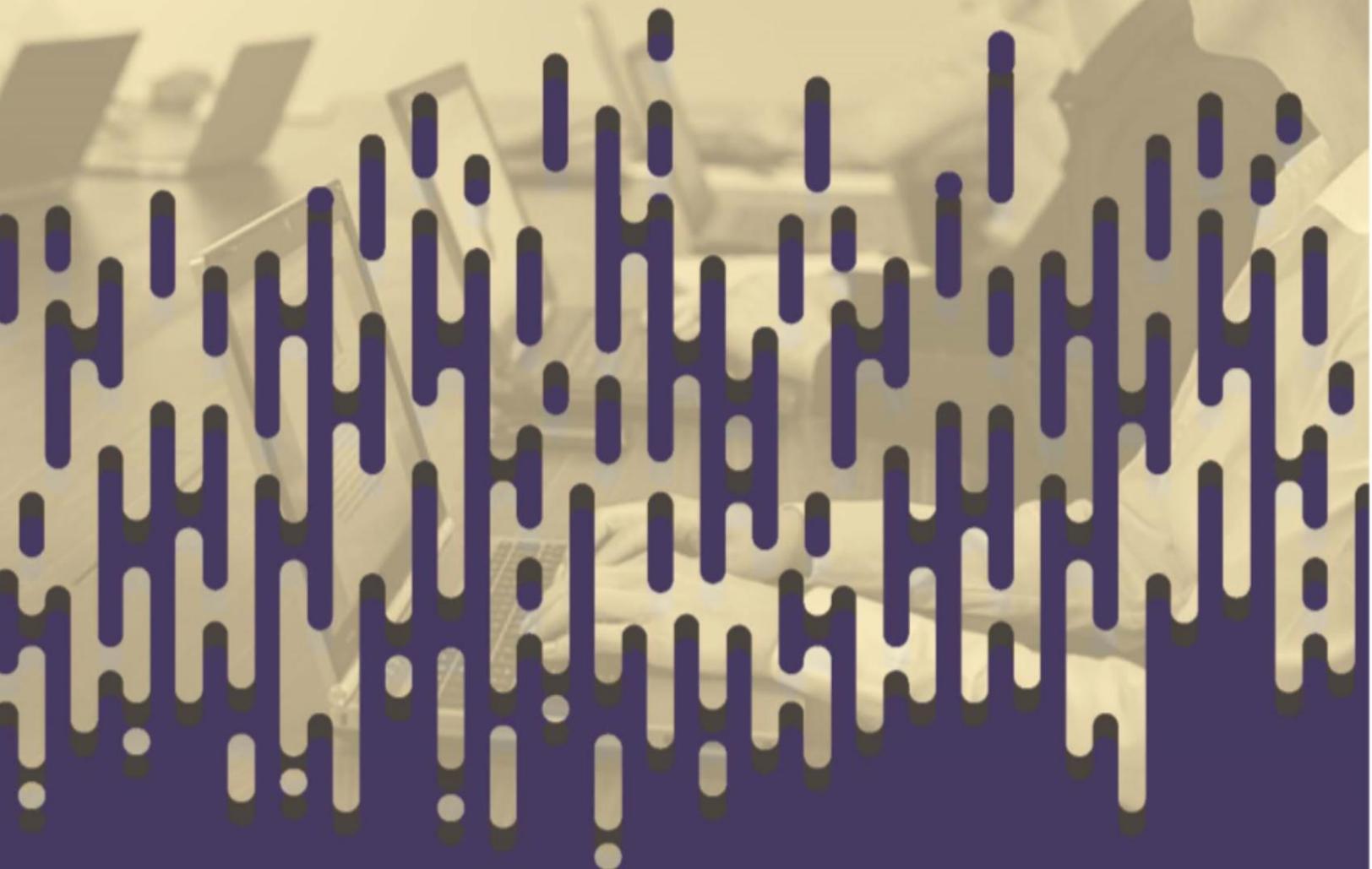


# MATERNAL MORTALITY REVIEW INFORMATION APPLICATION (MMRIA)

## USER GUIDE

Updated December 2019

For use with CDC-hosted MMRIA



Enhancing Reviews and Surveillance  
to Eliminate Maternal Mortality



MATERNAL MORTALITY REVIEW  
INFORMATION APP

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## REVISION HISTORY

Software Version	Author	Revision Date	Remarks
1.0	Amy St. Pierre	2/1/2019	Initial software and corresponding User Guide release.
2.1	Sunanda McGarvey	12/5/2019	<p>Updated to match software release. Added options previously not documented. Rearranged document to improve flow and match submenus for user roles.</p> <p>Added, headers, footer, figures, index, revision history.</p> <p>Reformatted document, updated text to match function except where noted. This was updated from <a href="https://mmria-01-mmria.services-dev.cdc.gov/">https://mmria-01-mmria.services-dev.cdc.gov/</a> and <a href="http://test-mmria.services-dev.cdc.gov/Account/Login/?ReturnUrl=%2F">http://test-mmria.services-dev.cdc.gov/Account/Login/?ReturnUrl=%2F</a> based on what functions were option in each version of the software.</p>

## I. WHAT IS MMRIA?

Created by the Centers for Disease Control and Prevention (CDC) and the CDC Foundation, in partnership with maternal mortality review committees, the **Maternal Mortality Review Information Application (MMRIA** or “Maria”) serves two purposes. First, it provides a repository for the medical and social information needed for maternal mortality review committee (MMRC) case review. Second, MMRIA provides standardized data that can be used for surveillance, monitoring, and research on maternal mortality. MMRIA provides a common language that helps MMRCs collaborate in case review and analysis.

MMRIA is a multi-user data entry system designed to flow like a case review. MMRIA’s abstraction forms and tools help MMRC members understand the story of a woman’s life and the events leading to her death. Devised to accommodate the scope of work and processes of MMRCs, the system supports abstraction and captures committee decisions. MMRIA provides access to semi-automated case narrative templates from which committee members can print easy-to-read case narrative details. Lastly, through the geocoding of addresses, MMRIA captures socio-spatial information to expand case discussions and analyses.

### System Requirements

- **MMRIA is intended for use with Google Chrome browser.**
- CDC Secure Access Management System (SAMS) login is required to access SAMS. SAMS access is provided by your SAMS Activity Administrator (AA).
- A MMRIA login and role are required to access MMRIA within SAMS. Your Jurisdiction Administrator, who may also be your SAMS Activity Administrator, will create your MMRIA login and link it to your SAMS login.

### Additional Resources

The following tools complement MMRIA use and are available on **Review to Action.org**:

- Reports from MMRCs
- Committee Facilitation Guide
- Model Purpose, Mission, Goals, and Vision for MMRCs
- Overview of State Legislative Support for MMRCs
- Model Case Identification Process
- Model Abstractor Job Description
- Tools for Case Abstraction
- Model Committee Meeting Agenda
- Model Confidentiality Statement
- Committee Decisions Form

## II. GETTING STARTED: BASIC FUNCTIONS

The Getting Started section covers basic functions in MMRIA that are applicable to all users. These include:

- Logging on to MMRIA using a SAMS login
- Menu options available based on your Role in MMRIA
- Common functions found throughout the system

### LOGGING IN

To access MMRIA you must first log in to SAMS.

1. Visit the SAMS URL at <https://sams.cdc.gov>. The main SAMS login page will be displayed.

Please note that this URL begins with https, not just http.

Note: When you use the URL above, you are directed to the SAMS login page.

### MMRIA Users

2. Select the first option in the External Partners section “SAMS Credentials.”
3. Log on using your SAMS username and password.

If you forgot your SAMS password, use the “Forgot Your Password” link below the Login button.

For additional SAMS help, contact 877-681-2901 or [samshelp@cdc.gov](mailto:samshelp@cdc.gov)

### Non-CDC Users

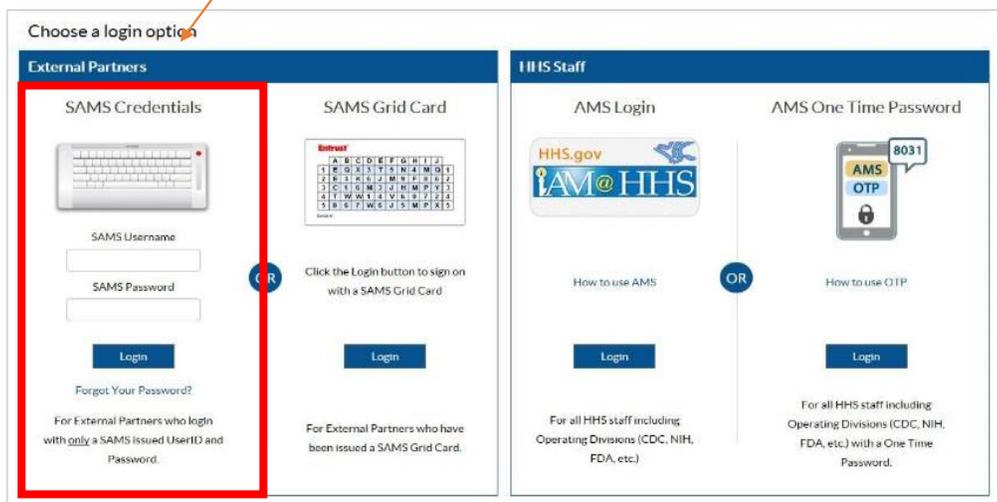


Figure 1 - SAMS Login Screen

The system will display the following government use warning which must be agreed to in order to proceed.

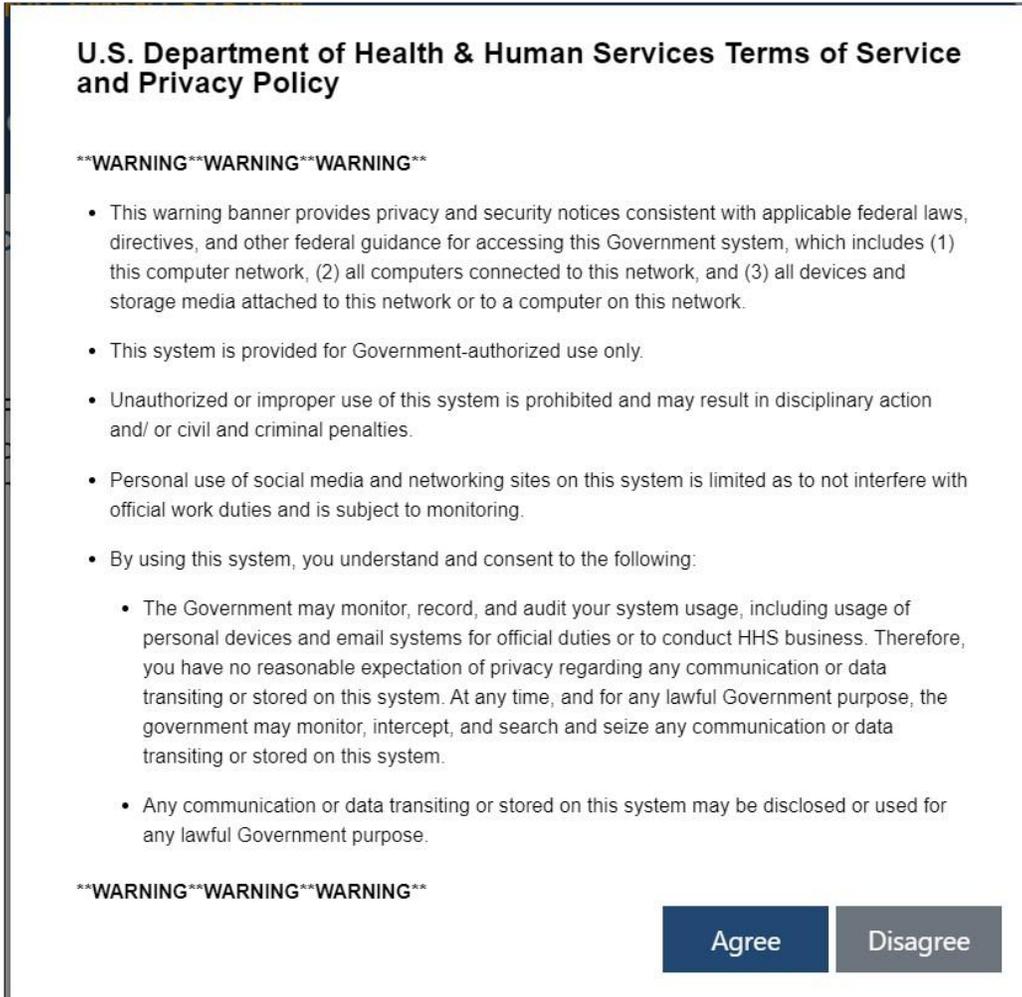


Figure 2 - SAMS Warning Banner

4. The SAMS Partner Portal will be displayed. This is the primary SAMS landing page for all users. Here you can navigate to administrative functions or assigned activities. It includes helpful documentation, and an Administrative option if you are a SAM Activity Administrator (AA). AAs will have an additional selection item in the left navigation panel titled SAMS Admin.
5. SAMS Admin functions are described in APPENDIX I: SAMS (SECURE ACCESS MANAGEMENT SYSTEM) details.

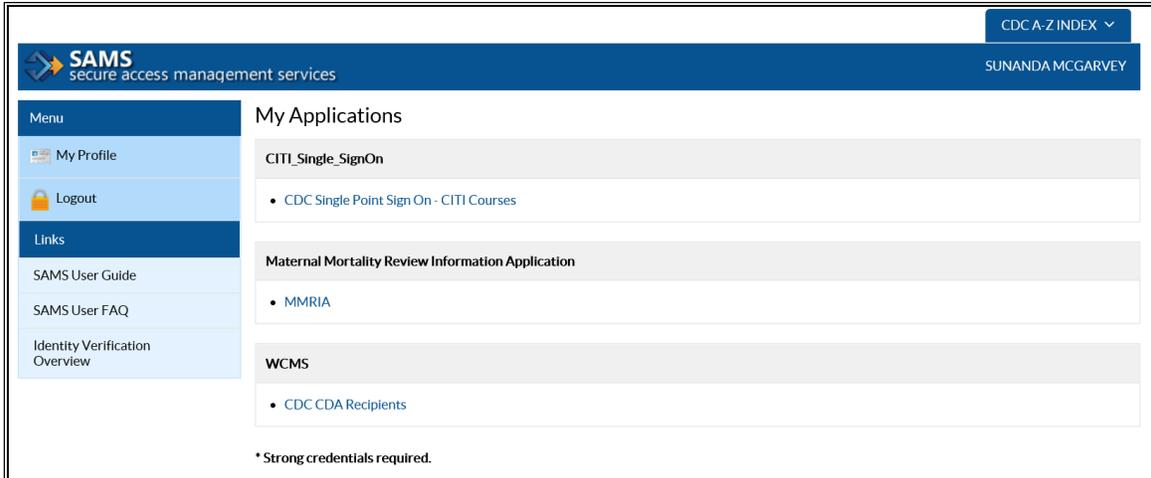


Figure 3 - SAMS Menu Options

## New User

If you are a new user, you will need to contact your Jurisdiction Administrator to request a login. They will create your MMRIA login and ensure that your SAMS login is also created. If you do not know who your Jurisdiction Administrator is, contact [mmriasupport@cdc.gov](mailto:mmriasupport@cdc.gov).

Once you have logged in, the list of roles assigned to you will appear on the home page. If you do not have a role assigned, contact your Jurisdiction Administrator to assign the appropriate role(s).

## Returning User

Once you select the MMRIA option from SAMS your MMRIA menu screens will be displayed.

## MMRIA Menus and Submenus

The menu is organized by submenus, and some submenus are included for all roles. These include the *General Options*, and the *List of Roles* assigned to your user.

The General Options submenu includes:

- Manage Account Profile
- View Aggregate Report
- Show Metadata Listing
- Print blank version (of report by template)

The General Options are described later in this section.

The remaining sections are available based on your role(s) in MMRIA. MMRIA roles include:

- **Jurisdiction Administrator:** has read/write access to users and jurisdiction. The Jurisdiction Administrator is responsible for creating, maintaining, and deleting user accounts for Abstractors and Committee Members in their jurisdiction. *Note: this is a separate role from the SAMS Activity Administrator, but one person can have both SAMS Activity Administrator and MMRIA Jurisdiction Administrator roles.*
- **Abstractor:** has read/write access to the case database for cases within their assigned jurisdiction. An Abstractor has access to PII.
- **Committee Member:** has read access to a de-identified case database for cases within their assigned jurisdiction. The de-identified –case database contains no PII.

Your main menu screen lists your assigned roles in a grid at the bottom of the screen.

If you are a Jurisdiction Administrator, you will see the following menu options:

Role Name	Jurisdiction	Is Active	Start Date	End Date	Days Till Role Expires	Jurisdiction Admin
jurisdiction_admin	/	true	2019-12-04	never	0	undefined

Figure 4 - Jurisdiction Admin Menu

If you are an Abstractor, you will see the following menu:

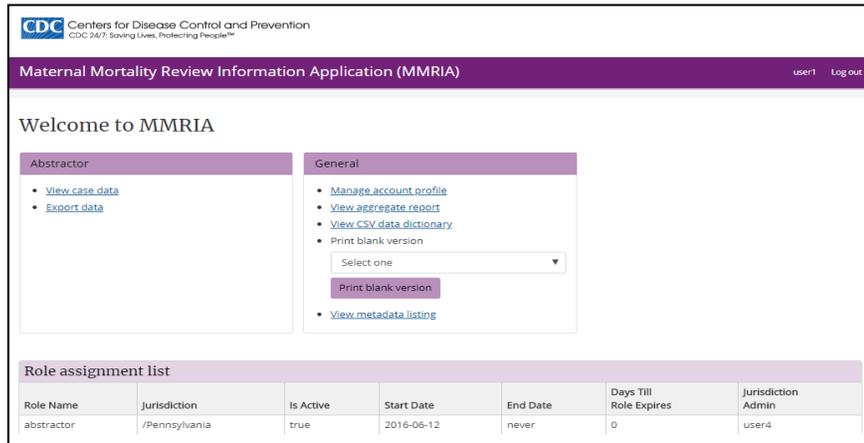


Figure 5 - Abstractor Menu

If you are a Committee member, then you will see the following menu:

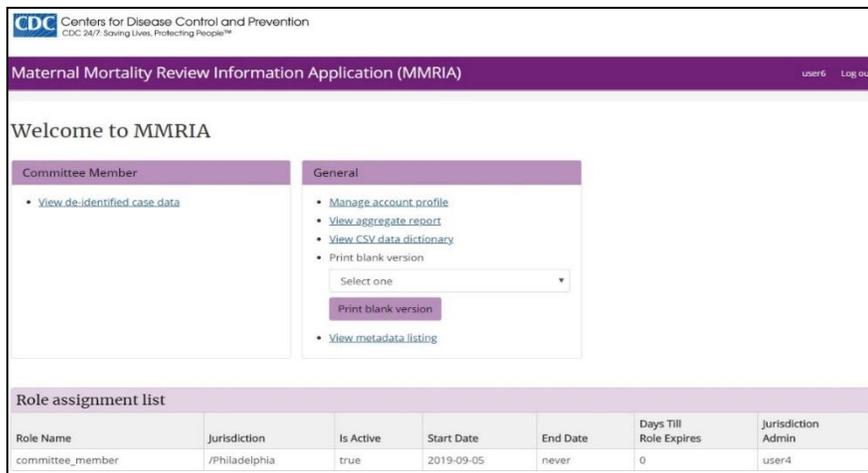


Figure 6 - Committee Member Menu

MMRIA supports three user roles, and the appropriate role is assigned to a user by a Jurisdiction Administrator. Roles are described in the next section – “MMRIA Manage Users & Jurisdictions”.

## Common Functions

### Saving Your Data

There is a save button available on each form within a record that you may choose to use. However, MMRIA automatically saves all data that is entered. For example, if you enter text and then navigate to another screen, it will automatically save your text. The save button is available for those who choose to use it.

### Deleting/Recovering Records

Records can be deleted from MMRIA in various parts of the system:

- User records can be deleted by users with the Jurisdiction\_Admin role, using the “Manage Users and Jurisdictions” menu option.
  - This option displays a “User List”
  - Click the “Remove User” button
  - You will be prompted to verify the deletion.
  
- User Roles can be deleted by users with the Jurisdiction\_Admin role, using the “Manage Users and Jurisdictions” menu option.
  - This option displays a “User List”
  - Click the Role you wish to remove
  - In the role details, select “Remove Role”
  - You will be prompted to verify the deletion.
  
- Case records can be deleted by users with the Abstractor role, using the “View Case Data” menu option.
  - This option displays a “Line Listing Summary” (Figure 7 - Line List Summary Showing Case Delete Button).
  - Double-click on the button to the right of the case to be deleted.
  - The record will be highlighted.
  - If you are sure you wish to delete the case, press “Delete” again.

The deleted case will be excluded from data exports and from aggregate standard reports created within MMRIA. If a case needs to be recovered after being deleted, contact [MMRIAsupport@cdc.gov](mailto:MMRIAsupport@cdc.gov).

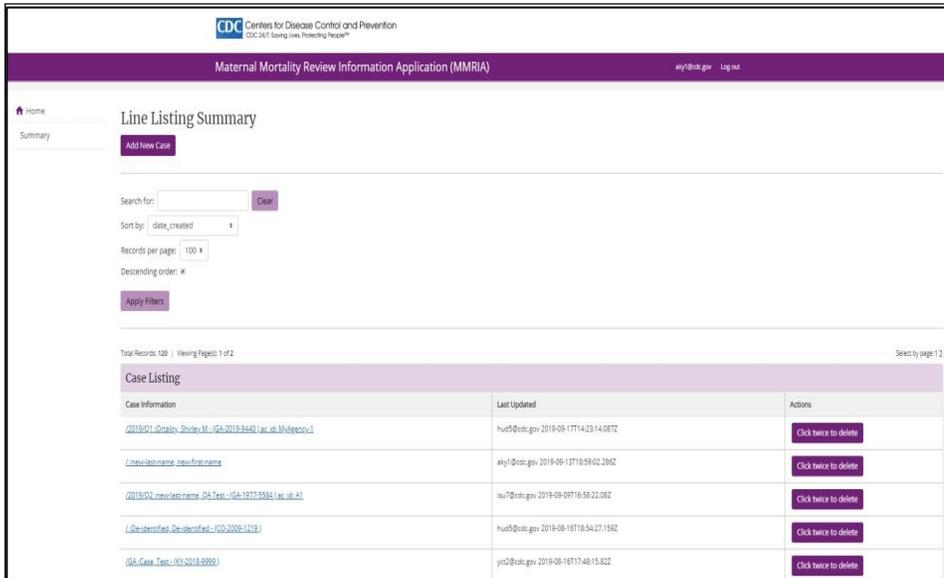


Figure 7 - Line List Summary Showing Case Delete Button

## Field Types

MMRIA supports multiple types of fields and structures:

- Single select drop-down lists
- Multi-select drop-down lists
- Checkboxes
- Editable lists – allow you to enter an option from a drop-down menu, or type another value if the value is not listed
- Free text fields
- Date and Date+Time Fields
  - Note that dates and times are de-identified when viewed by Committee Reviewers, to protect anonymity. Thus, it is important to enter not only dates and times but also gestational age or days postpartum for all events, which are visible to Committee Reviewers.
- Reviewer's Notes boxes – these are found at the bottom of each form. They can be expanded by clicking and dragging the bottom right corner of the box. Some of these are populated with text template that can be completed by the user with information specific to the case.
- Grids – used to capture or display related pieces of information in a table format as shown in Figure 8 - Role Assignment listing, below:

Prior Surgical Procedures Before this Pregnancy - 2 item(s)

✕ item 2 of 2

Date	Procedure	Comment(s)
2019-05-12	dental implant	Patient had reaction to ane:

+ Add Item

Were There Documented Preexisting Medical Conditions?\*

(blank) ▼

Figure 8 - Role Assignment listing

- Use the “add item” button to add a new record to the grid. Be sure to use the vertical scroll to view the record you added!

## Left Navigation Pane

The Left Navigation Pane holds options to navigate to common parts of the application. The options are context aware and change based on where you are in the application. In some parts of the application, such as “Manage Users and Jurisdictions”, there is no left navigation pane.

The left navigation pane may hold options for:

- Home – to return to your main menu
- Summary – to view the summary form
- Quick Edit – to navigate to a specific case record
- Select Case Form – to navigate directly to a case form

Home

Summary

Quick Edit

Select case form

Home Record ▼

Figure 9 - Left Navigation Pane Functions

## General Submenu

The General Options submenu (Figure 10 - General Submenu) includes:

- Manage Account Profile
- View Aggregate Report
- View CSV Data Dictionary
- Print blank version (of report by template)
- View Metadata Listing

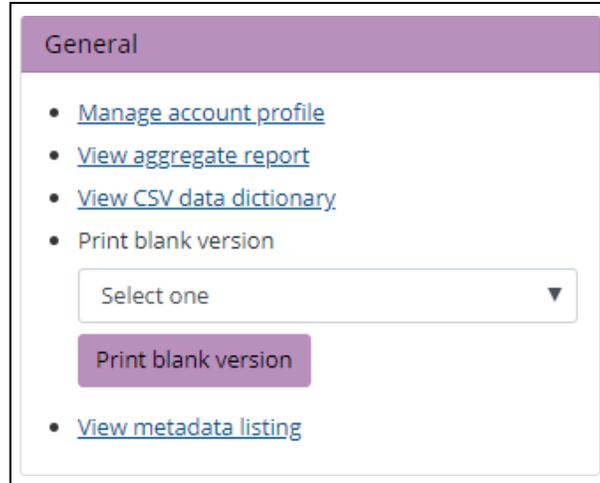


Figure 10 - General Submenu

## Manage Account Profile

The Manage Account Profile option is used to view the roles assigned to your user. Selecting this option from the General submenu displays your roles in a grid:

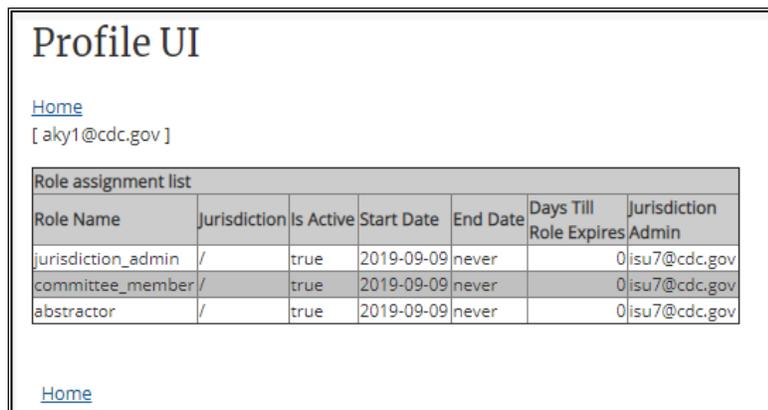


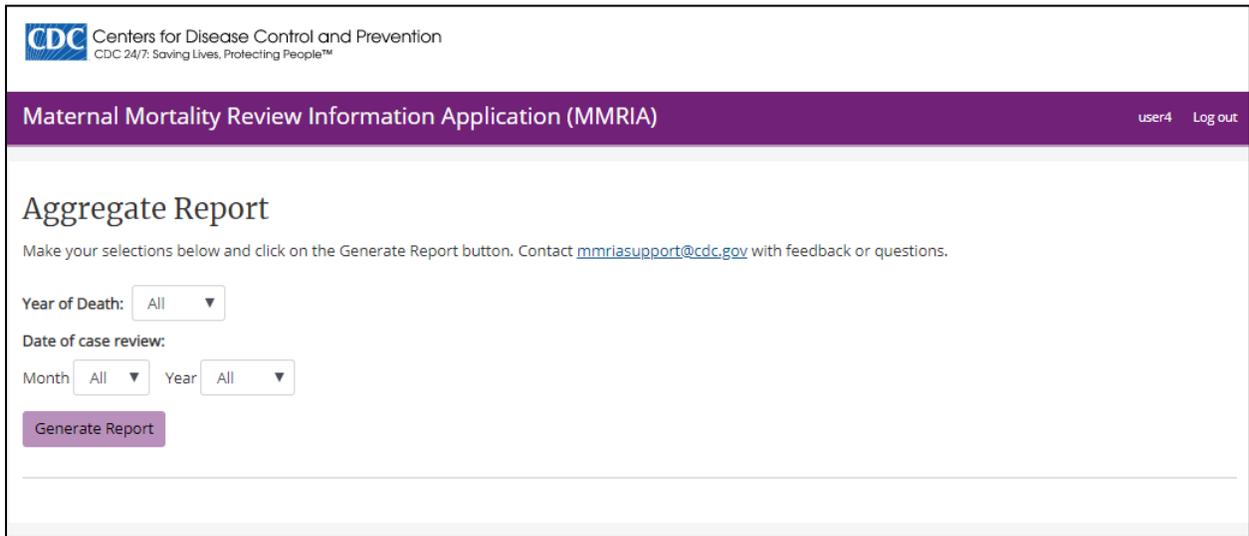
Figure 11 - Profile UI

- Selecting the “home” hyperlink will return you to the home page.

## View Aggregate Report

To view a snapshot of information on the cases you have entered, select “View Aggregate Report”.

- This will launch a new window (Figure 12)
- Use the drop-downs to select the “Year of Death” and the “Date of Case Review” Month and Year.
  - “Month” supports a dropdown of 01-12
  - “Year” supports a dropdown of 1999 – the current year
- Click the “Generate Report” button to display the data



The screenshot shows the MMRIA web application interface. At the top left is the CDC logo and text: "Centers for Disease Control and Prevention" and "CDC 24/7: Saving Lives, Protecting People™". The main header is a purple bar with "Maternal Mortality Review Information Application (MMRIA)" on the left and "user4 Log out" on the right. Below the header, the page title is "Aggregate Report". A sub-header reads: "Make your selections below and click on the Generate Report button. Contact [mmriasupport@cdc.gov](mailto:mmriasupport@cdc.gov) with feedback or questions." The form contains three dropdown menus: "Year of Death:" with "All" selected, "Date of case review:" with "Month" and "Year" both set to "All". Below these is a purple "Generate Report" button.

Figure 12 - Aggregate Report Selection

- The Aggregate report lists all cases meeting the filter criteria selected and provides a summary of data, as well as a pie chart showing the pregnancy-related and pregnancy-associated but not related cases.
- Figure 13 - Aggregate Report displays only a portion of the data that is included in the report.

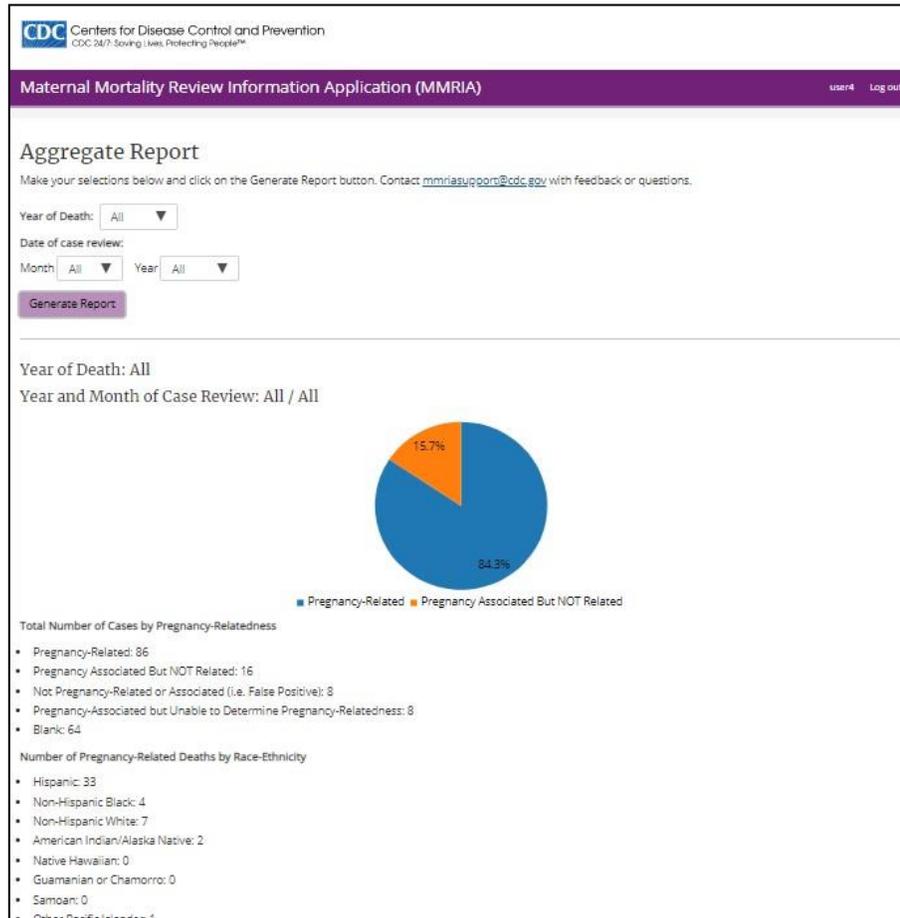


Figure 13 - Aggregate Report

- Select the Browser's back function to return to the submenu.

## View CSV Data Dictionary

The CSV Data Dictionary describes the properties of all fields contained within the MMRIA application database. This report lists field characteristics such as field types and field values. The data dictionary, including the column names of your exported data, can be found in the exported data file titled “data\_dictionary”. This file was previously named “field\_mapping”.



Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives, Protecting People™

Maternal Mortality Review Information Application (MMRIA)
user4 Log out

### CSV Data Dictionary

This webpage lists, describes, and defines the properties of all fields contained within the MMRIA application database. The data dictionary, including the column names of your exported data, can be found in the exported data file titled “data-dictionary.csv”. This file was previously named “field\_mapping”.

Search for:

Home Record						
MMRIA Form	Export File Name	Export Field	Prompt	Description	Path	Data Type
Home Record	mmria_case_export.csv	hr_f_name	First Name	First Name	/home_record/first_name	string
Home Record	mmria_case_export.csv	hr_m_name	Middle Name	Middle Name	/home_record/middle_name	string
Home Record	mmria_case_export.csv	hr_l_name	Last Name	Last Name	/home_record/last_name	string
Home Record	mmria_case_export.csv	hrdod_month	Month	The month in which the death occurred	/home_record/date_of_death/month	number
List Values						
		Value	Display	Description		
		9999	(blank)			
		1	1			
		2	2			
		3	3			
		4	4			
		5	5			
		6	6			
		7	7			
		8	8			
		9	9			
		10	10			
		11	11			
		12	12			
Home Record	mmria_case_export.csv	hrdod_day	Day	The day in which the death occurred	/home_record/date_of_death/day	number
List Values						
		Value	Display	Description		
		9999	(blank)			

Figure 14 - CSV Data Dictionary

## Print Blank Version

The Print Blank Version option allows you to select a form to print.

- The drop-down displays all the forms you can select for print.
- Select the form to print, or “All” to print a blank copy of all the forms.
- Select the “Print Blank Version”

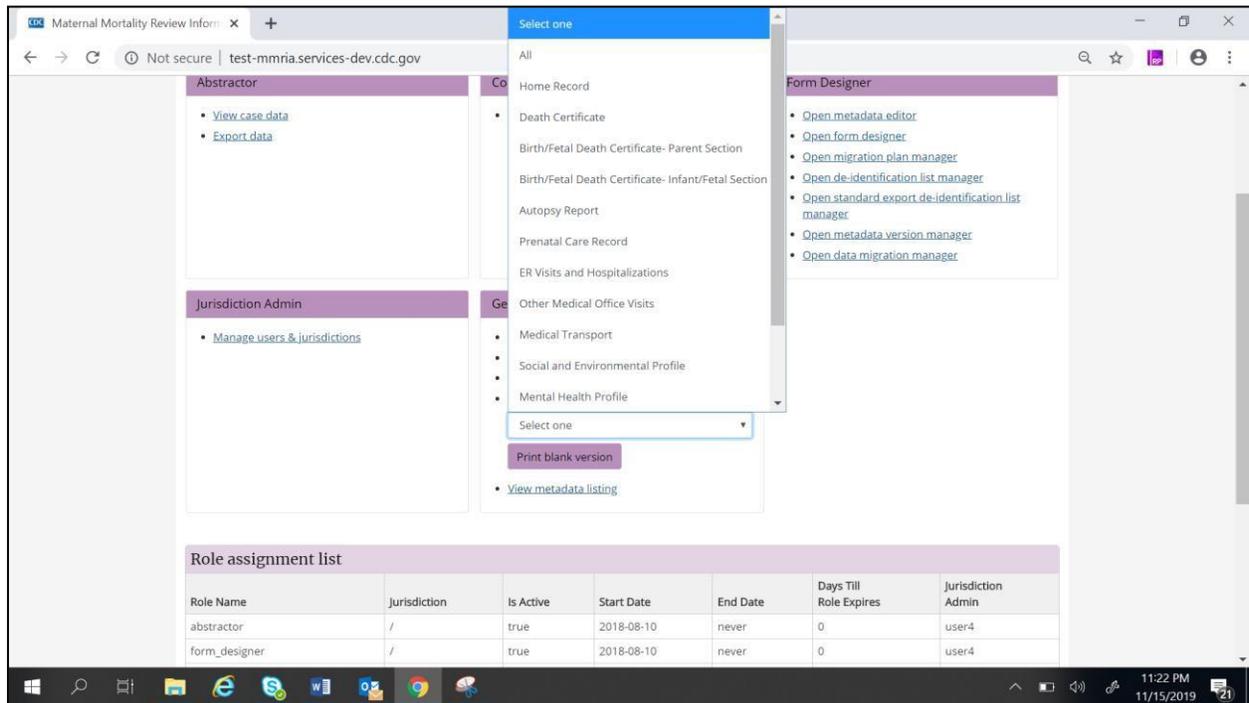


Figure 15 - Print Blank Version

- A Blank version of the selected form will be displayed in a new window.
- To print this report, right-click.
- Select the print option.
- Close the browser window when finished with printing.
- To return to the previous window, select the tab from the browser.

### III. MANAGE USERS AND JURISDICTIONS

The Jurisdiction Admin role assigns user names and passwords to each MMRIA user within a jurisdiction. Through the MMRIA interface, the Jurisdiction Admin can assign any of three user roles to a user: Abstractor, Committee Reviewer, or Committee Member. Users can belong to multiple roles. For example, A user can be assigned to both the role of Jurisdiction Administrator, Abstractor and Committee Member.

Guidelines for assigning roles to users are found later in this section.

**Note:** The initial Jurisdiction Admin role is created during the setup of the MMRIA database. Additional users can be assigned the Jurisdiction Admin role using MMRIA's Manage Users and Jurisdictions menu option. It is recommended that only trusted people within your jurisdiction are assigned the Jurisdiction Admin role.

If you are a Jurisdiction Admin:

- From the Jurisdiction Admin submenu on the Home Screen, click on the link for “Manage Users and Jurisdictions.”

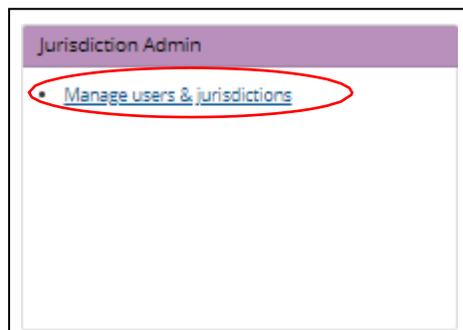


Figure 16 - Jurisdiction Admin Submenu

Within the “Manage Users and Jurisdictions” page (Figure 18), you will see a list of all users in your system, and will have the option to:

- Add new users
- Add or Edit roles for users
- Remove users
- Edit users

At the bottom of the screen, you will see a section that supports defining and updating a Jurisdiction Tree.

- The jurisdiction tree is used to define one or more hierarchies within your jurisdiction, that can be used to assign a role to a specific to a level in the jurisdiction tree, or to assign a specific set of patient records to a user for review.

Details about the jurisdiction tree can be found under the title “Managing the Jurisdiction Tree”

	mdb4@cdc.gov abstractor / 2019-01-23T16:45:44.309Z true <input type="button" value="Add New Role"/>	
sdhulipala@cdc.gov <input type="button" value="remove user"/>	sdhulipala@cdc.gov jurisdiction_admin / 2019-01-17T13:53:57.546Z true sdhulipala@cdc.gov committee_member / 2019-01-17T14:05:29.107Z true sdhulipala@cdc.gov abstractor /GA/ATL 2019-01-17T14:01:34.003Z true <input type="button" value="Add New Role"/>	
vhc6@cdc.gov <input type="button" value="remove user"/>	vhc6@cdc.gov abstractor / 2019-08-05T00:00:00Z true vhc6@cdc.gov committee_member / 2019-08-05T00:00:00Z true vhc6@cdc.gov jurisdiction_admin / 2019-08-05T00:00:00Z true <input type="button" value="Add New Role"/>	
yct2@cdc.gov <input type="button" value="remove user"/>	yct2@cdc.gov abstractor / 2019-01-23T15:54:00.869Z true yct2@cdc.gov jurisdiction_admin / 2019-01-23T15:53:50.43Z true yct2@cdc.gov committee_member / 2019-01-23T15:54:07.502Z true <input type="button" value="Add New Role"/>	
yso5@cdc.gov <input type="button" value="remove user"/>	yso5@cdc.gov abstractor / 2019-01-30T16:23:50.943Z true yso5@cdc.gov committee_member / 2019-01-30T16:23:58.911Z true <input type="button" value="Add New Role"/>	
Enter new user name: <input type="text"/> <input type="button" value="add new user"/>		
<p><b>Jurisdiction Tree</b></p> <input type="button" value="save jurisdiction tree"/> <ul style="list-style-type: none"> <li>• / <input type="text"/> <input type="button" value="add"/></li> <li>◦ /GA <input type="text"/> <input type="button" value="add"/> <input type="button" value="delete"/></li> <li>▪ /GA/ATL <input type="text"/> <input type="button" value="add"/> <input type="button" value="delete"/></li> <li>◦ /2019 <input type="text"/> <input type="button" value="add"/> <input type="button" value="delete"/></li> <li>▪ /2019/Q1 <input type="text"/> <input type="button" value="add"/> <input type="button" value="delete"/></li> <li>▪ /2019/Q2 <input type="text"/> <input type="button" value="add"/> <input type="button" value="delete"/></li> <li>▪ /2019/Q3 <input type="text"/> <input type="button" value="add"/> <input type="button" value="delete"/></li> <li>▪ /2019/Q4 <input type="text"/> <input type="button" value="add"/> <input type="button" value="delete"/></li> </ul> <input type="button" value="save jurisdiction tree"/>		

Figure 17 - List Users

## Add New Users

To add a new user, scroll to the bottom right hand side of the page where the Enter New User prompt is displayed:

**USERNAMES MUST MATCH THE SAMS USERNAME CREATED FOR THE USER, AND SHOULD BE THE USER'S EMAIL ADDRESS.**

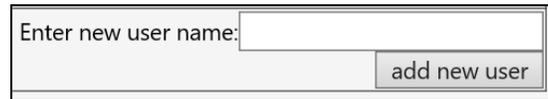
A screenshot of a web form. It features a text input field with the placeholder text "Enter new user name:" and an "add new user" button to its right.

Figure 18 - Create New Username Prompt

- Enter a username (must be in lower-case). The username must match the SAMS username for the user.
- Then click the "Add New User" button
  - The username must be unique. If it is not you will receive a warning as shown in Figure 20, below.
  - If the username meets the system requirements, the new user will be added to display list.
  - You must then assign one or more roles to the user. User role assignment is described in the following section.

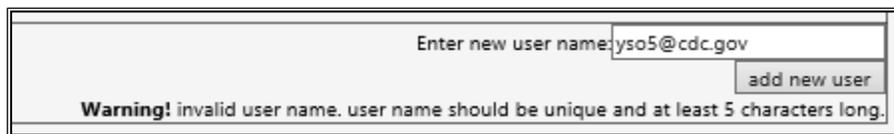
A screenshot of the same web form as in Figure 18, but with an error message displayed below the input field. The input field contains the text "yso5@cdc.gov". The error message reads: "Warning! invalid user name. user name should be unique and at least 5 characters long."

Figure 19 - Username Error Message

## Assign and Manage User's roles

As indicated above, the MMRIA roles include:

- **Jurisdiction Administrator:** has read/write access to users and jurisdiction. The Jurisdiction Administrator is responsible for creating, maintaining, and deleting user accounts for Abstractors and Committee Members in their jurisdiction. *Note: this is a separate role from the SAMS Activity Administrator, but one person can have both SAMS Activity Administrator and MMRIA Jurisdiction Administrator roles.*
- **Abstractor:** has read/write access to the case database for cases within their assigned jurisdiction. An Abstractor has access to PII.
- **Committee Member:** has read access to a de-identified case database for cases within their assigned jurisdiction. The de-identified case database contains no PII.

If you do not assign any roles to a new user, then when they login they will receive the message shown in Figure 21, below:

Role assignment list for user6

Role Name	Jurisdiction	Is Active	Start Date	End Date	Days Till Role Expires	Jurisdiction Admin
-----------	--------------	-----------	------------	----------	------------------------	--------------------

Figure 20 - No Role Assigned Error Message

No role assigned message

- To add a new role to a user, navigate to the user’s record and choose the “Add New Role” button.
- On the right-hand side of the row use the role drop-down to assign a role to the user.
- Then use the jurisdiction drop-down to select the jurisdiction where the role applies. The drop-down includes each jurisdiction in the hierarchy you defined and allows you to choose the jurisdiction level for the user. See Figure 32 – Jurisdiction tree example.
- The “effective start date” will default to the current date but can be updated to reflect the date for the role to become active.
- “Effective end date” is left blank by default but can be edited to deactivate the role if needed.
- The “Is Active” flag defaults to True, indicating that the role is active. This flag must be set to Active in order for the role to be recognized.

Figure 21 - Role Drop-down List

Figure 22 - Jurisdiction Drop-down for Create New Role

Once you have added a user role, click the “save jurisdiction tree” button. Changes to user roles will take effect immediately.

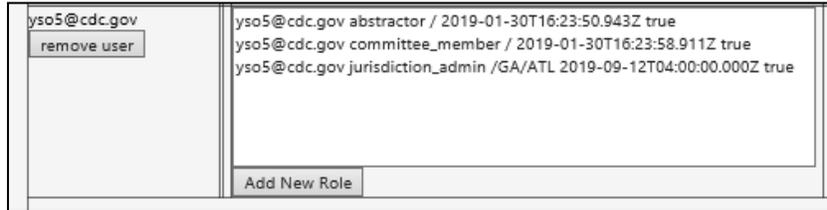


Figure 23 - User List Updated with New User

**NOTE:** To assign a user more than one role, repeat these Add New Role steps

## Update User Role

User roles can be updated

- Both the “Effective\_end\_date” and the “is\_Active” can be updated. However, the system uses the “is\_Active” flag to determine if a Role is currently effective.
- To update a user’s existing role, highlight the role row in the user’s record.
- Select the “Update Role” button
  - In the example below, the user’s “is\_Active” flag is changed from *True* to *False*

Name	Value
user_id	yso5@cdc.gov
role_name	jurisdiction_admin
jurisdiction_id	/GA/ATL
effective_start_date	2019-09-12T04:00:00.000Z
effective_end_date	
is_active	false

Buttons: Remove Role, Update Role

Warning! invalid user name. user name should be unique and at least 5 characters long.

Figure 24 - Update Role “is\_active” flag

### Update role “is\_active” flag

- The change in the role is now reflected in the user’s role record:

yso5@cdc.gov abstractor / 2019-01-30T16:23:50.943Z true
yso5@cdc.gov committee_member / 2019-01-30T16:23:58.911Z true
yso5@cdc.gov jurisdiction_admin /GA/ATL 2019-09-12T04:00:00.000Z false

Buttons: Add New Role

Warning! invalid user name. user name should be unique and at least 5 characters long.

Figure 25 - Updated Role Record

## Remove User Role

User roles can be deleted

- To delete a user role, highlight the role row in the user's record.
- Select the "Remove Role" button

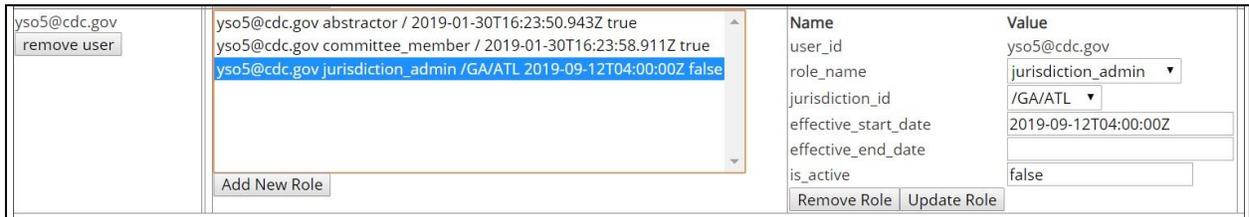


Figure 26- Remove User Role

- The following pop-up will be displayed to confirm the deletion, and you will have to type in the role you wish to remove:

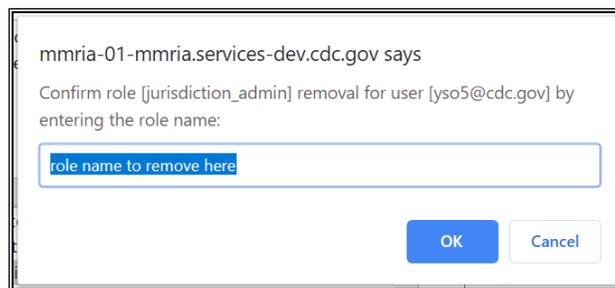


Figure 27 - Confirm Role Deletion Pop-up

- After entering the role to confirm removal, select the OK button.
- The role is now removed from the user's role list, as shown in Figure 34 below.

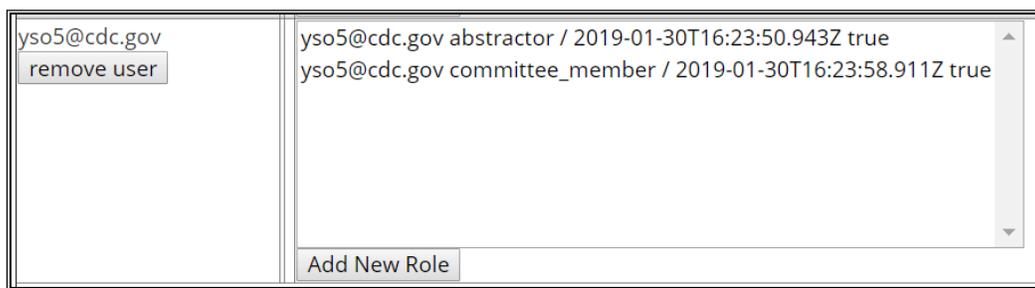


Figure 28 - Role Removed from User

## Remove User

Users can be removed from MMRIA

- To delete a user from MMRIA, select the *Remove User* button under the username to be removed.
- The following pop-up will be displayed to confirm the deletion, and you will have to type in the user name to remove from MMRIA:

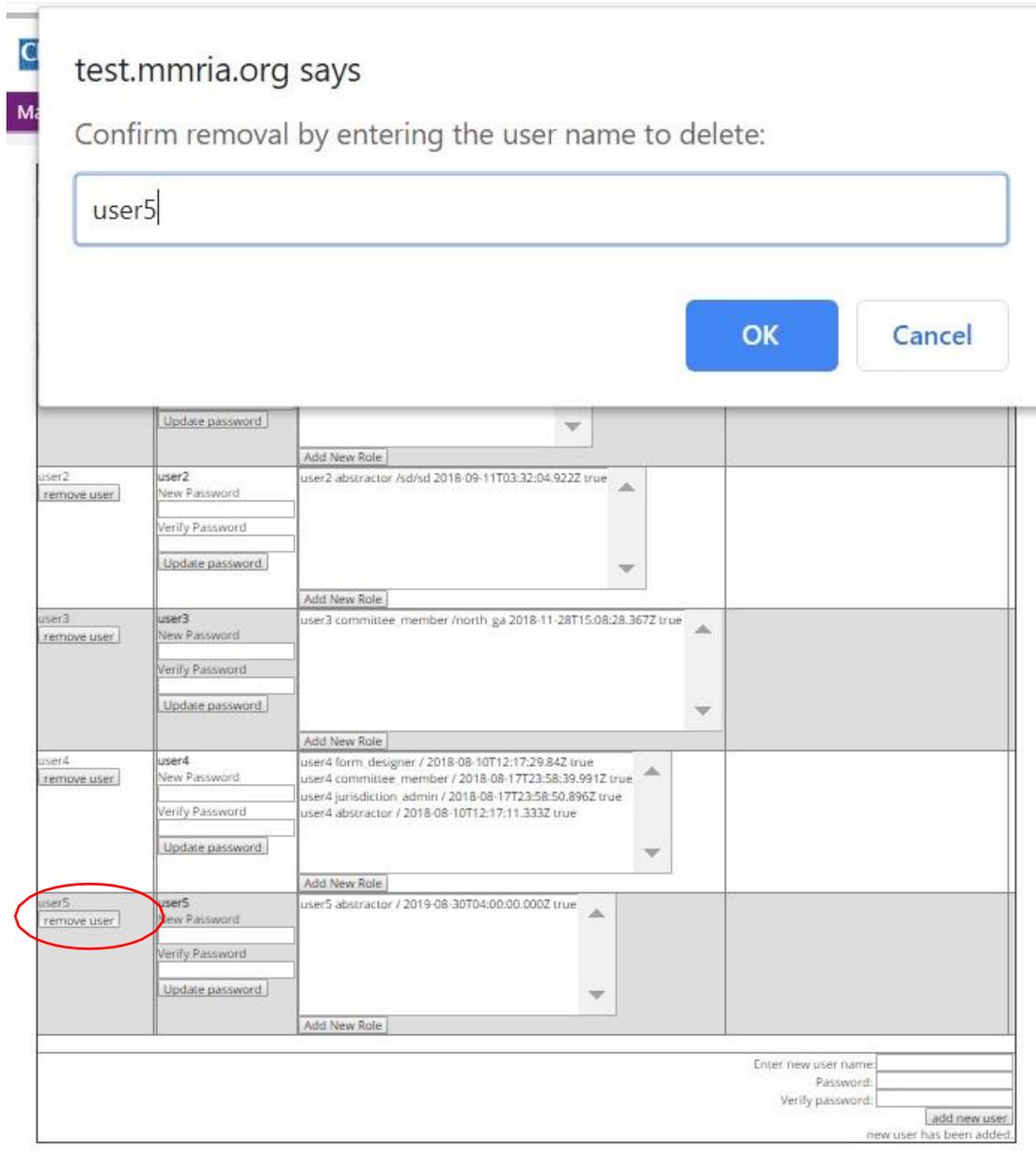


Figure 29 - Confirm Delete User Pop-up

- After entering the user to confirm removal, select the *OK* button.
- The user is now removed from MMRIA.

## Returning to the Main Menu

- To return to the main menu, click the name of application at the top of the screen:

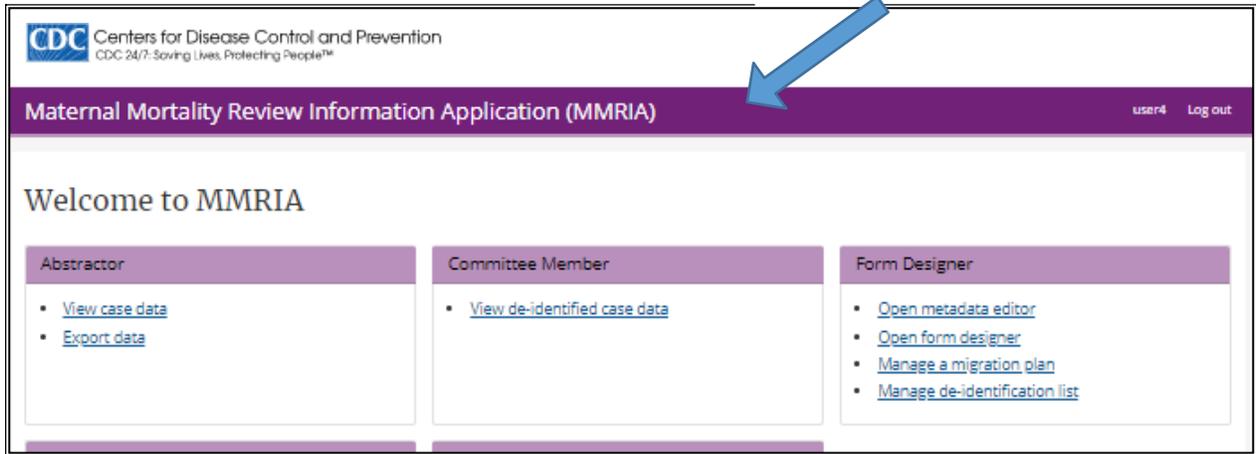


Figure 30 - Return to Home

## Managing the Jurisdiction Tree

The jurisdiction tree allows hierarchies to be created and applied for multiple purposes within MMRIA. It gives jurisdictions the flexibility to create different hierarchies and apply them as needed. For example, this can be used to model a geographical hierarchy to assign work, or to model a timeline for assignment of work. The Figure 32 below shows both a geographical hierarch and the division of a year into quarters:

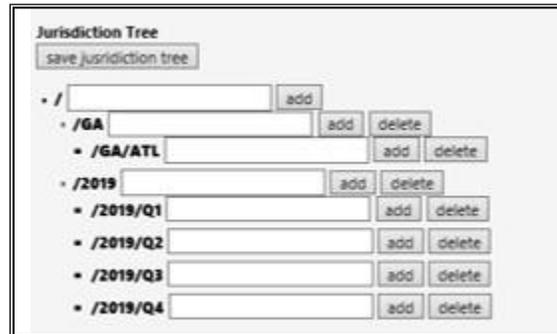


Figure 31 - Jurisdiction Tree example

- Jurisdiction hierarchies can be applied at multiple points in MMRIA:
  - Adding a role to user
  - Updating user role
  - Assigning a review to a role

3. To add a new hierarchy
  - Navigate to the new hierarchy's parent node
  - Enter the node name

The screenshot shows a web interface titled "Jurisdiction Tree". At the top left is a "save jurisdiction tree" button. Below it is a tree structure:
 

- / 2020 [input field] [add]
  - /GA [input field] [add] [delete]
    - /GA/ATL [input field] [add] [delete]
  - /2019 [input field] [add] [delete]
    - /2019/Q1 [input field] [add] [delete]
    - /2019/Q2 [input field] [add] [delete]
    - /2019/Q3 [input field] [add] [delete]
    - /2019/Q4 [input field] [add] [delete]

 At the bottom is another "save jurisdiction tree" button. The "2020" node is highlighted with an orange border.

Figure 32 - Create New Jurisdiction Tree Node

New node entered under top level of hierarchy as 2020, to parallel the 2019 entry

- Click the “add” button
- The Figure 34 below shows the new node added to the hierarchy

This screenshot is similar to Figure 32, but the "2020" node is now fully integrated into the tree structure. The tree structure is:
 

- / [input field] [add]
  - /GA [input field] [add] [delete]
    - /GA/ATL [input field] [add] [delete]
  - /2019 [input field] [add] [delete]
    - /2019/Q1 [input field] [add] [delete]
    - /2019/Q2 [input field] [add] [delete]
    - /2019/Q3 [input field] [add] [delete]
    - /2019/Q4 [input field] [add] [delete]
  - /2020 [input field] [add] [delete]

 The "save jurisdiction tree" buttons are present at the top and bottom.

Figure 33 - New Node Displayed

4. Follow the same steps to add children to the new nodes, this time choosing the new node as the parent:

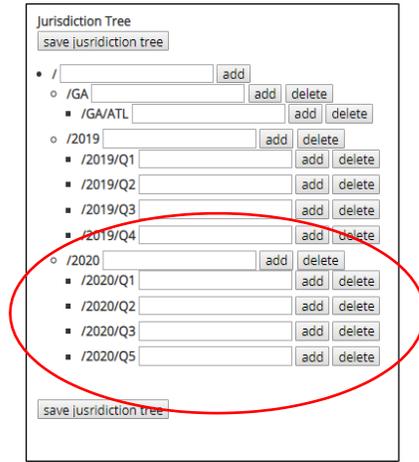


Figure 34 - Fully Populated 2020 node

5. To remove a node from the hierarchy
  - Navigate to the node
  - Click the “delete” button
  - In the Figure 36 below, the incorrect Q5 value is removed:

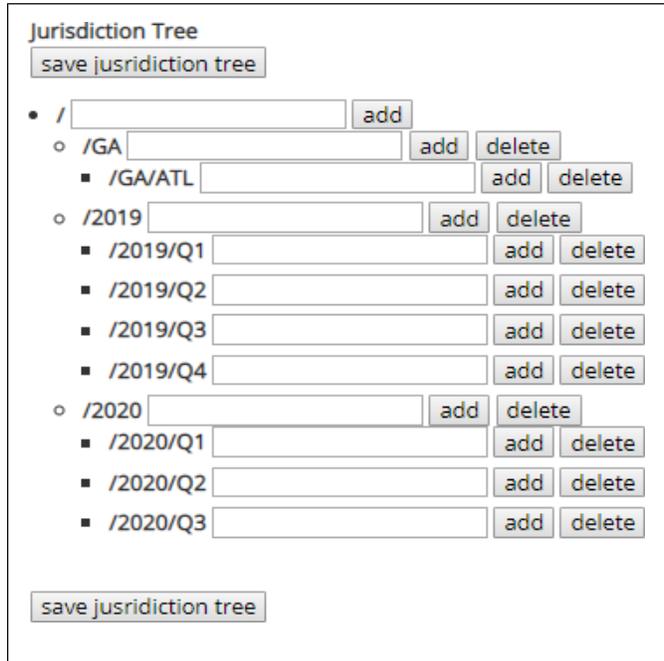


Figure 35 - Node Deleted from Jurisdiction Tree

## IV. ABSTRACTING CASES INTO MMRIA

MMRIA is designed to capture your abstraction notes and help you write a comprehensive case narrative. You may wish to abstract on paper and then enter the data into MMRIA, but it is ideal to enter case data into MMRIA before you present a case to your committee. Why?

1. The templates contained in the Reviewer's Notes sections of each form and the Case Narrative form itself will aid you in writing and printing a case narrative that can be easily printed for presentation to your committee.
2. Throughout the different forms in MMRIA, you will see fields marked with an asterisk. Fields with asterisks denote core data elements. These fields are **not required** but were identified by review committees and subject matter experts as **important information** for both committees and analysts to have accessible. All of the core elements are brought into a Core Elements Report that you may print for presentation to your committee. If you have this data available, make sure you complete the field. If it is not available, you may wish to note that in the Reviewer's Notes text box at the bottom of each form.
3. If your committee members have MMRIA access, they can view de-identified case information prior to or during committee meetings.

**Note:** Be sure to exclude any personal identifiers from the Reviewer's Notes sections of each form. Any identified information entered into Reviewer's Notes sections of forms will NOT be de-identified for the Committee Reviewer role.

### Abstractor Submenu

Users assigned the Abstractor role will see the following submenu. The menu has two options: (1) View case data (2) Export Data



Figure 36 - Abstractor Submenu

## View Case Data

This submenu option is where you add new cases, edit cases, or delete cases.

1. Selecting View Case Data displays:
  - “Summary List” of cases
  - “Add a New Case” option
  - “Delete a case”
2. Navigation panel on the left of the screen allows you to return to the home page.

Home

Summary

### Line Listing Summary

Add New Case

Search for:  Clear

Sort by:

Records per page:

Descending order:

Apply Filters

Total Records: 118 | Viewing Page(s): 1 of 2 Select by page: 1 2

Case Information	Last Updated	Actions
<a href="#">/2019/02_mevl/lastname_OA_Test_(GA-1977-5584)_ac_id:Δ1</a>	isu7@cdc.gov 2019-09-09T16:58:22.08Z	<a href="#">Click twice to delete</a>
<a href="#">/De-identified_Deidentified_(CO-2008-1219)</a>	hud5@cdc.gov 2019-08-16T18:54:27.159Z	<a href="#">Click twice to delete</a>
<a href="#">/GA_Case_Test_(KY-2018-9999)</a>	yc2@cdc.gov 2019-08-16T17:48:15.82Z	<a href="#">Click twice to delete</a>
<a href="#">/De-identified_Deidentified_(CO-2012-3521)</a>	hud5@cdc.gov 2019-08-16T13:22:02.780Z	<a href="#">Click twice to delete</a>

Figure 37 - Line Listing Summary

## ADD A NEW CASE

1. To add a new case, click the “Add New Case” button located under the “Line Listing Summary” heading.



Figure 38 - Add New Case button

- After clicking on the “Add New Case” button, you will be taken to the Home Record screen shown below. This will be described in further detail in the “Case Forms” below:

The screenshot shows the 'Review Information Application (MMRIA)' interface. At the top, it says 'Disease Control and Prevention' and 'Protecting People™'. Below that is a purple header with 'Review Information Application (MMRIA)'. The main heading is 'new-last-name, new-first-name' in purple. Underneath is 'Home Record' with a 'Select to print' button. The form contains several sections: 'First Name', 'Middle Name', and 'Last Name' (all with 'new-first-name' or 'new-last-name' in the input boxes); 'Date of Death\*' with 'Month', 'Day', and 'Year' dropdowns (all showing '(bl)'); 'State of Death Record\*' (dropdown with '(blank)'), 'Record ID\*' (greyed out), and 'Agency-Based Case Identifier' (input box); 'How was this Death Identified? (Primary Source)\*' (dropdown with '(blank)') and 'Specify Other or Additional Sources' (input box); 'Primary Abstractor' (input box) and 'Jurisdiction ID' (dropdown with '/'); and a 'Case Progress Report' section with eight dropdown menus: 'Death Certificate', 'Autopsy Report', 'Birth/Fetal Death Certificate- Parent Section', 'Birth/Fetal Death Certificate- Infant/Fetal Section', 'Prenatal Care Record', 'ER Visits and Hospitalizations', 'Other Medical Office Visits', and 'Medical Transport', all currently set to '(blank)'. A 'Select to print' button is also visible in the top right corner of the form area.

Figure 39 - Add New Case Home Record

3. You can start data entry on any form. To proceed from one form to the next, select the “Case Forms” drop-down menu that is available from the left navigation pane, shown in the Figure 41 below:

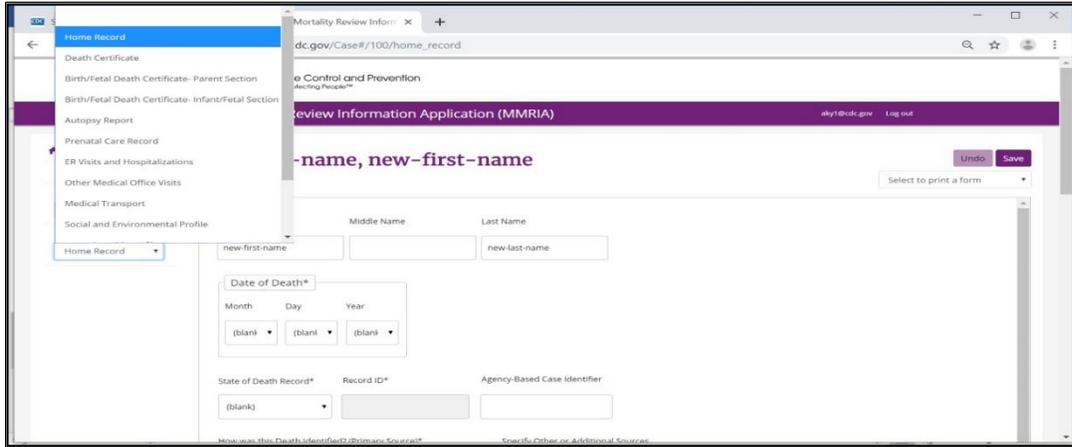


Figure 40 - Forms Drop-down on Left Navigation Pane

4. The list of available forms is shown below, in Table 1:

*Table 1 - Case Form Types*

Home Record	Other Medical Office Visits*
Death Certificate	Medical Transport*
Birth/Fetal Death Certificate – Parent Section	Social and Environmental Profile
Birth/Fetal Death Certificate – Infant/Fetal Section*	Mental Health Profile
Autopsy Report	Informant Interviews*
Prenatal Care Record	Case Narrative
ER Visits & Hospitalizations*	Committee Review

*\*Indicates that for a case, you can enter multiple forms*



**Note:** You may not have information to complete each of these forms for every case. You will have fields within forms that you cannot complete. It is okay to leave fields blank. It is recommended that you note in the Reviewer's Notes box at the bottom of each form if key information was not available. This will help you write your Case Narrative and help you to explain incomplete information to your committee.

5. The left navigation pane includes a Quick Edit function, that can be used to locate a specific form or case to update:

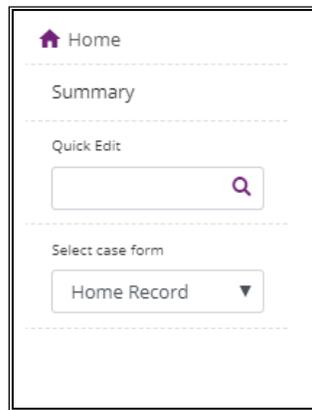


Figure 41- Quick Edit

## EDIT A CASE

1. The summary list screen displays existing cases on the Line Listing Summary Page as shown in Figure 43 - Edit a Case below.
2. To view or edit a case, click directly on it to open the case's Home Record page.

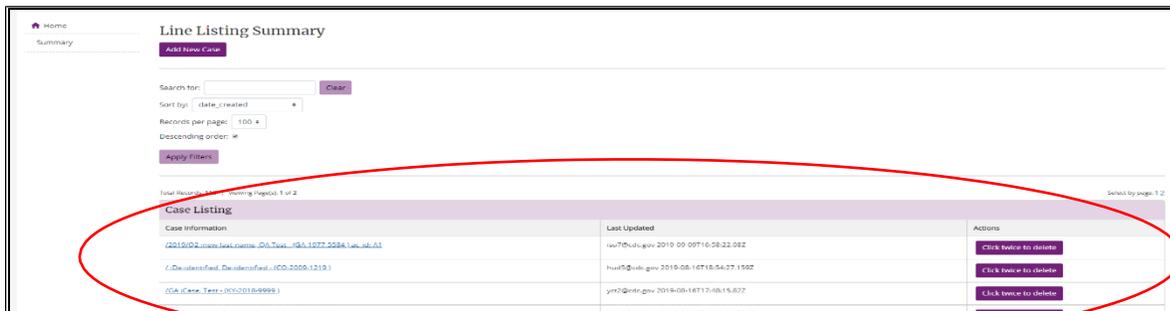
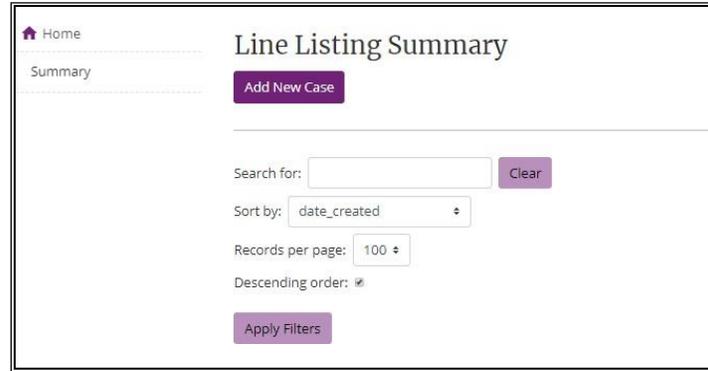


Figure 42 - Edit a Case

3. Use the search options toward the top of the page to search for a case using a search string, to define a sort order, indicate the number of records to display on the page, or to change your sort order from the default of Descending, to Ascending.



The screenshot shows a web interface titled "Line Listing Summary". On the left, there is a navigation menu with "Home" (indicated by a house icon) and "Summary". Below the menu is a purple button labeled "Add New Case". The main content area contains search and filter options: a "Search for:" text input field with a "Clear" button to its right; a "Sort by:" dropdown menu currently set to "date\_created"; a "Records per page:" dropdown menu set to "100"; and a "Descending order:" checkbox which is checked. At the bottom of these options is a purple button labeled "Apply Filters".

*Figure 43 - Line Listing Search Parameters*

**Tip:** At any point, you can return to the Line Listing Summary by clicking “Summary” on the tool bar.

## Case Forms

The following section highlights the fourteen case forms within MMRIA. Data may be entered in any order. You will be directed to the Home Record after selecting “Add New Case” or selecting a previously entered case for review or edit.

## Navigation Options

On this set of screens, the **Left Navigation Pane** includes the options:

- **Home** – return to home screen
- **Summary** – returns you to summary page
- **Case Forms** – displays a drop-down list of forms

The **right side** of the screen includes a **Print drop-down**

- **Print Home Record** – prints the home record for the selected case
- **Print Core Elements Only** – Prints only the pre-defined core elements from each form
- **Print All** – enables you to print a completed case or specific completed forms

The screenshot shows the MMRIA Home Record form for a case named "Ortality, Shirley". The form is displayed in a web browser window. The browser address bar shows the URL: "mmria-01-mmria.services-dev.cdc.gov/Case#/1/home\_record". The CDC logo is visible at the top of the page. The form fields are as follows:

- First Name:** Shirley
- Middle Name:** M
- Last Name:** Ortality
- Date of Death\*:** Month: 9, Day: 5, Year: 2016
- State of Death Record\*:** Georgia
- Record ID\*:** GA-2019-0440
- Agency Based Case Identifier:** MyAgency:1
- How was this Death Identified? (Primary Source):** Facility Reporting
- Specify Other or Additional Sources:** (empty field)
- Primary Abstracter:** Shubee Mat
- Jurisdiction ID:** /2019/Q1

A print dropdown menu is open on the right side of the form, showing the following options:

- Select to print a form
- Select to print a form
- Current form
- Print Home Record
- Other
- Print Core Elements Only
- Print All

Figure 44 - Case Record, Home Record

## Printing Forms

You have the option to print a copy of all 14 forms, a single record, or an entire case. The print dialog opens in a separate browser window.

You may wish to print only the Case Narrative form for a given case. Using the case narrative templates, your Case Narrative form should contain all of the information your committee needs to review a case. You may also want to print the Core Elements report, which contains additional data that your review committee may need.

- For select cases, you may wish to print graphs from the Prenatal Care and ER Visits/Hospitalizations forms or other forms as appropriate.
- To print any forms besides the Case Narrative and Core Elements for committee review, be aware that within the abstractor role, you will be printing fully identified forms. To print these other forms, you should use a committee reviewer role to ensure information is de-identified.

### STEPS FOR PRINTING A CASE

1. From the submenu, navigate to the Line Listing Summary screen.
2. Locate and click on the case report of interest.
3. Its Home Record will display by default.
4. On the right-hand side of the screen choose the drop-down for “Select to print a form”. To see a menu listing all forms.

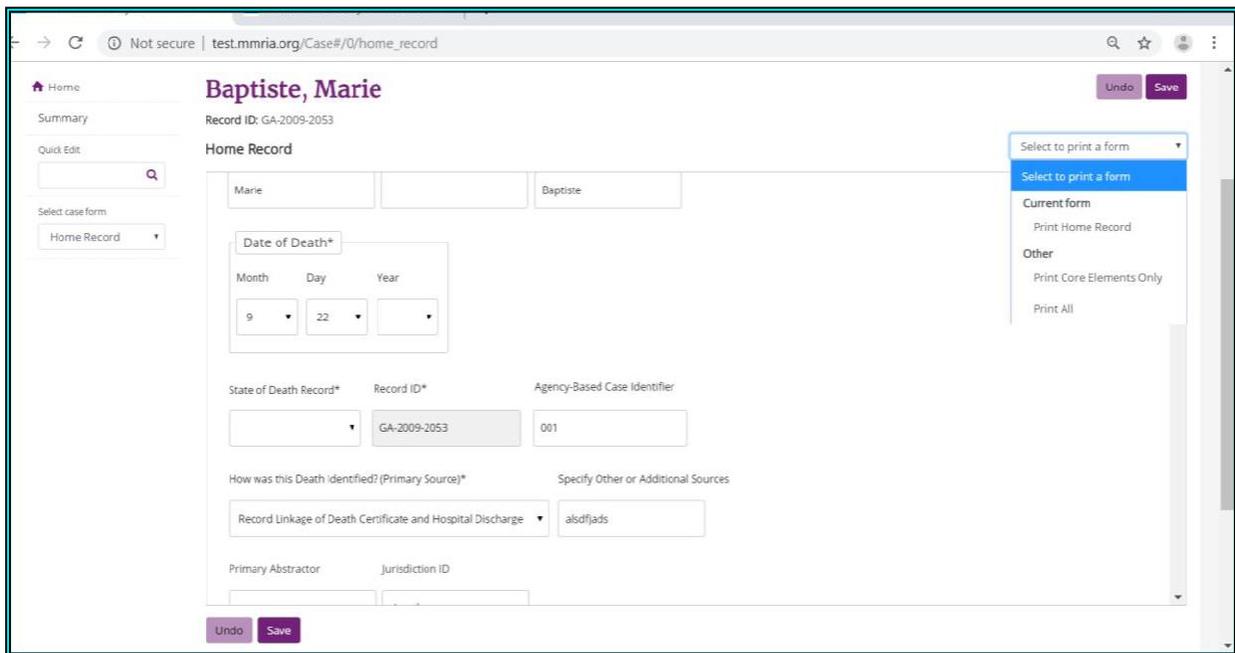


Figure 45 - Print Drop-down

5. To print the current form, select the option below “Current form”.
  - To change the current form, use the “Select Case Form” drop-down on the left navigation pane.
  - Choose the form you want to print.
6. To print this report, right-click.
  - Select the print option.
  - Close the browser window when finished with printing.
7. To return to the previous window, select the tab from the browser.

**MMRIA**

Home Record

**First Name:** Shirley

**Middle Name:** M

**Last Name:** Orталity

**Date of Death\***

**Month:** 9

**Day:** 5

**Year:** 2019

**State of Death Record\*:** GA

**Record ID\*:** GA-2019-9440

**Agency-Based Case Identifier:** MyAgency-1

**How was this Death Identified? (Primary Source)\*:** 4

**Specify Other or Additional Sources:**

**Primary Abstractor:** Shubee Mac

**jurisdiction:** /2019/Q1

**Case Progress Report**

**Death Certificate:** 1

**Autopsy Report:** 0

**Birth/Fetal Death Certificate- Parent Section:** 1

**Birth/Fetal Death Certificate- Infant/Fetal Section:** 1

**Prenatal Care Record:** 0

**ER Visits and Hospitalizations:** 0

**Other Medical Office Visits:** 0

**Medical Transport:** 0

Figure 46 - Print Home Screen form (Displays a portion of the report)

8. To print only the core data elements, from the print drop-down, select “Print Core Elements Only”. This is under the “Other” option. It opens in another window.
  - a. This report prints the core elements from all the forms.
  - b. Only a portion of the report is displayed in the Figure 48 below:

	
<h3>Home Record</h3>	
Date of Death*	
Year: 2019	
Record ID*: GA-2019-9440	
How was this Death Identified? (Primary Source)*: 4	
<h3>Death Certificate</h3>	
Place of Last Residence	
State*: GA	
Country*: US	
Demographics	
Date of Birth*	
Year:	
Age at death*:	
Marital Status*:	
Country of Birth (If Foreign Born)*:	
Primary Occupation*:	
Hispanic Origin?*:	
Education*:	
Race	
Race*:	
Death Information	
If Death Occurred in Hospital*:	
If Death Not in a Hospital*:	

Figure 47 - Print Core Data Elements (displaying a portion of report)

9. To print the current form, select the option below “Current form”.
  - To change the current form, use the “Select Case Form” drop-down on the left navigation pane.
  - Choose the form you want to print.
10. To print this report, right-click
  - Select the print option.
  - Close the browser window when finished with printing.
11. To return to the previous window, select the tab from the browser.
12. To print all forms for the case report, select the “Print All” option.

**Note:** if you would like a set of blank forms with all drop-down values displayed to help you take abstraction notes on paper, contact [mmriasupport@cdc.gov](mailto:mmriasupport@cdc.gov)

## MMRIA Forms

The following sections review each of the 14 forms in MMRIA.

### Home Record Form

The Home Record form is divided into three components: Record ID, Date of Death, and Case Progress.

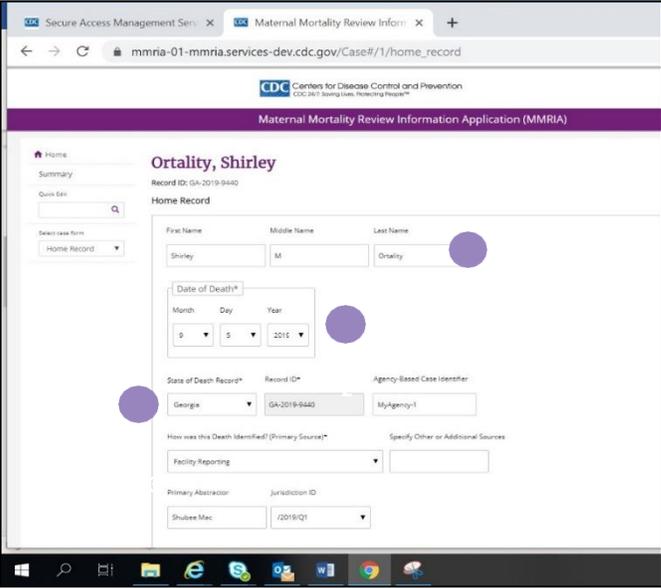
- The Home Record form includes sections in addition to what is shown in the figures below.

#### RECORD ID

The Record ID is automatically generated once you complete the:

- Last Name,
- Year of Death and
- State of Death

fields and click in the Record ID field (Figure 49). The Record ID consists of your 2-letter state acronym + the year of death + a random 4-digit number.



The screenshot shows the MMRIA Home Record form for a case named Shirley Ortality. The form is displayed in a web browser window with the URL `mmria-01-mmria.services-dev.cdc.gov/Case#/1/home_record`. The CDC logo and "Centers for Disease Control and Prevention" are visible at the top. The form title is "Ortality, Shirley" and the Record ID is "GA-2019-9442". The form fields are as follows:

Field	Value
First Name	Shirley
Middle Name	M
Last Name	Ortality
Date of Death (Month)	9
Date of Death (Day)	5
Date of Death (Year)	2019
State of Death	Georgia
Record ID	GA-2019-9442
Agency-Based Case Identifier	MyAgency-1
How was this Death Identified? (Primary Source)	Facility Reporting
Specify Other or Additional Sources	
Primary Abstraction	Shubee Mac
Jurisdiction ID	/2019/Q1

Figure 48 - Home Record

**AGENCY- BASED CASE IDENTIFIER**

The Agency-Based Case Identifier field, (Figure 50), is for internal reference and is based on your jurisdiction or state system. If your jurisdiction does not use an internal reference number, you can leave this field blank.

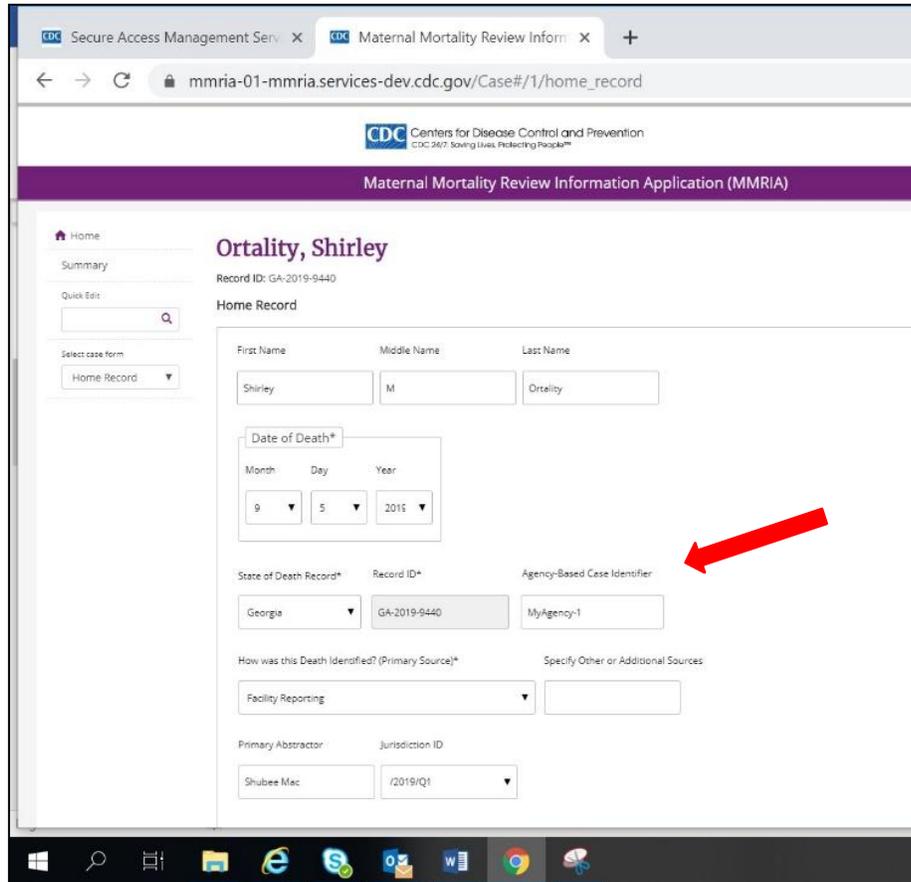


Figure 49 – Agency-Based Case Identifier

- The “Primary Abstractor” field has an associated Jurisdiction ID, with a drop-down. Selecting a value from this drop-down associates the Primary Abstractor to a node in the Jurisdiction Hierarchy. This means the case is associated with the jurisdictional node, and any user assigned to that node or above in the jurisdiction hierarchy can access the case record.

The screenshot shows a web browser window with the URL `mmria-01-mmria.services-dev.cdc.gov/Case#/100/home_record`. The page title is "new-last-name, new-first-name". The main content area is titled "Home Record" and contains several form fields. The "Primary Abstractor" field is highlighted with a blue background, and its dropdown menu is open, showing a list of jurisdictional nodes including "/2019/Q1", "/2019/Q2", "/2019/Q3", and "/2019/Q4". Other fields include "Month" (9), "Day" (5), "Year" (19), "State of Death Record\*" (Georgia), "Agency-Based Case Identifier" (MyAgency-1), and "How was this Death Identified?" (Facility Reporting). A "Case Progress Report" section is also visible, containing dropdown menus for "Death Certificate", "Autopsy Report", "Birth/Fetal Death Certificate- Parent Section", "Birth/Fetal Death Certificate- Infanc/Fetal Section", "Prenatal Care Record", and "ER Visits and Hospitalizations".

Figure 50 - Primary Abstractor Jurisdiction drop-down

- Refer to page 49 for more information about the Primary Abstractor Jurisdiction drop-down.
- The home record form also includes a “Case Progress Report” section. This section includes each form that is a part of the case with an associated drop-down to specify the status. The abstractor can use this as a way to track progress.
- The Statuses options include:
  - Not Started
  - In Progress
  - Completed
  - Not Available
  - Not Applicable

- These values are only set by the user, the software does not update these entries.

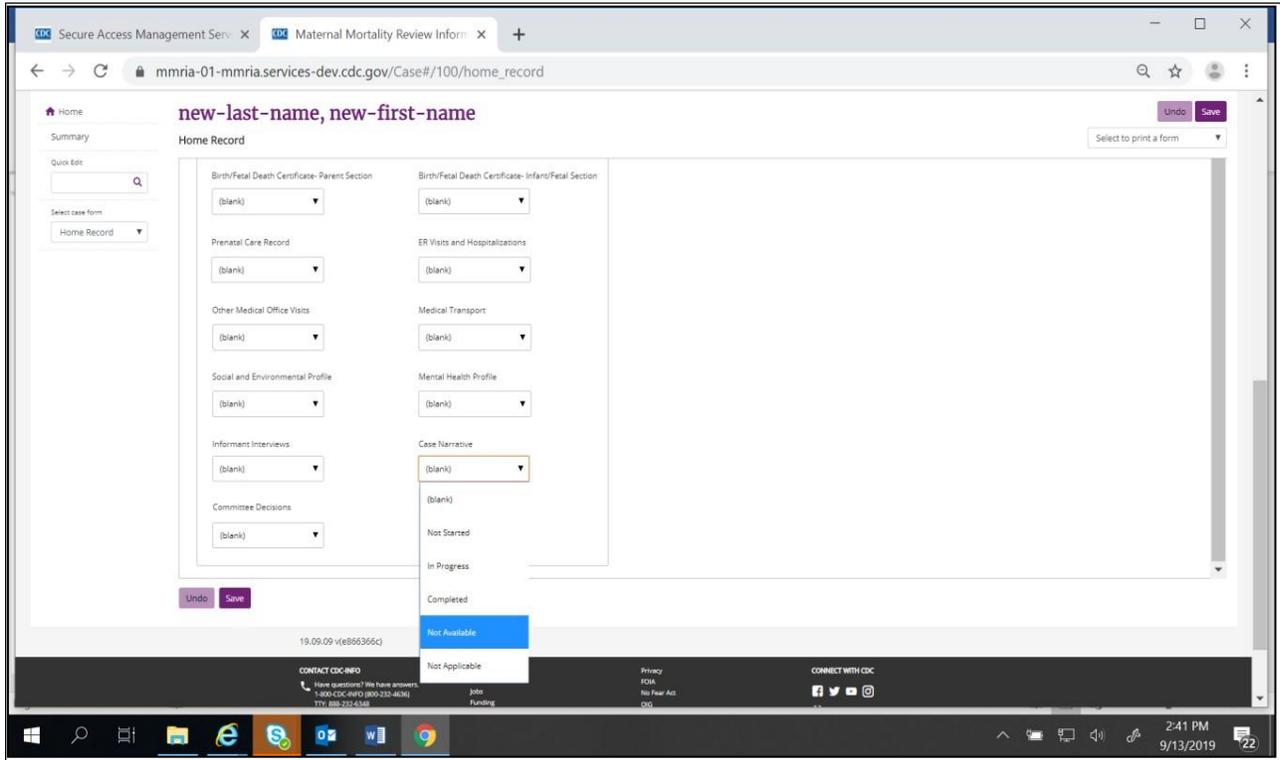


Figure 51 - Case Narrative drop-down

## Death Certificate Form

To navigate to the Death Certificate form, click on the “Case Forms” option on the Left Navigation Pane, and select “Death Certificate”. The Death Certificate form includes sections in addition to what is shown in the figures below.

### Place of Last Residence and Geocoding

This section of the Death Certificate is specific to the address of the deceased, not the location of death, i.e. name of the medical facility where the woman died.

The full address, along with other identifying information will not be visible to the Committee Reviewer role. MMRIA uses geocoding to support social and health system context for case discussion and analysis and to enable distance calculations. A complete address is required to successfully geocode an address. MMRIA’s “Get Coordinates” button is linked to Texas A&M’s Geoservices geocoding system.

- 1) Enter the full address.
- 2) Click on “Get Coordinates”.
- 3) The Matching census tract will be populated

The screenshot shows a form titled "Place of Last Residence" with the following fields and controls:

- Street:** Text input field containing "1125 Blackhawk Trail". A purple circle with the number "1" is next to this field.
- Apartment or Unit Number:** Empty text input field.
- City:** Text input field containing "Lawrenceville".
- State\*:** Dropdown menu showing "Georgia" with a downward arrow.
- Zip Code:** Text input field containing "30043".
- County:** Text input field containing "Gwinnett".
- Country\*:** Dropdown menu showing "United States" with a downward arrow.
- Buttons:** A purple "Get Coordinates" button and a grey "Clear" button. A purple circle with the number "2" is next to the "Get Coordinates" button.
- Output Fields:** Four grey boxes displaying results:
  - Matching geography type:** "StreetSegment". A purple circle with the number "3" is next to this box.
  - Census tract certainty code:** "1".
  - Census tract certainty name:** "ResidenceStreetAddress".
  - Urban status:** "Metropolitan".

Figure 52 - Retrieve geographic parameters

## Birth/Fetal Death Certificate – Parent Section Form

To navigate to the Birth/Fetal Death Certificate – Parent Section form, click on the “Case Forms” option on the Left Navigation Pane, and select “Birth/Fetal Death Certificate- Parent Section”.

- This form collects information only on the parents, not the infant or fetus. Infant and fetus information is collected on the Birth/Fetal Death Certificate – Infant/Fetal Section form.
- Race and ethnicity of both parents (Figure 54) are captured in the data system just as they are recorded on the source document.

**Note: Race Recode.** Click on the “Recode” button to code race in accordance with the standards set by the Office of Management and Budget (OMB) Race and Ethnic Standards for Federal Statistics and Administrative Reporting<sup>1</sup>. This is used for analysis and aggregate reporting.

The screenshot shows the 'Father's Race' section of the form. It features a list of race categories with checkboxes: (blank), White (checked), Black, American Indian/Alaska Native, Native Hawaiian, Guamanian or Chamorro, Samoan, Other Pacific Islander, Asian Indian, Chinese, Filipino, Japanese, Korean (checked), Vietnamese, Other Asian, Other Race, and Race Not Specified. To the right of the list are four text input fields labeled 'Specify Other Race', 'Specify Other Asian', 'Specify Other Pacific Islander', and 'Specify Principal Tribe'. At the bottom, there is a dropdown menu for 'Father's OMB Race Recode' currently set to 'Bi-Racial', and two buttons labeled 'Recode' and 'Clear'.

Figure 53 – Birth/Fetal Death certificate Parent Section

1. “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity” is available from the OMB website at <http://www.whitehouse.gov/omb/fedreg/1997standards>.

In the **Location of Residence** Section of the form:

- 1) Click on “Get Coordinates” to complete the census fields using the address information.
  - a. The complete address is required to populate the census fields;
- 2) Click on “Calculated Distance” to calculate distance in miles from Residence to Place of Delivery (Figure 55).

Location of Residence

Street	Apartment or Unit Number		
<input type="text" value="1175 Blackhawk Trail"/>	<input type="text"/>		
City	State*	Zip Code	County
<input type="text" value="Lawrenceville"/>	<input style="text-align: center; font-size: small;" type="text" value="Georgia"/> ▼	<input type="text" value="30043"/>	<input type="text" value="Gwinnett"/>

1
Get Coordinates
Clear

Matching geography type	Census tract certainty code	Census tract certainty name	Urban status
<input type="text" value="StreetSegment"/>	<input type="text" value="1"/>	<input type="text" value="ResidenceStreetAddress"/>	<input type="text" value="Metropolitan"/>

Estimated Distance from Residence to Place of Delivery\* (In Miles)

<input type="text" value="15.64"/>	<span style="background-color: #8e44ad; color: white; padding: 5px 10px; border-radius: 3px;">Calculated Distance</span>	<span style="background-color: #8e44ad; color: white; padding: 5px 10px; border-radius: 3px;">Clear</span>	<span style="background-color: #8e44ad; border-radius: 50%; padding: 5px 10px; display: inline-block; margin-right: 5px;">2</span>
------------------------------------	--	--	--

Figure 54 - Location of Residence, Location Parameters

## Birth/Fetal Death Certificate – Infant/Fetal Section Form

To navigate to the Birth/Fetal Death Certificate – Infant/Fetal Section form, click on the “Case Forms” option on the Left Navigation Pane, and select “Birth/Fetal - Infant/Fetal Section” (Figure 56).

- 1) To add a new record, click on “View Record 1” (Figure 56).
- 2) To add information for more than one birth or fetal death, click on “add new Birth/Fetal Death Certificate- Infant/Fetal Section form.” (Figure 56).

The screenshot displays the MMRIA user interface for a Birth/Fetal Death Certificate - Infant/Fetal Section form. The interface includes a navigation pane on the left with options like Home, Summary, Quick Edit, and Select case form. The main content area shows the patient name "Orталity, Shirley" and Record ID: GA-2019-9440. Below this, there is a section for "Birth/Fetal Death Certificate- Infant/Fetal Section" with a purple button labeled "Add New Birth/Fetal Death Certificate- Infant/Fetal Section form" (highlighted with a circled '2'). A "List of Records" table is shown below, with columns for Record Number and Actions. The table contains two records, each with a "View Record" link (the first is highlighted with a circled '1') and a "Delete Record" button. A "Select to print a form" dropdown is also visible.

Record Number	Actions
<a href="#">View Record 1</a>	Delete Record
<a href="#">View Record 2</a>	Delete Record

Figure 55 - Birth/Fetal Death Infant/Fetal Section Functions

- After you click on “View Record 1,” the form below will appear on the screen (Figure 57).
- The Birth/Fetal Death Certificate – Infant/Fetal form includes sections in addition to what is shown in the figures below.
- If another birth or fetal death should be added, click on “Case Forms,” navigate to “Birth/Fetal Death Certificate- Infant/Fetal Section,” and repeat steps.

The screenshot displays a web-based form for creating a new record. The header shows the user's name 'Ortality, Shirley' and the record ID 'GA-2019-9440'. The form is titled 'Birth/Fetal Death Certificate- Infant/Fetal Section (Record 2)'. On the left, there is a sidebar with a 'Home' link, a 'Summary' section, a 'Quick Edit' search box, and a 'Select case form' dropdown menu currently set to 'Birth/Fetal Death'. The main form area contains several sections: 'Record Type\*', 'Multiple Gestation', and 'Birth Order' at the top; 'Newborn (Fetus) Record Identification' with fields for 'State File No.', 'Local File No.', 'Newborn Medical Record No.', 'Date of Delivery', and 'Time of Delivery'; 'Newborn (Fetus) Biometrics and Demographics' with a 'Birth Weight' section containing 'Unit of Measurement', 'Value (Grams or Pounds)\*', and 'Value (Ounces)\*'; 'Gender'; and 'Apgar Scores' with '5 Minute' and '10 Minute' checkboxes.

Figure 56 - Birth/Fetal Death Infant/Fetal Section, Create New Record

## Autopsy Report

To navigate to the Autopsy form, click on the “Case Forms” option on the Left Navigation Pane, and select “Autopsy Report”. Figure 58 illustrates the sections of the Autopsy Report form.

- You may wish to copy and paste sections of the actual Autopsy Report into the Reviewer’s Notes section at the bottom of the form.
- Remember to always exclude any identifying information about people or facilities from Reviewer’s Notes text areas.
- The Autopsy Form includes sections in addition to what is shown in the figures below.

**Ortality, Shirley**  
Record ID: GA-2019-9440  
Autopsy Report

Was an Autopsy Performed?\* (blank) ▼      Completeness of Autopsy Information\* (blank) ▼

**Reporter Characteristics**

Reporter Type (blank) ▼      Other (Specify) [ ]

**Date of Autopsy**

Month (blan ▼)      Day (blar ▼)      Year (blar ▼)      Jurisdiction [ ]

**Biometrics** [ ]

**Mother** [ ]

Figure 57 - Autopsy Report

## Prenatal Care Record Form

To navigate to the Prenatal Care Record form, click on the “Case Forms” option on the Left Navigation Pane, and select “Prenatal Care Record”. Figure 59 displays the sections of the Prenatal Care Record form.

- The Prenatal Care Record form includes sections in addition to what is shown in the figures below.

**Ortality, Shirley**  
Record ID: GA-2019-9440  
Prenatal Care Record

Prenatal Care Record No.

Was There More than One Prenatal Care Source?  
 (blank)  
 Single  
 Multiple

Primary Prenatal Care Facility

Place Type  Specify Other Place Type   
 Primary Provider Type  Specify Other Provider Type

Principal Source of Payment\*  Specify Other  Use of WIC\*

Location of Primary Prenatal Care Facility

Street  Apartment or Unit Number

City  State\*  Zip Code  County

Matching geography type  Census tract certainty code  Census tract certainty name  Urban status

Prior Surgical Procedures Before this Pregnancy - 1 item(s)

✕ Item 1 of 1

Date	Procedure	Comment(s)
<input type="text"/>	<input type="text"/>	<input type="text"/>

Figure 58 - Prenatal Care Record

## PRENATAL CARE RECORD GRAPHS

Below the Routine Monitoring Grid, you will see three graphs: Blood Pressure, Weight Gain, and Hematocrit.

- If you enter data for these values in the Routine Monitoring Grid, you can view it in these graphs. To generate the graphs: enter values in the Routine Monitoring Grid above the graphs.
- Navigate to any other form in MMRIA, and then navigate back to the Prenatal Care Record. Values will be displayed in the graphs.

**NOTE - If any line within a grid is blank, a default x-axis value of 1/1/1970 and y-axis values of 0 will appear in the graphs.** You can correct the graph by deleting the blank line in the grid, navigating to another form, and navigating back to the Prenatal Care Record.

## ER Visits and Hospitalizations Form

To navigate to the ER Visits and Hospitalizations form, click on the “Case Forms” option on the Left Navigation Pane, and select “ER Visits and Hospitalizations”.

- 1) To add a new record, click on “View Record 1” (Figure 60).
- 2) To add information for more than one birth or fetal death, click on more than one ER visit or hospitalization, click on “add new ER Visits and Hospitalizations form” (Figure 60).

**Ortality, Shirley**  
Record ID: GA-2019-9440

ER Visits and Hospitalizations

Add New ER Visits and Hospitalizations form 2

Select to print a form

List of Records

Record Number	Actions
<a href="#">View Record 1</a> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 5px;">1</span>	Delete Record

Figure 59 - ER Visits and Hospitalizations form

- After you click on “View Record 1,” the ER Visits and Hospitalizations form will appear on the screen (Figure 61).
- If there were multiple ER visits or hospitalizations, click on “Case Forms,” navigate to “ER Visits and Hospitalizations,” and repeat steps.
- The Prenatal Care Record form includes sections in addition to what is shown in the figures below.

**Ortality, Shirley**  
Record ID: GA-2019-9440  
ER Visits and Hospitalizations (Record 1)

Medical Record Number

**Basic Admission and Discharge Information**

Date of Arrival at Hospital/ER	Date of Admission to Hospital
Month: (bl) ▼ Day: (bl) ▼ Year: (bl) ▼	Month: (bl) ▼ Day: (bl) ▼ Year: (bl) ▼
Time of Arrival <input type="text"/>	Time of Admission <input type="text"/>
Gestational Age- Weeks <input type="text"/>	Gestational Age- Weeks <input type="text"/>
Gestational Age- Days <input type="text"/>	Gestational Age- Days <input type="text"/>
Days Postpartum <input type="text"/>	Days Postpartum <input type="text"/>

Admission Condition: (blank) ▼      Admission Status: (blank) ▼

Specify Other Status:       Admission Reason\*: (blank) ▼      Specify Other Reason:

Figure 60 – Prenatal Care Record

- The “Reviewers Notes about this Hospitalizations, Delivery, or ER Visit”, includes a notes template that can be used to capture key points.

(Fill out separate summary for each hospital visit and label each different facility by number or letter to differentiate facilities.)

She presented at \_\_\_\_\_(weeks gestation) to the \_\_\_\_\_(ED or L& D triage or other) in a \_\_\_\_\_(hospital level of OB care or trauma /trauma level) via \_\_\_\_\_(method of transportation) at \_\_\_\_\_(time). Her chief complaint was \_\_\_\_\_. Her weight on admission was \_\_\_\_\_and her presenting vital signs were \_\_\_\_\_. She was screened for \_\_\_\_\_(describe type of screening i.e. Embolism, hemorrhage, ectopic, influenza, domestic violence, etc.)

Physical examination on admission found \_\_\_\_\_. Labs performed included \_\_\_\_\_with \_\_\_\_\_abnormal findings noted. Diagnostic tests performed included \_\_\_\_\_with the following abnormal findings noted \_\_\_\_\_. Her diagnosis was \_\_\_\_\_and she was admitted to \_\_\_\_\_(describe unit) OR transferred to \_\_\_\_\_OR discharged to \_\_\_\_\_.

(If admitted provide brief chronological synopsis of events that occurred during the hospital stay including condition and vital signs when discharged.)

If admission to L&D complete the following template:

She labored for \_\_\_\_\_hours and delivered via \_\_\_\_\_(method-if CS describe reason) by a (n) \_\_\_\_\_(provider type) under \_\_\_\_\_(anesthesia/local). Medications administered during labor and delivery or postpartum included \_\_\_\_\_. She received \_\_\_\_\_units of blood products (delete if not applicable). Infant weighed \_\_\_\_\_with Apgars of \_\_\_\_\_.

Complications during labor, delivery or postpartum (prior to discharge) include \_\_\_\_\_.

She was discharged home on day \_\_\_\_\_. Vitals signs at discharge included \_\_\_\_\_. She was instructed to \_\_\_\_\_(special education or follow-up appointments).

Figure 61 - Reviewers Notes about this Hospitalizations, Delivery, or ER Visit, Notes Template

**NOTE - FILL OUT AND UNIQUELY LABEL SEPARATE SUMMARIES FOR EACH HOSPITAL VISIT**

### ER VISITS AND HOSPITALIZATIONS FORM GRAPHS

Below the Vital Signs Grid, you will see four graphs: Temperature, Pulse, Respiration, and Blood Pressure. If you enter data for these values in the Vital Signs Grid, you can view it in these graphs.

To generate the graphs:

- Enter values in the Vital Signs Grid above the graphs.
- Navigate to any other form in MMRIA, and then navigate back to the ER Visits and Hospitalizations form. Values will be displayed in the graphs.

**Tip: Note: If any line within a grid is blank, a default x-axis value of 1/1/1970 00:00:00 and y-axis values of 0 will appear in the graphs.** You can correct the graph by deleting the blank line in the grid, navigating to another form, and navigating back to the ER Visits and Hospitalizations form.

### Other Medical Office Visits Form

To navigate to the Other Medical Office Visits form, click on the “Case Forms” option on the Left Navigation Pane, and select “Other Medical Office Visits” (Figure 63).

1. To add a new record, click on “View Record 1” (Figure 60).
2. To add information for more than one Other Medical Office Visit, click on “Add New Other Medical Office Visits form” (Figure 63).

**Ortality, Shirley**  
Record ID: GA-2019-9440

Other Medical Office Visits

Add New Other Medical Office Visits form 2

Select to print a form ▼

List of Records	
Record Number	Actions
<a href="#">View Record 1</a> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 5px;">1</span>	Delete Record

Figure 62 - ER Visits and Hospitalizations Form Graphs

After you click on “View Record 1,” the form below will appear on the screen (Figure 64). If there were multiple Other Medical Office Visits, click on “Case Forms,” navigate to “Other Medical Office Visits,” and repeat steps.

## Ortality, Shirley

Record ID: GA-2019-9440

### Other Medical Office Visits (Record 1)

**Visit**

**Date Of Medical Office Visit**

Month	Day	Year	Arrival Time	Gestational Age- Weeks
<input type="text" value="(blan) ▼"/>	<input type="text" value="(blar) ▼"/>	<input type="text" value="(blar) ▼"/>	<input type="text"/>	<input type="text"/>

Gestational Age- Days	Days Postpartum
<input type="text"/>	<input type="text"/>

Visit Type*	Medical Record No	Reason For Visit Or Chief Complaint
<input type="text" value="(blank) ▼"/>	<input type="text"/>	<input type="text"/>

**Medical Care Facility**

Place Type	Specify Other Place Type	Provider Type	Specify Other Provider Type
<input type="text" value="(blank) ▼"/>	<input type="text"/>	<input type="text" value="(blank) ▼"/>	<input type="text"/>

Figure 63 - Other Medical Office Visits

## Location of Medical Care Facility

Remember that within the Reviewer Committee role, complete addresses will be de-identified – only the state will appear.

- **Enter the full address.**
- **Click on “Get Coordinates.”**

The “Get Coordinates” button (Figure 65) helps with geocoding for mapping. This is a two-step process involving collecting FIPS block level information.

Location Of Medical Care Facility

Street Apartment or Unit Number

City State Zip Code County

(blank) ▼

Matching geography type Census tract certainty code Census tract certainty name Urban status

Figure 64 - Location of Medical Care Facility

## Medical Transport Form

To navigate to the Medical Transport form, click on the “Case Forms” option on the Left Navigation Pane, and select “Medical Transport” (Figure 66).

1. To add a new record, click on “View Record 1” (Figure 66).
2. To add information for more than one Medical Transport, click on “Add New Medical Transport form” (Figure 66).

List of Records	
Record Number	Actions
<a href="#">View Record 1</a>	<a href="#">Delete Record</a>

Figure 65 - Medical Transport Functions

- After you click “View Record 1,” the form below will appear on the screen (Figure 67)
- If there were multiple Medical Transports, click on “Case Forms,” navigate to “Medical Transport,” and repeat steps above.

**Ortality, Shirley**  
Record ID: GA-2019-9440  
Medical Transport (Record 1)

**Date of Transport**

Month Day Year  
(bl) ▼ (bl) ▼ (bl) ▼

Gestational Age- Weeks Gestational Age- Days Days Postpartum

Reason for Transport

Maternal Conditions (Describe)

Who Managed the Transport? Specify Other  
(blank) ▼

Transport Vehicle Specify Other  
(blank) ▼

**Timing of Transport**

Call Received Depart for Patient Origin Arrive at Patient Origin Patient Contact

Depart for Referring Facility Arrive at Referring Facility

Figure 66 - Medical Transport, New Record

## Social and Environmental Profile Form

The **Social and Environmental Profile** should be completed for each case that you abstract and review. To navigate to the Social and Environment Profile form, click on the “Case Forms” option on the Left Navigation Pane, and select the “Social and Environment Profile” form (Figure 68).

**Ortality, Shirley**  
 Record ID: GA-2019-9440  
 Social and Environmental Profile

**Socio-Economic Characteristics**

Source of Income: (blank) ▼      Employment Status: (blank) ▼

Occupation:

Country of Birth: (blank) ▼      Immigration Status: (blank) ▼

Time in the US:       Units: (bl) ▼      Current Living Arrangements: (blank) ▼      Homelessness\*: (blank) ▼

Religious Preference:

**Members of Household - 1 item(s)**

✕ Item 1 of 1

Relationship: (blank) ▼      Gender: (blank) ▼      Age:

Comments:

+ Add Item

Previous or Current Incarceration(s)? (blank) ▼

**Details of Incarcerations - 1 item(s)**

✕ Item 1 of 1

Date	Duration	Reason
<input style="width: 95%;" type="text"/>	<input style="width: 95%;" type="text"/>	<input style="width: 95%;" type="text"/>

Figure 67 - Social and Environmental Profile Form

## Mental Health Profile Form

To navigate to the Mental Health Profile form, click on the “Case Forms” option on the Left Navigation Pane, and select “Mental Health Profile” (Figure 69).

**Ortality, Shirley**  
 Record ID: GA-2019-9440  
**Mental Health Profile**

Were There Documented Preexisting Mental Health Conditions?\*

(bla ▼)

Documented Preexisting Mental Health Conditions - 1 item(s)

✕ Item 1 of 1

Condition	Duration of Condition	Treatment(s)
(blank) ▼		
Duration of Treatment	Treatment Changed During Pregnancy?	Dosage Changed During Pregnancy?
	(bl ▼)	(bl ▼)
If Yes, Mental Health Provider Consultation During this Pregnancy?	Did Patient Adhere to Treatment?	
(bl ▼)	(bl ▼)	
<a href="#" style="background-color: #4a4a8a; color: white; padding: 2px 10px; border-radius: 3px;">+ Add Item</a>		

Were There Documented Screenings and Referrals for Mental Health Conditions? - 1 item(s)

✕ Item 1 of 1

Date of Screening	GA- Weeks	GA- Days	Days Postpartum
Screening Tool	Referral for Treatment		
(blank) ▼	(bl ▼)		
<a href="#" style="background-color: #4a4a8a; color: white; padding: 2px 10px; border-radius: 3px;">+ Add Item</a>			

Specify Other Screening Tool(s)

Figure 68 - Mental Health Profile Form

## Informant Interviews Form

To navigate to the Informant Interviews form, click on the “Case Forms” option on the Left Navigation Pane, and select “Informant Interviews”.

1. To add a new record, click on “Record 1” (Figure 70).
2. To add information for more than one Informant Interview, click on “Add New Informant Interview form” (Figure 70).

Figure 69 - Informant Interview Form

- After you click on “View Record 1,” the form below will appear on the screen (Figure 71).
- If there were multiple Informant Interviews, click on “Case Forms,” navigate to “Informant Interviews,” and repeat steps above.

Figure 70 - Informant Interview, New Record

## Case Narrative Form

To navigate to the Case Narrative form, click on “Case Forms” and select “Case Narrative.”

### HOW TO USE THE CASE NARRATIVE FORM

Within the Case Narrative form, you will see the Reviewer’s Notes from the various forms carried over into one place. At the very top is a text box labeled Case Narrative – this is where you can write your case narrative to print for your committee. You may use the template provided and edit it as needed.

- You can copy and paste from the Reviewer’s Notes boxes into the Case Narrative box at the very top to write a comprehensive Case Narrative.
- To copy and paste from the Reviewer’s Notes boxes, highlight the text you wish to copy, right-click, and select Copy. Then place your cursor in the Case Narrative box at the very bottom of the form, right-click, and select Paste.
- You can also copy and paste text from Word, Notepad, or other documents outside of MMRIA. Text may be copied into MMRIA; however, formatting will not be maintained (e.g. bold, italics, and underlines). Pasting images or other file types is not currently supported in MMRIA
- When you have completed your case narrative, you can preview or print it by going to Print Version and clicking “Case Narrative.” You will see the Case Narrative displayed there (Figure 72).

**Ortality, Shirley**

Record ID: GA-2019-9440

Case Narrative

Case Narrative- Use the pre-fill text below, and copy and paste from Reviewer's Notes above to create a comprehensive case narrative. Whatever you type here is what will be printed in the Print Version.

She was a (age, place of birth, race/ethnicity, marriage status, level education, occupation). She was a gravida \_\_\_ para \_\_, who died with cause of death \_\_, \_\_ days /months, before, during or after delivery. Medical history was significant for \_\_ (Pre-pregnancy risk factors or pre-existing medical conditions). Pre-pregnancy BMI was \_\_\_\_\_. Life course issues significant for \_\_\_\_\_ (psychosocial factors).

Entry into prenatal care was at \_\_\_\_\_ weeks with # visits at a \_\_\_ (describe location) with a \_\_\_ (provider type). Prenatal history was significant for \_\_\_ (include identified obstetric risk factors). Referrals during prenatal period were to \_\_\_\_\_ at \_\_\_\_\_ weeks gestation.

Health events prior to delivery included \_\_\_\_\_. She presented to clinic/hospital/other \_\_\_\_\_ at \_\_\_\_\_ weeks gestation. Delivery was by a (provider title)\_\_\_\_, method was \_\_\_\_\_, with \_\_\_\_\_ anesthesia. Obstetric complications included \_\_\_\_\_. Fetus/infant was \_\_\_\_\_ weeks gestation and weighed \_\_\_\_\_pounds/ounces. Apgar scores were \_\_\_\_\_ and complications were \_\_\_\_\_. Postpartum period (before discharge) significant for developing \_\_\_\_\_. Mother and infant were/were not discharged (if applicable) to \_\_\_\_\_. At \_\_\_\_\_weeks postpartum she presented to (describe location) \_\_\_\_\_. Postpartum period (after discharge) significant for \_\_\_\_\_.

(Summarize terminal event). Autopsy was done by a \_\_\_\_\_ or was not done. Significant findings included \_\_\_\_\_.

(Describe if any bereavement services were offered.)

Figure 71 - Case Narrative

## Committee Decisions Form

To navigate to the Committee Decisions Form, click on “Case Forms” and select “Committee Decisions.”

### HOW TO USE THE COMMITTEE DECISIONS FORM

The Committee Decisions Form is perhaps the most important form within MMRIA, because it captures the findings of your committee and helps your committee prioritize action. It is crucial to assign a person to take notes on the “paper” version of the Committee Decisions Form ([Appendix: Committee Decisions Form](#)) BEFORE each case goes for review. This person may or may not be the same person who abstracted the case. You can also give copies of the form to each committee member for each case and collect the forms at the end of each meeting in order to capture all possible input on a case. Once the meeting has finished and a case is closed, an abstractor or other assigned data entry person should enter the findings into the system as soon as possible.

Though the formatting differs, the content of the “paper” version of the form matches the content of the Committee Decisions Form within the system (Figure 73).

The screenshot displays the 'Committee Decisions' form for a case titled 'Ortality, Shirley'. The record ID is GA-2019-9440. The form includes several input fields and dropdown menus:

- Review Date:** An empty text input field.
- Pregnancy-Relatedness:** A dropdown menu currently showing '(blank)'.
- Estimate the Degree of Relevant Information (Records) Available for this Case:** A dropdown menu currently showing '(blank)'.
- Does Committee Agree with the Underlying Cause of Death Listed on Death Certificate?:** A dropdown menu currently showing '(blank)'.
- Notes About Key Circumstances Surrounding This Death Identified by the Committee (Enter in Bulleted Format):** A large, empty text area for notes.
- Committee Determination of Cause(s) of Death - 1 item(s):** A list item with a close button (X) and the text 'item 1 of 1'.

Figure 72 - Committee Decisions Form

**Committee Decisions**

Recommendation

Level of Prevention (blank) ▼      Level of Impact (blank) ▼

+ Add Item

Recommendations of the Committee - 1 item(s)

✕ Item 1 of 1

Recommendation

Level of Prevention (blank) ▼      Level of Impact (blank) ▼

+ Add Item

Undo   Save

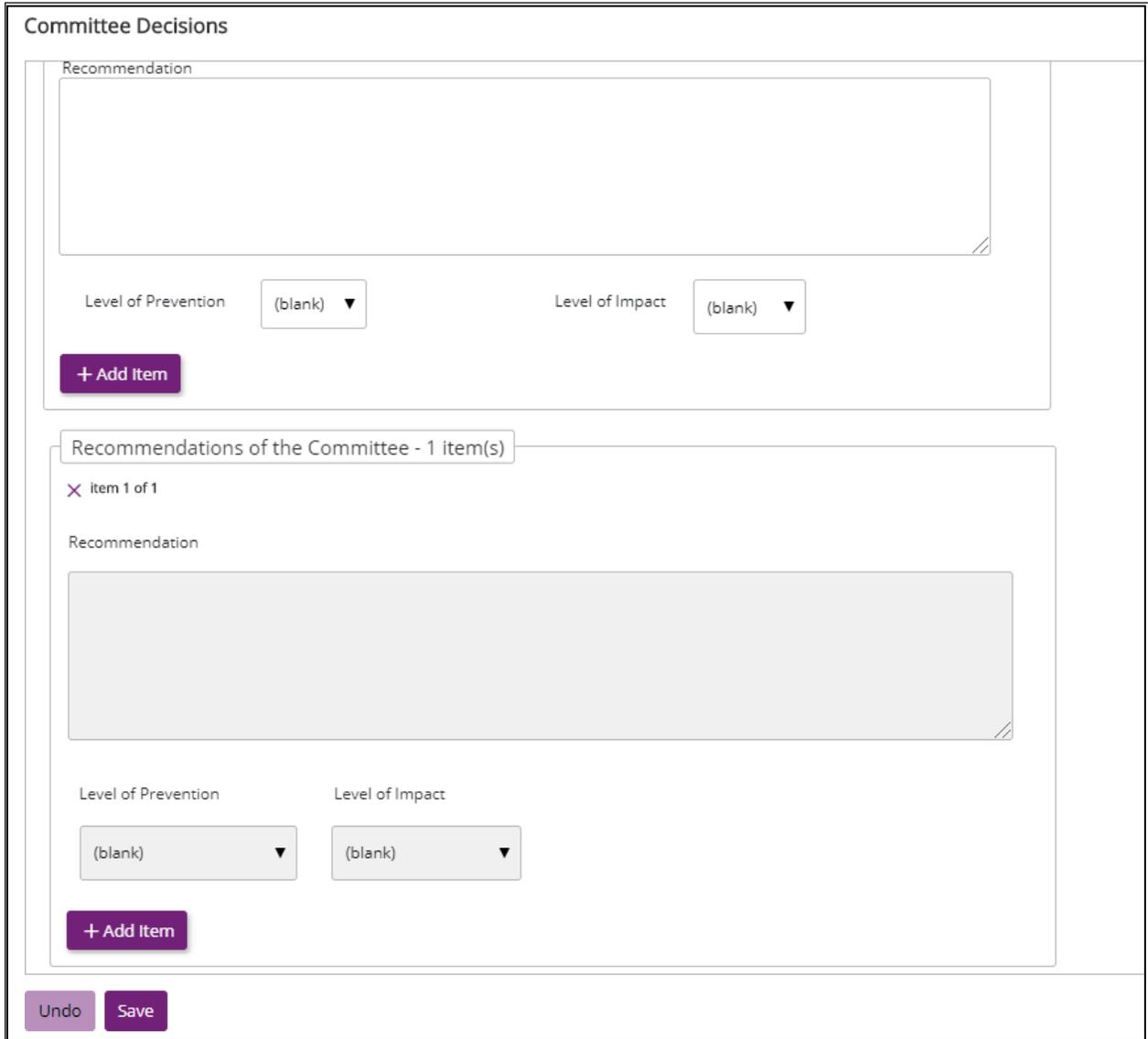
The image shows a web form titled "Committee Decisions". At the top, there is a large text area labeled "Recommendation". Below it are two dropdown menus: "Level of Prevention" and "Level of Impact", both currently set to "(blank)". A purple button with a plus sign and the text "+ Add Item" is located below the dropdowns. Below this is a section titled "Recommendations of the Committee - 1 item(s)". Inside this section, there is a small "✕ Item 1 of 1" header. Below that is another "Recommendation" text area, followed by "Level of Prevention" and "Level of Impact" dropdown menus, both set to "(blank)". A second "+ Add Item" button is at the bottom of this section. At the very bottom of the form are two buttons: "Undo" and "Save".

Figure 73 - Committee Decisions Form, continued

## V. DATA ANALYSIS

### Data Structure

The MMRIA data structure is a hierarchical database with two levels in the hierarchy. The first level is comprised of forms for which you can have only one per case (Single Forms) and forms for which you can have more than one per case (Multiple Forms). The second level is composed of grids that exist within the Single and Multiple Forms.

### Forms and Grids

 SINGLE FORM S	 M ULTIPLE FORM S	 GRIDS
<ul style="list-style-type: none"> <li> Home Record</li> <li> Death Certificate</li> <li> Birth/Fetal Death Certificate- Parent Section</li> <li> Autopsy Report</li> <li> Prenatal Care Records</li> <li> Mental Health Profile</li> <li> Social and Environmental Profile</li> <li> Committee Decisions</li> <li> Case Narrative</li> </ul>	<ul style="list-style-type: none"> <li> Birth/Fetal Death Certificate- Infant/Fetal Section</li> <li> ER Visits and Hospitalizations</li> <li> Medical Transport</li> <li> Informant Interviews</li> <li> Other Medical Office Visits</li> </ul>	<ul style="list-style-type: none"> <li> Grids exist within single and multiple forms. See <a href="#">Field Types</a> for more details.</li> </ul>

The data is stored by MMRIA in JSON (JavaScript Object Notation) format. While it is possible to import JSON-formatted data directly into some data analysis tools, MMRIA also has a data export function that provides CSV files for analysis. These data files are structured like a relational database.

## Data Export - Overview

Data tables are exported from MMRIA as CSV files and the Export interface allows you to filter on a number of parameters. Two key parameters are to export:

- **All Data**
- **Core Data**

The Core Data export generates four files, while the All Data export generates one file per table in the system. The core data/all data filter, as well as the remaining filters are described below.

## Export Data

From the Abstractor submenu, select “Export Data”.

- The Export Data form will be displayed (Figure 75 - Export Data Choices).
- You will be prompted to answer five questions:
  - 1) Enter a jurisdiction name to prepend to each file, with a default value displayed below the prompt.
  - 2) Do you want to export All Data or only Core Data?
    - a. The All Data option is described below, and the Core Data option is described in the section titled “Core Elements Report”.
  - 3) Would you like to password protect the file?
  - 4) What fields do you want to deidentify? With choices on None, Standard, or Custom.
  - 5) Please select which cases you want to include in the export? With choices of All or Custom.
- The cases retrieved from the filters will be displayed in the Search Results.
  - Choosing the checkbox beside a case will include it under the “Cases to be Included in the Export”.
- Your data export choices are displayed under “Summary of your Exported Data Choices”
  - If the options are correct select the button, “Confirm and Start Export”.
  - If the options are not correct, then modify your selections.
    - Modifying the selections should update the summary display.

- In the following figure, the user chose the All Data option for filter #2. The All Data report output is described in the section “All Data Elements Report”.

Maternal Mortality Review Information Application (MMRIA)
user4 [Log out](#)

## Export Data

1. The Jurisdiction name that will be added to each exported case is:
2. Do you want to export all data or only core data?  
The zip file will be downloaded directly to the "Downloads" folder in the local environment of your computer.  
 All  Core
3. Would you like to password protect the file?  
 No  Yes
4. What fields do you want to de-identify?  
 None  Standard  Custom
5. Please select which cases you want to include in the export?  
 All  Custom

**Summary of your Export Data choices**

- Export/Jurisdiction name: test-mmria.services-dev.cdc.gov
- Export All data
  - Exporting All data and a [data dictionary](#)
- Password protected: No
- De-identify fields: None
- Filter by: All

Confirm & Start Export

**Export Request History**

(\*Please note that the export queue is deleted at midnight each day.)

date_created	created_by	date_last_updated	last_updated_by	file_name	export_type	status	action
2019-12-06T17:56:53.598Z	user4	2019-12-06T17:56:52.4762363+00:00	mmria-server	2019-12-06T17-56-53.598Z.zip	All CSV	Downloaded	<input type="button" value="Download"/>   <input type="button" value="Delete"/>

Figure 74 - Export Data Choices

- Once you select "Confirm and Start Export", a row will be added to the "Export Request History" section of the form for your requested download (Figure 76 - Export Request Queued).
  - The initial status will be "Creating Export".

Export Request History							
(*Please note that the export queue is deleted at midnight each day.)							
date_created	created_by	date_last_updated	last_updated_by	file_name	export_type	status	action
2019-11-19T11:58:39.816Z	user4	2019-11-19T11:59:05.2082181+00:00	mmria-server	2019-11-19T11-58-39.816Z.zip	All CSV	Downloaded	Download   Delete
2019-11-19T18:48:34.412Z	user4	2019-11-19T18:48:59.4055779+00:00	mmria-server	2019-11-19T18-48-34.412Z.zip	All CSV	Downloaded	Download   Delete
2019-11-19T23:05:58.34Z	user4	2019-11-19T23:06:23.0696511+00:00	mmria-server	2019-11-19T23-05-58.340Z.zip	All CSV	Creating Export...	

Figure 75 - Export Request Queued

- When the queued export is ready for download, the status will change to "Download". Two buttons will appear:
  - Delete the request by selecting the "Delete" button.
    - We recommend that you delete previous exports from your Export Request History to improve the speed of future exports.
    - Save copies of any previous data exports to a secure location, before use the "Delete" button to remove them from your Export Request History.
  - Download the file by selecting the "Download" button.
    - This process can take several minutes and may be slower or faster depending on the number of cases you have in MMRIA.
    - The core export is generally faster than the export of all data.

Export Request History							
(*Please note that the export queue is deleted at midnight each day.)							
date_created	created_by	date_last_updated	last_updated_by	file_name	export_type	status	action
2019-11-19T11:58:39.816Z	user4	2019-11-19T11:59:05.2082181+00:00	mmria-server	2019-11-19T11-58-39.816Z.zip	All CSV	Downloaded	Download   Delete
2019-11-19T18:48:34.412Z	user4	2019-11-19T18:48:59.4055779+00:00	mmria-server	2019-11-19T18-48-34.412Z.zip	All CSV	Downloaded	Download   Delete
2019-11-19T23:05:58.34Z	user4	2019-11-19T23:06:23.0696511+00:00	mmria-server	2019-11-19T23-05-58.340Z.zip	All CSV	Download	Download

Figure 76 – Export Ready for Download

- The download will generate a zip file (Figure 78 - Export Zip File)
  - The name of the zip file is formatted as an ISO Date and Time String: YYYY-MM-DD T hh:mm:ss Z.
    - *It may be necessary to clear your browsing history prior to downloading the files. To do so in Google Chrome, select Settings. Under Advanced, select Privacy and Security, then select Clear Browsing Data.*
  - Open the zip file to view the individual csv files.
  - Once the file is opened, you can then Save the zip file to your local computer for offline access. You can also re-run the download of any export later.

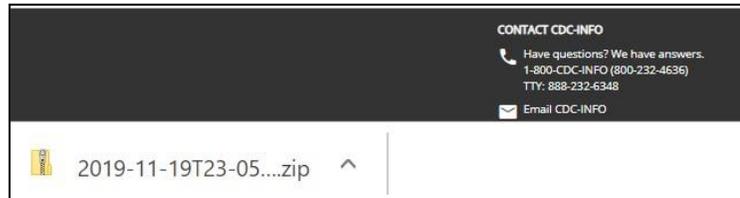


Figure 77 - Export Zip File

- By default, all files are exported into a folder called “Downloads” which is located at



## All Data Elements Report

- When an Export for All data elements is unzipped, the zip file includes:
  - A Data-dictionary of data elements (data-dictionary.csv) and includes the following columns:
    - Metadata version
    - File name
    - Column name
    - MMRIA Path
    - MMRIA Prompt
    - Field Description
  - A Data-dictionary-lookup (data-dictionary-lookup.csv) is generated to show all fields with associated lists of values, and includes the values in each list. The columns in this file include:
    - Item value
    - Item display
    - Item Description
  - All 1<sup>st</sup>-level Single Forms are merged and put out as one file, named *mmria\_case\_export*.
  - A separate CSV file is also created for each of the five 1<sup>st</sup>-level Multiple Forms and each of the 53 grids. The CSV files are named to reflect the forms from which they originated and the contents of the grid.
  - A file including any text fields that exceed the over-the-qualitative-limit length of 32k.
  - Individual files for each table in the MMRIA system.

over-the-limit	aep_social_and_medical_referrals.csv	ahmr_referrals_and_consultations.csv
ar_causes_of_death.csv	ar_toxicology.csv	arrmdf_gross_findings.csv
arrmdf_microscopic_findings.csv	bcifs_causes_of_death.csv	certificate_infant_fetal_section.csv
cr_critical_factors_worksheet.csv	cr_recommendations_of_committee.csv	data-dictionary.csv
data-dictionary-lookup.csv	dc_causes_of_death.csv	delivery_hospitalizations_details.csv
evahmr_anesthesia.csv	evahmr_birth_attendant.csv	evahmr_blood_product_grid.csv
evahmr_diagnostic_imaging_grid.csv	evahmr_internal_transfers.csv	evahmr_labratory_tests.csv
evahmr_list_of_medications.csv	evahmr_pathology.csv	evahmr_surgical_procedures.csv
evahmr_vital_signs.csv	ical_procedures_before_pregnancy.csv	ices_information_for_this_record.csv
informant_interviews.csv	medical_transport.csv	mmria_case_export.csv
mr_physical_exam_and_evaluations.csv	mt_transport_vital_signs.csv	omov_laboratory_tests.csv
omov_medications.csv	omov_new_grid.csv	omov_physical_exam.csv
omov_referrals_and_consultations.csv	omov_relevant_family_history.csv	omov_relevant_medical_history.csv
omov_relevant_social_history.csv	omov_vital_signs.csv	other_medical_office_visits.csv
p_diagnostic_procedures.csv	p_family_medical_history.csv	p_medical_referrals.csv
p_other_lab_tests.csv	p_other_sources_of_prenatal_care.csv	p_pre-existing_conditons_grid.csv
p_problems_identified_grid.csv	p_routine_monitoring.csv	p_substance_use_grid.csv
p_ph_details_grid.csv	saep_details_of_incarcerations.csv	saep_if_yes_specify_substances.csv
saep_members_of_household.csv	sit_and_hospital_medical_records.csv	psychological_exam_and_assesments.csv
tic_imaging_and_other_technology.csv	tions_and_drugs_during_pregnancy.csv	umented_mental_health_conditions.csv
xisting_mental_health_conditions.csv		

Figure 78 - All Data Elements Listing

- Once exported, these files are ready for analysis. Some analyses may require you to merge multiple exported CSV files. Guidance on merging multiple exported CSV files is found in the section “Relating Your Data.”

## Core Elements Report

The Core Elements Report is now a report rather than a data entry form as it was in MMRDS. The data used to create this report comes from the other forms in MMRIA. You can print this report from the Export menu, to support case review processes or you can export it as a data table to support MMRC analyses. Directions for printing are found in the section [PRINTING FORMS](#). Directions for exporting the Core Elements report are described here.

The Core Elements Report is run by selecting the “Core Data” option from export filter #2 below:

- You will be prompted to answer five questions:
  - 1) Enter a jurisdiction name to prepend to each file, with a default value displayed below the prompt
  - 2) **Do you want to export All Data or only Core Data?** *Figure 79 - Core Elements with De- Identified option (1)*
  - 3) Would you like to password protect the file?
  - 4) What fields do you want to deidentify? With choices on None, Standard, or Custom.
  - 5) Please select which cases you want to include in the export? With choices of All or Custom.
- There are differences between the files generated by this export and those generated when the “All Data” option is selected, and these will be described later in this section.
  - In Figure 79 - Core Elements with De-Identified option (2), the standard de-identified option is selected for filter question #4.
  - Selection of the de-identification option results in a summary listing of the fields to be de-identified.
  - A right-hand scroll bar allows you to review the list of data elements to be de-identified.
- In Figure 79 - Core Elements with De-Identified option (3), filter question #5 was used to select a custom set of cases for inclusion. This option allows the user to:
  - Enter a year as the search parameters.
  - Specify the sort field to be used and to indicate sort order (descending or ascending).
  - Indicate the pagination (number of records) for display.
  - Select “Apply Filters” to retrieve the cases that match the filter parameters.
- The records returned from the query are displayed in the form just below the filter criteria.
  - The checkbox to the left of each case can be used to select it for inclusion in the export.
- Like the All Data option, the “Confirm and Start Export” button is used to initiate the download.
  - This adds a row to the Export Request History, where the type columns reflects *Core CSV* instead of *All CSV*.
- The subsequent steps in the download are the same as the steps for the All Data export option.



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## Export Data

1. The jurisdiction name that will be added to each exported case is:
 

test-mmria.services-dev.c
2. Do you want to export **all data** or only **core data**?  
 The zip file will be downloaded directly to the "Downloads" folder in the local environment of your computer.
 

All  Core 1
3. Would you like to password protect the file?
 

No  Yes
4. What fields do you want to de-identify?
 

None  Standard  Custom 2

**Standard fields that will be de-identified**

Path: home_record/first_name
Path: home_record/last_name
Path: home_record/middle_name
Path: death_certificate/certificate_identification/local_file_number
Path: death_certificate/place_of_last_residence/city
Path: death_certificate/place_of_last_residence/zip_code
Path: death_certificate/place_of_last_residence/county
Path: death_certificate/demographics/city_of_birth
5. Please select which cases you want to include in the export?
 

All  Custom

Search for:  Apply Filters 3

Sort by:

Records per page:

Descending order:

Total Records: 234 | Viewing Page(s): 1 of 3 Select by page: 1 2 3

Filtered Cases							
	Date last updated Last updated by	Name [Jurisdiction ID]	Record ID	Date of death	Committee review date	Agency case ID	Date created Created by
<input type="checkbox"/>	2019-11-07T22-49-53.378Z user4	Agg, Dee [/Philadelphia]		2018-6	N/A		2019-11-07T22-49-53.378Z user2
<input type="checkbox"/>	2019-11-20T19-33-31.099Z user4	Garrett, Jill Donnelly [/north_ga]	GA-1986-8597	2018-8	N/A		2019-11-20T19-33-31.099Z user4

Figure 79 - Core Elements with De-Identified option

Export Request History							
(*Please note that the export queue is deleted at midnight each day.)							
date_created	created_by	date_last_updated	last_updated_by	file_name	export_type	status	action
2019-11-19T11:58:39.816Z	user4	2019-11-19T11:59:05.2082181+00:00	mmria-server	2019-11-19T11-58-39.816Z.zip	All CSV	Downloaded	<a href="#">Download</a>   <a href="#">Delete</a>
2019-11-19T18:48:34.412Z	user4	2019-11-19T18:48:59.4055779+00:00	mmria-server	2019-11-19T18-48-34.412Z.zip	All CSV	Downloaded	<a href="#">Download</a>   <a href="#">Delete</a>
2019-11-19T23:05:58.34Z	user4	2019-11-19T23:06:23.0696511+00:00	mmria-server	2019-11-19T23-05-58.340Z.zip	All CSV	Downloaded	<a href="#">Download</a>   <a href="#">Delete</a>
2019-11-19T23:14:06.566Z	user4	2019-11-19T23:14:31.6199583+00:00	mmria-server	2019-11-19T23-14-06.566Z.zip	Core CSV	Download	<a href="#">Download</a>

Figure 80 - Export Request History for Core Elements

- When an Export for Core Data Elements is unzipped it includes the files shown in Figure 81 – Core Data Export Files:

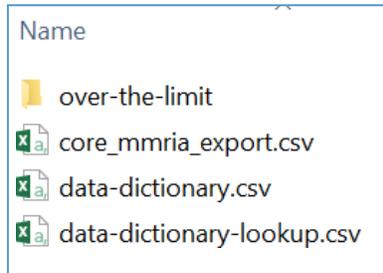


Figure 81 – Core Data Export Files

- A Data-dictionary of core data elements is generated in its own file that includes columns for:
  - Metadata version
  - File name
  - Column name
  - MMRIA Path
  - MMRIA Prompt
  - Field Description
- A Data-dictionary-lookup is generated to show all core fields with associated lists of values, and includes the values in each list. The columns in this file include:
  - Item value
  - Item display
  - Item Description
- All Core Data Elements are output in one file, named *core\_mmria\_export*.
- A file including any text fields that exceed the over-the-qualitative-limit length of 32k.
- The section below describes guidelines on relating data, which is informative for all downloads, but written to be used when your data export was for All Data Elements.

## Relating Your Data:

Any of the csv files can be imported into the software of your choice for analysis. There will be times that you will want to relate two or more of the csv files.

<b>Single-Single</b>	1 <sup>st</sup> level to 1 <sup>st</sup> level	1 key used	Key is <b><i>_id</i></b> in both sources
<b>Single-Multiple</b>	1 <sup>st</sup> level to 1 <sup>st</sup> level	1 key used	Key is <b><i>_id</i></b> in both sources
<b>Single-Grid</b>	1 <sup>st</sup> level to 2 <sup>nd</sup> level	1 key used	Key is <b><i>_id</i></b> in both sources
<b>Multiple-Multiple</b>	1 <sup>st</sup> level to 1 <sup>st</sup> level	1 key used	Key is <b><i>_id</i></b> in both sources
<b>Multiple-Grid</b>	1 <sup>st</sup> level to 2 <sup>nd</sup> level	3 keys used	Keys in <b>Multiple Form Files</b> are <b><i>_id</i></b> and <b><i>record_index</i></b> , and in the <b>Grid Files</b> are <b><i>_id</i></b> and <b><i>parent_record_index</i></b> .

Figure 82 - Relating Your Data

## Data Export: Grids

Grids are used to capture data in cases where users have more than one entry per form and the entry has related fields. One example is the Toxicology Grid on the Autopsy Report form.

You can input multiple substances and indicate characteristics for each substance, such as concentration, unit, and level, as illustrated below.

### TOXICOLOGY GRID ON THE AUTOPSY REPORT FORM

<u>Substance</u>	<u>Concentration</u>	<u>Unit of Measure</u>	<u>Level</u>	<u>Comment(s)</u>
A				
B				
C				

Below is a list of each form that contains at least one grid, and the numbers of grids contained within that form.

#### SINGLE FORMS:

- Death Certificate
- Autopsy Report
- Prenatal Care Record
- Social and Environmental Profile
- Mental Health Profile
- Committee Decisions

#### MULTIPLE FORMS:

- Birth/Fetal Death Certificate – Infant/Fetal section [1 Grid]
- ER Visits and Hospitalizations [13 Grids]
- Other Medical Office Visits [10 Grids]
- Medical Transport [1 Grid]

## Analysis of MMRIA Data: Considerations

- Most analyses will only require the use of one to three data files at a time. The mmria\_case\_export file, along with its associated grids, provides most of the data an analyst would need to support both routine and topic-specific analyses.
- Variables in the CSV output data files were named in most cases using the following algorithm:
  - The first letter of each word of the form name +
  - The first letter of each word in the MMRIA path +
  - The first letter of each word following the last slash and first five letters of the last word in the MMRIA path

For example, the variable for place type of the medical care facility on the Other Medical Office Visits form would be found at the following path:

other\_medical\_office\_visits/medical\_care\_facility/place\_type and the variable name is omovmcf\_p\_type

The path and variable names are located in the data\_dictionary.csv file.

If there is a duplicate variable name based on this algorithm, MMRIA creates a unique alphanumeric name. In future releases of MMRIA, these alphanumeric names will be replaced with a descriptive name.

## Example Analyses

Below are some examples of questions that you might pursue, along with the required data files.

- What proportion of pregnancy-associated deaths are pregnancy-related?
  - Data file: mmria\_case\_export file
- What are the leading underlying causes of pregnancy-related death? How do they vary?
  - Data file: mmria\_case\_export file
- What are the most and least preventable underlying causes of pregnancy-related death?
  - Data file: mmria\_case\_export file
- What are the common contributing factors of the leading causes of pregnancy-related death?
  - Data files: mmria\_case\_export file merged with Contributing Factors and Committee Recommendations Grid
- What recommendations for action were made for the leading causes of pregnancy-related death?
  - Data files: mmria\_case\_export file merged with Contributing Factors and Committee Recommendations Grid
- What recommendations for action for the leading causes of pregnancy-related death would have the largest impact?
  - Data files: mmria\_case\_export file merged with Contributing Factors and Committee Recommendations Grid

## VI. REVIEWING CASES

As a Committee Member your submenu option allows you to view de-identified case data (Figure 82 - Committee Reviewer's submenu)

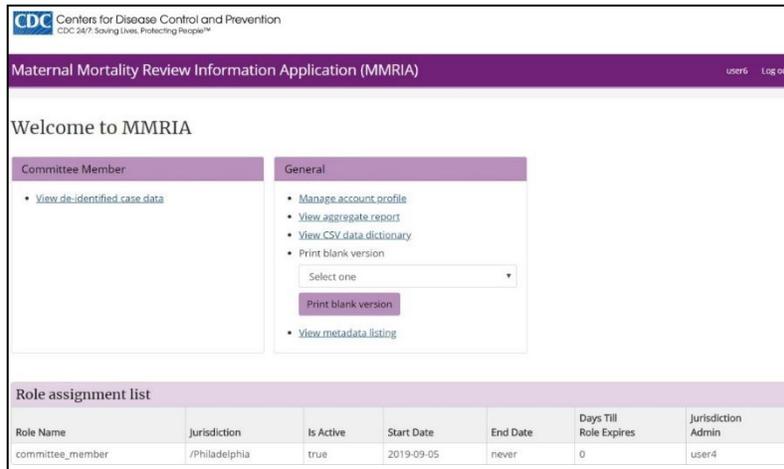


Figure 83 - Committee Reviewer's submenu

This option allows you to see cases in MMRIA, but they are deidentified.

“View de-identified case data” will display a Line Listing Summary page listing all cases that have been entered into MMRIA by your committee’s abstractors. Note that the first and last names have been redacted and replaced with “de-identified” for each case.

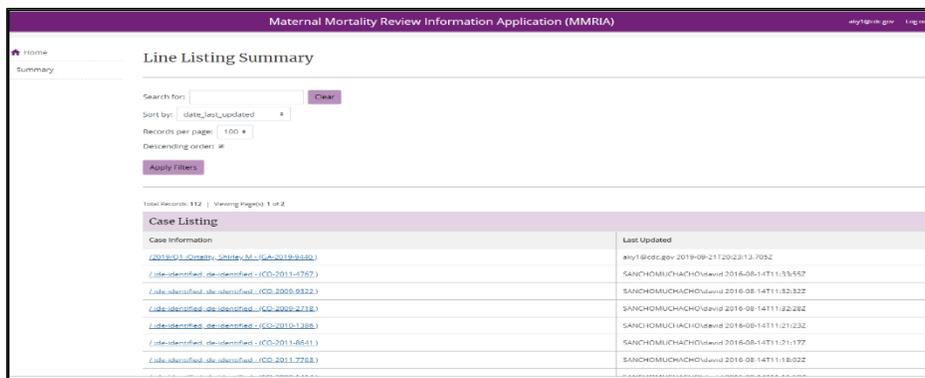


Figure 84 - Committee Review De-Identified Line List Summary

**Note:** As a committee reviewer, you can only **view** cases. You cannot edit or delete cases.

To view a case, click directly on a case to open its Home Record page. To learn more about the contents each case form, refer to the [Case Forms](#) section of this User Guide.

## De-identified Fields

Within each case, you will see all of the forms that your committee's abstractors can access. However, you will see that the following fields are de-identified:

*Table 2 - De-identified Fields*

<b>Form</b>	<b>Fields</b>
<b>Home Record</b>	First Name, Middle Name, Last Name
<b>Death Certificate</b>	Local File No.
	Place of Last Residence - City, Zip Code, County
	City of Birth
	Place of Injury (Place Name)

	Location Where Injury Occurred - City, Zip Code, County
	Place of Death - Facility Name, City, Zip Code, County
<b>Birth/Fetal Death Certificate- Parent Section</b>	Delivery Facility Name
	Name of Facility Mother Transferred From
	Facility of Delivery Location - City, Zip Code, County
	Father's First Name, Middle Name, Last Name
	Father's Day of Birth
	Father's City of Birth
	Mother's First Name, Middle Name, Last Name, Maiden Name, Medical Record Number
	Mother's City of Birth
	Location of Residence - City, Zip Code, County
	Last Normal Menses
<b>Birth/Fetal Death Certificate- Infant/Fetal Section</b>	Newborn/Fetus First Name, Middle Name, Last Name
	State File No., Local File No., Medical Record No.
	Facility- Name, City and State
<b>Autopsy Report</b>	Month and Day of Autopsy
	Jurisdiction
<b>Prenatal Care Record</b>	Prenatal Care Record No.
	Location of Primary Prenatal Care Facility - City, Zip Code, County
	Month and Day that Birth Control was Discontinued

MMRIA User Guide

	Month and Day of: Last Normal Menses, Estimated Date of Confinement (Estimated Date of Delivery), First Prenatal Visit, First Ultrasound, Last Prenatal Visit
	Name, City and State of Intended Birthing Facility
<b>ER Visits and Hospitalizations</b>	First Name, Middle Name, Last Name, Maiden Name
	Medical Record Number
	Month and Day of Arrival at Hospital/ER, Admission to Hospital, Discharge from ER/Hospital
	Facility Name, City, Zip Code, County
<b>Other Medical Office Visits</b>	Medical Record No
	Location of Medical Care Facility - City, Zip Code, County
<b>Medical Transport</b>	Month and Day of Medical Transport
	Date/Times of: Transport Vital Signs, Departure, Arrival, Patient Contact
	Place of Destination
<b>Informant Interviews</b>	Informant Name
	Month and Day of Interview

**Note on Display:**

All de-identified Times display as “12:00 AM.”

All de-identified Dates within grids display as “2001-01-01.”

All de-identified Date/Time fields within grids display as “0001-01-01 00:00:00.”

All de-identified text fields display as “de-identified.”

**Note:** because dates are de-identified, it is important that your committee’s abstractor(s) enter **gestational ages or days postpartum** for all events.

## VII. FREQUENTLY ASKED QUESTIONS

### **I accidentally deleted a record – can it be recovered?**

Deleted records do not get exported to a data set and are marked for deletion; contact [MMRIAsupport@cdc.gov](mailto:MMRIAsupport@cdc.gov) if you need assistance to recover a deleted record.

### **How should I handle a “false positive” case?**

False positives, or cases where a woman was not in fact pregnant within one year of her death, **should** be entered into MMRIA. They can help your state monitor the number of false positives you encounter and analyze the characteristics of these false positives. To enter a false positive, complete all of the data on the Home Record and the Death Certificate form. Then, on the Committee Decisions Form, select “Not Pregnancy-Related or Associated (i.e. False Positive).”

### **Can CDC or other states see my state’s data?**

No, CDC and other states cannot view your data unless you choose to share it.

### **Why does MMRIA ask for the same information multiple times on various forms (i.e. death certificate, birth certificate, and prenatal care)?**

Names and demographic information are often inconsistent across source documents. Names can also change from event to event. Names may be misspelled or get reversed – this can be especially true with uncommon names. Inconsistencies in names and demographic information, or missing demographic information, across source documents can provide context around an event in a woman’s life. For this reason, CDC recommends that information should always be abstracted exactly as it is on the source document. Do not cut and paste from previous entries.

## APPENDIX I: SAMS (SECURE ACCESS MANAGEMENT SYSTEM) DETAILS

MMRIA uses CDC's Secure Access Management System (SAMS) for user authentication.

SAMS Activity Administrator (AAs) are designated to perform user identity management and application access authorization functions for MMRIA. Jurisdictions should designate at least two SAMS AAs.

AA tasks include:

- Inviting new users
- Viewing user account attributes (non-sensitive registration information, account status, proofing level / status, credentials, etc.)
- Tracking selected users, and requesting SAMS administrative actions (e.g. user account suspension, reinstatement, etc.)
- Annual or periodic user auditing and clean-up

The AA roll is ultimately responsible for the invitation and final user approvals that allow users access to MMRIA. As such proper care should be taken to ensure only appropriate users have access.

## SAMS AA Login

To access the SAMS AA administrative console you must first log in to SAMS.

1. Visit the SAMS URL at <https://sams.cdc.gov>. The main SAMS login page will be displayed.

2. Select the External Partners option on the far-left side. Enter your SAMS username and password.
3. The system will display the following government use warning which must be agreed to in order to proceed.

**Government Warning** Close

\*\*\*WARNING\*\*\*WARNING\*\*\*WARNING\*\*\*

- This warning banner provides privacy and security notices consistent with applicable federal laws, directives, and other federal guidance for accessing this Government system, which includes (1) this computer network, (2) all computers connected to this network, and (3) all devices and storage media attached to this network or to a computer on this network.
- This system is provided for Government-authorized use only.
- Unauthorized or improper use of this system is prohibited and may result in disciplinary action and/or civil and criminal penalties.
- Personal use of social media and networking sites on this system is limited as to not interfere with official work duties and is subject to monitoring.
- By using this system, you understand and consent to the following:
  - The Government may monitor, record, and audit your system usage, including usage of personal devices and email systems for official duties or to conduct HHS business. Therefore, you have no reasonable expectation of privacy regarding any communication or data transiting or stored on this system. At any time, and for any lawful Government purpose, the government may monitor, intercept, and search and seize any communication or data transiting or stored on this system.
  - Any communication or data transiting or stored on this system may be disclosed or used for any lawful Government purpose.

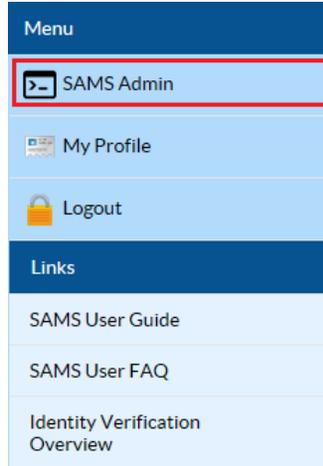
\*\*\*WARNING\*\*\*WARNING\*\*\*WARNING\*\*\*

4. The SAMS Partner Portal will be displayed. This is the primary SAMS landing page for all users. Here you can navigate to administrative functions or assigned activities

The screenshot shows the SAMS Partner Portal landing page. At the top, there is the CDC logo and the text 'Centers for Disease Control and Prevention' with the tagline 'CDC 24/7: Saving Lives, Protecting People™'. To the right is a search bar with a magnifying glass icon. Below the search bar is a 'CDC A-Z INDEX' dropdown menu. The main header area is dark blue with the SAMS logo and the text 'SAMS secure access management services'. On the left is a 'Menu' sidebar with the following items: 'SAMS Admin', 'My Profile', 'Logout', 'Links', 'SAMS User Guide', 'SAMS User FAQ', and 'Identity Verification Overview'. The main content area is titled 'My Applications' and contains two sections: 'DEMO Application' with 'Demo Upload' and 'Demo Download' links, and 'SAMS Proof Archive' with a 'Proof Archive Upload \*' link. Below these sections is a note: '\*Strong credentials required.\*' At the bottom of the page, there is a row of social media icons including Facebook, Twitter, YouTube, Instagram, LinkedIn, and RSS.

## SAMS Partner Portal

When a user logs into SAMS, a personalized portal screen is displayed called the Partner Portal. This screen displays the activities the user has access to, helpful documentation, and AA options if applicable. AA's will have an additional selection item in the left side navigation labeled as SAMS Admin.



Once the SAMS Admin button is selected, the screen moves to an administrative screen with a navigation section on the left and a main information screen on the right. The AA Welcome screen is shown below.



When an AA accesses this screen, all Work Items in the AA's work list will be displayed in the right-hand, main section of the screen labeled "SAMS". Work items are actions that require attention by the AA. In the above screenshot no work items are pending.

The tasks or options available to the AA are displayed on the navigation panel on the left side of the screen labeled "Tasks" and may be accessed by clicking on the item name. A screenshot of the available AA menu options is included below.



## Home Tasks

### VIEW MY ROLES

1. From the SAMS Welcome screen, click the “Home”  “View My Roles” option.



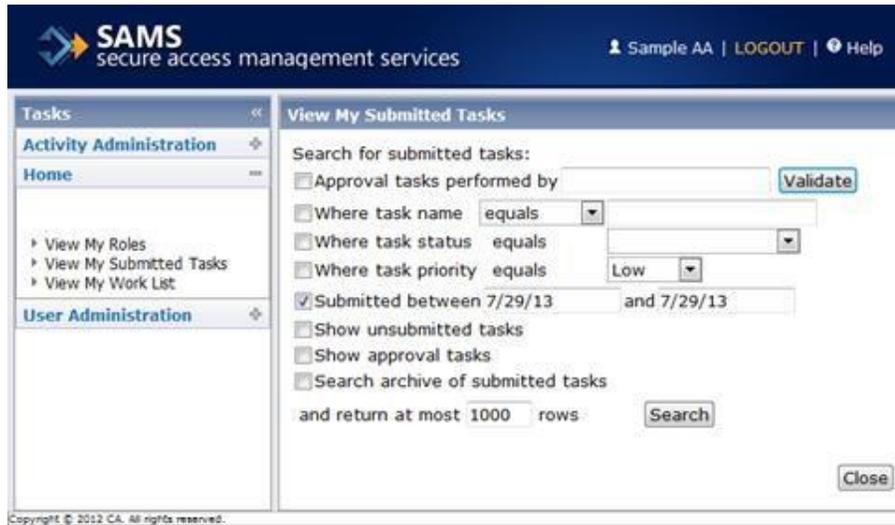
2. Under the “Groups” tab, each activity to which you are assigned is displayed along with details about the activity. The data provided is membership in the activity, administrator of the activity, activity name, activity description, minimum proofing level, minimum credential required, activity display name, activity ID, and the associated activity URL. A check in the Member and/or Administrator column checkbox specifies the role(s) you are assigned for the activity.
3. Under the “Admin Roles” tab, each role you are assigned is displayed, for an AA, the standard roles are “Activity Admin” and “User”. A user’s standard roles are “user” and “Email address change”.
4. Click the Close button to return to the Welcome screen.

### VIEW MY SUBMITTED TASKS

1. From the Welcome screen, click the “Home”  “View My Submitted Tasks” option.



- The following search screen will be displayed:



- From this screen, you can search all tasks submitted by you – for example, a user activity approval. You can filter on all options provided on the screen. To use a particular criterion, place a check in the checkbox to the left of the item.
  - The “Approval tasks performed by” takes a SAMS user account name (email address). The validate button validates that the user entered is in the SAMS user store.
  - The “Where task name” has a drop down with equals, contains, starts with, ends with” and a text field to enter your criteria.
  - The “Where task status equals” allows you to select any status in the drop-down list. They are: Completed, In progress, Partially completed, Failed, Rejected, Cancelled, Scheduled, and Audited.
  - The “Where task priority equals” allows you to select a priority from the drop down list. They are: Low, Medium, and High.
  - The “Submitted between” takes a set of dates.
  - The last 3 filter types are simply checked or unchecked.
- Once the filter is filled out with your search criteria, click the Search button to display the search results. The screen shown below displays the tasks whose name contains the specified word “invite”:

Results of filtered Submitted Task Search:

Description	Status	Priority	Submitted	Last Updated	Last Operation
Invite User task, User	Completed	Medium	11/4/2016 9:14 PM	11/5/2016 2:20 PM	There was no workflow process mapped to this task.
Invite User task, User	Completed	Medium	11/2/2016 3:28 PM	11/2/2016 6:13 PM	There was no workflow process mapped to this task.
Invite User task, User	Completed	Medium	8/25/2016 10:47 AM	8/29/2016 4:22 PM	There was no workflow process mapped to this task.
Invite User task, User	In progress	Medium	8/25/2016 10:26 AM	8/25/2016 10:27 AM	There was no workflow process mapped to this task.
Invite User task, User	Completed	Medium	6/13/2016 10:30 AM	6/13/2016 11:09 AM	There was no workflow process mapped to this task.
Invite User task, User	Completed	Medium	6/13/2016 10:29 AM	6/21/2016 12:21 PM	There was no workflow process mapped to this task.

- Click the Search Tasks button to perform another search, or click Close to return to the Welcome screen.

**VIEW MY WORK LIST**

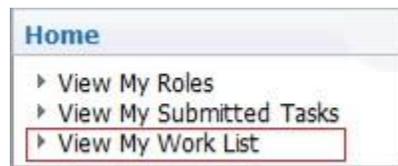
Work items are listed as pending tasks for AAs and will always be related to the final AA approval of an end user’s account. After final approval a user’s status changes to ‘active’ in SAMS and they are able to login to MMRIA.

There are two ways to access a work list for review and approval of pending tasks. The first, pending tasks will be displayed as soon as you login to the AA administrative console in SAMS as seen in the screenshot below. Simply link on the hyperlink text under the ‘Name’ section to review the record.

Work List				
▼ Status	▼ Name	▲ Last Updated On	▼ Initiated By	▼ Workflow Level
○	<a href="#">SAMS Invite User - WPF - Add user "testuser@test.com" to group "SAMS Administrative Help Desk Activity"</a>	4/17/17 1:51 PM	@cdc.gov	Event Level Workflow

You can also navigate to your worklist using the menu within the AA administrative console.

1. From the Welcome screen, click the “Home”  “View My Work List” option. Pending work items are also displayed in the right side panel of the AA administration console immediately following login.



The following image is an example of a Work List item.

View My Work List				
▼ Status	▼ Name	▲ Last Updated On	▼ Initiated By	▼ Workflow Level
○	<a href="#">SAMS Invite User - WPF - Add user "testUser@test.com" to group "Demo Download"</a>	7/31/13 3:25 PM	SampleAA@test.com	Event Level Workflow

- Click the item name to display the appropriate work item page. In the example below, the Approve Applicant screen is displayed.

**Approve Applicant: testUser@test.com**

[View My Work List](#) > Approve Applicant: testUser@test.com

---

Title: SAMS Invite User - WPF - Add user "testUser@test.com" to group "Demo Download"  
 State: Available  
 Initiated by: SampleAA@test.com  
 Created on: 7/31/13 2:50 PM

You can choose one of the following options:

**Approve** Approve the work item and proceed to the next approver  
**Reject** Reject the work item and complete the process  
**Reserve Item** Reserve the work item and remove it from work lists of other approvers

Reserving this work item removes it from work lists of other approvers.

---

User ID	testUser@test.com	User Account Number	1145
Current Proofing Level	1	Requested Proofing Level	1
Account Origination Date	7/31/2013		

---

Please verify that the person whose information appears below corresponds correctly with the person who was originally invited. Both sets of names have been provided here for easy comparison. Please contact SAMS support at 877-681-2901 or samshelp@cdc.gov if you are unsure or suspect there may be a problem.

Invitation First Name	Test	First Name	TestFirstName
		Preferred Name	Test
Invitation Last Name	UsersLastName	Last Name	UsersLastName
First Name	TestFirstName	Middle Name	TestLastName
Last Name	UsersLastName	Suffix	
Preferred Name	Test		

**Organization Information**

Address Line One	1234 Test Org Address
Address Line Two	
Locality	Atlanta
State	Georgia
Postal Code	30303
Country	United States

**Contact Info**

Primary Phone	770-488-5959
Alternate Phone	
Email	testUser@test.com

- Four action options are available and are outlined in further detail below.



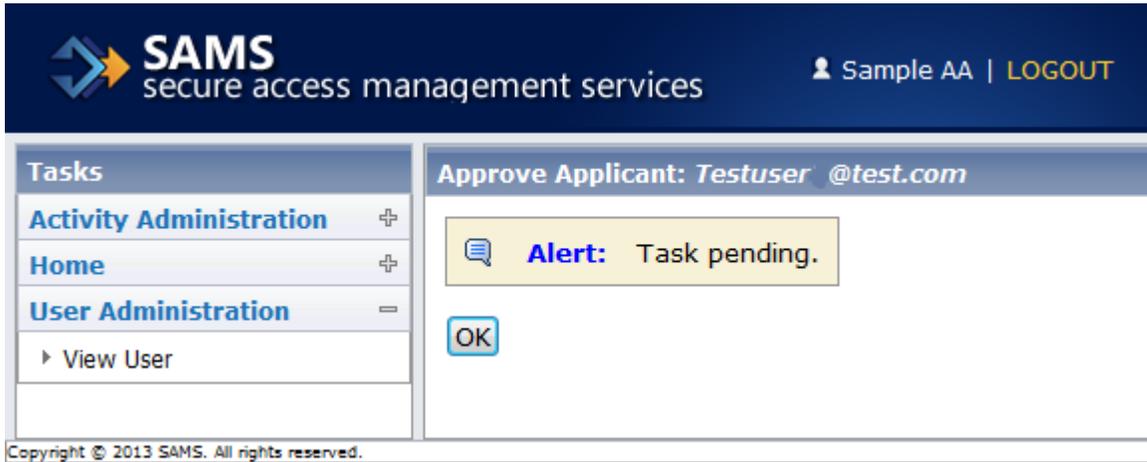
**Approve** – approves the user. Makes them active in SAMS and allows them to authenticate for access to an authorized SAMS protected application.

**Reject** – rejects the workflow and ends the user’s on-boarding process to SAMS. If rejected the AA should notify the end user of why, as the SAMS system does not notify the end user of the rejection.

**Reserve Item** – allows a specific Program AA to reserve this item for their exclusive review. The item is removed from the general pool of Program AA’s at the time it is reserved.

**Close** – closes the Approve Applicant window with no action. The applicant’s pending approval will remain in the worklist of all authorized Program AAs.

4. If the work item is approved the following screen will be displayed.



5. Click the OK button. You may select another option from the menu on the left.

## SAMS Administration Tasks

### User Report AA

The 'User Report AA' is designed to give AA's visibility into the historical activity of a selected user including their activity associations.

1. From the Welcome screen, click "User Administration" ➤ "User Report AA".



2. On the 'User Profile' tab enter appropriate criteria to allow you to search for a particular user.

3. Click the 'History' tab to review the results of your search.

ID	UserName	Email	AccountStatus	AccountOriginationDate	GivenName	SurName	OrgName	OrgRole	ActivityName	SAMSStatus	ActivityStatus
401886	testuser@test.com	testuser@test.com	Applicant	2017-04-17 11:05:43.717	TestFirstName	TestLastName	CDC		SmokeTestActivity02	Terminated	Terminated
401887	testuser@test.com	testuser@test.com	Applicant	2017-04-17 11:15:03.65	userfirstname	userlastname	CDC		SAMS Administrative Help Desk Activity	Present	Invited

## View User AA

This function allows MMRIA AAs to view a subset of the profile information available for users in SAMS. This function can be extremely helpful if an AA needs to determine the status of a user who is on-boarding to SAMS or determine if they are the correct person for assignment of a particular activity.

There are three major user states in SAMS – candidate, applicant, and active. Each of them is outlined quickly below. If a user has a status other than active, they will be unable to login to SAMS for access to a protected application.

- Candidate – User has been invited to SAMS but has not yet registered. Only activity available to the user through SAMS is registration.
- Applicant – User has registered in SAMS and final AA approval for access is pending.
- Active – User has successfully completed SAMS on-boarding activities and has access to approved SAMS protected applications or Programs.

1. From the Welcome screen, click “User Administration” ➤ “View User AA”.



2. Enter the details of the user to search and click the 'search' button.

 A screenshot of the SAMS web application interface. At the top, the SAMS logo and "secure access management services" are visible, along with a user icon and a "LOGOUT" link. Below this is a section titled "View User AA: Select User". Inside this section, there is a search area with the heading "Search for a user". Below the heading is a search form with a dropdown menu set to "User ID", an equals sign, another dropdown menu, and a text input field containing "testuser@test.com\*". There are "Search" and "Clear" buttons. Below the search form is a "Search Results" section with a heading "Search for a user" and a "Cancel" button at the bottom left.

3. Search results (example) display as shown below:

SAMS secure access management services

Sample AA | LOGOUT

View User: Select User

Search for a user

Search for a user  
where  =

Search Results

Select	User ID	Last Name	First Name	Email	Account Status
<input checked="" type="radio"/>	testUser@test.com	UsersLastName	TestFirstName	testUser@test.com	Active

1-1 of 1

1-1 of 1

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4. Click the radio button to the left of the user you want to display and click the Select button to see the user profile information.

SAMS secure access management services

LOGOUT

View User AA: testuser@test.com

User Profile | Sponsor | Activities | History

User ID: testuser@test.com | User Account Number: 401887

Account Status: Active | Account Origination Date: 4/13/2017

Current Proofing Level: 3 | Requested Proofing Level: 3

Identity Provider: SAMS

System User Name: | System Password Expiration Days: -1

Please Note: The person whose information appears below should correspond correctly with the person who was originally invited. Both sets of names have been provided here for easy comparison. Please contact SAMS support at 877-661-2901 or samshelp@cdc.gov if you have concerns or if you suspect there may be a problem.

Invitation First Name: userfirstname | First Name: userfirstname

Invitation Last Name: userlastname | Last Name: userlastname

Preferred Name: userfirstname | Preferred Name: userfirstname

Organization Information

Organization Name: CDC

Role: |

Address Line One: 1234 Test

Address Line Two: |

Locality: Atlanta

State: Georgia

Postal Code: 30345

Country: United States

Contact Info

Primary Phone: (404) 542-2852

Alternate Phone: |

Four tabs will be visible at the top of the user profile summary screen and are described below.



**User Profile** – Selected by default and displays general information related to the user

**Sponsor** – This tab is only used for international users who must leverage a sponsor as part of the SAMS on-boarding process. This tab can be disregarded except for when an international user is being on-boarded.

**Activities** – This tab will display the current activities assigned to the user along with activity specific information.

**History** – This tab will display historical information related to the user based on their email address.

## Invite User

Inviting users to SAMS is a primary function of MMRIA AAs.

1. From the Welcome screen, click “Activity Administration” ➤ “Invite user”.



2. The Invite a User screen is displayed as shown below. Enter the candidate’s information in the fields displayed. (★ denotes a required field.)

 A screenshot of the SAMS "Invite User" form. The header shows the SAMS logo and "secure access management services" with a "LOGOUT" link. The form has three tabs: "Candidate Profile", "Sponsor", and "Activities". Below the tabs, there is a legend: "★ = Required". A note states: "This task is for inviting a new user. If you think the user you wish to invite already exists in the system, click here." There are four input fields: "First Name", "Last Name", "Email", and "Confirm Email", each with a red star icon indicating it is required. A legend below the fields states "★ denotes a required field". At the bottom are "Submit" and "Cancel" buttons.

Three tabs will be visible at the top of the user profile summary screen and are described below.



**Candidate Profile** – Selected by default and where the AA should enter user details required for invitation.

**Note:** *The invitation should be to the user’s full legal first and last name. Nicknames or abbreviations should not be used as this might cause issues with ID proofing later in the SAMS on-boarding process. Also, the AA should confirm the user is not already in SAMS with the same or a different email address. This will help avoid the same user receiving multiple SAMS invitations to different email addresses.*

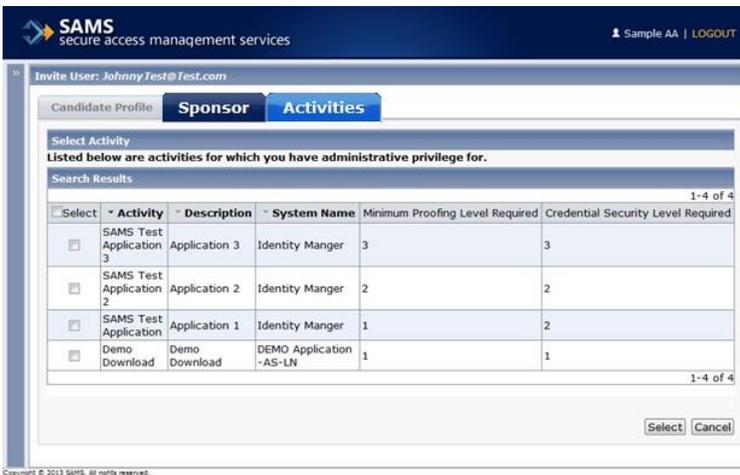
**Sponsor** – This tab is only used for international users who must leverage a sponsor as part of the SAMS on-boarding process. This tab can be disregarded except for when an international user is being on-boarded. Refer to the International on-boarding portion of this document for more information.

**Activities** – This tab allows the AA to select the application or Program activities required by the user. User’s cannot be invited to SAMS without an activity association therefore, specific to new users, this activity association justifies their invitation to the SAMS system.

3. Click the **Activities** tab.



4. Click the **Add a group** button to display the list of current activities in SAMS.
5. Insert a check in the checkbox to the left of MMRIA.



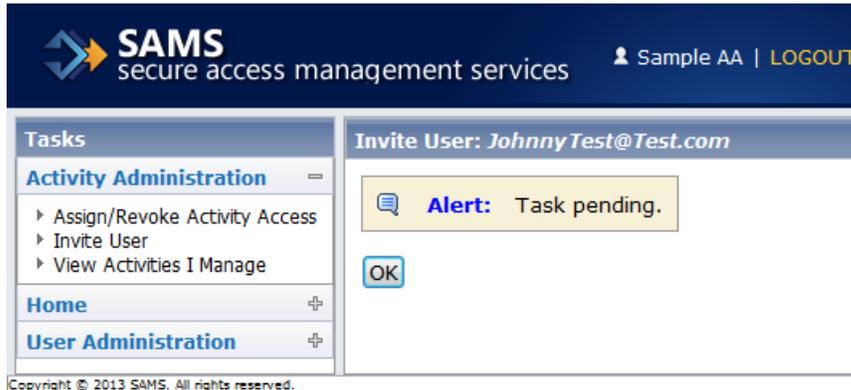
6. Click the **Select** button. The candidate's Activities tab displays with the selected application in the list.



7. When the candidate's information is complete on the Candidate Profile and Activities tabs, click **Submit**.

8. A task confirmation message displays.

**Note:** An Alert message means the action has been submitted for processing and is not considered an error. In addition, if an Error is displayed stating the User is a duplicate; the user already exists in the SAMS system and should have the activity added through the “Assign/Revoke Activity Access” process in previous section.



9. Click the **OK** button to acknowledge the confirmation message. The user will receive the SAMS Invitation (to Users) email shown in Appendix A.

The Invitation is valid for **30** days. The user may register at any time during the 30-day period. If the user begins to register but does not complete the task by clicking the Submit button, the user may enter the system again later, but any information entered previously is not saved.

The user may authenticate to SAMS an unlimited number of times within the 30-day time period using the temporary password included in their invitation email. Within this time period, the user will be sent the Invitation Reminder email contained in Appendix B if he/she does not register. If the user does not register within the 30 day period, the user’s account is removed from the system and the appropriate AA is notified.

**Note:** When an AA establishes a new account in SAMS and issues an invitation to the new user, the recipient’s account is assigned a status of Candidate. The only function allowed for a Candidate user is to register in the system. Users cannot be assigned an activity if they are in the Candidate status. Use the View User function to determine if the user is in fact in Candidate, Applicant, or Active state.

A Candidate account shifts to the Applicant status once the recipient of a SAMS invitation has successfully completed the registration process. At this point the user is not allowed to login to the SAMS system. An Active state is assigned once the user is accepted and approved for access to one or more SAMS’ applications. At this point a user can log into SAMS.

The account of a user who has a current invitation to SAMS and has not yet registered is in a Candidate state. An AA may not be aware that the user he/she wishes to invite exists in the SAMS system.

## APPENDIX II: SAMS INVITATION TO USERS

**Subject:**

U.S. Centers for Disease Control: SAMS Partner Portal - Invitation to Register

**Message:**

Hello Johnny Test,

You have been invited to register with the SAMS Public Health Partner Portal. This invitation was requested for you based on your specific role in public health and will enable you to access the following CDC computer application(s):

- **Maternal Mortality Review Information Application: MMRIA**

A registration account has already been created for you. A link to this account and a temporary password are provided below. This invitation is valid for 30 days.

**SAMS Partner Portal Registration**

Registration consists of the following steps:

1. Online Registration
2. Identity Verification (if required for your application)
3. Access Approval

Online registration with the SAMS portal takes about 5 minutes. Please have the following available before you begin:

- Your home address - This must match the documentation you intend to use for proofing if applicable.
- Your organization / employer and their address
- Your telephone number

Should you have questions about the SAMS Partner Portal or the registration process, please contact our Help Desk for assistance or refer to the [SAMS User FAQ](#).

Thank you,

The SAMS Team

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To register with the SAMS Partner Portal, please click the following link or cut and paste it into your browser:

<https://im-int.cdc.gov/iam/im/SAMS/ui/index.jsp?task.tag=SAMSRegistration>

When prompted, please enter:

- Your Email/User Name: [JohnnyTest@Test.com](mailto:JohnnyTest@Test.com)
- Temporary Password: XXXXXXXX

and click the Login button.

**\*\*\*Note:** In order to access the SAMS Partner Portal, your browser **must** be configured to use TLS 1.0 encryption. If your computer is not configured for TLS, or if you are unsure, please contact your local IT System Administrator for assistance.

---

For more information and assistance, please see the SAMS FAQ located [here](#), or contact the SAMS Help Desk between the hours of 8:00 AM and 6:00 PM EST Monday through Friday (excluding U.S. Federal holidays) at the following:

Toll Free: (877) 681-2901  
Email: [samshelp@cdc.gov](mailto:samshelp@cdc.gov)

**\*\*\*Note: This email has been sent from an unmonitored mailbox. DO NOT REPLY TO THIS EMAIL. Please direct all inquiries to the Help Desk as listed above.**

## APPENDIX III: SAMS INVITATION REMINDER

**Subject:**

U.S. Centers for Disease Control: SAMS Partner Portal - Invitation Reminder

**Message:**

Hello Johnny Test,

This email is a reminder that your invitation to register with the SAMS Partner Portal will expire in fifteen (15) days. If you have recently completed SAMS' registration, please disregard this email.

To register with the SAMS Partner Portal, please click the following link or cut and paste it into your browser:

<https://im.cdc.gov/idm/sams/imcss/index.jsp?task.tag=SAMSRegistration>

When prompted, please enter your SAMS Partner Portal account User name ([JohnnyTest@Test.com](mailto:JohnnyTest@Test.com)) and the temporary password supplied in your original invitation email. If you did not receive an invitation email or if it has become lost, please contact the SAMS Help Desk for assistance using the information provided below.

**\*\*\*Note:** Access to the individual activities for which you have been invited may take up to two hours to propagate to the application's authorization system. In addition, if you have been invited to an activity that requires Level 3 id-proofing, the activities you have been invited to will **not** show up in the SAMS portal until you have been **issued** your Grid Card. Grid Cards will be mailed to the home address specified during registration and will usually arrive 2-5 business days after you receive your SAMS Welcome email. In order to access the SAMS Partner Portal, your browser **must** be configured to use TLS 1.0 encryption. If your computer is not configured for TLS, or if you are unsure, please contact your local IT System Administrator for assistance.

Thank you,

The SAMS Team

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For more information and assistance, please see the SAMS FAQ located [here](#), or contact the SAMS Help Desk between the hours of 8:00 AM and 6:00 PM EST Monday through Friday (excluding U.S. Federal holidays) at the following:

Toll Free: (877) 681-2901

Email: [samshelp@cdc.gov](mailto:samshelp@cdc.gov)

**\*\*\*Note: This email has been sent from an unmonitored mailbox. DO NOT REPLY TO THIS EMAIL. Please direct all inquiries to the Help Desk as listed above.**

## APPENDIX IV: SAMS ACCOUNT ACTIVATION NOTIFICATION TO USERS

**Subject:**

U.S. Centers for Disease Control: SAMS Partner Portal - SAMS Account Activation

**Message:**

Welcome! Your access to the SAMS Partner Portal has been approved. Inside this site you'll find links that provide access to applications and information designed to assist you in the performance of your role in Public Health.

The SAMS Partner Portal may be reached by clicking [here](#).

When prompted,

**For External Partners:**

Your Email/User Name: ([johnnytest@test.com](mailto:johnnytest@test.com)) and the password you chose during registration. Then click the Login button.

If you've forgotten your password, you may reset it by following the 'Forgotten Password' link on the SAMS log in page.

Thank you,

The SAMS Team

**\*\*\*Note:** In order to access the SAMS Partner Portal, your browser **must** be configured to use TLS 1.2 encryption. If TLS 1.2 encryption is not possible, TLS 1.1 or 1.0 may be selected. If your computer is not configured for TLS, or if you are unsure, please contact your local IT System Administrator for assistance.

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For more information and assistance, please see the SAMS FAQ located [here](#), or contact the SAMS Help Desk between the hours of 8:00 AM and 6:00 PM EST Monday through Friday (excluding U.S. Federal holidays) at the following:

Toll Free: (877) 681-2901

Email: [samshelp@cdc.gov](mailto:samshelp@cdc.gov)

**\*\*\*Note: This email has been sent from an unmonitored mailbox. DO NOT REPLY TO THIS EMAIL. Please direct all inquiries to the Help Desk as listed above.**

## APPENDIX V: SAMS NEW ACTIVITY ACCESS AUTHORIZATION NOTIFICATION TO USERS

**Subject:**

U.S. Centers for Disease Control: SAMS Partner Portal - SAMS Activity Authorization

**Message:**

Welcome!

You have been authorized for access to:

- **Maternal Mortality Review Information Application: MMRIA**

**For External Partners:**

While your SAMS registration is complete, the security policy of the application you will be accessing requires the use of an Entrust Grid card during login. If you do not already have an Entrust card assigned to you, one will be automatically mailed to your registered home address in SAMS within 5-7 business days.

Once the card is received you can reach the activity home page directly by clicking 'activity URL'.

**For HHS Staff:**

On the SAMS homepage, click on 'AMS Login' and use the HSPD-12 PIV card option to login.

**\*\*\*Note:** In order to access the SAMS Partner Portal, your browser **must** be configured to use TLS 1.2 encryption. If TLS 1.2 encryption is not possible, TLS 1.1 or 1.0 may be selected. If your computer is not configured for TLS, or if you are unsure, please contact your local IT System Administrator for assistance.

Thank you,

The SAMS Team

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For more information and assistance, please see the SAMS FAQ located [here](#), or contact the SAMS Help Desk between the hours of 8:00 AM and 6:00 PM EST Monday through Friday (excluding U.S. Federal holidays) at the following:

Toll Free: (877) 681-2901  
Email: [samshelp@cdc.gov](mailto:samshelp@cdc.gov)

**\*\*\*Note: This email has been sent from an unmonitored mailbox. DO NOT REPLY TO THIS EMAIL. Please direct all inquiries to the Help Desk as listed above.**

## APPENDIX VI: SAMS ACCOUNT REMOVAL WARNING NOTIFICATION (TO ACTIVE USERS)

Removal notifications are issued 30, 15, 1, and day of expiration.

**Subject:**

U.S. Centers for Disease Control: SAMS Partner Portal - SAMS Account Notification

**Message:**

Dear SAMS User,

You are receiving this email from CDC's SAMS Partner Portal to notify you that your account, identified by username JohnnyTest@Test.com, will soon expire.

Your SAMS Portal account has not been active for an extended period of time. If you would like to keep your account open and maintain your access to CDC applications, you must log into SAMS and reset your password within the next thirty (30) days.

The SAMS Partner Portal may be reached by clicking <https://sams.cdc.gov>.

If you feel that this notification is in error or if you have any questions or concerns, please contact the SAMS Help Desk.

Thank you,

The SAMS Team

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For more information or assistance, please contact the SAMS Help Desk between the hours of 8:00 AM and 8:00 PM EST Monday through Friday (excluding U.S. Federal holidays) at the following:

Toll Free: 1-877-681-2901

Email: [samshelp@cdc.gov](mailto:samshelp@cdc.gov)

**\*\*\*Note: This email has been sent from an unmonitored mailbox. DO NOT REPLY TO THIS EMAIL. Please direct all inquiries to the Help Desk as listed above.**

## APPENDIX VII: SAMS PASSWORD RESET NOTIFICATION TO USERS

**Subject:**

U.S. Centers for Disease Control: SAMS Partner Portal - Notification of Password Reset

**Message:**

Dear SAMS User,

You are receiving this email from CDC's SAMS Partner Portal to confirm that you recently reset your account password. If you performed this action, there is nothing further for you to do and you may disregard this email.

If you did not initiate this reset action, please contact the SAMS Help Desk as soon as possible so that they can verify the integrity and security of your account.

Thank you,

The SAMS Team

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For more information or assistance, please contact the SAMS Help Desk between the hours of 8:00 AM and 6:00 PM EST Monday through Friday (excepting U.S. Federal holidays) at the following:

Toll Free: 877-681-2901

Email: [samshelp@cdc.gov](mailto:samshelp@cdc.gov)

**\*\*\*Note: This email has been sent from an unmonitored mailbox. DO NOT REPLY TO THIS EMAIL. Please direct all inquiries to the Help Desk as listed above.**

## APPENDIX VIII: CDC SAMS RULES OF BEHAVIOR

### Overview

Secure Access Management Service (SAMS) is a United States federal government computer system that provides secure external access to non-public CDC applications for use by authorized personnel. Users should be aware that they have no expectation of privacy when using SAMS or SAMS-protected program applications. All user actions are recorded and may be reviewed by CDC officials with a legitimate reason to do so as authorized by CDC's Office of the Chief Information Security Officer. The following rules of behavior apply to all SAMS' users.

Because written guidance cannot cover every contingency, users are asked to go beyond the stated rules, using their best judgment and highest ethical standards to guide their actions. These rules are based on federal laws and regulations and on applicable agency directives. As such, there are consequences for non-compliance. Based on the severity of the violation and through due process of the law, consequences can include, but are not limited to: suspension or loss of access privileges and/or civil and criminal penalties. Use of SAMS, and the applications it protects, is restricted to users that have been specifically authorized and granted access by CDC or its designated agents.

### SAMS User Accounts

All SAMS' user accounts are uniquely identified by a username and protected with a password. Passwords automatically expire every sixty (60) days. SAMS will prompt users to update expired passwords on their next login. If a user feels their password may have been compromised, they must change it immediately. In addition, the user must report any suspected misuse or unauthorized access to the SAMS Help Desk as quickly as possible.

SAMS allows users to reset a forgotten password using a set of secret security questions they select and complete during registration. Selected questions and answers should be easy for a user to remember but difficult for others to guess. Since question and answer combinations can provide access to a user's account, they must be protected in the same way as a password.

If a user fails to enter the correct username and password combination three (3) times in a row, their account will be locked for one (1) hour, after which, the user may try again. If the user cannot recall their password, they can follow the 'forgotten password' link on the SAMS login page to reset it. If a user does not remember their password and is unable to successfully answer their security questions, a new account must be created.

### User Responsibilities and Rules of Behavior

- SAMS' users are uniquely identified through their SAMS user account. Once a user's request for access has been granted and their account is active, the user is responsible for all actions taken using that account. Therefore, every effort should be made to protect the account password and related security information. To help prevent account compromise, users agree:
  - To keep their account private and not share their password with anyone.
  - To securely store and protect any written copy of their user name and/or password.
  - To make every effort to prevent others from watching password entry.
  - To choose passwords that are difficult to guess by avoiding the use of well-known personal information.
  - To log off of the system when finished or whenever leaving their computer unattended.

- Users must not access SAMS or Program applications using an account that belongs to another person.
- Users must not attempt to circumvent any SAMS' security control mechanism.
- SAMS' users are provided access to sensitive and/or non-public information to assist them in performing their duties and for the betterment of national, state, and local public health services. Users must take positive steps to protect this information, the people this information may represent, and the systems designed to protect it. Users must report improper or suspicious activities involving SAMS' information and systems to the SAMS Help Desk.

### **User Acknowledgement and Agreement**

I have read the SAMS User Rules of Behavior, agree to its terms, and understand my responsibilities for the use and protection of my account username and password. Further, I understand the consequences that may result from the disclosure or inappropriate use of SAMS' information or access privileges. If I fail to adhere to the terms of this statement, my account may be revoked without notice and CDC and/or its agents may take other actions as appropriate up to and including prosecution under federal law.

Your acceptance below and your continued use of the SAMS system constitute your acknowledgement that you understand these rules and your agreement to abide by them.

For questions concerning these rules and your responsibilities regarding them, please contact the SAMS Help Desk between the hours of 8:00 AM and 6:00 PM EST Monday through Friday (excluding U.S. Federal holidays) at the following:

Toll Free: 877-681-2901

Email: [samshelp@cdc.gov](mailto:samshelp@cdc.gov)

Please click 'Accept' button below to assert your acknowledgement and acceptance of the SAMS User Rules of Behavior and continue with the registration process.

APPENDIX IX: COMMITTEE DECISIONS FORM

MMRIA		MATERNAL MORTALITY REVIEW COMMITTEE DECISIONS FORM v16		1
REVIEW DATE	RECORD ID #	COMMITTEE DETERMINATION OF CAUSE(S) OF DEATH		
<input type="text"/>	<input type="text"/>	<b>TYPE</b>	<b>CAUSE (DESCRIPTIVE)</b>	
PREGNANCY-RELATEDNESS: SELECT ONE		IMMEDIATE		
<input type="checkbox"/> <b>PREGNANCY-RELATED</b> The death of a woman during pregnancy or within one year of the end of pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy		CONTRIBUTING		
<input type="checkbox"/> <b>PREGNANCY-ASSOCIATED, BUT NOT -RELATED</b> The death of a woman during pregnancy or within one year of the end of pregnancy from a cause that is not related to pregnancy		UNDERLYING		
<input type="checkbox"/> <b>PREGNANCY-ASSOCIATED BUT UNABLE TO DETERMINE PREGNANCY-RELATEDNESS</b>		OTHER SIGNIFICANT		
<input type="checkbox"/> <b>NOT PREGNANCY-RELATED OR -ASSOCIATED</b> (i.e. false positive, woman was not pregnant within one year of her death)		<b>IF PREGNANCY-RELATED, COMMITTEE DETERMINATION OF UNDERLYING CAUSE OF DEATH</b> Refer to page 3 for PMSS-MM cause of death list. If more than one is selected, list in order of importance beginning with the most compelling (1-2; no more than 2 may be selected in the system).		
ESTIMATE THE DEGREE OF RELEVANT INFORMATION (RECORDS) AVAILABLE FOR THIS CASE:		DID <b>OBESITY</b> CONTRIBUTE TO THE DEATH? <input type="checkbox"/> YES <input type="checkbox"/> PROBABLY <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		
<input type="checkbox"/> <b>COMPLETE</b> All records necessary for adequate review of the case were available		DID <b>MENTAL HEALTH CONDITIONS</b> CONTRIBUTE TO THE DEATH? <input type="checkbox"/> YES <input type="checkbox"/> PROBABLY <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		
<input type="checkbox"/> <b>SOMEWHAT COMPLETE</b> Major gaps (i.e. information that would have been crucial to the review of the case)		DID <b>SUBSTANCE USE DISORDER</b> CONTRIBUTE TO THE DEATH? <input type="checkbox"/> YES <input type="checkbox"/> PROBABLY <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		
<input type="checkbox"/> <b>MOSTLY COMPLETE</b> Minor gaps (i.e. information that would have been beneficial but was not essential to the review of the case)		WAS THIS DEATH A <b>SUICIDE</b> ? <input type="checkbox"/> YES <input type="checkbox"/> PROBABLY <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		
<input type="checkbox"/> <b>NOT COMPLETE</b> Minimal records available for review (i.e. death certificate and no additional records)		WAS THIS DEATH A <b>HOMICIDE</b> ? <input type="checkbox"/> YES <input type="checkbox"/> PROBABLY <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		
<input type="checkbox"/> <b>N/A</b>		IF HOMICIDE, SUICIDE, OR ACCIDENTAL DEATH, LIST THE <b>MEANS OF FATAL INJURY</b>		
DOES THE COMMITTEE AGREE WITH THE UNDERLYING CAUSE OF DEATH LISTED ON DEATH CERTIFICATE? <input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> FIREARM <input type="checkbox"/> FALL <input type="checkbox"/> INTENTIONAL NEGLIGENCE <input type="checkbox"/> SHARP INSTRUMENT <input type="checkbox"/> PUNCHING/KICKING/BEATING <input type="checkbox"/> OTHER, SPECIFY: <input type="checkbox"/> BLUNT INSTRUMENT <input type="checkbox"/> EXPLOSIVE <input type="checkbox"/> POISONING/OVERDOSE <input type="checkbox"/> DROWNING <input type="checkbox"/> UNKNOWN <input type="checkbox"/> HANGING/STRANGULATION/SUFFOCATION <input type="checkbox"/> FIRE OR BURNS <input type="checkbox"/> NOT APPLICABLE <input type="checkbox"/> MOTOR VEHICLE		
		IF HOMICIDE, WHAT WAS THE <b>RELATIONSHIP OF THE PERPETRATOR TO THE DECEDENT</b> ?		
		<input type="checkbox"/> NO RELATIONSHIP <input type="checkbox"/> OTHER ACQUAINTANCE <input type="checkbox"/> UNKNOWN <input type="checkbox"/> PARTNER <input type="checkbox"/> OTHER, SPECIFY: <input type="checkbox"/> EX-PARTNER <input type="checkbox"/> OTHER RELATIVE		



**IF PREGNANCY-RELATED, COMMITTEE DETERMINATION OF UNDERLYING CAUSE OF DEATH\* PMSS-MM**

If more than one is selected, please list them in order of importance beginning with the most compelling (1-2; no more than 2 may be selected in the system).

\*PREGNANCY-RELATED DEATH: THE DEATH OF A WOMAN DURING PREGNANCY OR WITHIN ONE YEAR OF THE END OF PREGNANCY FROM A PREGNANCY COMPLICATION, A CHAIN OF EVENTS INITIATED BY PREGNANCY, OR THE AGGRAVATION OF AN UNRELATED CONDITION BY THE PHYSIOLOGIC EFFECTS OF PREGNANCY.

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> 10 Hemorrhage (excludes aneurysms or CVA)  | <input type="checkbox"/> 83 Collagen vascular/autoimmune diseases   | <input type="checkbox"/> 92.1 Epilepsy/seizure disorder  |
| <input type="checkbox"/> 10.1 Hemorrhage - rupture/laceration/<br>intra-abdominal bleeding                            | <input type="checkbox"/> 83.1 Systemic lupus erythematosus (SLE)  | <input type="checkbox"/> 92.9 Other neurologic diseases/NOS  |
| <input type="checkbox"/> 10.2 Placental abruption   | <input type="checkbox"/> 83.9 Other collagen vascular diseases/NOS  | <input type="checkbox"/> 93 Renal disease  |
| <input type="checkbox"/> 10.3 Placenta previa   | <input type="checkbox"/> 85 Conditions unique to pregnancy (e.g.<br>gestational diabetes, hyperemesis, liver<br>disease of pregnancy)                           | <input type="checkbox"/> 93.1 Chronic renal failure/End-stage renal<br>disease (ESRD)  |
| <input type="checkbox"/> 10.4 Ruptured ectopic pregnancy  | <input type="checkbox"/> 88 Injury  | <input type="checkbox"/> 93.9 Other renal disease/NOS  |
| <input type="checkbox"/> 10.5 Hemorrhage - uterine atony/postpartum<br>hemorrhage                                     | <input type="checkbox"/> 88.1 Intentional (homicide)  | <input type="checkbox"/> 95 Cerebrovascular accident (hemorrhage/<br>thrombosis/aneurysm/ malformation)<br>not secondary to hypertensive disease |
| <input type="checkbox"/> 10.6 Placenta accreta/increta/percreta   | <input type="checkbox"/> 88.2 Unintentional   | <input type="checkbox"/> 96 Metabolic/endocrine  |
| <input type="checkbox"/> 10.7 Hemorrhage due to retained placenta   | <input type="checkbox"/> 88.9 Unknown/NOS   | <input type="checkbox"/> 96.1 Obesity  |
| <input type="checkbox"/> 10.8 Hemorrhage due to primary DIC   | <input type="checkbox"/> 89 Cancer  | <input type="checkbox"/> 96.2 Diabetes mellitus  |
| <input type="checkbox"/> 10.9 Other hemorrhage/NOS  | <input type="checkbox"/> 89.1 Gestational trophoblastic disease (GTD)   | <input type="checkbox"/> 96.9 Other metabolic/endocrine disorders  |
| <input type="checkbox"/> 20 Infection   | <input type="checkbox"/> 89.3 Malignant melanoma  | <input type="checkbox"/> 97 Gastrointestinal disorders   |
| <input type="checkbox"/> 20.1 Postpartum genital tract (e.g. of the uterus/<br>pelvis/perineum/necrotizing fasciitis) | <input type="checkbox"/> 89.9 Other malignancies/NOS  | <input type="checkbox"/> 97.1 Crohn's disease/ulcerative colitis   |
| <input type="checkbox"/> 20.2 Sepsis/septic shock   | <input type="checkbox"/> 90 Cardiovascular conditions   | <input type="checkbox"/> 97.2 Liver disease/failure/transplant   |
| <input type="checkbox"/> 20.4 Chorioamnionitis/antepartum infection   | <input type="checkbox"/> 90.1 Coronary artery disease/myocardial<br>infarction (MI)/atherosclerotic<br>cardiovascular disease                                   | <input type="checkbox"/> 97.9 Other gastrointestinal diseases/NOS  |
| <input type="checkbox"/> 20.5 Non-pelvic infections (e.g. pneumonia, TB,<br>meningitis, HIV)                          | <input type="checkbox"/> 90.2 Pulmonary hypertension  | <input type="checkbox"/> 100 Mental health conditions  |
| <input type="checkbox"/> 20.6 Urinary tract infection   | <input type="checkbox"/> 90.3 Valvular heart disease congenital and<br>acquired   | <input type="checkbox"/> 100.1 Depression  |
| <input type="checkbox"/> 20.9 Other infections/NOS  | <input type="checkbox"/> 90.4 Vascular aneurysm/dissection (non-cerebral)   | <input type="checkbox"/> 100.9 Other psychiatric conditions/NOS  |
| <input type="checkbox"/> 30 Embolism - thrombotic (non-cerebral)  | <input type="checkbox"/> 90.5 Hypertensive cardiovascular disease   | <input type="checkbox"/> 999 Unknown COD   |
| <input type="checkbox"/> 30.9 Other embolism/NOS  | <input type="checkbox"/> 90.6 Marfan Syndrome   |  |
| <input type="checkbox"/> 31 Embolism - amniotic fluid   | <input type="checkbox"/> 90.7 Conduction defects/arrhythmias  |  |
| <input type="checkbox"/> 40 Preeclampsia  | <input type="checkbox"/> 90.8 Vascular malformations outside head and<br>coronary arteries  |  |
| <input type="checkbox"/> 50 Eclampsia   | <input type="checkbox"/> 90.9 Other cardiovascular disease, including CHF,<br>cardiomegaly, cardiac hypertrophy, cardiac<br>fibrosis, non-acute myocarditis/NOS |  |
| <input type="checkbox"/> 60 Chronic hypertension with superimposed<br>preeclampsia                                    | <input type="checkbox"/> 91 Pulmonary conditions (excludes ARDS-Adult<br>respiratory distress syndrome)   |  |
| <input type="checkbox"/> 70 Anesthesia complications  | <input type="checkbox"/> 91.1 Chronic lung disease  |  |
| <input type="checkbox"/> 80 Cardiomyopathy  | <input type="checkbox"/> 91.2 Cystic fibrosis   |  |
| <input type="checkbox"/> 80.1 Postpartum/peripartum cardiomyopathy  | <input type="checkbox"/> 91.3 Asthma  |  |
| <input type="checkbox"/> 80.2 Hypertrophic cardiomyopathy   | <input type="checkbox"/> 91.9 Other pulmonary disease/NOS   |  |
| <input type="checkbox"/> 80.9 Other cardiomyopathy/NOS  | <input type="checkbox"/> 92 Neurologic/neurovascular conditions<br>(excluding CVAs)   |  |
| <input type="checkbox"/> 82 Hematologic   |   |  |
| <input type="checkbox"/> 82.1 Sickle cell anemia  |   |  |
| <input type="checkbox"/> 82.9 Other hematologic conditions including<br>thrombophilias/TTP/HUS/NOS                    |   |  |