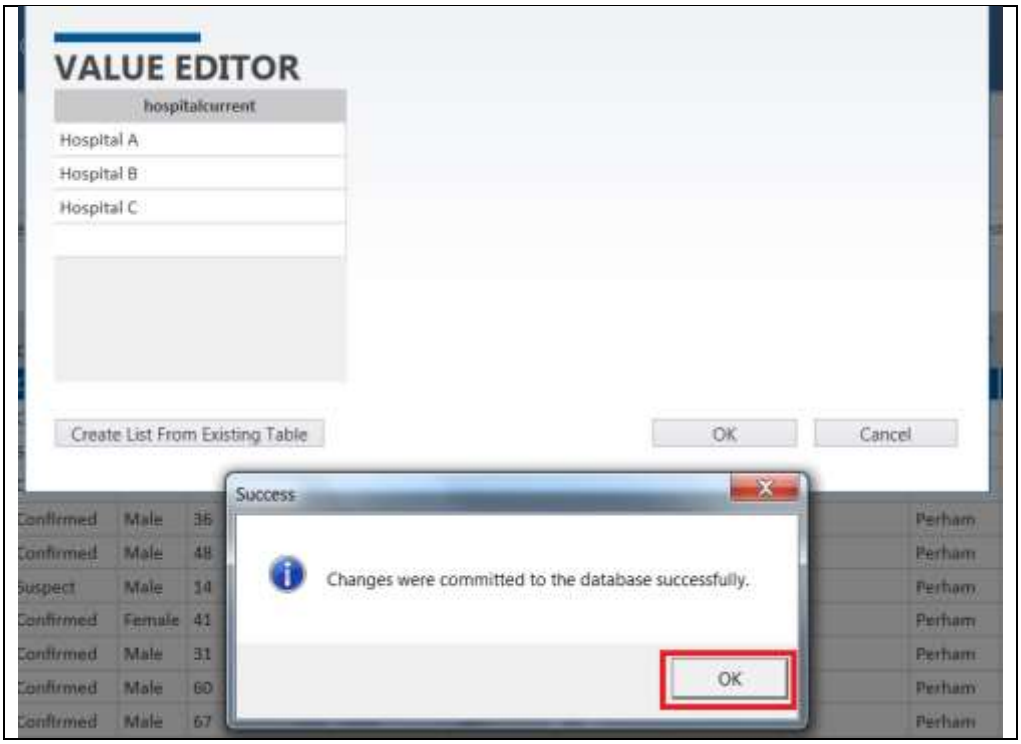
   b. In the “Value Editor” box that opens, type the first value for the selected variable in the table. Hit enter. A new row will be added to the table. Continue until all values for the drop down list are added
      i. In the example below for Health Facility Name (field variable “hospitalcurrent”), three names of hospitals were entered (Hospital A, Hospital B, and Hospital C).



3) Once all desired values are added, hit the “Ok” button in the bottom right hand corner of the box.

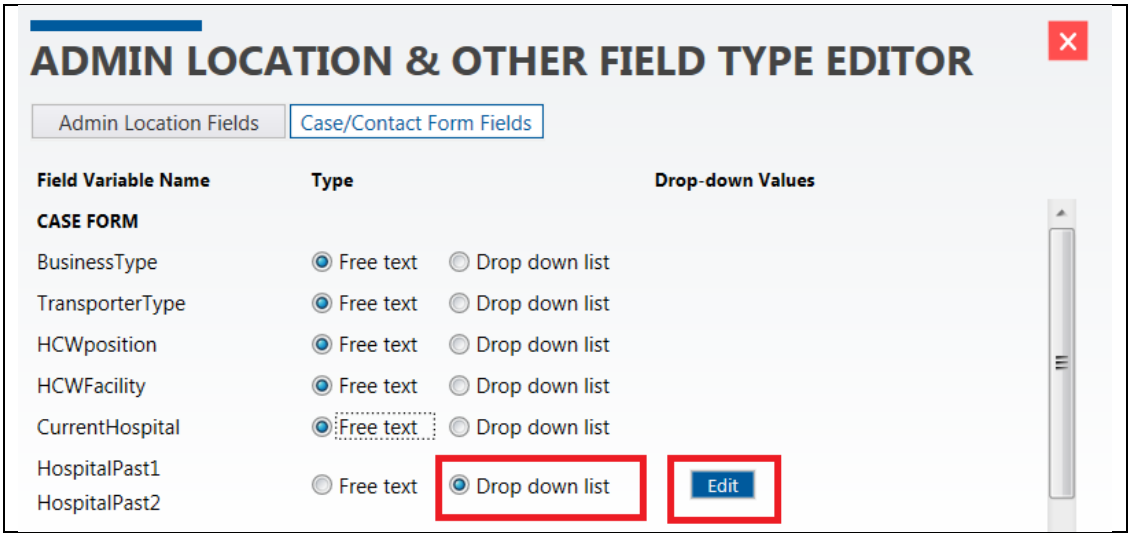


4) A pop up window will appear stating that “Changes were committed to the database successfully”. Click “OK” on the pop up window.

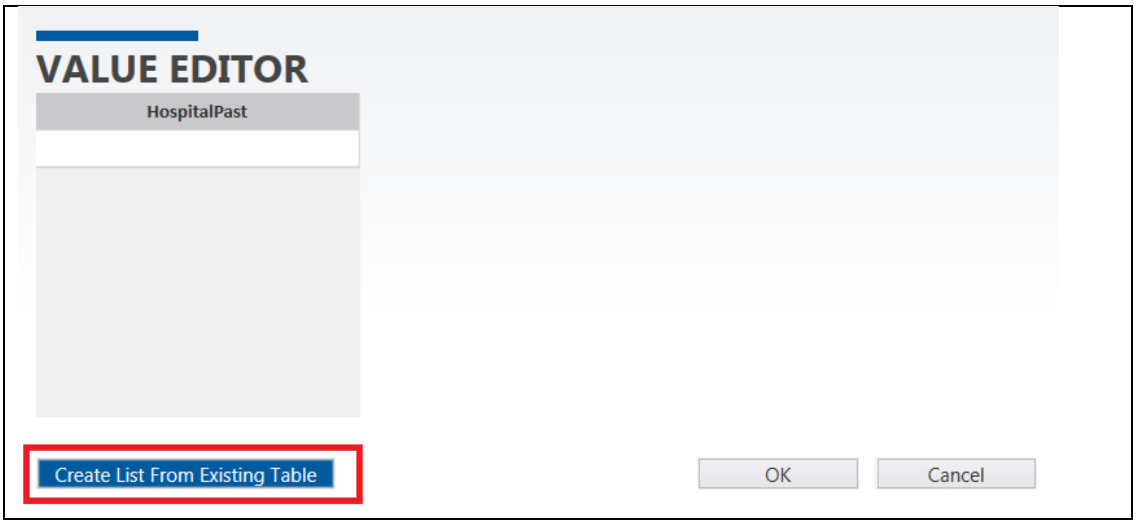


5) If you need to add more drop down lists, repeat steps above.

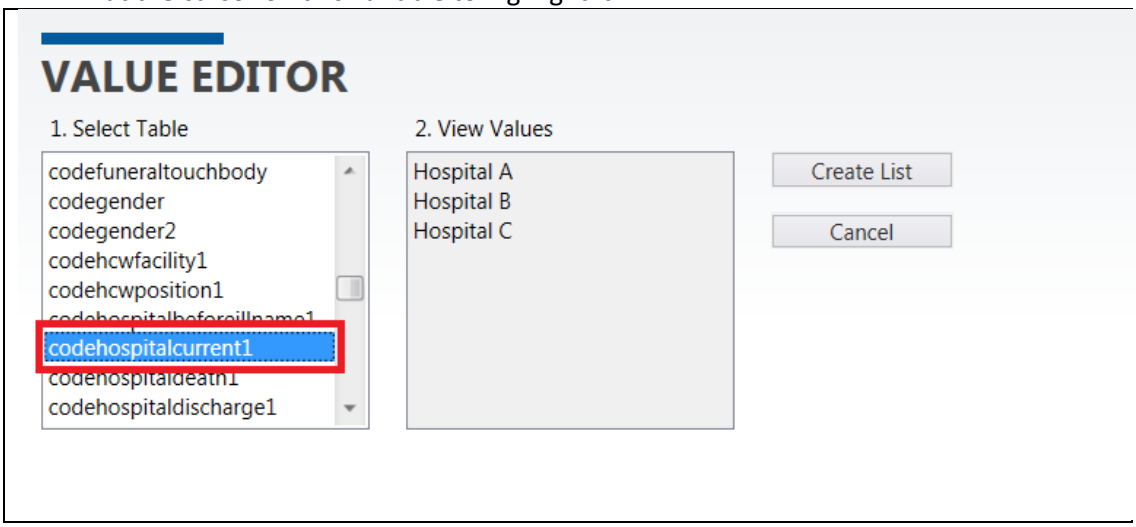
6) Once a drop down list is entered for one variable, it can be **re-used** for other variables. For example, you can re-use the list of hospitals specified for the "CurrentHospital" variable for the variables "HospitalPast1" and "HospitalPast2". To do this:
   a. Select "Drop down list" for the variable(s) for which the existing drop down list would be re-used. Click on Edit.



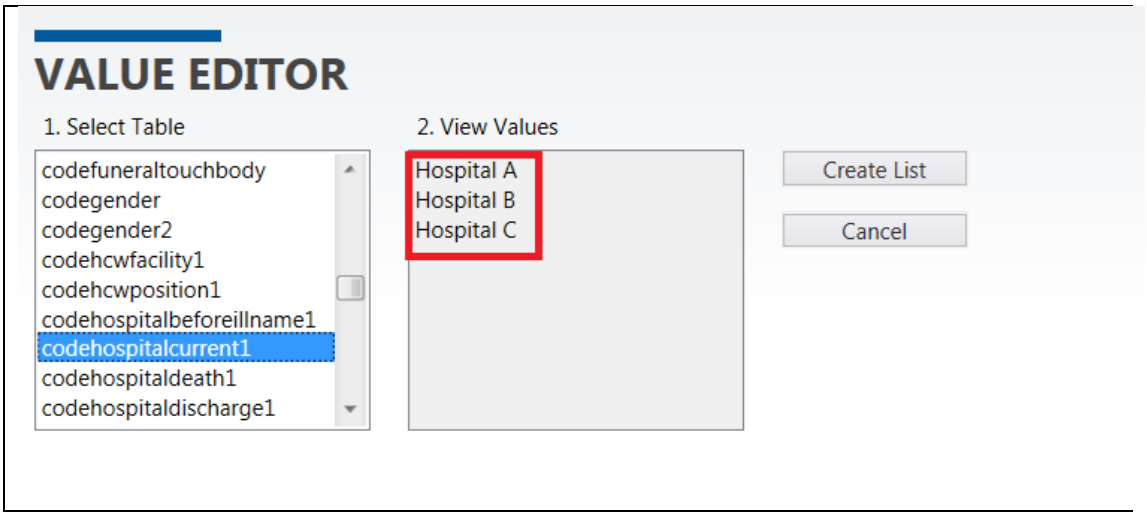
   b. In "Value Editor" click on "Create List From Existing Table".



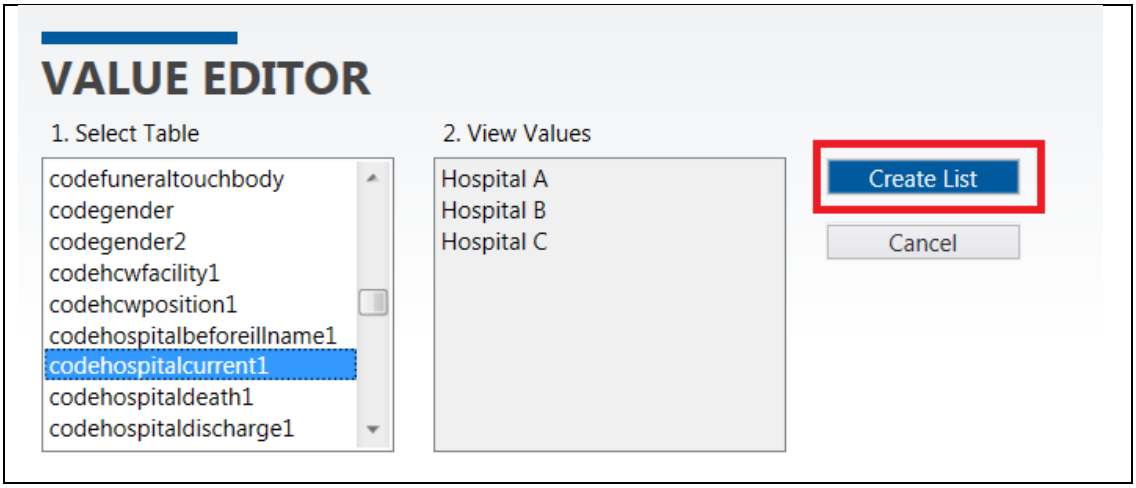
c. In the next window, look in the "1. Select Table" list on the left to find the drop down list that you wish to re-use for this variable (in the example below it would be "codehospitalcurrent1"). Put the cursor on this variable to highlight it.



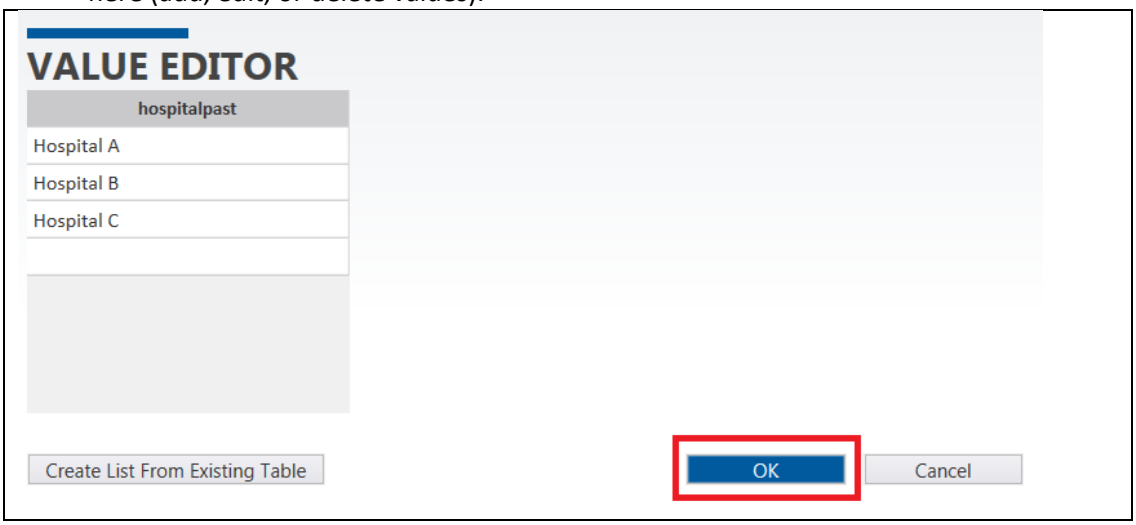
d. You will see in the window "2. View Values" on the right the drop down list for the selected variable. Check to make sure you selected the correct drop down list.



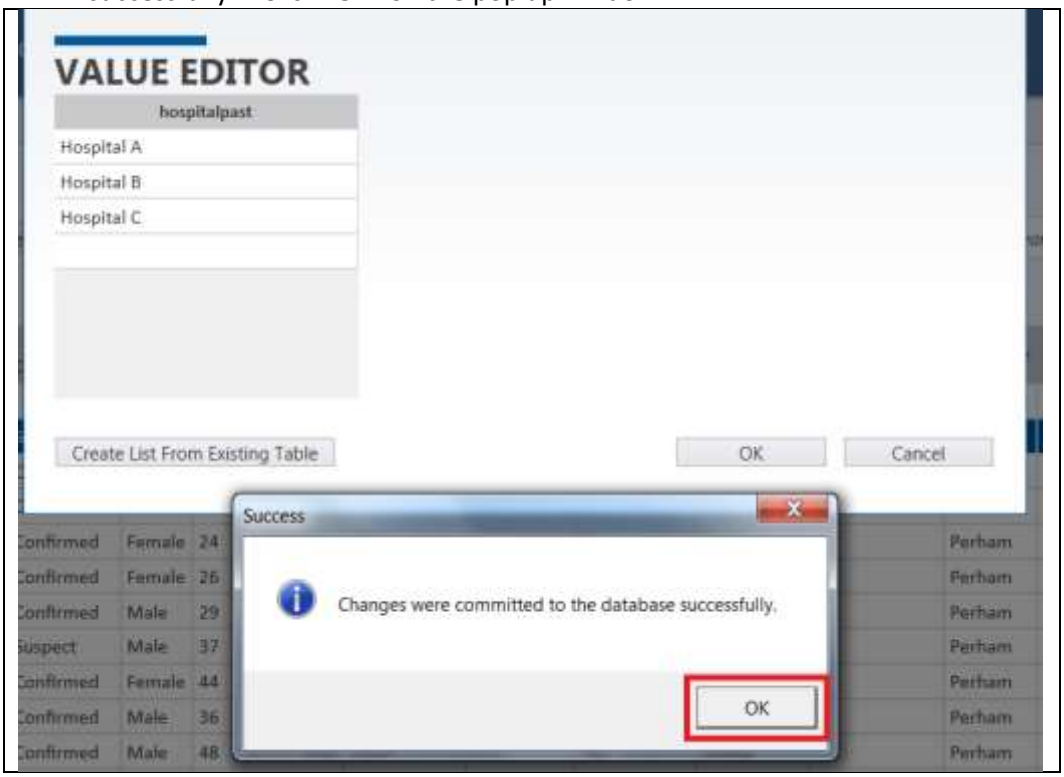
e. Click on “Create List”.



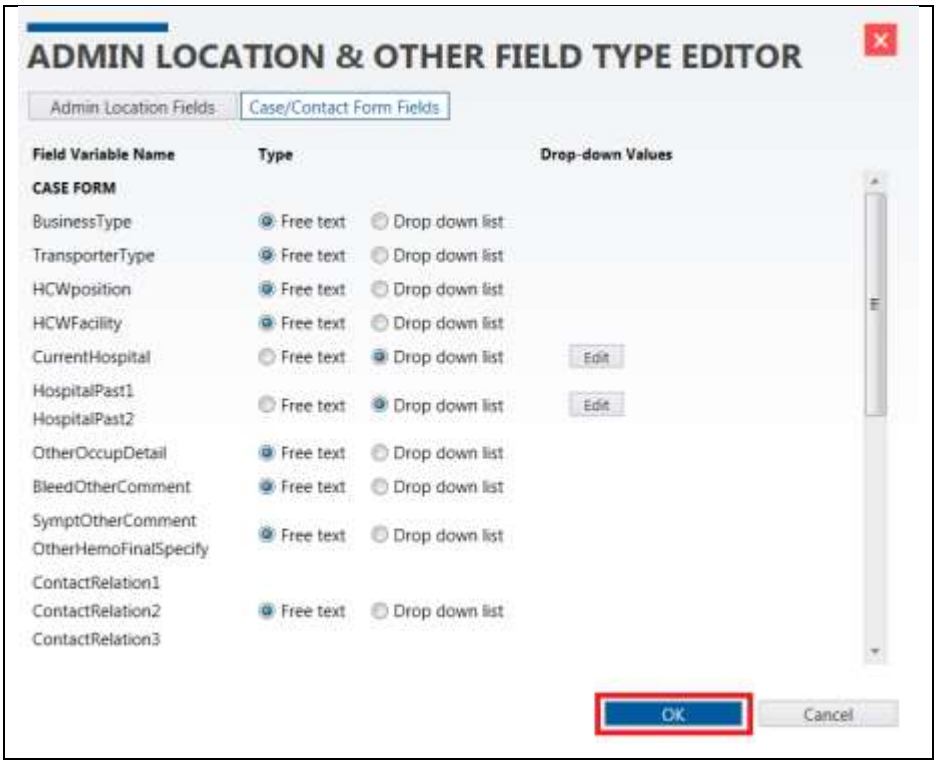
f. Check that the correct values from the existing drop down list (Hospital A, Hospital B, Hospital C) were assigned to your variable (“hospitalpast”) and click Ok. You can also modify the list from here (add, edit, or delete values).



g. A pop up window will appear stating that “Changes were committed to the database successfully”. Click “OK” on the pop up window.

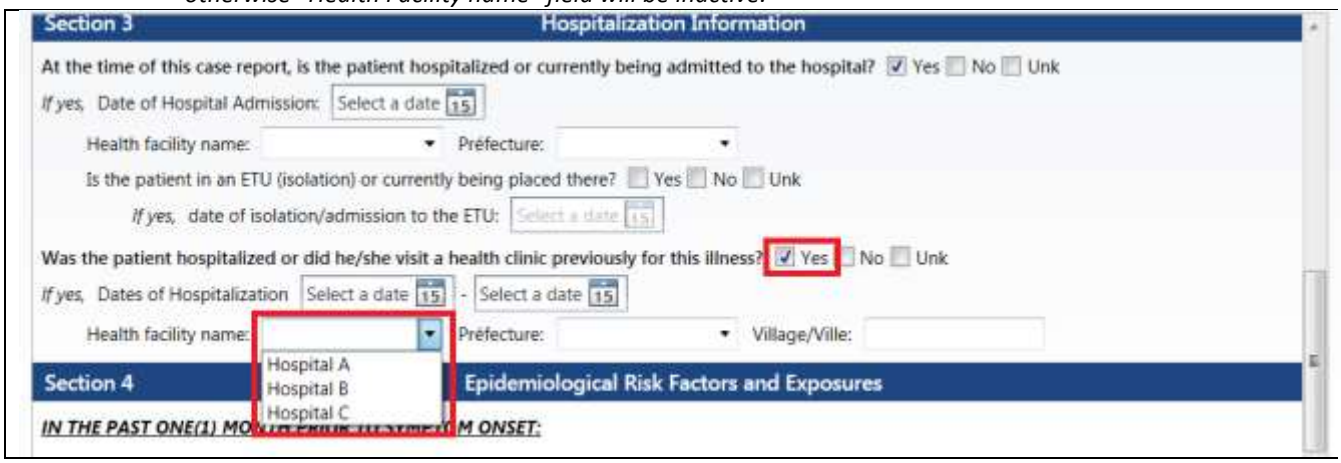


h. Close the “Admin Location & Other Field Type Editor” box by clicking “OK” in the bottom right corner.

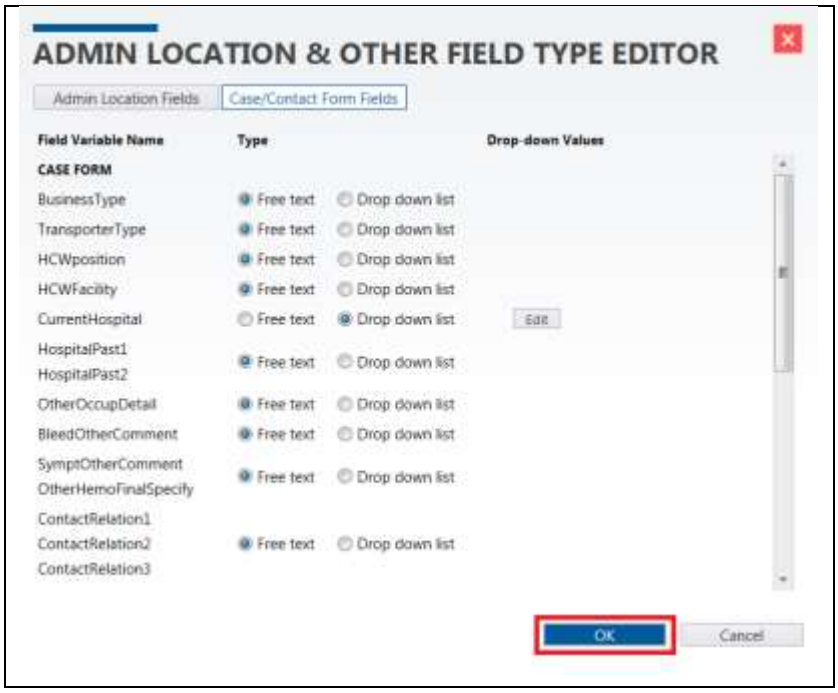


i. The drop down list(s) you specified is now available in the relevant fields on forms within the application. You can check this by opening a case (or contact) form (either click on "Add Case" or double click an existing case record) and observing the drop down lists for the selected variables.

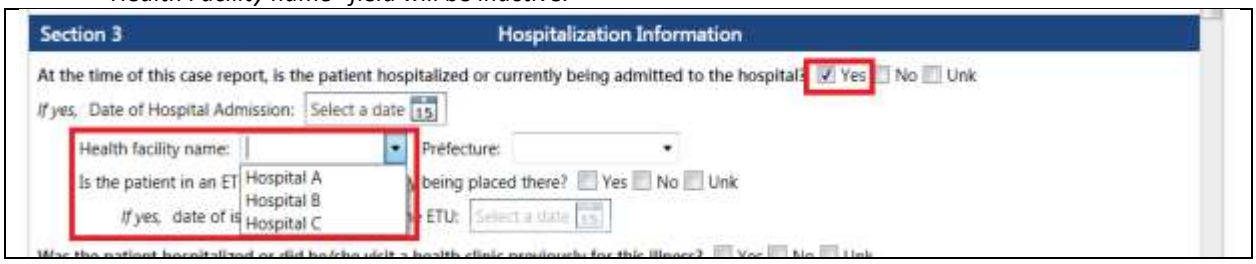
   a. *Note. To check drop down list for variable "Health Facility Name" (variable HospitalPast1) select "Yes" for question "Was the patient hospitalized or did he/she visit a health clinic previously for this illness?", as otherwise "Health Facility name" field will be inactive.*



7) If you are finished creating drop down lists, close the "Admin Location & Other Field Type Editor" box by clicking "Ok" button in the bottom right hand corner.



8) The drop down list(s) you specified is now available in the relevant fields on forms within the application. You can check this by opening a case form (either click on "Add Case" or double click an existing case record) and observing the drop down list for the selected variables.
    a. *Note. To check drop down list for variable "Health Facility Name" select "Yes" for question "At the time of this case report, is the patient hospitalized or currently being admitted to the hospital", as otherwise "Health Facility name" field will be inactive.*

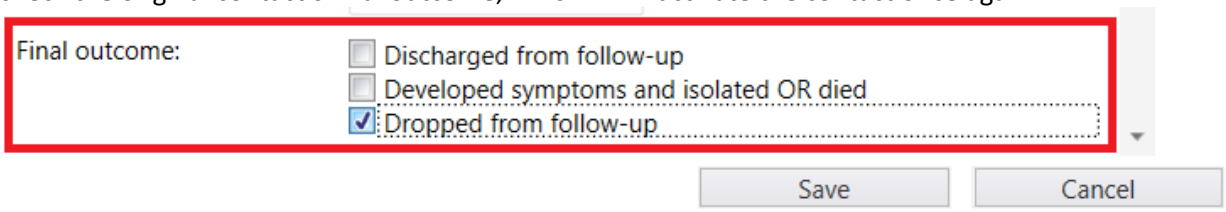


NOTE: Once you have finished adding drop-down lists for administrative locations or other variables, **EXIT "super user" mode** by closing the database (click on "Close" with the "x" in the upper right corner of the screen).

11.3 Changing Contact Outcomes

Users have the ability to change the "Final outcome" variable for contacts only in Super-user mode. To do this, open a Contact Information Entry Form, scroll down and find the "Final outcome" variable. These check boxes will be active in Super-user mode, allowing the user to change contact outcome.

The main practical use of this feature is to temporarily re-activate a contact so their 21-day follow-up information can be edited (editing is not possible for an inactive contact). To do this, uncheck the contac'ts final outcome in super user mode, which will re-activate the contact. Edit the follow-up information as desired. Then re-check the original contact's final outcome, which will inactivate the contact once again.

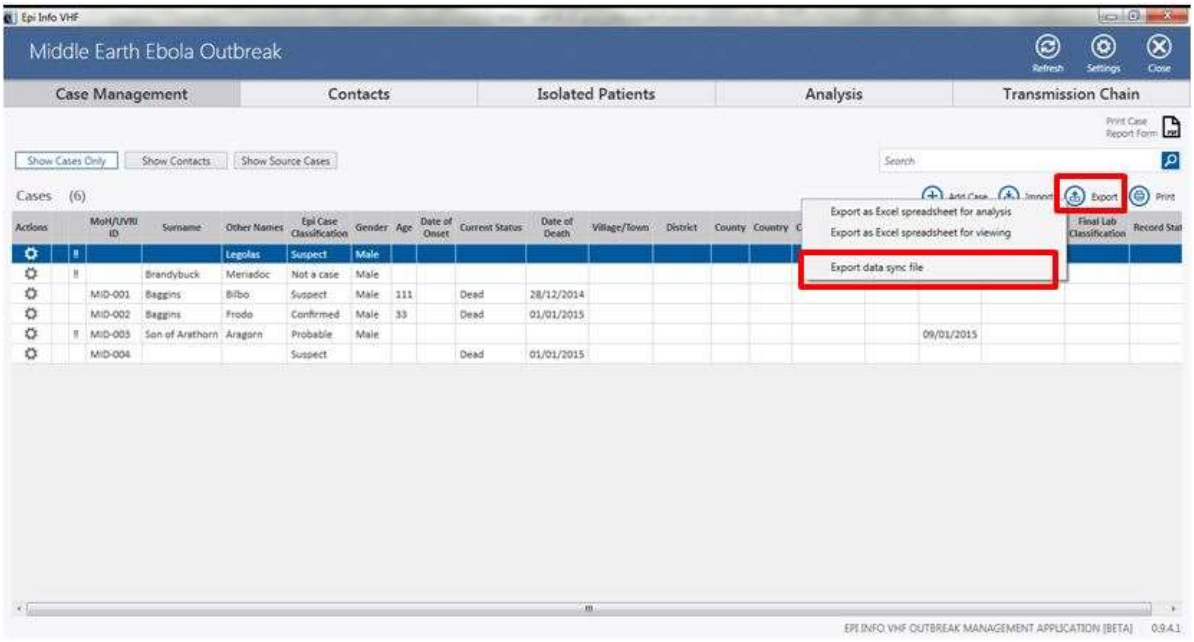


12 Updating to a New Version of the Epi Info VHF Application

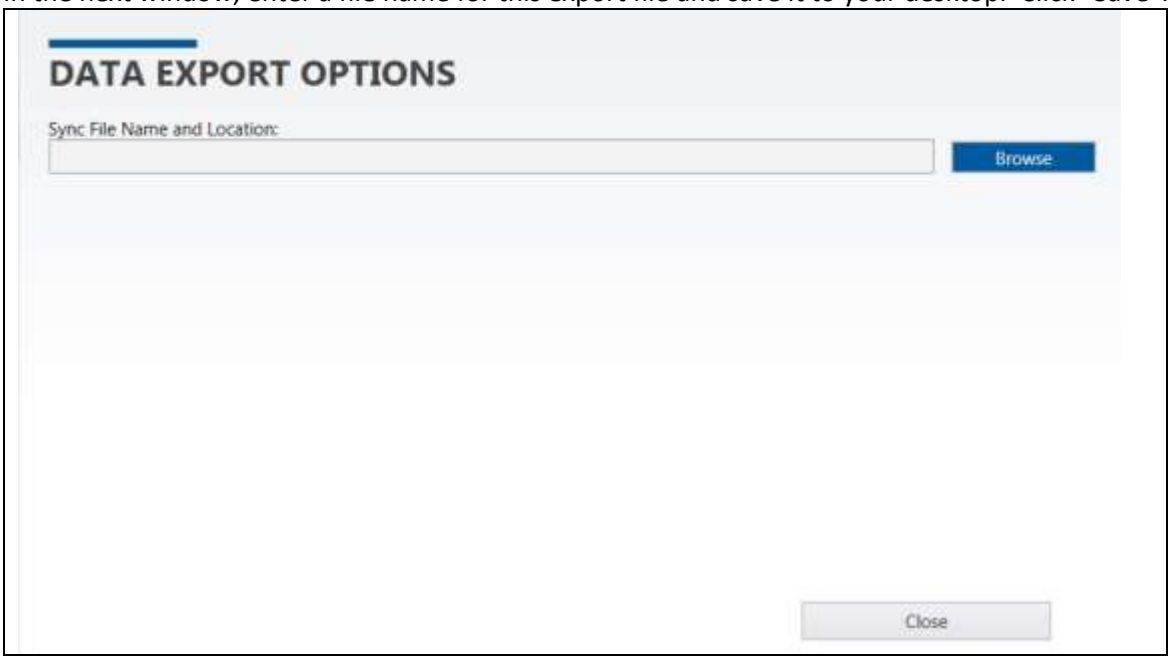
The below instructions explain how to update the version of the VHF application on your computer. These instructions include directions to create a backup of your database to ensure that your data are not lost during the upgrade process.

12.1 Create a Database Backup

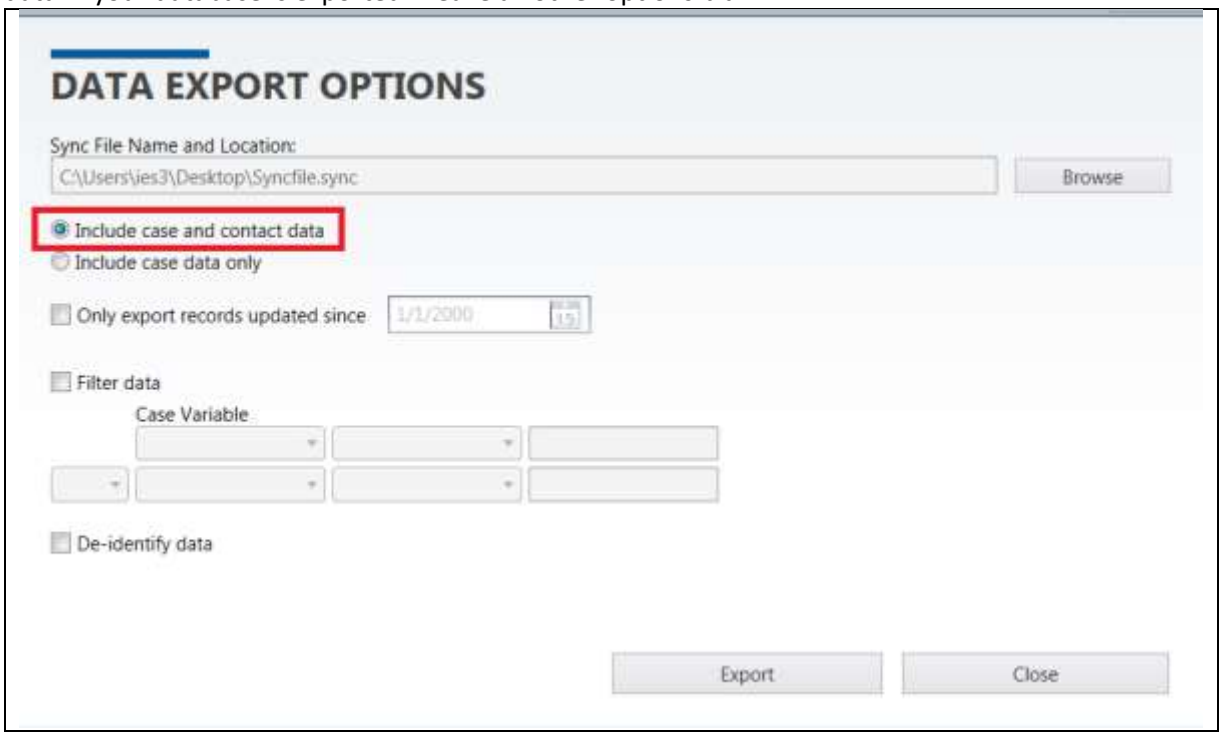
1. Before downloading the update, create a backup of your database by exporting the full database as a data sync file. To do this:
    a. Open your database.
    b. On the **Case Management** tab, find the "Export" button on the right, a few inches below the top of the screen. Click "Export" and choose "Export data sync file".



c. In the next window, enter a file name for this export file and save it to your desktop. Click “Save”.



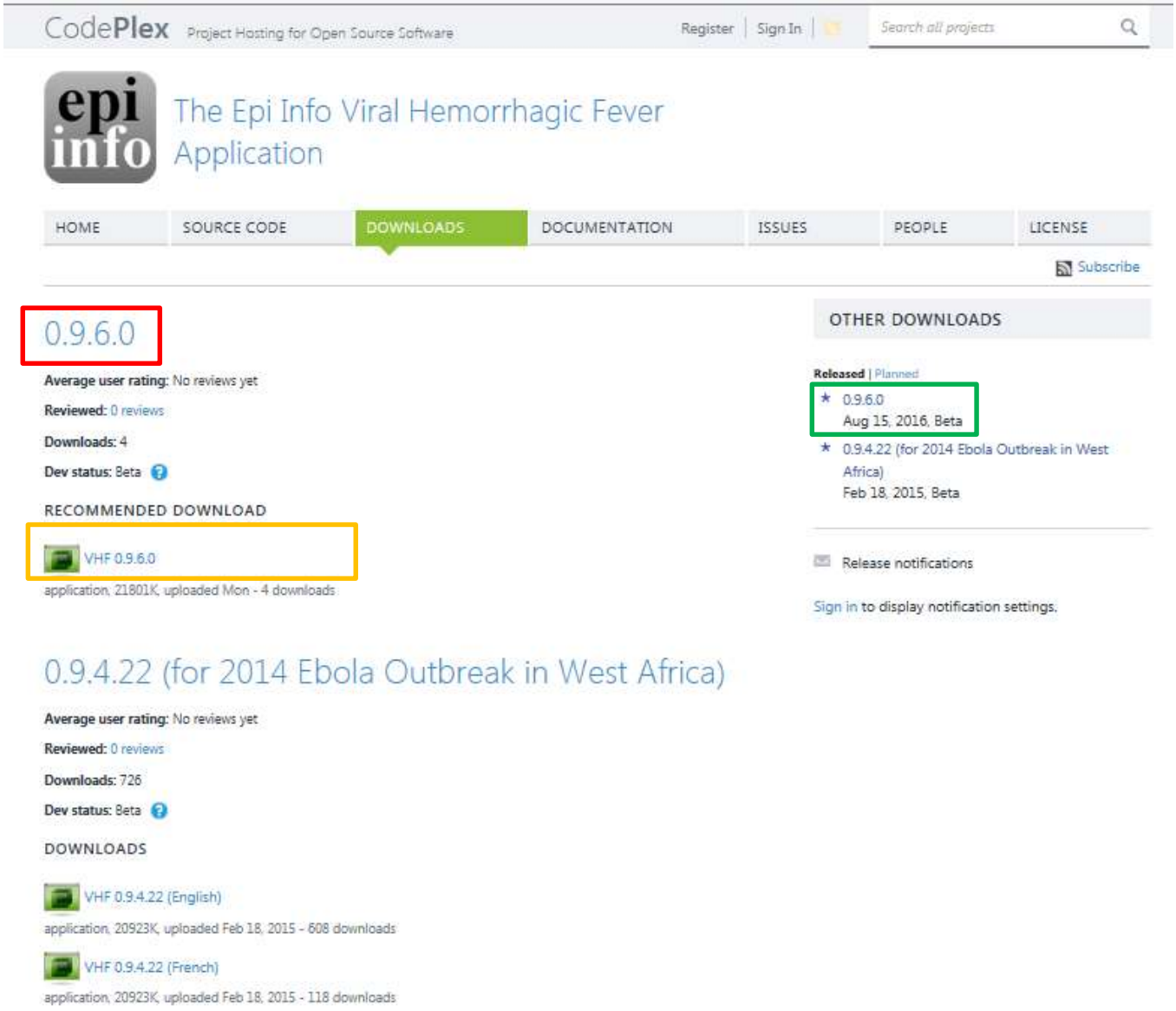
d. In the **Data Export Options** pop-up box, choose “Include case and contact data” to make sure all data in your database is exported. Leave all other options blank.



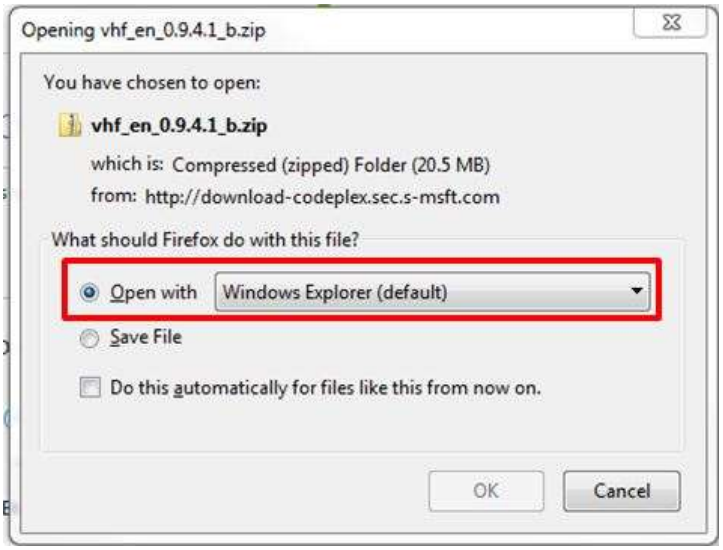
e. Click **OK**. You now have a .sync backup file (data sync file) of your full database saved to your desktop.

12.2 Download the Latest Version and Update the Application

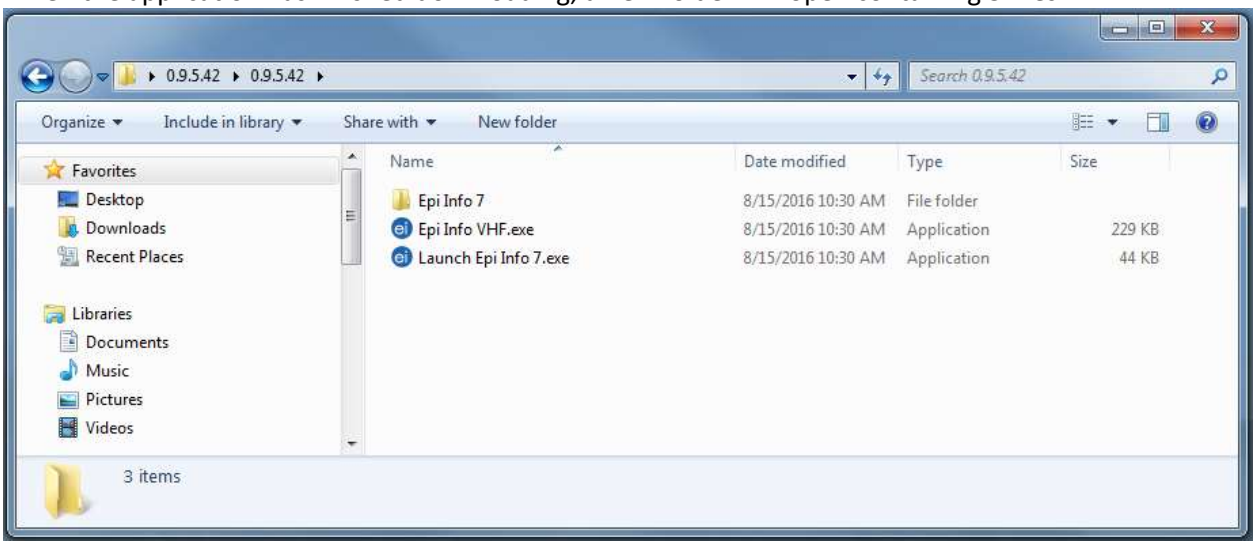
1. To download the latest version of the application, open the Epi Info VHF Codeplex site in your web browser: http://epiinfovhf.codeplex.com/.
    a. Click on the Downloads tab.
    b. The currently recommended version to download will always have a small star next to the version number in the list on the right (green box below). Make sure that the download title (red box) on the page you are on matches the currently recommended version. If not, click on the starred version number in the list on the right to go to the correct page.



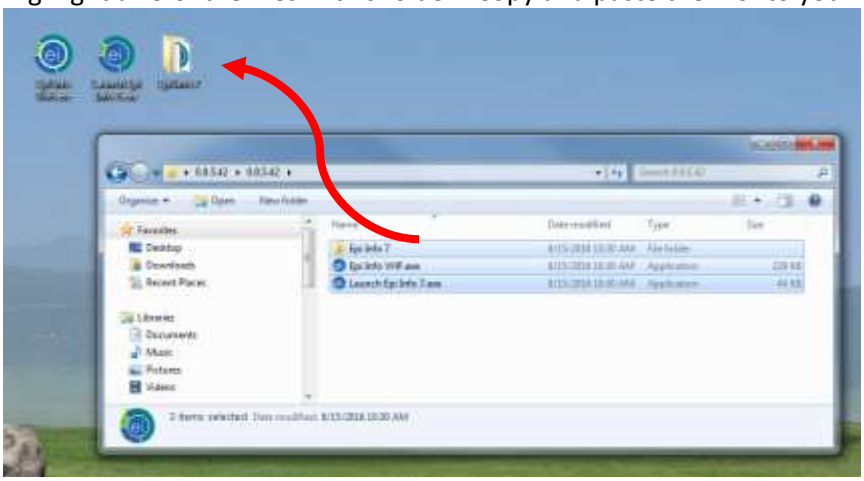
    c. Click on the blue title of your desired download (yellow boxes above)
    d. In the window that opens, choose to open the file with Windows Explorer, then click OK



2. When the application has finished downloading, a new folder will open containing 3 files

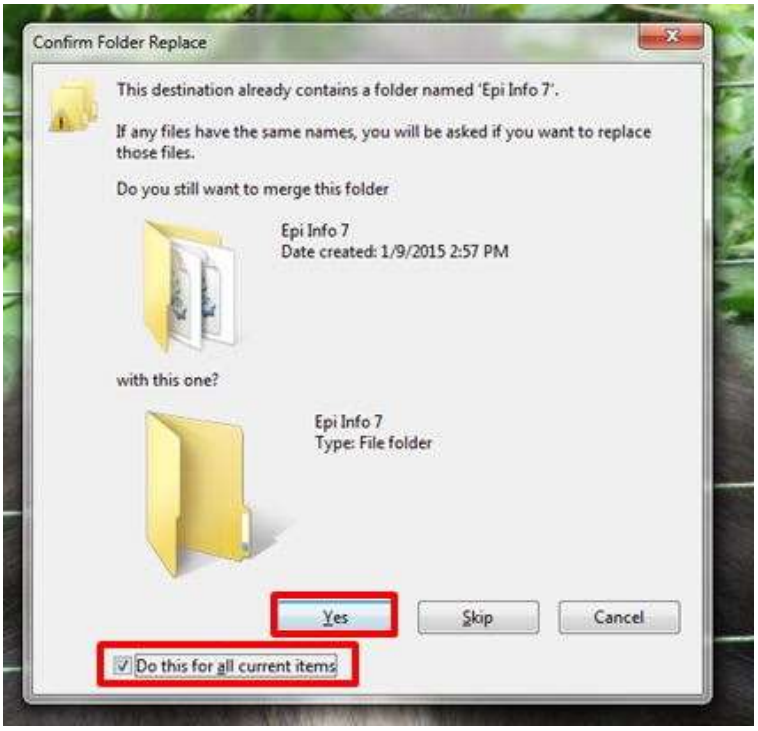


3. Highlight all 3 of the files in this folder. Copy and paste them onto your desktop.



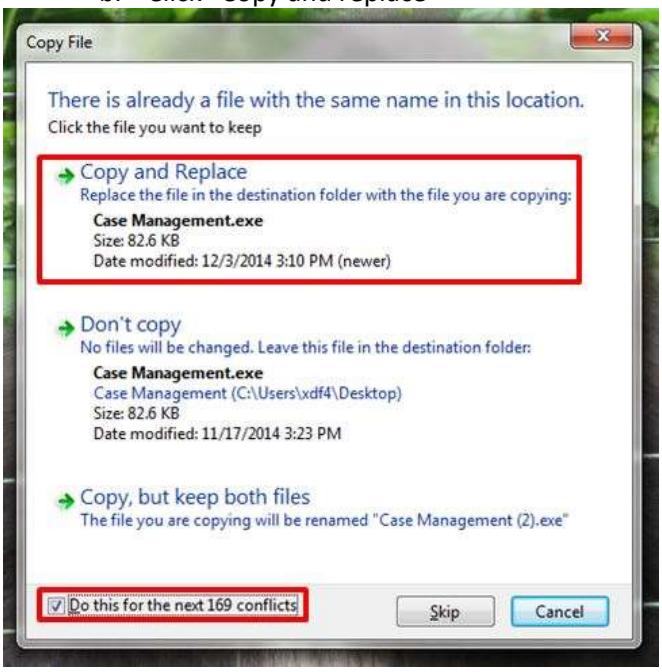
a. Note that this instruction assumes that you have the previous version of Epi Info VHF installed on your desktop as shown above. If you have the previous version installed in a different location, instead copy and paste these 4 files into that other location. Make sure to paste these 4 files into the same place as the 4 files for the previous version of the application; do not put the new files inside the Epi Info 7 folder from your previous installation.

4. You will get a message asking if you want to merge the new Epi Info 7 folder with the old one. At the bottom of this message click "Do this for all current items", then click "Yes" to merge your old folder with the new one.

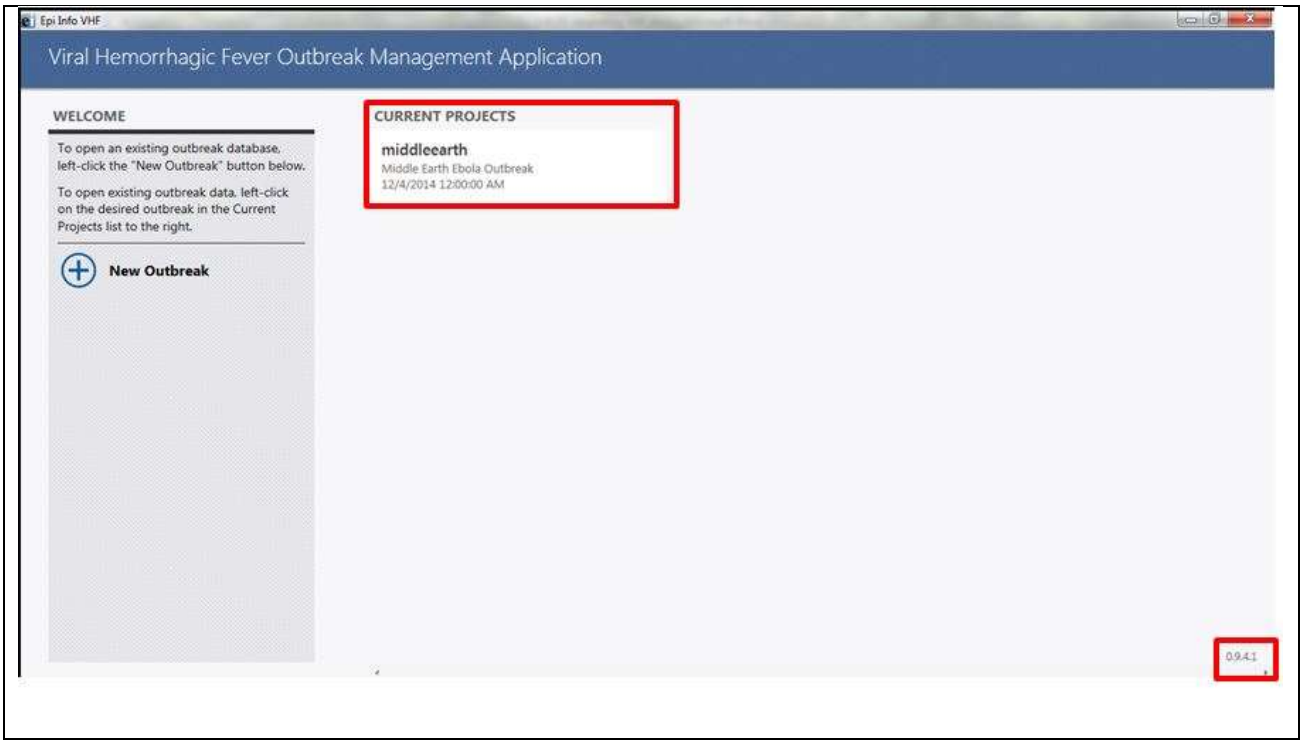


5. The next window will say that there are already files with these names on your desktop.
   a. Click the box at the bottom to take the same action for all conflicts

b. Click “Copy and replace”



6. Wait for all items to copy. Once copying is complete, double click on the Case Management icon on your desktop. All database files from your old version of Epi Info VHF have been left in place, and should now be accessible through the updated version. The same applies for other files that you have added to the Epi Info/Projects/VHF folder such as canvas files for Epi Info analysis. **If your update was successful, you should see all of your existing databases listed under “Current Projects” and you should see the version number of the new version in the lower right corner of the screen.**



13 Exporting, Importing, and Merging Files: How to Create and Use a Satellite or Backup Database

13.1 Exporting/Importing Data Sync Files

The Epi Info VHF application includes the capability to export data from one VHF database as a data sync file (.sync), a format that can then be imported into a different VHF database.

There are several reasons you might wish to export data from your database:

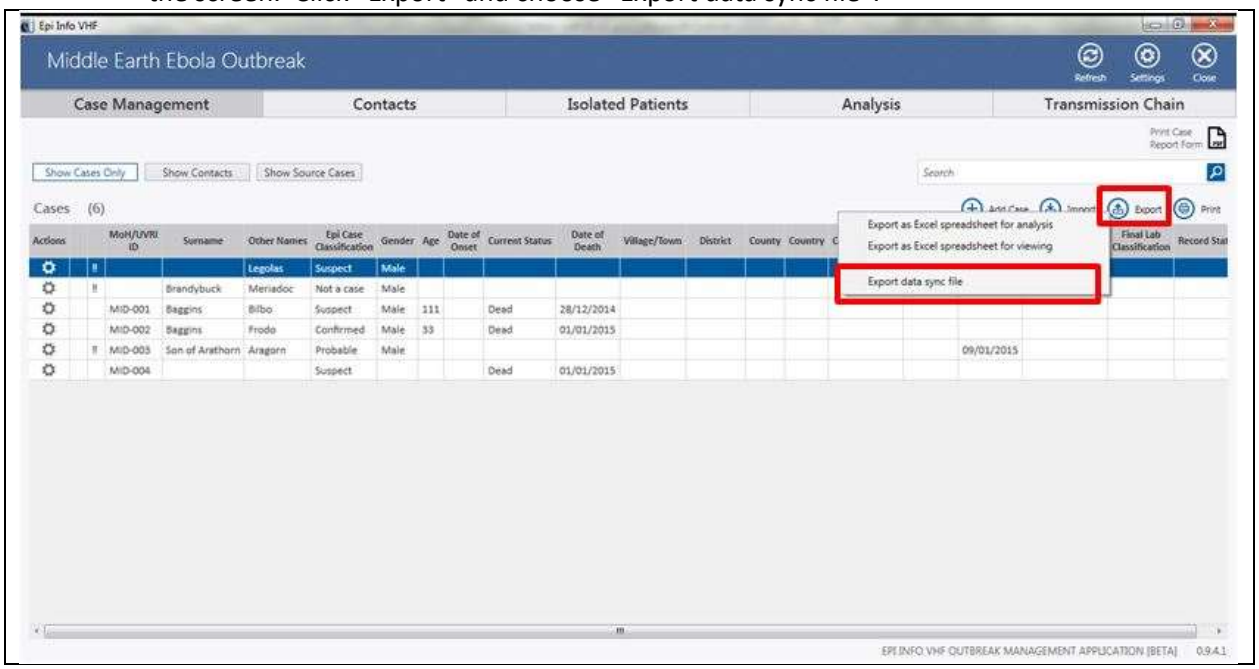
1. To create a backup of a SQL server database. You can do this by exporting your data from the SQL server database and importing them into an otherwise empty Access database.
2. To merge information in multiple databases. For instance, if the country you are working in maintains *satellite databases* in each county around the country as well as a central country-wide database that contains all cases for the whole country, you may want to have the satellite database managers export their data and send it to the central database. The data can be imported into the central database and merged with the data from all other counties.
3. To create a seed database. By selectively exporting only cases and contacts from a particular region, you can create a "seed database" that can be used to start a new satellite database in the region of interest
4. To share de-identified or filtered data with partners without giving these partners access to the complete data set.

Data can be exported from and imported to both Access and SQL server databases; the process is the same in either scenario.

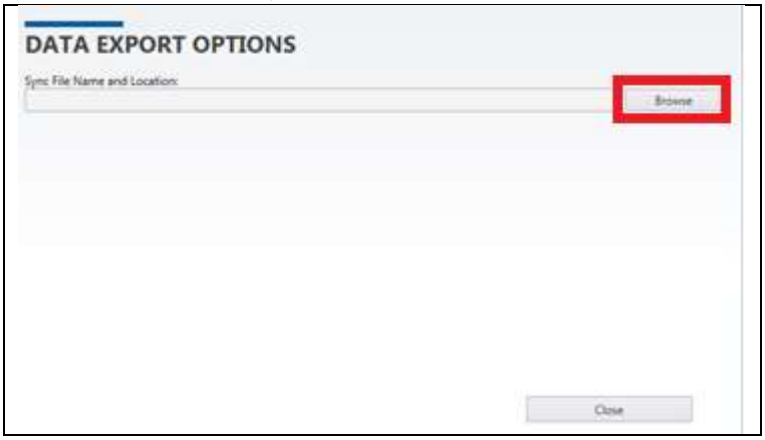
1. To export your database as a data sync file:

a. Open your database.

b. On the **Case Management** tab, find the "Export" button on the right, a few inches below the top of the screen. Click "Export" and choose "Export data sync file".

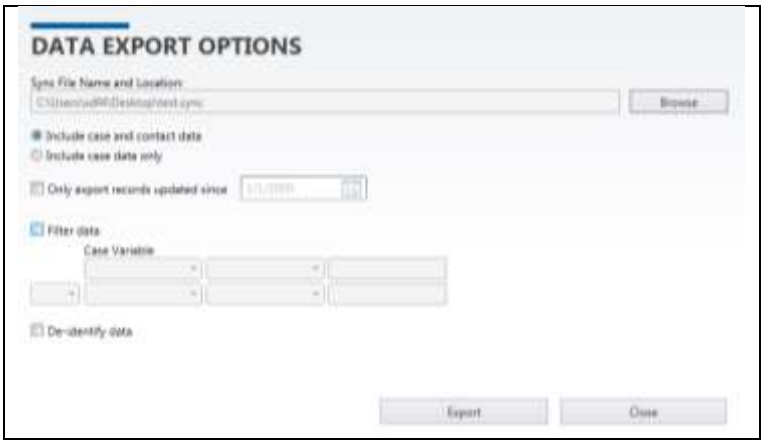


c. In the next window, enter a file name and save location for this export file by selecting “Browse”



d. The Data Export Options box will now populate with additional export options. You can choose to:

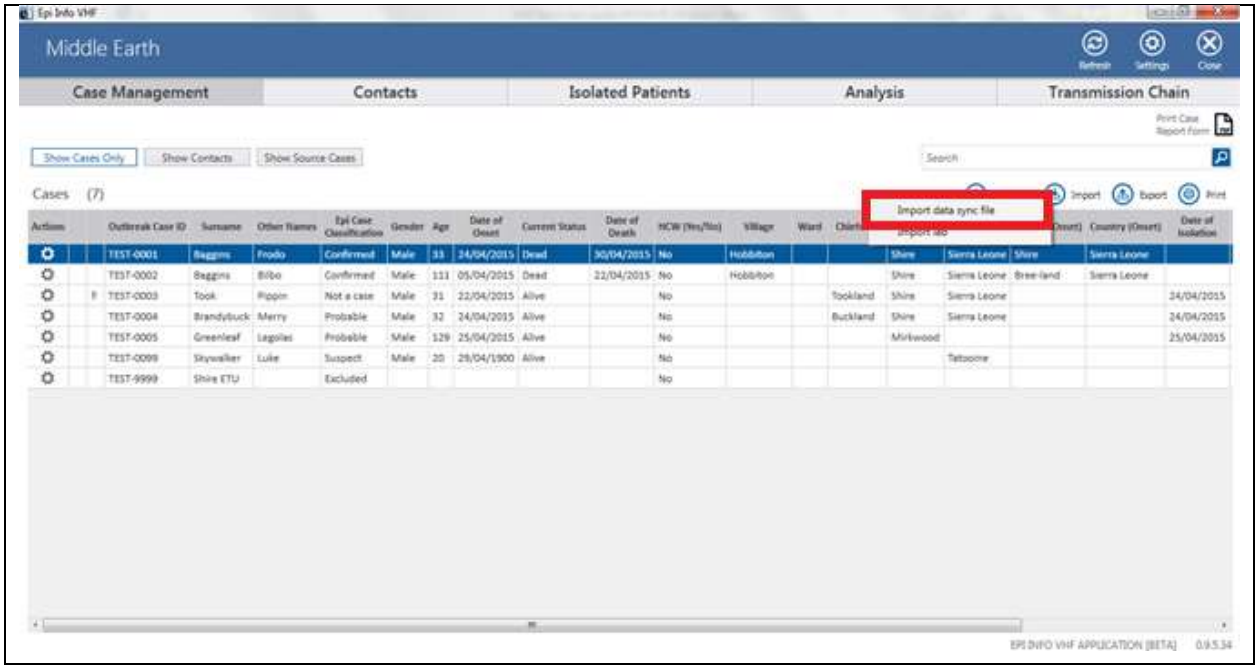
i. Include both case and contact data in your export or cases only
ii. Only export records updated since a certain date. If you are sending data from a satellite database to a central database, this option is helpful to reduce export and import times for large databases as it is generally only necessary to include records that have been updated since the last time the data was sent to the central database.
iii. Filter data to include only case records meeting particular criteria.
    1. Choose the name of the variable you wish to filter by under “Case Variable”.
    2. In the next drop down, choose “equals” if you want to include only records with an exact match for the chosen variable. Otherwise, choose “contains” to include all records containing specific text for the chosen variable.
    3. Enter the text you wish to filter by in the free text box.
        a. For example, if you choose **DistrictRes Contains Mont**, your export will include all cases whose highest-level administrative location of residence has been recorded as “Mont”, “Montserrado”, “Vermont”, etc. By contrast, if you chose **DistrictRes Equals Mont**, your export would contain only cases whose highest-level administrative location of residence was recorded as “Mont”.
    4. You can choose up to 2 criteria to filter records by; these criteria can be joined by either “And” or “Or”.
    5. Finally, you can choose to de-identify the exported data. See section “**De-identifying Exported Data Synch Files**”(13.3) for a thorough explanation of sync file de-identification



e. Click **OK**. You now have a .sync backup file (data sync file) of your full database.

To import a sync file into a different database, follow the following steps:

1) Download the sync file to your desktop if you received it by email.
2) Either create a new outbreak to import the synch file into a blank database shell, or open an existing database that you want to import the data into.
3) Click the **Import** button in the Case Management tab. A context menu appears. Select **Import case sync file** from the list of menu items.



4) A file dialog appears. Select the sync file you wish to open and click **Open**.
5) The import process starts, and will complete in several seconds or several minutes depending on the size of the data. Once the import has completed, all data that was packaged in the data sync file will appear in the recipient database.

13.2 Data Flow and Merging

The sync file export and import process relies on Globally-Unique ID (GUID) values, which are generated silently by Epi Info 7 when a record is created. GUIDs cannot be edited by users and remain hidden from view, although

you can view them in the case and contact CSV file exports. If during an import, a record in the incoming sync file matches a record in the receiving database based on the GUIDs in the two records, then the recipient's record will be updated with the incoming data for that record. Note, however, that empty or missing fields will never overwrite existing data during data import.

All records in the incoming data sync file that have GUIDs that are not found in the recipient database are added to the recipient database as new records.

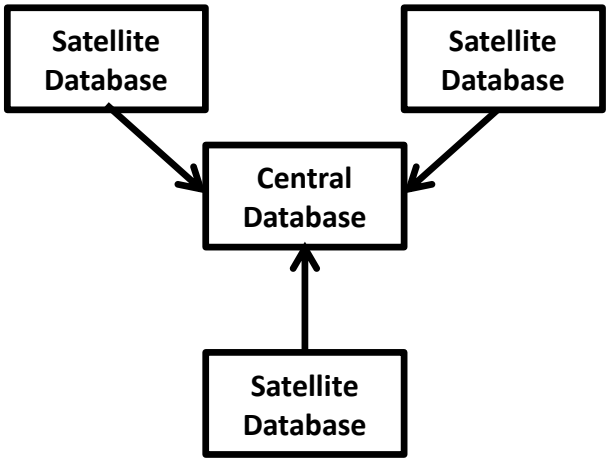
The use of GUIDs to match records allows one location to update the records in another on an ongoing basis. For example, if a satellite database at location "A" needs to send its data to the central database at location "B" every day, then subsequent import operations in to "B"'s database will not generate duplicate data. This is because each time a record is exported from database A, it will have the same GUID as it did the day before. When this record is then imported into database B, the VHF application will be able to tell that this record is an updated version of a record that was previously imported into database B, and so the application will merge these two records as described above.

However, this process assumes that a record is not created independently in both location "A" and location "B". If a record for Mr. John Smith is created in both location "A" and "B", the GUIDs for each record will be different even if every user-defined field in both records is the same. The import process will therefore not be able to match John Smith's record in "B" with John Smith's data in the sync file from database "A"'s, resulting in duplicate data.

Because merging will create duplicates if the same case record is created separately in two locations:

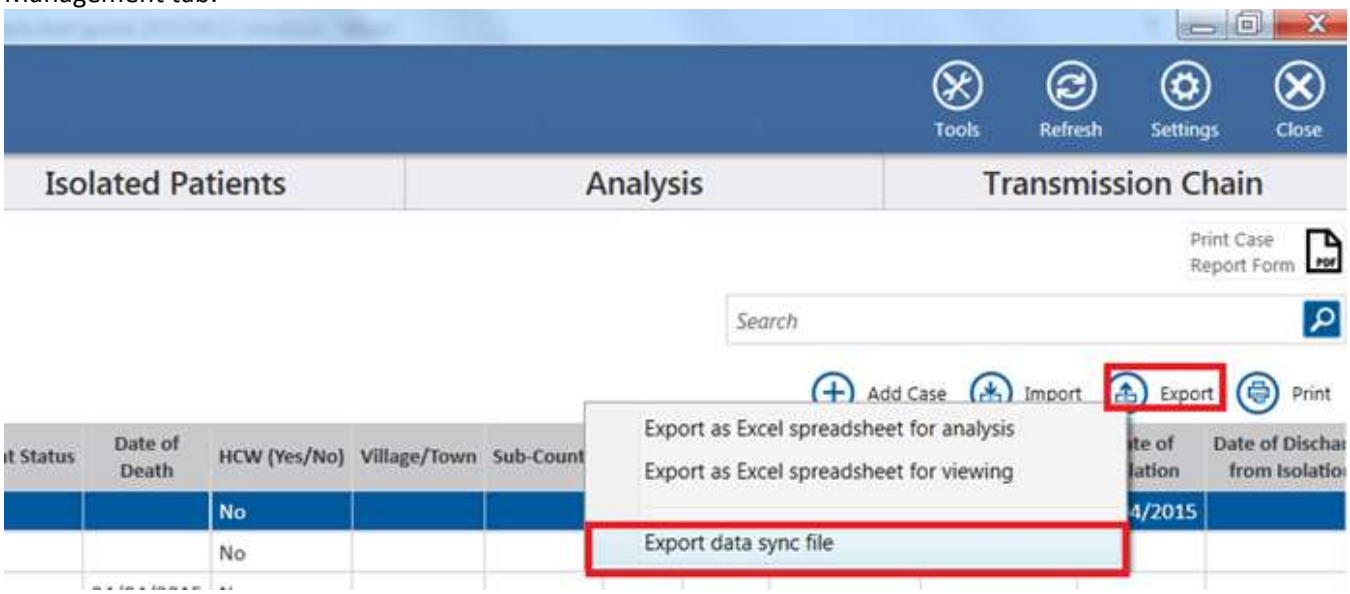
a) A satellite database should be initially created as a seed database from any existing central database, containing any records for the region that will be covered by the seed database that already exist in the central database.
b) *All case and contact information for a particular region should be entered directly into that region's satellite database* and should not be entered into the central database. If it is not possible to separate the data flow to ensure that no cases or contacts for the satellite region are entered into the central database, it may not be advisable to create a satellite database for that region.

Recommended data flow for satellite and central databases:

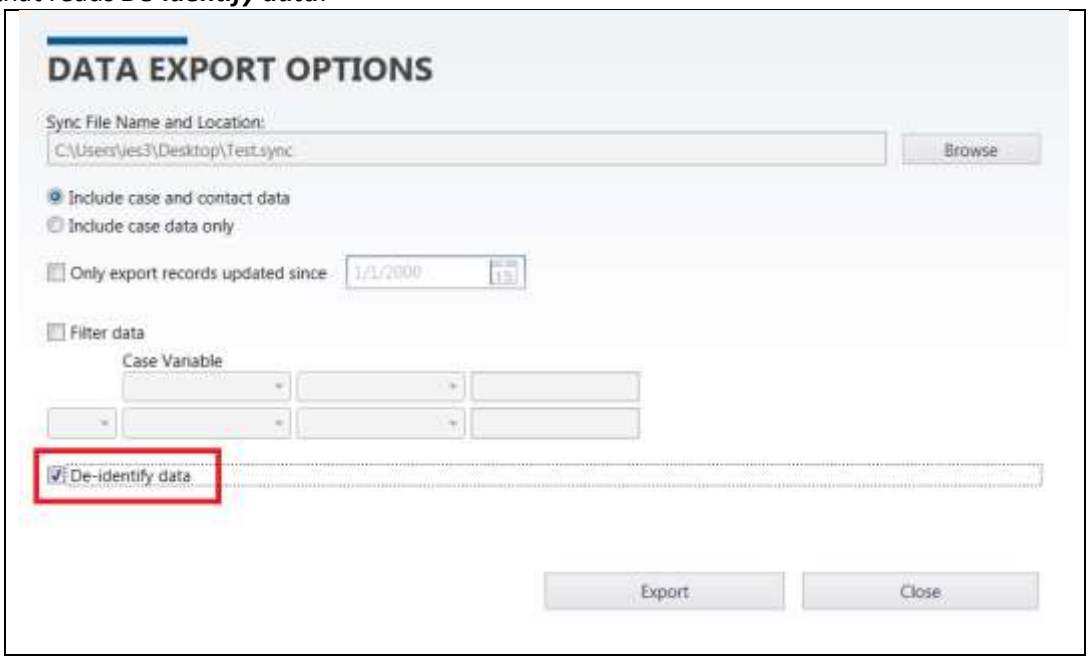


13.3 De-identifying Exported Data Sync Files

The purpose of the de-identify option is to protect the privacy of Ebola-infected cases and their contacts. This option is available when you choose the option ***Export data sync file*** under the export options on the Case Management tab.



Once the name of the file and location to save the file to be exported has been selected, the **Data Export Options** box will appear. To de-identify the data, click on the checkbox at the bottom of the **Data Export Options** that reads ***De-identify data***.



By de-identifying the exported data sync file, a set list of personal identifiers (PID) are removed from the associated data export. Please see the table below for the list of PIDs removed from the exported data.

Case Investigation Form

Section	Question	Variable
Patient Information	Patient's Surname	Surname
	Other Names	OtherNames
	Phone Number for Patient or Family Member	PhoneNumber
	Owner of Phone	PhoneOwner
	Head of Household	HeadHouse
Epidemiological Risk Factors	Name of Source Case #1	ContactName1
	Name of Source Case #2	ContactName2
	Name of Source Case #3	ContactName3
	Did the Patient Attend a Funeral: If yes, **Name of deceased person #1**	FuneralName1
	Did the Patient Attend a Funeral: If yes, **Name of deceased person #2**	FuneralName2
	Was the Patient Hospitalized or Did He/She Go to a Clinic or Visit Anyone in the Hospital Before Their Illness? If yes, **Patient visited**	HospitalBeforeIllPatient
	Did the Patient Consult a Traditional Healer Before Becoming Ill? Is yes, **name of healer**	TradHealerName
Risk Factors and Lab Testing	Case Report Form Completed By: Name	InterviewerName
	Case Report Form Completed By: Phone	InterviewerPhone
	Case Report Form Completed By: Email	InterviwerEmail
	Information Provided by Proxy. If proxy, **Name**	ProxyName

Contact Information

Section	Question	Variable
Contact Information	Surname	ContactSurname
	Other Names	ContactOtherNames
	Head of Household	ContactHeadHouse
	LC1 Chairman	LC1
	Phone Number	ContactPhone

In the US version, some additional fields are removed when the ***De-identify*** option is chosen on the **Data Export Options** pop-up box. The variable names for these additional fields are as follows:

US version Case Investigation Form

Section	Question	Variable
Patient Information	Date of Birth	DOB
	Email	Email
	Address	AddressRes

Patient Information: Location Where Patient Became Ill	Address	AddressOnset
Case Report Form Completed By:	If Proxy, Phone	ProxyPhone
	If Proxy, E-mail	ProxyEmail

US version Contact Information

Section	Question	Variable
Contact Information	Date of Birth	ContactDOB
	Address	ContactAddress
	Email	ContactEmail

14 Multi-User Support

14.1 Default Set-up

The default data storage mechanism for the VHF application is Microsoft Access. All new outbreak databases are created in the Access format. The VHF application does not allow multiple individuals to simultaneously work on the database when the underlying format is Microsoft Access. This single-computer, single-user model works well for small, limited outbreaks where hardware and IT support are either limited or non-existent. The app will run on virtually any Windows PC it is loaded onto and doesn't need any other equipment or software.

14.2 Multi-user Set-up

In larger outbreaks, the single-user model may be quite limiting and result in data entry bottlenecks. Simultaneous data entry and editing is supported as of version 0.9.3.0 when the underlying database engine is Microsoft SQL Server. Utilizing SQL Server allows multiple individuals to add, edit, and delete records.
Additional software and hardware is required to support the multi-user set-up:
1) One PC must be selected to act as a server
2) Microsoft SQL Server must be installed on the PC selected as the server
3) A router must be provided for connecting to client computers
4) If the router in (3) is not wireless, then network cables will be required for client PCs to connect to the router
IT staff familiar with both SQL Server and the VHF application will be required to initially configure the application for multi-user functionality.

14.3 Record Locking

When run in a multi-user environment, the application enforces record locking to prohibit two individuals from editing the same record at the same time. When a record is locked, you will see a "lock" icon next to the record. All other clients will be unable to edit that record until the lock is released. Locks are typically released when the person editing the record closes or saves the record. Locks may also be forcibly removed by system administrators.
It is important to note that locks propagate among all relationships. That is, if case SIER14-0001 is opened by a client and it is locked, not only is SIER14-0001 locked, but so are all of that case's contacts. Likewise, if a contact of SIER14-0001 is opened for editing, then SIER14-0001 is locked along with that contact.

14.4 Database Refreshing

The application automatically forces database refreshes depending on what actions other clients have carried out. Total refreshes occur when connected clients: Delete cases, delete contacts, update a case-contact relationship, update a follow-up visit with sick/isolated, or when data are imported via the sync file mechanism. Other actions, such as adding cases or editing contacts, do not require a database refresh.
Because of the way database refreshing takes place, it is not recommended to edit the daily follow-up information of contacts while other connected users are taking actions that will force database refreshing.

15 Frequently Asked Questions

1) Can I use the regular Epi Info 7 program to work with the VHF data?
No. While the Epi Info VHF Application runs on top of CDC's Epi Info 7 suite of software tools, and Epi Info 7 is utilized for most of the data entry process and all database access and interaction, this does not mean that a "standalone" Epi Info 7 installation can be used to work with your VHF application data. Using a regular copy of Epi Info 7 to work with your VHF application could result in serious problems and loss of relationship information. Therefore, it is always recommended to edit your data through the VHF application.

2) Why does the case count for the country not match the case count across all districts?
The way that the district report is generated can lead to apparent numeric discrepancies in the output. Take, for example, a database with five confirmed cases. All five are from country "X." Four are from district "Y" and the fifth does not have a specified district of residence. This will lead to a discrepancy between cases for the country and cases across all districts: country case count of 5 and a district case count of only 4 (because 1 confirmed case lacked a district). The output is not incorrect, but because of how Epi Info VHF counts cases, the numbers will not be what you expect because there is no way to display values that are missing.

3) Why is there no final lab classification when I entered “confirmed acute” or “confirmed convalescent”?
Yes, it's possible to have lab sample records with "Confirmed Acute" or "Confirmed Convalescent" and still have no final lab classification. This is because the data entry personnel determines if a case has confirmed lab samples and must mark the epi case classification field (page 1 of case report form) and the final lab classification field (page 5 of case report form) appropriately..

4) How do I export the analysis results into Excel?
There is no way to get the Analysis output into Excel.

5) Does the analysis tab contain statistics for cases marked as “excluded” or “non-case”?
No, cases marked as 'excluded' in their epi case classification are not included for any statistics shown in the Analysis tab. However, they ARE included in all of the VHF's app exports, so keep in mind if you're analyzing using other statistical tools (e.g. R, SAS, SPSS, Epi Info) that your numbers may not match the application's if you are not filtering out excluded or non-case records.
‘Non-cases’ are included in some parts of the analysis tab.

6) When I enter the names of people who’ve been in contact with the case patient into various fields of the case report form, does the program automatically either make that person a source case or a contact, depending on the field?

No. While at present the Epi Info 7 VHF electronic form mirrors the paper forms, we currently lack a way to automatically enter either source case or contact relationship links using this information. Therefore, even if you enter source case or contact data into the case report form, the source case and/ or contact relationsihps must still be entered manually on the Case Management tab.

7) How do I print the district-based report without it spilling on to more than one page?

The district-based report printout and the district of onset and district of residence tables in the main analysis tab both have overflow problems when printed. That means, after a certain number of tables/rows are present, some rows will be added below the bottom of the page and will not be printed. For small outbreaks this should not be an issue; however, our team is aware of the problem and will correct in future updates.

8) If a contact has multiple source cases, how is the 21-day period determined?

For a contact with multiple source cases, the application reviews all of the contact's source case relationships and dates. The most recent date of last contact (that is not classified as 'Not a Case') is the date that is used for the start of the 21-day period.

9) How does a contact get automatically discharged from the 21-day follow-up period?

When a contact is marked as "seen/not sick" on day 21, this discharges them from follow-up.

16 Known Issues

16.1 Database Compatibility between Application Versions

a. Databases created in version 0.9.5.38 and above are not backwards compatible with those created in 0.9.4.22 and below. This means that an exported .sync file created in version 0.9.4.22 or below can be imported into higher numbered application versions, but a .synch file created in version 0.9.5.38 and above cannot be imported into version 0.9.4.22 or below.
b. The correct way to update a database created in version 0.9.4.22 or below to the improved format of databases in 0.9.5.38 and above, is to copy the .mdb and .prj files for the database found in the folder Epi Info 7 → Projects → VHF in the lower application version number (0.9.4.22), and copy those two files into the same folder for the higher application version number (0.9.6.0). Then open application version 0.9.6.0 and you should see your database appear in the existing databases section. Click on the database, and it will update into the new database structure (this may take some time to complete).
c. Exported .sync files from earlier application versions (0.9.4.22 and earlier) can be imported into the newer versions (0.9.5.38 and later), however they will not have their underlying database structure upgraded to the new and improved format. Therefore, to first open a new database in the new application version using a .sync file, please first import the .sync file into version 0.9.4.22, and then follow the instructions in point b above.
d. In much earlier versions (those before 0.9.4.17), the data sync file created on export ended with .ecs instead of .sync. Versions 0.9.5.38 and forward cannot import .ecs files (only .sync files). Therefore, to upgrade the database into the format of those in 0.9.5.38 and above, import the .ecs file into a new database in version 0.9.4.22, and then follow the instructions in point b above.
e. For assistance with upgrading databases in application versions 0.9.4.22 and below into version 0.9.6.0 or above, please contact ***epiinfo@cdc.gov***

16.2 Analysis

- Many of the outputs on the analysis tab are still under discussion and have been tweaked specifically for the 2014 West Africa Ebola outbreak.
- There may be data inconsistencies in the database which will show up when you analyze the data (including in the app's analysis tab). For example, it's possible to mark a case's epi case classification as "Suspect" and have a Final Lab Classification as "Confirmed." This will cause some of the analysis counts to mismatch. Staff are investigating whether additional business rules are needed to address this.
- When analyzing Age in Free-Form Analysis, or after having exported your data to CSV format, keep in mind that the values here can be in months or years depending on the AgeUnit column. Therefore, to get a consistent "age in years" value you will have to do some additional calculations in whatever analysis tool you are using. Epi Info team members can assist you with this process.

16.3 Transmission Chain

- In large outbreaks, the transmission chain may take a long time to load and provides no visual cues to the user that it's processing data.

16.4 Multi-User Support

- Multi-site data collection is currently not recommended unless both sites are sure that they will not create the same records; that is, site "A" and site "B" shouldn't both create a case record for John Smith. If this is done, duplication will occur. Instead, site "A" can create John Smith's record and site "B" will import site "A"'s database to incorporate John Smith’s record into the more comprehensive database.

17 Distinct Features of the U.S. Version

Below is the description of features that are different in the US version of the VHF application compared to the International version.

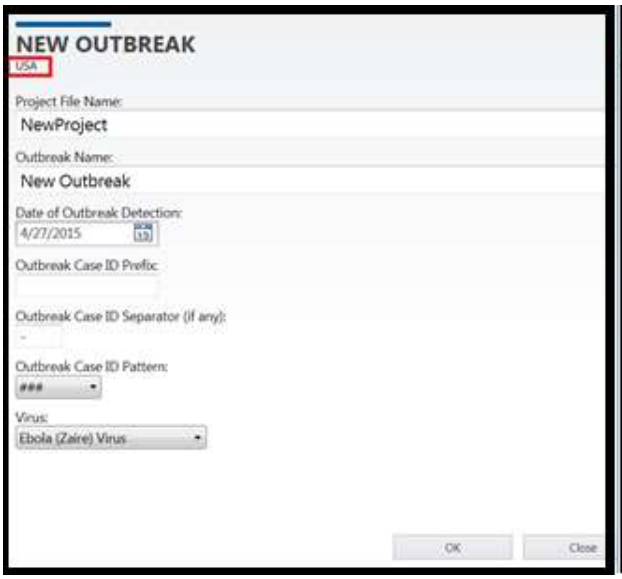
17.1 Create a New Outbreak

To create or open an existing outbreak in the U.S. version database, run the **Epi Info VHF** application by double-clicking on its icon on the desktop and under **Region,** choose the US version by clicking on the icon with the US flag. There is no choice of language for the US verison (English only).

New Outbreak setup in the U.S. version has the following differences compared with the International version:

1. Country and administrative location specifications are not included.
2. No short form checkbox

U.S. version:

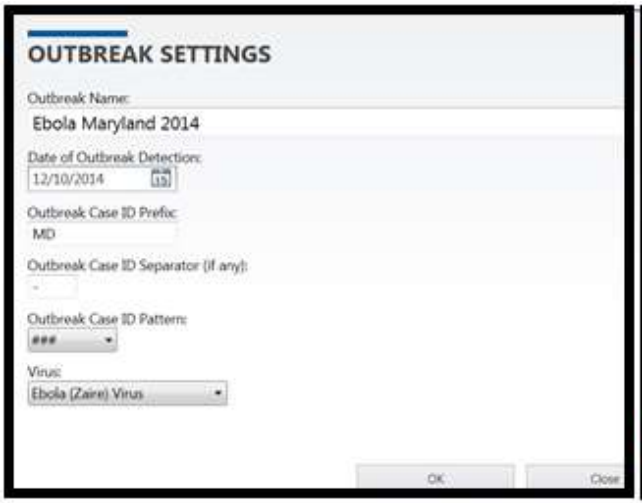


International version:

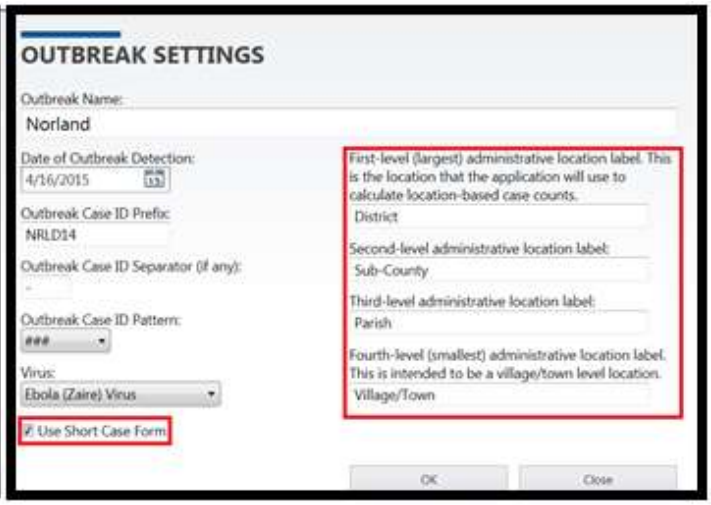
Outbreak Settings in the U.S. version has the following differences with the International version:

1. Country and administrative location specifications are not included.
2. No short form checkbox

U.S. version:



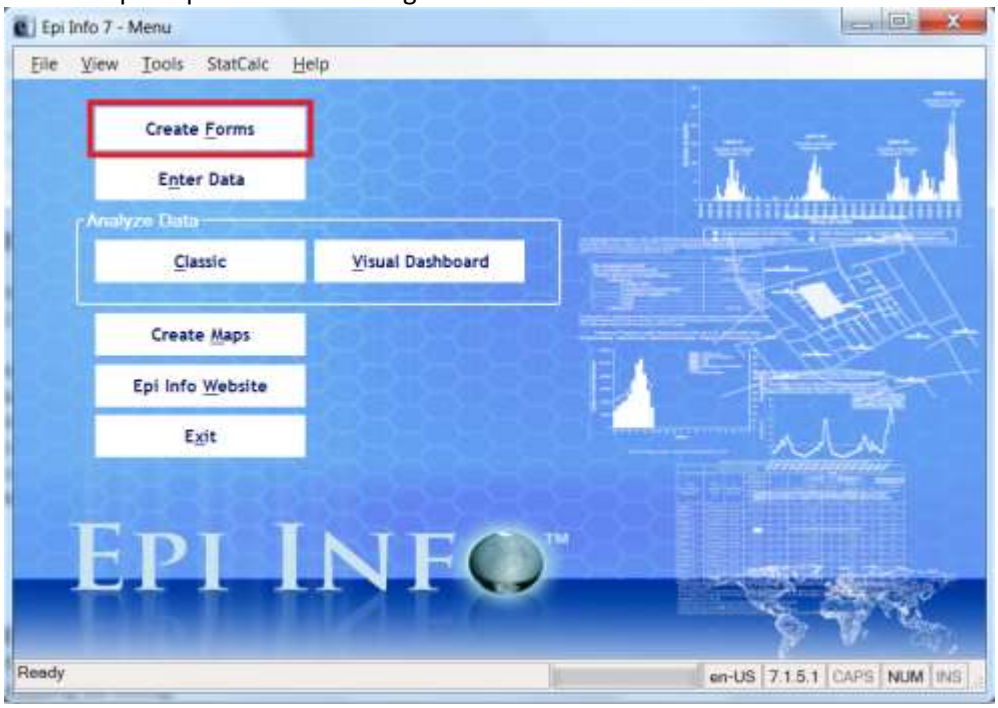
International version:



17.1.1 Customizing the Case and Contact Forms

The case and contact forms can be **customized** for individual state needs. To do this:

1. Create a new outbreak
2. Open Epi Info 7 form designer.

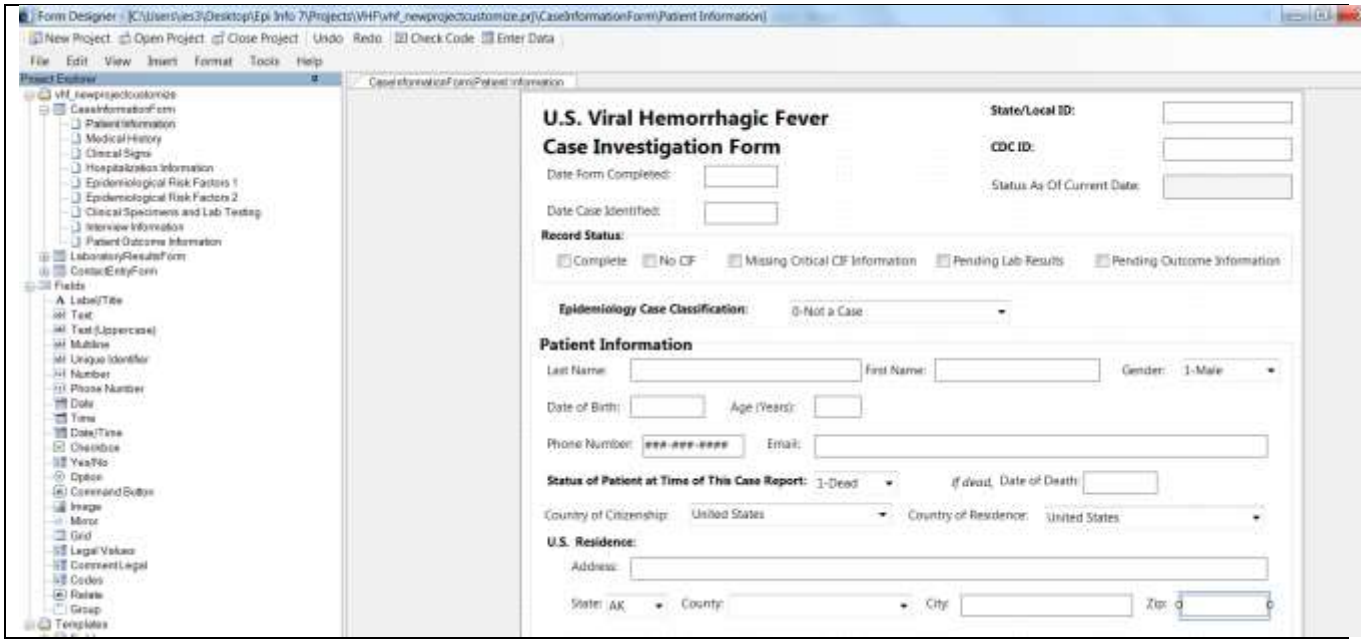


3. Load U.S. case and contact forms into Epi Info 7 **Form Designer**. To do this
   a. Click on **Open Project**

b. Browse to the location where the Epi Info 7 folder as a part of VHF application is saved
    i. Go to the Epi Info 7 -> Projects -> VHF folder
c. Find the .prj file for the new outbreak
d. Click **Open**.

4. The case Investigation Form will open in **Form Designer**. Please refer to http://wwwn.cdc.gov/epiinfo/user-guide/index.htm for the User Guide on Epi Info™ 7.

5. All variable fields matching the International version form have the same variable name as in the international verion form. All variables needed for application functions are the same in the U.S. and International versions.



6. Before data has been entered, the user can modify existing field types (for example, from text to drop-down; on contact form change “Risk Level” and “Public Health Action” to comment legal values, etc.), can add fields, but **should never delete the fields**.

7. Once data has been entered into the database, users can only add fields (cannot modify existing fields). Users should **never delete fields** from the database.

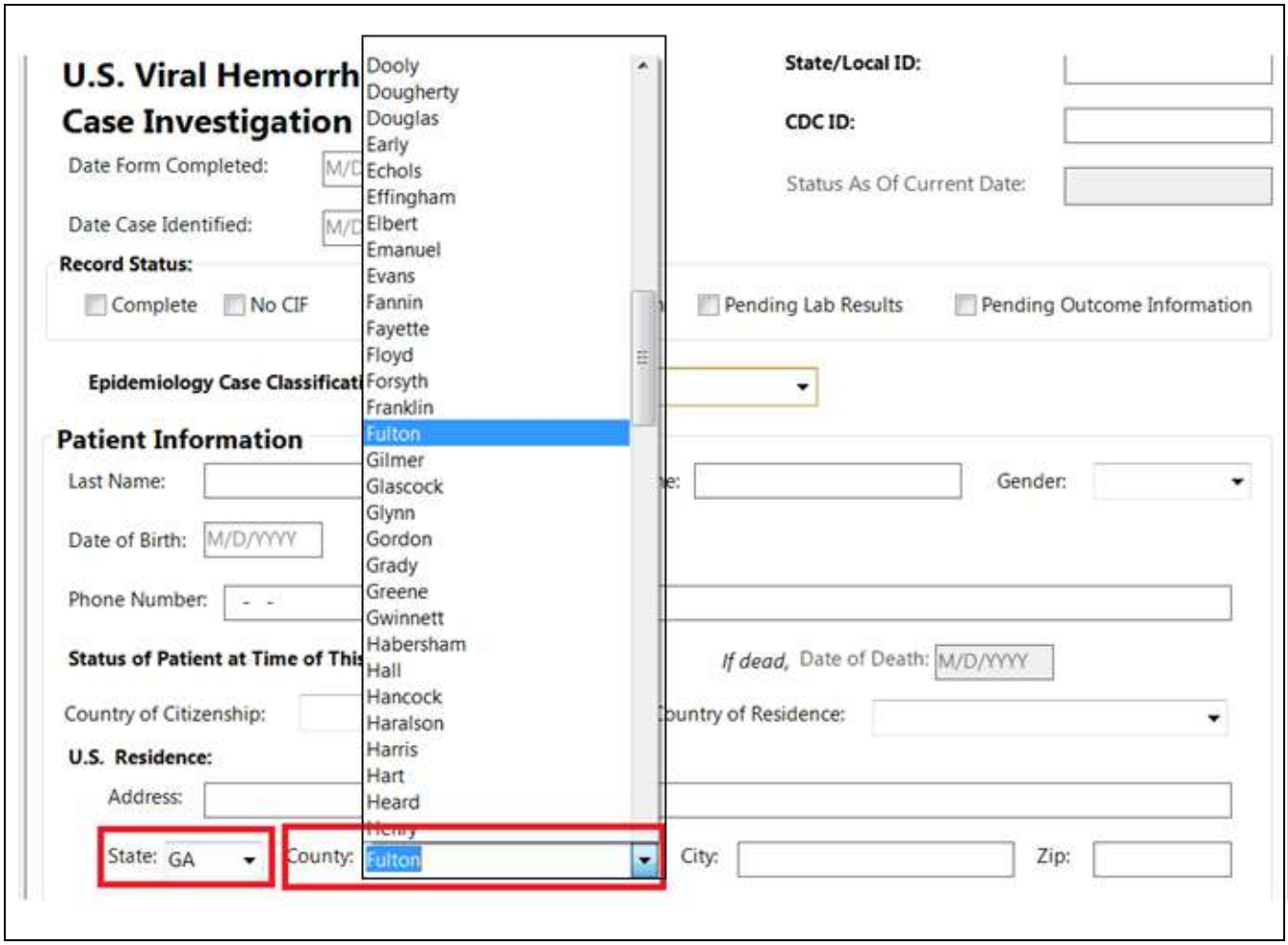
17.1.2 Differences in Administrative Level Location Fields

The U.S. forms have 4 Administrative Level Location Fields, with some differing slightly from those in the international forms. These correspond to the 4 Administrative Level Location Fields on International form as following:

US Form	International Form
1 - State	1 - District
2 - County	2 - Sub-county
-	3 - Parish
3 - City	4 - Village/Town
4 - Address	-

These 4 levels of administrative locations in the US form are applicable to all location fields on the Case Investigation Form (including US Residence, Occupation, Hospitalization Information, Epidemiology Risk Factors, Interview Information and Patient Outcome sections) and the Contact Information Entry Form.

The U.S. version forms have cascading drop-down lists for states and counties in all sections containing these fields:



17.2 Case Management

17.2.1 Case Investigation Form

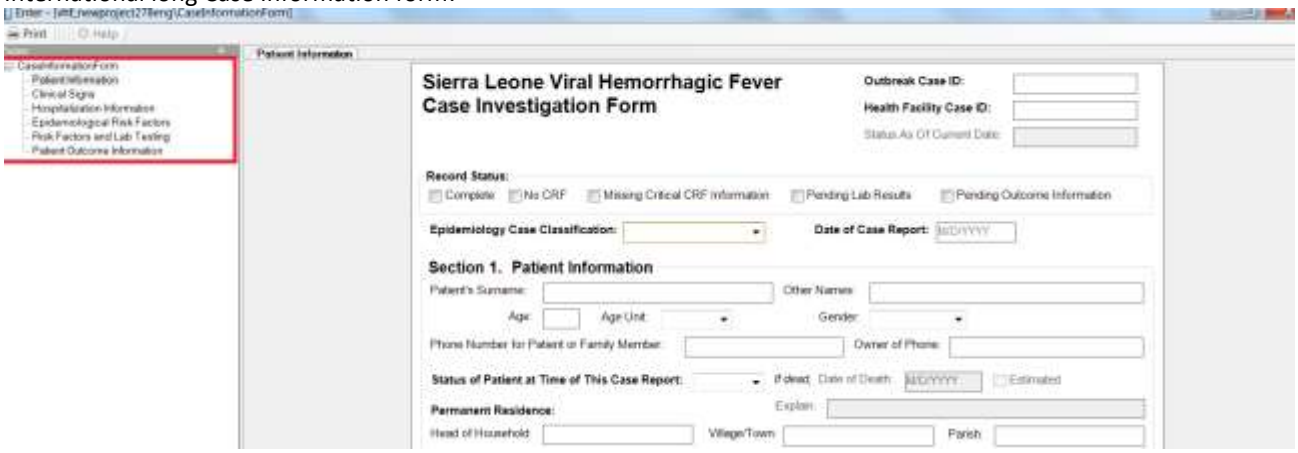
The U.S. version has only the long Case Investigation form (no short form). The Case Investigation form has the following 9 pages (International Case Investigation form has 6 pages):

- Patient Information
- Medical History
- Clinical signs
- Hospitalization Information
- Epidemiological Risk Factors 1
- Epidemiological Risk Factors 2

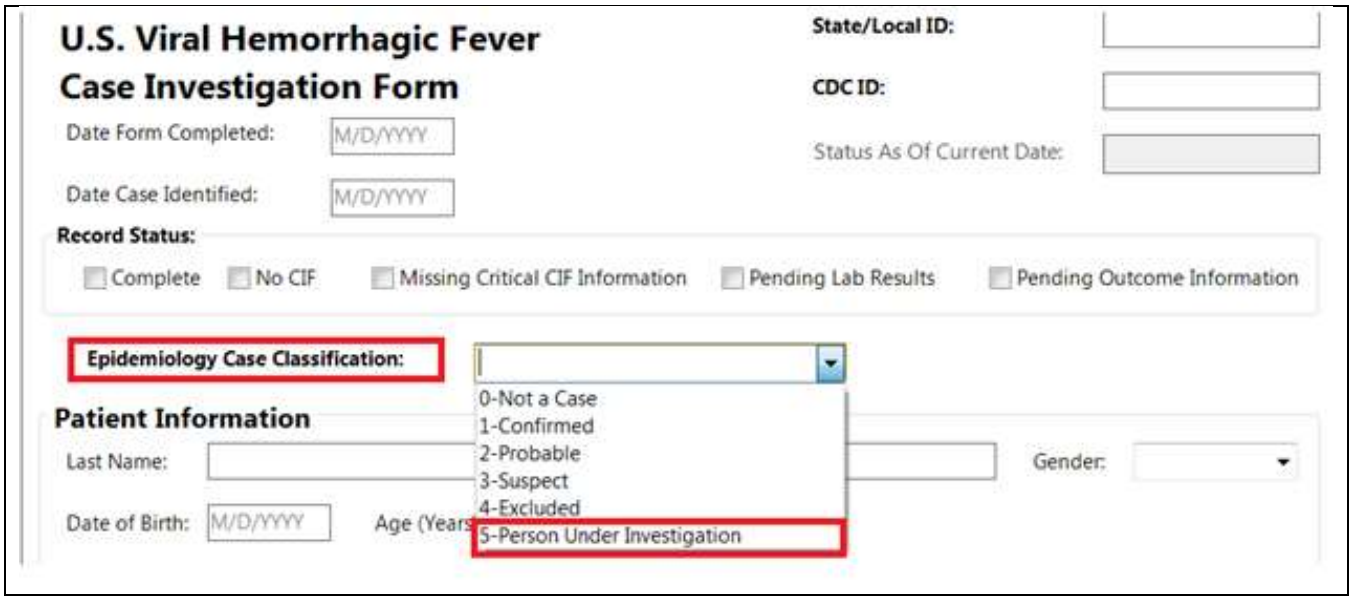
- Clinical Specimens and Lab Testing (Clicking on' Laboratory Sample Entry' should open the following lab results sub forms)
  - Laboratory Results
  - Laboratory Results 2
- Interview Information
- Patient Outcome Information

U.S. Case Information form:

International long Case Information form:



Epidemiology Case Classification in the U.S. version has an additional category - **Person Under Investigation (PUI)**:



In addition to the differences described above, the table below summarizes differences between the U.S. and International Case Investigation Forms (i.e. variables that have the same variable name but different prompts in the two versions, or variables that were added or removed):

Variable name	Section	Question on the US Form	Question on International Form
ID	Patient information	CDC ID	MOH/UVRI Case ID
OrigID	Patient information	State/Local ID	Health Facility Case ID
DateCaseID	Patient information	Date Case Identified	-
Surname	Patient information	Last Name	Patient's surname
OtherNames	Patient information	First name	Other names
AgeUnit	Patient Information	-	Age Unit
DOB	Patient Information	Date of Birth	-
Email	Patient Information	Email	-
AddressRes	Patient Information	Address	
Citizenship	Patient Information	Country of Citizenship	-
HeadHouse	Patient Information: Permanent Residence	-	Head of Household
OtherOccupOrg	Patient Information: Occupation	Organization	-
AddressOnset	Patient Information: Location Where Patient Became Ill	Address	-
OtherMedConditions	Medical History	Does the patient have any current medical conditions?	-
OtherMedConditionsDetail	Medical History	If yes, please describe:	-
Pregnant	Medical History	(Females only) Is the patient pregnant?	-
CurrentMeds	Medical History	Does the patient take any medications for his/her medical conditions?	-
CurrentMedsDetail	Medical History	If yes, please describe	-
InterviewerHealthFacility	Case Report Form Completed By:	Organization	-

ProxyPhone	Case Report Form Completed By:	If Proxy, Phone	-
ProxyEmail	Case Report Form Completed By:	If Proxy, E-mail	-
PersonLabSubmit1	Diagnostic Specimens and Results Form	Submitting Person	-
PersonLabSubmit2	Diagnostic Specimens and Results Form	Submitting Person	-
PersonLabSubmit3	Diagnostic Specimens and Results Form	Submitting Person	-
PersonLabSubmit4	Diagnostic Specimens and Results Form	Submitting Person	-
PersonLabSubmit5	Diagnostic Specimens and Results Form	Submitting Person	-

In addition to the above, the U.S. Case Investigation Form has the following variables removed:

- All variables with label "estimated" for dates and values
- All patient Occupation variables except for HCW and Other Occupation
- All animal status variables under Epidemiological Risk Factors

All epidemiological risk factors in the US Case Investigation Form are listed for the period of three weeks prior to symptom onset compared to one month in International form.

The lab summary line list in the US version has the following differences compared to the International version:

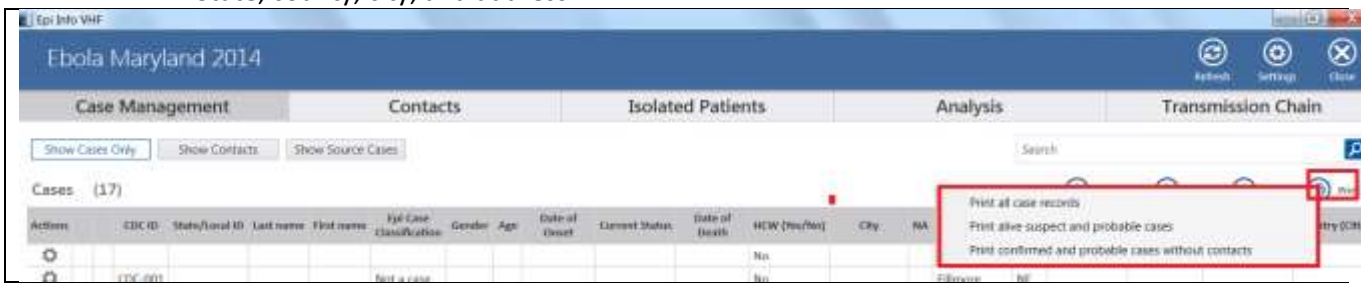
- Added CDC Specimen ID
- Add the following columns at the end:
    - Testing Lab
    - Submitting Facility
    - Submitting Person
    - Submitter Phone

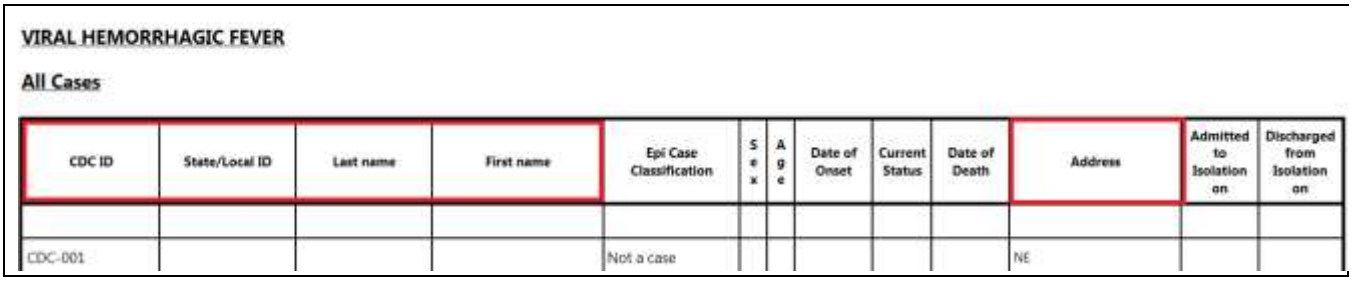
US version:

International version:

Column heading labels in print-outs under print in Case Management tab were changed to match specifications:

- Two IDs with correct labels
- First and last name
- State, county, city, and address





VIRAL HEMORRHAGIC FEVER

All Cases

CDC ID	State/Local ID	Last name	First name	Epi Case Classification	Sex	Age	Date of Onset	Current Status	Date of Death	Address	Admitted to Isolation on	Discharged from Isolation on
CDC-001				Not a case						NE		

Case csv export (analysis)

- All values on form are automatically exported, including fields added by the user. Fields are exported in tab order.
- There is no option to export a csv file for viewing as there is in the international version.

17.3 Contact Management

The U.S. Contact Information Entry Form has 4Administrative Location Fields and cascading drop-down lists for states and counties, just like the Case Investigation Form.

The table below summarizes the differences between the U.S. and International Contact Information Entry Forms (i.e. variables that have the same variable name but different prompts in the two versions, or variables that were added or removed):

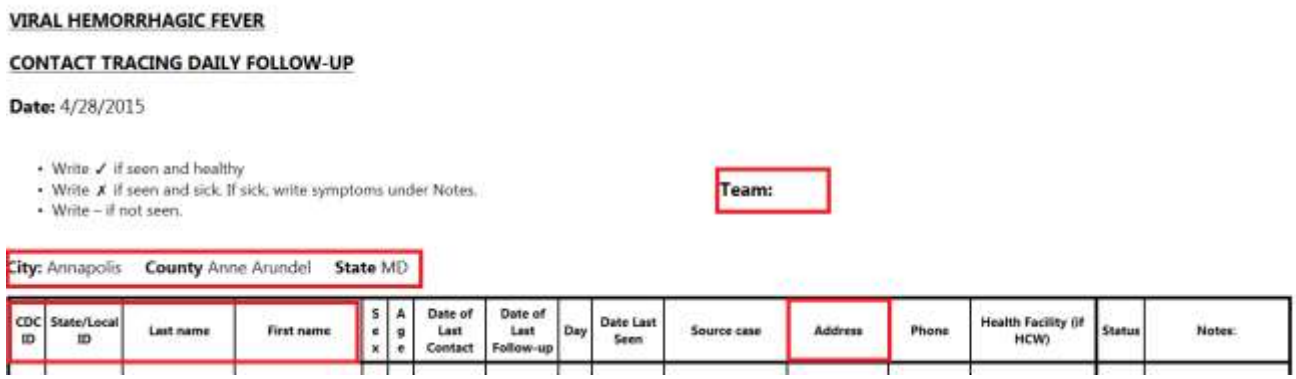
Variable name	Section	Question on the US Form	Question on International Form
ContactStateID	Contact Information	State/Local ID	-
ContactCDCID	Contact Information	CDC ID	-
Date of Interview	Contact Information	Date of Interview	-
ContactSurname	Contact Information	Last Name	Surname
ContactOtherNames	Contact Information	First Name	Other Names
ContactDOB	Contact Information	Date of Birth	-
ContactAgeUnit	Contact Information	-	Age Unit
ContactHeadHouse	Contact Information	-	Head of Household
LC1	Contact Information	-	Community Political Leader
ContactZip	Contact Information	Zip Code	-

ContactEmail	Contact Information	Email	-
ContactHCWPosition	Contact Information	If Healthcare Worker, Position/Job Title	-
Team	Contact Information	Contact Tracing Team	-
Public Health Action	Contact Information	Public Health Action	-
AdminOveride	Contact Information	Admin Override	-
ContactNotes	Contact Information	Notes	-

The U.S. version Daily Follow-ups and Prior Follow-ups Reports as well as the Contact follow-up print-outs and Excel export have the following differences compared to the International version:

- Top part of the report
  - Removed Team Leader heading
  - Changed Village to City, Chiefdom to County, and District to State
- Column headings
  - Added CDC and State/Local IDs
  - Changed all Surnames to Last Names and Other Names to First Names
  - Added address
  - Removed Head of Household

U.S. version:


VIRAL HEMORRHAGIC FEVER

CONTACT TRACING DAILY FOLLOW-UP

Date: 4/28/2015

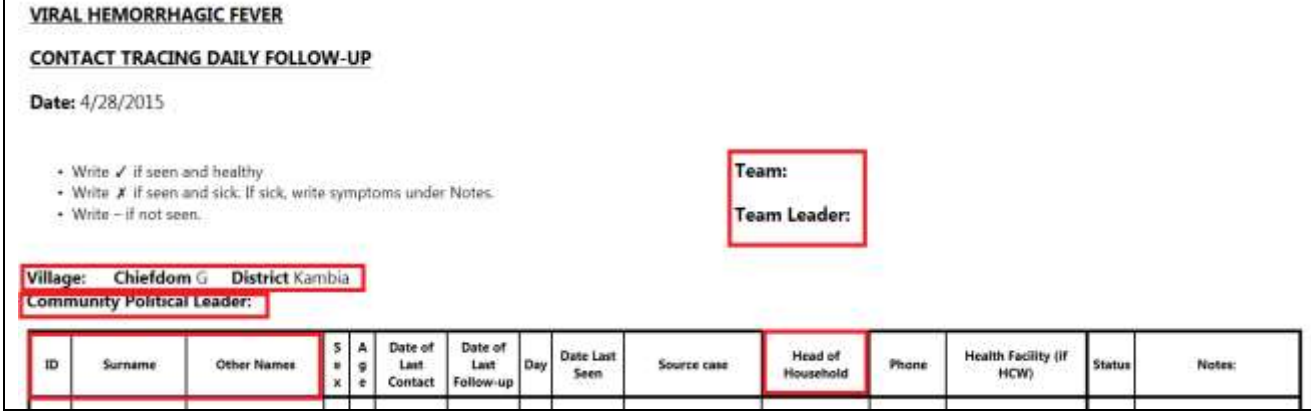
- Write ✓ if seen and healthy
- Write ✗ if seen and sick. If sick, write symptoms under Notes.
- Write – if not seen.

Team:

City: Annapolis **County** Anne Arundel **State** MD

CDC ID	State/Local ID	Last name	First name	Sex	Age	Date of Last Contact	Date of Last Follow-up	Day	Date Last Seen	Source case	Address	Phone	Health Facility (if HCW)	Status	Notes:

International version:


VIRAL HEMORRHAGIC FEVER

CONTACT TRACING DAILY FOLLOW-UP

Date: 4/28/2015

- Write ✓ if seen and healthy
- Write ✗ if seen and sick. If sick, write symptoms under Notes.
- Write – if not seen.

Team:

Team Leader:

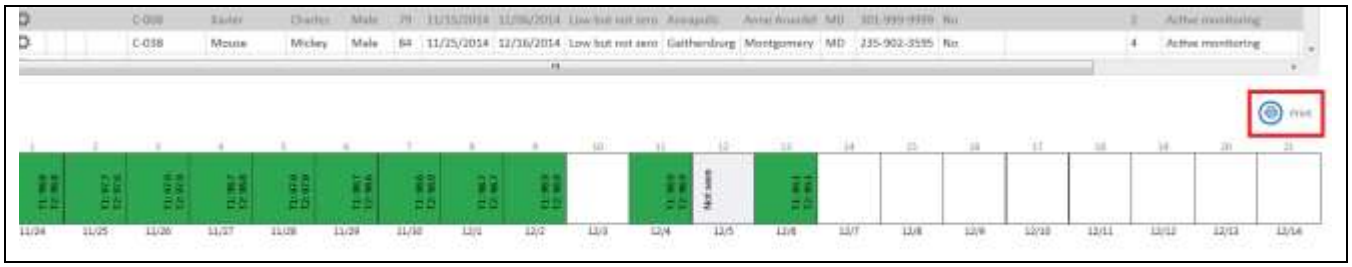
Village: **Chiefdom** G **District** Kambia

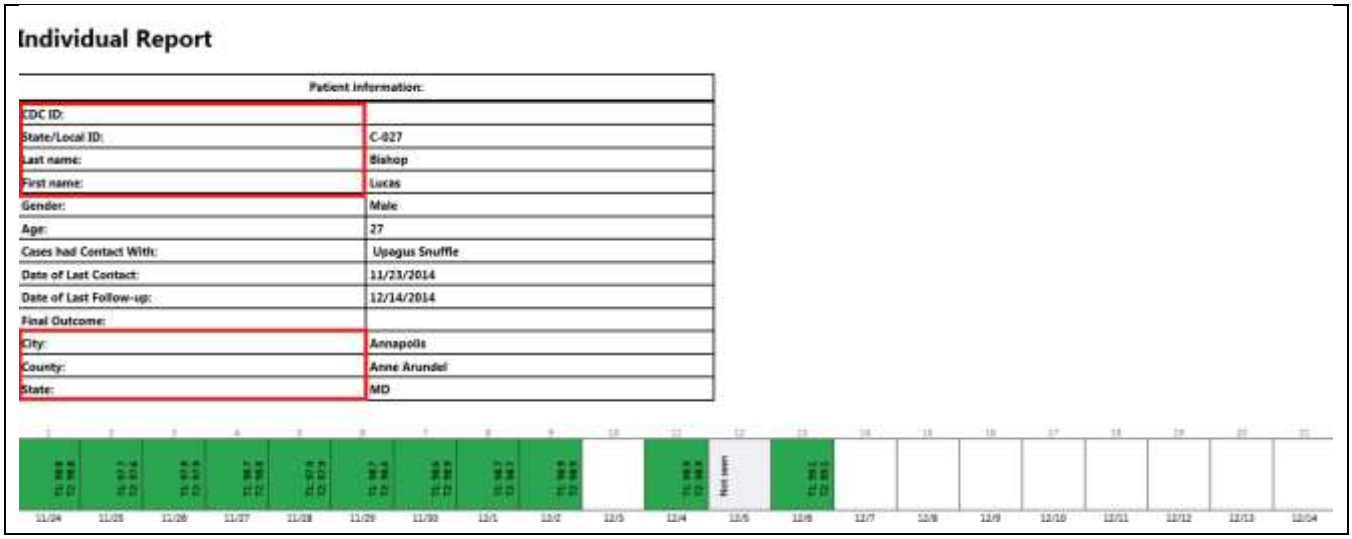
Community Political Leader:

ID	Surname	Other Names	Sex	Age	Date of Last Contact	Date of Last Follow-up	Day	Date Last Seen	Source case	Head of Household	Phone	Health Facility (if HCW)	Status	Notes:

The column headings in the print-outs generated from Print Individual Report under the Contacts tab were changed to match specifications:

- Two IDs with correct labels
- First and last name
- State, county, city





Individual Report

Patient Information:	
CDC ID:	
State/Local ID:	C-027
Last name:	Bishop
First name:	Lucas
Gender:	Male
Age:	27
Cases had Contact With:	Upagus Snuffle
Date of Last Contact:	11/23/2014
Date of Last Follow-up:	12/14/2014
Final Outcome:	
City:	Annapolis
County:	Anne Arundel
State:	MD

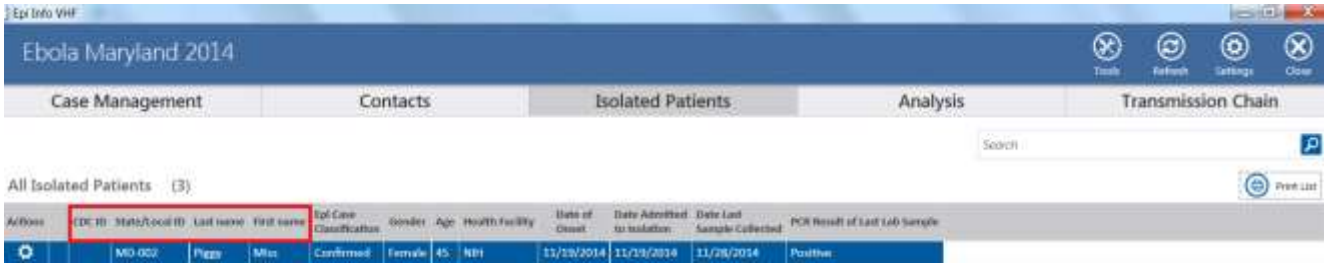
Contact csv export

- If the user adds fields to the contact form, those fields are exported in addition to all pre-existing fields.
- Fields are exported in tab order.

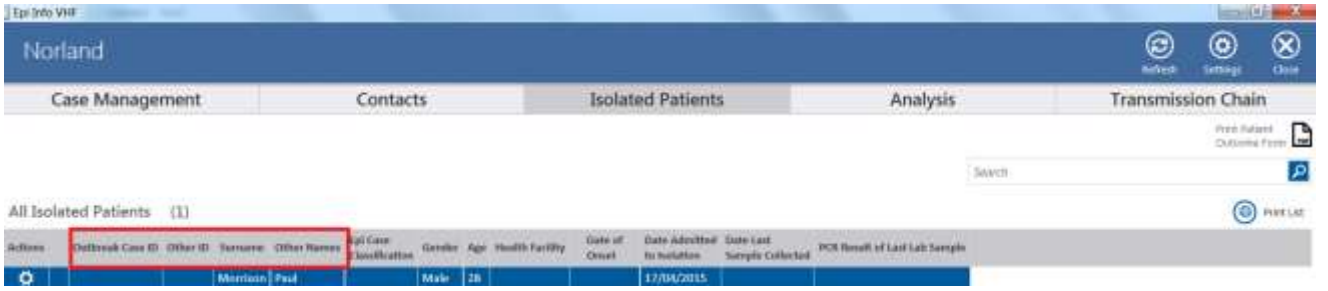
17.1 Isolated Patients

In the U.S. version, the **Isolated Patients** tab showing the list of all patients currently in isolation has CDC ID and State/Local ID (instead of outbreak Case ID and Other ID in international version, respectively) and First name and Last name (instead of Surname and Other names in international version, respectively).

US version:



International version:

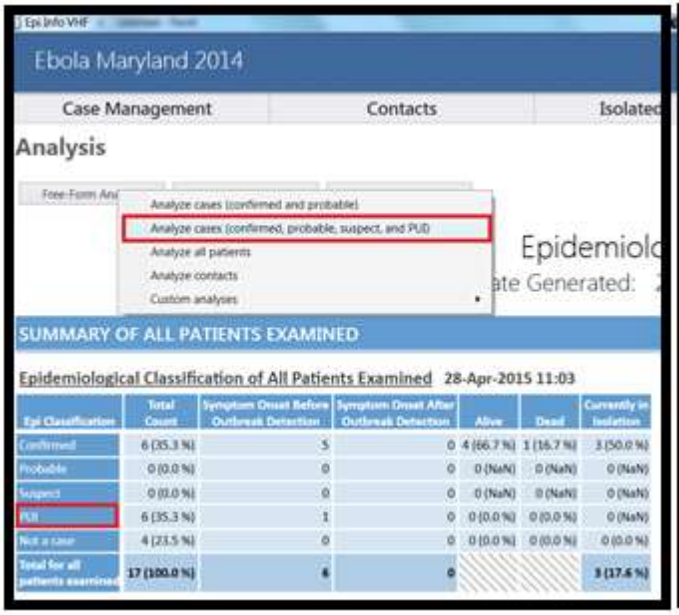


17.1 Analysis

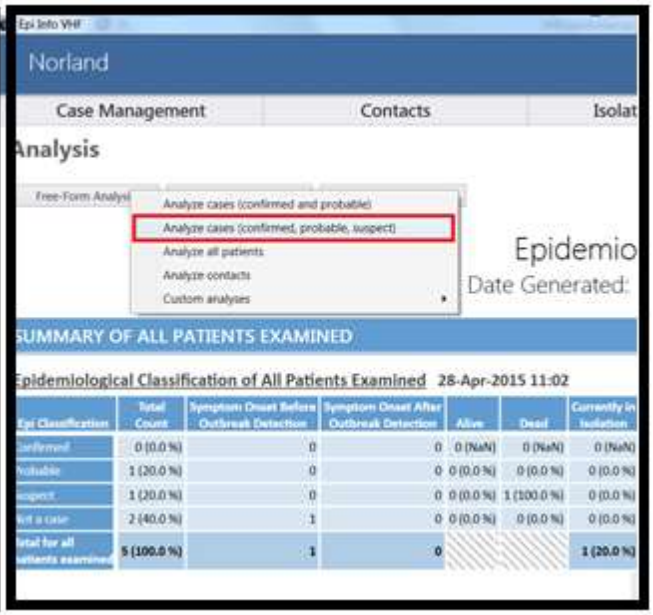
Under Free-Form Analysis, the option to analyze all cases includes those with Epidemiology Case classification Persons Under Investigation (PUI)

Some analysis tables were removed in the U.S. version (when compared to the international version).

US version:



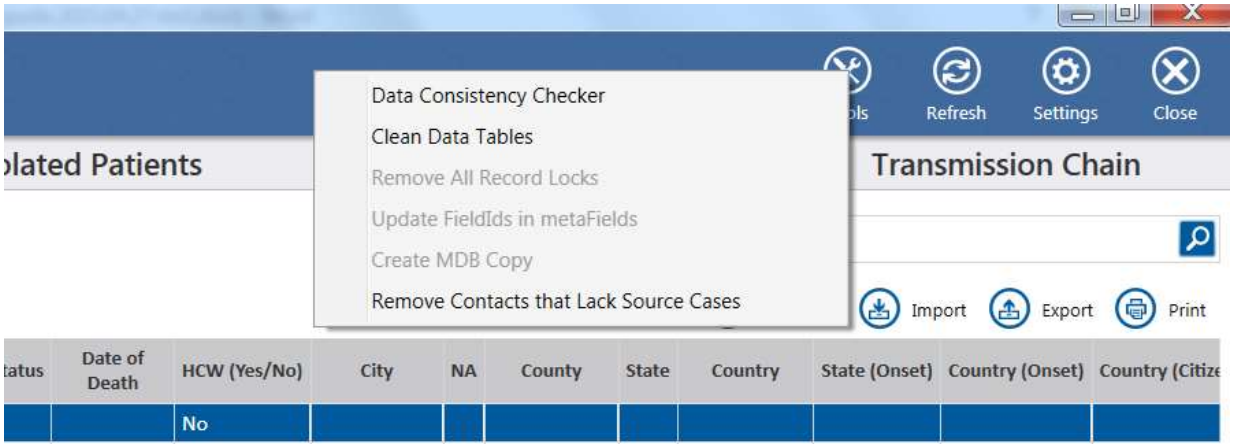
International version:



17.1 Super-user Mode

In Super-user mode for the US version, the “Tools” button has no “Administrative Location & Other Field Type Editor” option.

US version:



International version: