

Searching for Cases with Open COPHI Investigations

Operating Instructions

Overview

A SAS program for finding cases with open COPHI investigations is now available for analysis of eHARS data: `COPHI_Open_Investigations.sas`

This program runs against the Document-based dataset downloaded from eHARS. The step-by-step instructions in this document detail the actions necessary to save, customize, and run the `COPHI_Open_Investigations.sas` file. The output generated by the program resembles the following (data are not actual cases):

<i>COPHI_Open_Investigations.sas</i> NIR/NRR Open COPHI Cases Reported after eHARS deployment date based on merger of relational data table documents with the PersonView document, by Document_uid RISK FACTOR SUSPECTED: Blood Transfusion						
STATENO	FULLNAME	birthdate	earliest_dx_dt	risk_cd	trans_first_dt	enter_dt
001060	MOUSE, MICKEY	19600325	199909..	(R11)Adult rcvd transfusion	19860315	20080419
001486	DUCK, DONALD	19531120	200008..	(R11)Adult rcvd transfusion	19870419	20080515
002479	THUMB, TOM	19820824	198805..	(R34)Child rcvd transfusion	20010224	20090115
<i>COPHI_Open_Investigations.sas</i> NIR/NRR Open COPHI Cases Reported after eHARS deployment date based on merger of relational data table documents with the PersonView document, by Document_uid RISK FACTOR SUSPECTED: Transplant of Tissue or Organ						
STATENO	FULLNAME	birthdate	earliest_dx_dt	risk_cd	enter_dt	
006049	ANDROPOV, PEEKUP	19730105	200101..	(R12)Adult rcvd transplant tissue/organ	20070212	
<i>COPHI_Open_Investigations.sas</i> NIR/NRR Open COPHI Cases Reported after eHARS deployment date based on merger of relational data table documents with the PersonView document, by Document_uid RISK FACTOR SUSPECTED: Healthcare Occupational Exposure						
STATENO	FULLNAME	birthdate	earliest_dx_dt	risk_cd	detail	enter_dt
007039	GOOFY, GUS	19730105	200101..	(R13)Adult worked in health care setting	(05)Health aide	20070212
007234	HONEYDEW, BUNSEN	19520511	200102..	(R13)Adult worked in health care setting	(01)Physician	20010328
004449	NOBODI, DONATELA	19650528	1999....	(R13)Adult worked in health care setting	(04)Nurse	20010625
<i>COPHI_Open_Investigations.sas</i> NIR/NRR Open COPHI Cases Reported after eHARS deployment date based on merger of relational data table documents with the PersonView document, by Document_uid RISK FACTOR SUSPECTED: Other Unusual Exposure						
STATENO	FULLNAME	birthdate	earliest_dx_dt	risk_cd	enter_dt	
000313	CASE, JUSTIN	19840111	199201..	(R14)Child sexual contact w/male	20070122	
000314	DOKEY, OKEY	19840111	199201..	(R27)Child IDU	20090122	
004322	BUZZOFF, WOODY	19490313	200103..	(R40)Adult other documented risk	20080814	

Before Running the Program

To prepare for running the SAS program, do the following:

1. Save the *COPHI_Open_Investigations.sas* attachment in a folder of your choosing.
Note: Record the location where the attachment is saved, as the intervals between running the program may be lengthy.
2. Log on to the eHARS application installed at your site.
3. Click **Admin** on the Navigation bar.
eHARS displays the Administrative Tasks Home page.
4. In the Main Menu bar, click **Dataset Maintenance**.
eHARS displays the Dataset Maintenance page:

Dataset Type	Date Last Modified
Person-based:	2009-01-13 07:02:55
Document-based:	2009-01-26 11:14:24
Core Person-based:	2009-01-13 07:05:35
Administrative:	2009-01-13 07:05:41
Incidence:	2009-01-13 07:05:02
Recreated HARS:	2008-12-17 02:44:30

DATASET

Update Analysis Dataset

Specify Update Dataset Type: Person

Export Existing Analysis Dataset

Specify Export Dataset Type: Person

Specify Output Type: Comma Delimited

5. In the Update Analysis Dataset section, click the **Specify Update Dataset Type** list and select **Document**:

DATASET

Update Analysis Dataset

Specify Update Dataset Type: Document

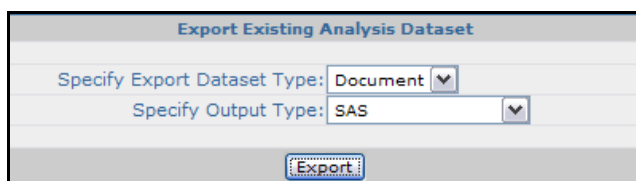
6. Click **Update**.

eHARS opens a SAS Output window and begins updating the dataset. This process can take several minutes depending upon the number of cases in the eHARS database. When successfully completed, eHARS displays a message similar to the following in the SAS Output window:

Update complete. The document-based dataset has been updated successfully. Data for 14192 persons are included.

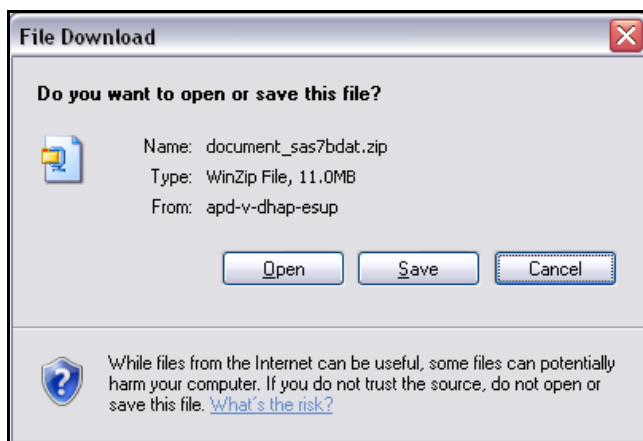
This request took 70.45 seconds of real time (v9.1 build 1461).

7. Close the SAS Output window displaying the “Update complete” message and return to the eHARS window displaying the Dataset Maintenance page.
8. In the Export Existing Analysis Dataset section, click the **Specify Export Dataset Type** list and select **Document**.
9. Click the **Specify Output Type** list and select **SAS**:



10. Click **Export**.

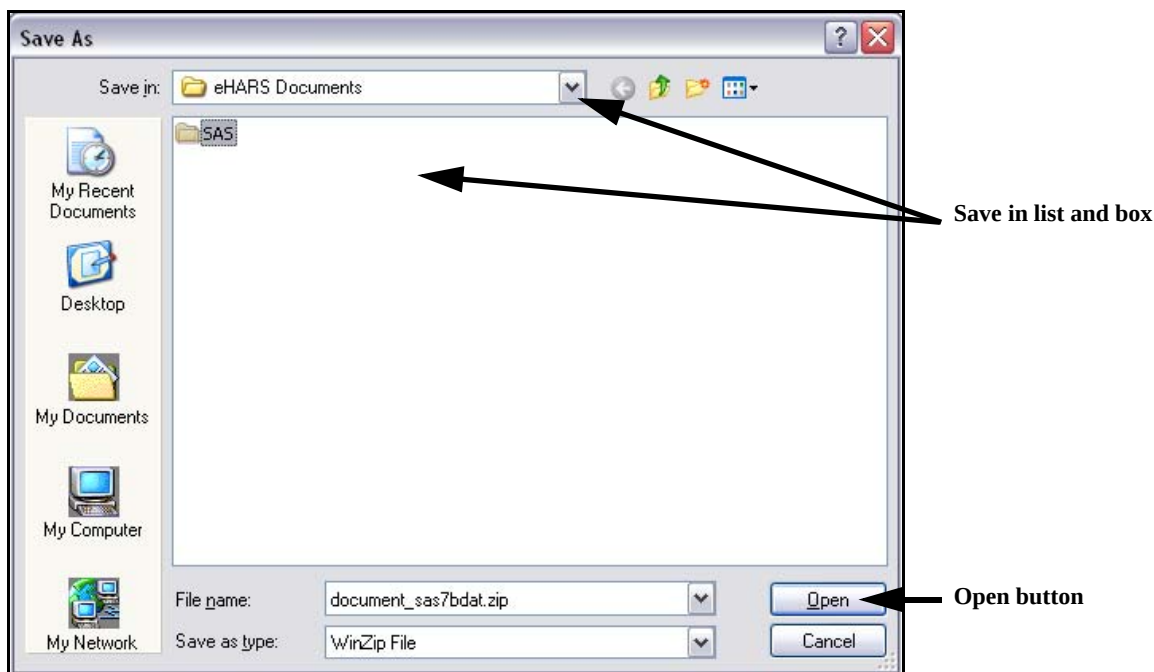
eHARS displays the **File Download** dialog box:



11. Click **Save**.

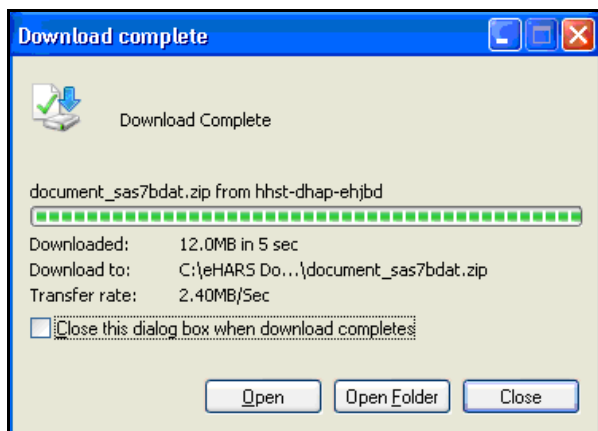
eHARS displays a **Save As** dialog box.

- Using the **Save in** list and box, select the location where your site stores eHARS data for reporting and analysis purposes:



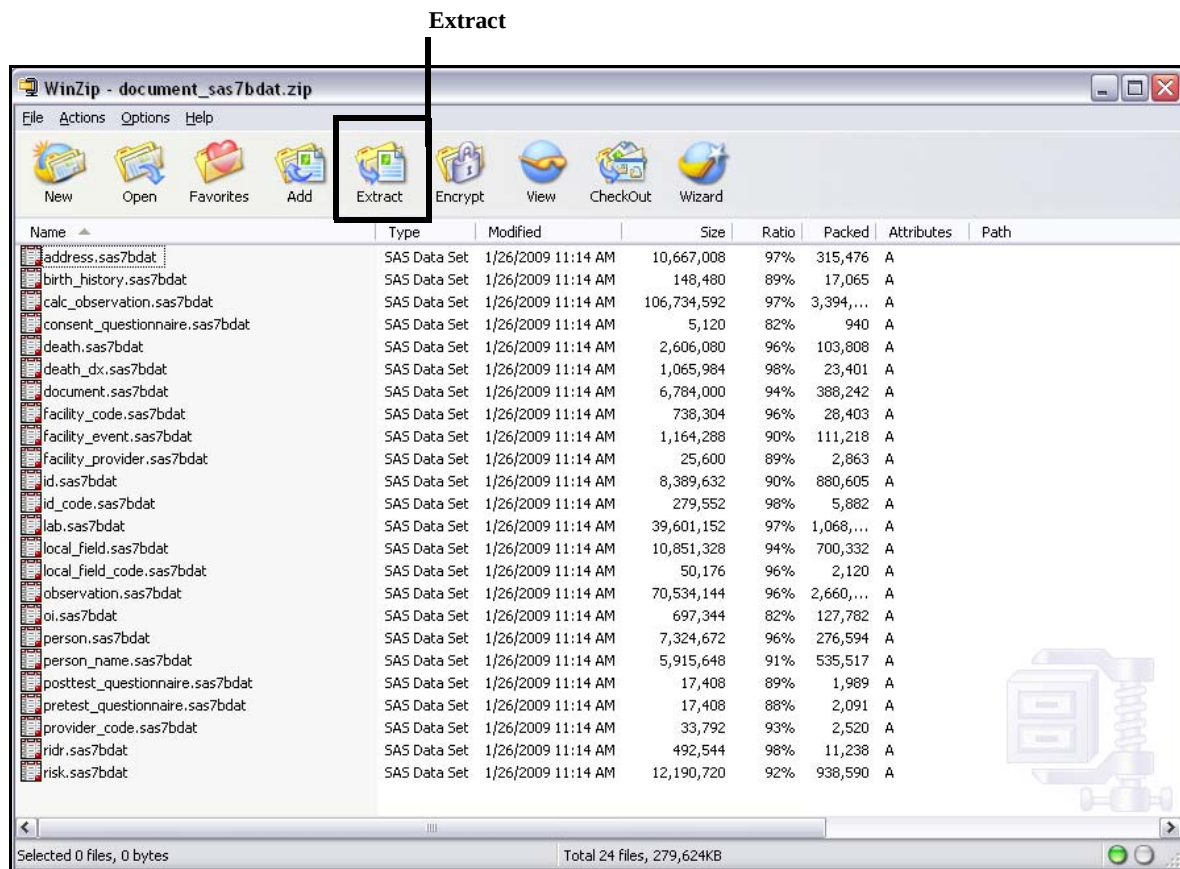
- Click the **Open** button in the **Save As** dialog box.

eHARS closes the **Save As** dialog box and downloads document_sas7bdat.zip to the C:\eHARS Documents\SAS folder. When the download is complete, eHARS displays the **Download complete** dialog box:



- Click the **Open** button in the **Download complete** dialog box.

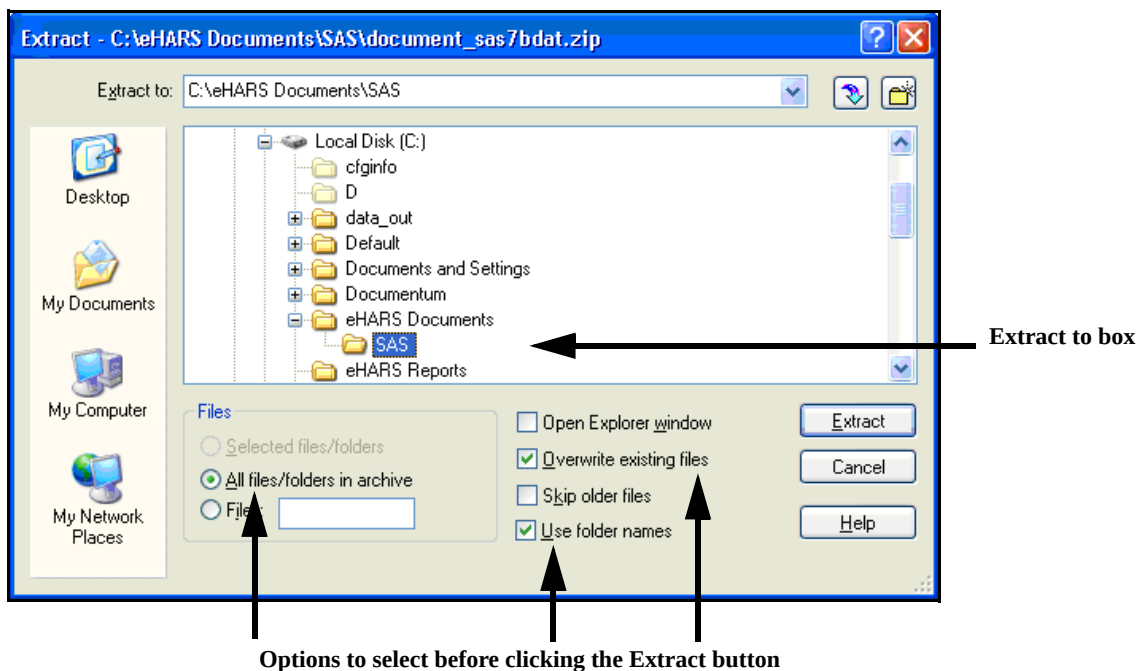
eHARS closes the **Download complete** dialog box. WinZip launches and displays the WinZip - document_sas7bdat.zip window:



15. Click **Extract**.

WinZip displays the **Extract** dialog box.

16. In the **Extract to** box, select the same location chosen in step 12:



Note: WinZip displays your selection in the **Extract to** list at the top of the **Extract** dialog box.

17. Select the following options in the **Extract** dialog box:

- **All files / folders in archive**
- **Overwrite existing files**
- **Use folder names**

18. Click the **Extract** button.

WinZip begins extracting all files in the Document dataset to the selected folder and displays the progress of the extraction in a **WinZip** dialog box:



When extraction of all files is completed, WinZip closes the dialog box and displays the WinZip - document_sas7bdat.zip window.

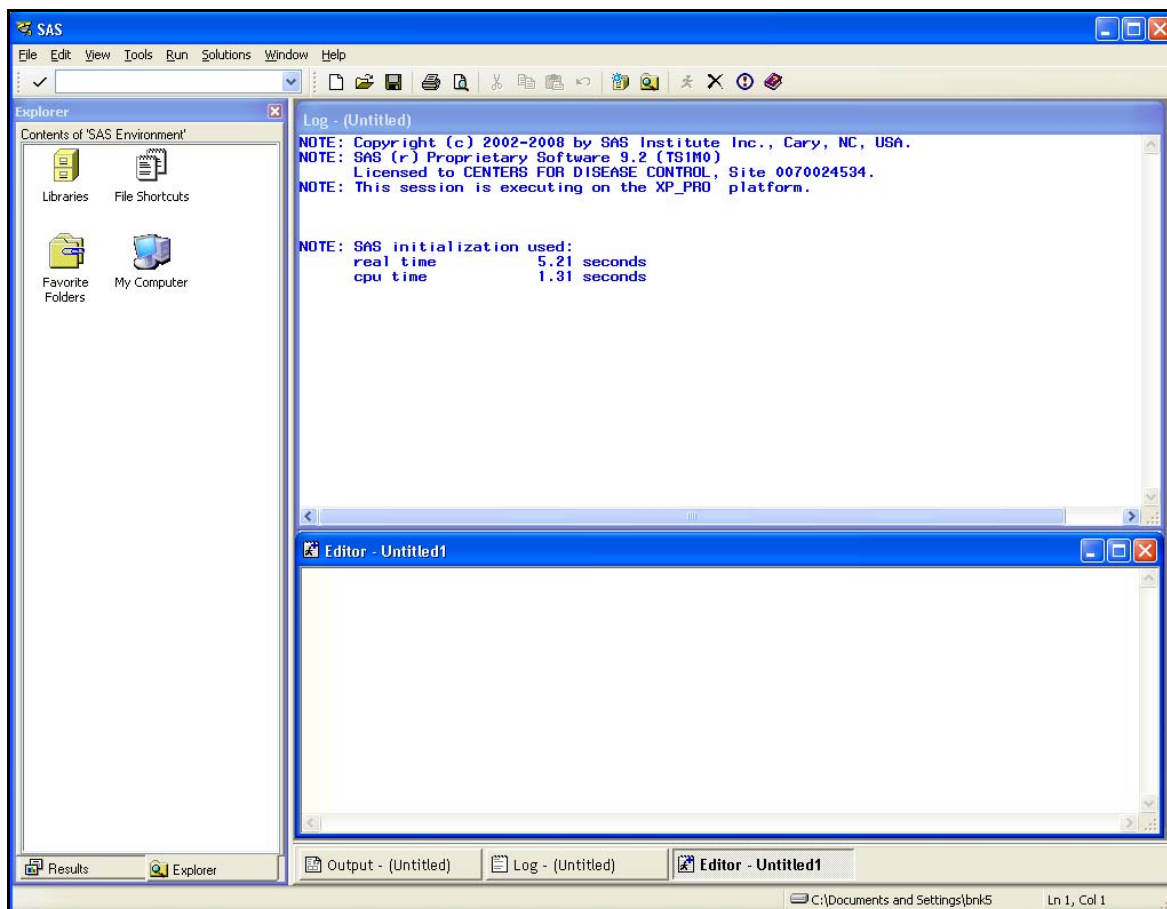
19. Close the WinZip - document_sas7bdat.zip window.
20. Log off of eHARS.

Customizing the Program

To customize the *COPHI_Open_Investigations.sas* program for your SAS environment before running the program, do the following:

1. Start SAS.

SAS displays a SAS window similar to the following:



2. Maximize the Program Editor window.
3. With the Program Editor window maximized, click the **File** menu and select **Open Program**.
SAS displays the **Open** dialog box.
4. Using the **Look in** list and box, navigate to the folder where you saved the *COPHI_Open_Investigations.sas* attachment (see step 1 on page 2) and select the file.
5. Click **Open**.

SAS loads the program in the Program Editor window and displays the program's source code:

```

SAS - [Program Editor - COPHI_Open_Investigations.sas]
File Edit View Tools Run Solutions Window Help

*This program is intended to provide output identifying COPHI cases with open investigations.
To reduce the output to a manageable size, it should be limited to NIR/NRR transmission category cases
reported after eHARS was deployed (using ENTER_DT to make that latter restriction). -Richard Selik;

*In the OPTIONS statement below, you may need to change the location of the libraries to be searched for
the formats by fmtsearch because those libraries may be in a different location in your system;
options nofmterr yearcutoff=1910 ls=90 errors=0 fmtsearch=(library.ndpifmt library.geogfmt library.formats);

*In the LIBNAME statement below, you will need to change the path and folder to correspond to where the eHARS
data are stored in your system;
LIBNAME UAT "\\cdc\private\rms1\COPHI\Fictitious_UAT_eHARS_data";

*In the DATA step below, you obtain the Person View documents only from DOCUMENT table.
The ENTER_DT is when the first document was entered into the system.
Only the person view documents need to be obtained (document_type_cd='000' or '999');
data PVDocumentType (drop=document_type_cd);
set UAT.document (keep=document_uid document_type_cd enter_dt);
WHERE document_type_cd='000'; /*Code '000' Selects only PV documents*/

if enter_dt > '20060131'; *Change this date to when you started using eHARS;
*This is intended to restrict the data to person-view documents reported after the date of eHARS deployment;
run;
proc sort; by document_uid;
run;

/* The data step below selects documents with a STATENO from your state. In this example, it selects
documents with a STATENO for New York state.
id_cd tells the type of identifier and id_value tells the value of that identifier. For example,
if New York state is running the program, then select id_cd='165' to limit id_value to NY STATENO.
If South Carolina is running the program, then select id_cd='172' to limit id_value to SC STATENO.
[See eHARS Technical Reference for other states.]/
data STATENO (drop=doc_belongs_to id_cd id_value doc_belongs_to);
set UAT.id (keep=document_uid id_cd id_value doc_belongs_to);
WHERE id_cd = '165' and doc_belongs_to='PERSON';
*In the WHERE statement above, Doc_belongs_to = 'PERSON' indicates you are obtaining the PV stateno
for the index case person, and not the stateno for a child or parent of the index case person;
RENAME ID_VALUE=STATENO;
run;
proc sort; by document_uid;
run;

*The DATA step below selects documents for NIR/NRR cases;
data transcat (drop=calc_obs_uid);
set UAT.calc_observation;
where calc_obs_uid = '221' and calc_obs_value in ('09' '10' '19' '20');
*When the CALC_OBS_UID = '221', the CALC_OBS_VALUE becomes the value of the transmission category,
and the values selected here are limited to those for NIR and NRR cases;
rename calc_obs_value = trans_cat;

```

NOTE: 137 line(s) included. C:\Documents and Settings\bnk5

6. In the OPTIONS statement, change the location of the format libraries if the default libraries are in a different location:
`options nofmterr yearcutoff=1910 ls=90 errors=0
fmtsearch=(library.ndpifmt library.geogfmt library.formats);`
7. In the LIBNAME statement, change the path and folder to correspond to where the Document-based dataset is stored:
`LIBNAME UAT "\\cdc\private\rms1\COPHI\Fictitious_UAT_eHARS_data";`
8. In the following DATA STEP statement, change the enter_dt value to the date when the first document was entered in eHARS:
`data PVDocumentType (drop=document_type_cd);
set UAT.document (keep=document_uid document_type_cd enter_dt);
WHERE document_type_cd='000'; /*Code '000' selects only PV docs*/
if enter_dt > '20060131'; *Change this date to when you started using
eHARS;`

9. In the following DATA STEP statement, change the id_cd value to your site's STATENO:

```
/* The data step below selects documents with a STATENO from your
state. In this example, it selects documents with a STATENO for New
York state. [See eHARS Technical Reference Guide for other states.]*/
data STATENO (drop=doc_belongs_to id_cd);
set UAT.id (keep=document_uid id_cd id_value doc_belongs_to);
WHERE id_cd = '165' and doc_belongs_to='PERSON';
```

10. If applicable for your site, make changes to the program's optional steps (such as excluding birth dates in the output).

Note: Instructions for modifying optional steps are included in the program's comments and are not reproduced here.

11. When the necessary changes made to *COPHI_Open_Investigations.sas* are complete, save a copy:

- 11.1 Click the **File** menu in the Program Editor window and select **Save As**.

SAS displays the **Save As** dialog box.

- 11.2 Using the **Save in** list and box, select the location for the copy.

- 11.3 Enter a name for the copy in the **File name** box.

- 11.4 Click **Save**.

SAS saves the copy and displays the name of the saved file in the Program Editor window:

```
SAS - [COPHI_Open_Investigations_GA.sas]
File Edit View Tools Run Solutions Window Help

/* This program is intended to provide output identifying COPHI cases with open investigations.
To reduce the output to a manageable size, it should be limited to NIR/NRR transmission category cases
reported after eHARS was deployed (using ENTER_DT to make that latter restriction). -Richard Selick;

*In the OPTIONS statement below, you may need to change the location of the libraries to be searched for
the formats by fmtsearch because those libraries may be in a different location in your system;
options nofmterr yearcutoff=1910 ls=90 errors=0 fmtsearch=(library.ndpfmt library.geogfmt library.formats);

*In the LIBNAME statement below, you will need to change the path and folder to correspond to where the eHARS
data are stored in your system;
LIBNAME DOC "\\cdc\private\M312\bnk5\My SAS Files\Document dataset";

*In the DATA step below, you obtain the Person View documents only from DOCUMENT table.
The ENTER_DT is when the first document was entered into the system.
Only the person view documents need to be obtained (document_type_cd='000' or '999');
data PVDocumentType (drop=document_type_cd);
set DOC.document (keep=document_uid document_type_cd enter_dt);
WHERE document_type_cd='000'; /*Code '000' Selects only PV documents*/

if enter_dt > '20060131'; *Change this date to when you started using eHARS;
*This is intended to restrict the data to person-view documents reported after the date of eHARS deployment;
run;

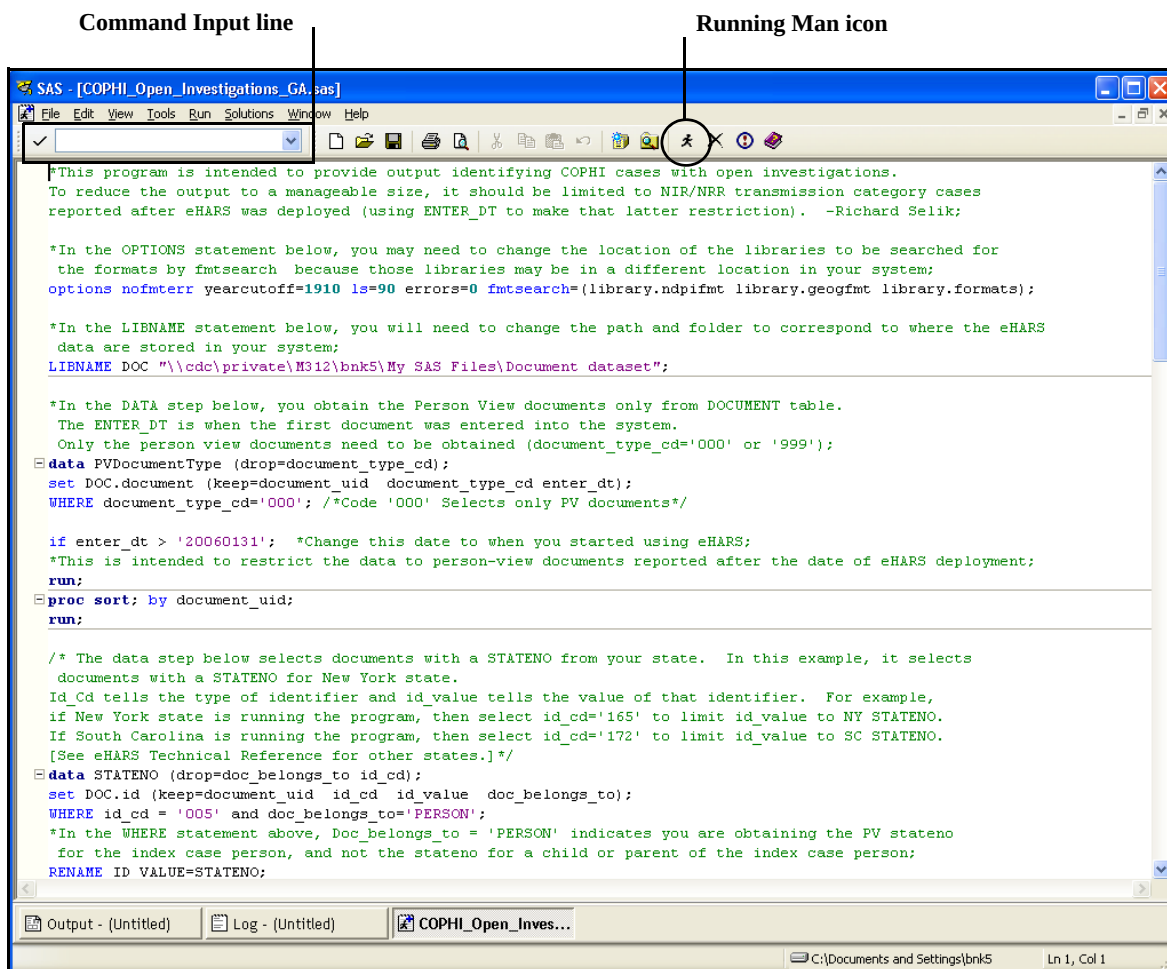
proc sort; by document_uid;
run;

/* The data step below selects documents with a STATENO from your state. In this example, it selects
documents with a STATENO for New York state.
Id_Cd tells the type of identifier and id_value tells the value of that identifier. For example,
if New York state is running the program, then select id_cd='165' to limit id_value to NY STATENO.
If South Carolina is running the program, then select id_cd='172' to limit id_value to SC STATENO.
[See eHARS Technical Reference for other states.]*/
data STATENO (drop=doc_belongs_to id_cd);
set DOC.id (keep=document_uid id_cd id_value doc_belongs_to);
WHERE id_cd = '005' and doc_belongs_to='PERSON';
*In the WHERE statement above, Doc_belongs_to = 'PERSON' indicates you are obtaining the PV stateno
for the index case person, and not the stateno for a child or parent of the index case person;
RENAME ID VALUE=STATENO;
```

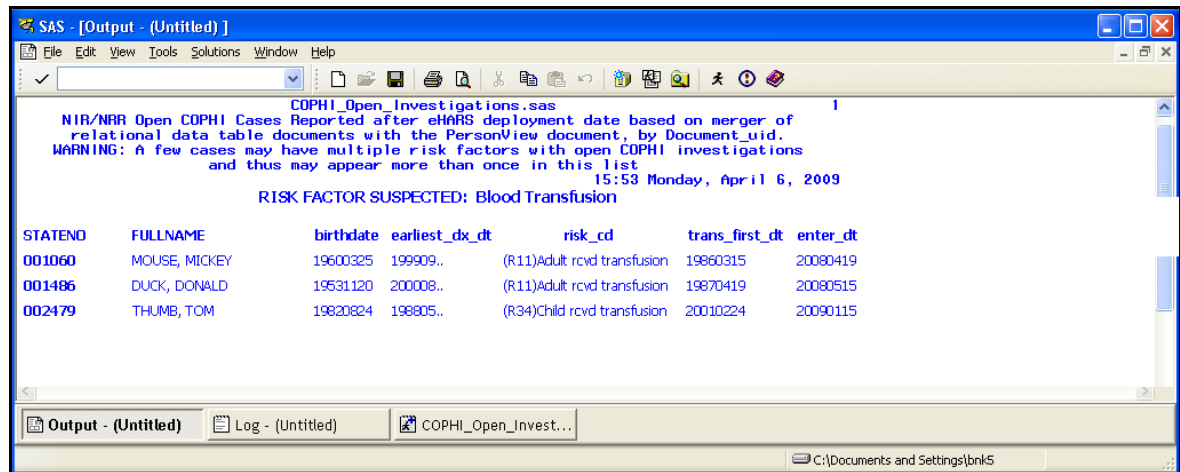
Running the Customized Program and Generating the Results

After you customize the *COPHI_Open_Investigations.sas* program for your site's SAS environment and save a copy that reflects your changes, do the following to run the customized program and generate the results:

1. With the customized program open in the Program Editor window, run the program in SAS by doing one of the following:
 - Click the **Running Man** icon.
 - Enter *run* in the command input line and press the **ENTER** key.
 - Click the **Run** menu and select **Submit**.



SAS executes the program code. When successfully completed, SAS displays output similar to the following:



The screenshot shows the SAS Output window for a program named 'COPHI_Open_Investigations.sas'. The output includes a title, a warning, a timestamp, and a table of results. The table has columns for STATEND, FULLNAME, birthdate, earliest_dx_dt, risk_cd, trans_first_dt, and enter_dt. Three rows of data are displayed.

STATEND	FULLNAME	birthdate	earliest_dx_dt	risk_cd	trans_first_dt	enter_dt
001060	MOUSE, MICKEY	19600325	199909..	(R11)Adult rcvd transfusion	19860315	20080419
001486	DUCK, DONALD	19531120	200008..	(R11)Adult rcvd transfusion	19870419	20080515
002479	THUMB, TOM	19820824	198805..	(R34)Child rcvd transfusion	20010224	20090115

Customer Support and Service

If you have any questions regarding the SAS programs or instructions, contact CCID Informatics Customer Support at 1-877-659-7725 (toll free), 404-639-6480 (local), or ccidinformatix@cdc.gov.