



# Biovigilance Component Hemovigilance Module Introduction to Analysis

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Welcome to the National Healthcare Safety Network training session: Hemovigilance Module: Introduction to Analysis.



# Target Audience

- This training is intended for persons who will be generating and analyzing data in the Hemovigilance Module and have user rights set up so that they may do so
  - This could include supervisors or managers in Transfusion Services and/or other persons within your facility who require information about the events reported in NHSN
  - Users should have administrative rights, all rights, or analysis rights in order to perform these tasks.

This training is intended for persons who will be generating and analyzing data in the Hemovigilance Module and have user rights set up so that they may do so. This could include supervisors or managers in Transfusion Services and/or other persons within your facility who require information about the events reported in NHSN. Users should have administrative rights, all rights, or analysis rights in order to perform the tasks described in this session.



# Objectives



Once your facility has entered Incident and Adverse Reaction data for at least one month, you may want to see reports of what has been entered. This session will:

- Show how to access data for analysis in NHSN
- Demonstrate how to generate data sets in Hemovigilance
- Describe output options in Hemovigilance
- Show how to generate output
- Show how to customize (modify) output
- Discuss documentation needed to generate reports
- Describe advanced options in Analysis
- Show how to export your output for manipulation outside of NHSN
- Create custom output sets

Once your facility has entered Incident and Adverse Reaction data for at least one month, you may want to see reports of what has been entered. This session will show you how to access data for analysis in NHSN, demonstrate how to generate data sets in Hemovigilance, describe output options in Hemovigilance, show how to generate output, customize or modify output, discuss documentation needed to generate reports in Hemovigilance, describe advanced options in analysis, demonstrate how to export your output for manipulation outside of NHSN, and how to create custom output sets.



# Analysis in NHSN

- Once you are logged into NHSN and are on the Hemovigilance Module Home Page, select Analysis from the left navigation bar

Department of Health and Human Services  
Centers for Disease Control and Prevention

NHSN - National Healthcare Safety Network (ISD-CLFT-NHSN1) | NHSN Home | My Info | Contact us | Help

Logged into Pleasant Valley Hospital (ID 10312) as RUBY.  
Facility Pleasant Valley Hospital (ID 10312) is following the BV component.

**NHSN Home**  
Reporting Plan  
Patient  
Incident  
Reaction  
Summary Data  
**Analysis**  
Surveys  
Users  
Facility  
Group  
Log Out

## NHSN Hemovigilance Module Home Page

Use the Navigation bar on the left to access the features of the application.

**Assurance of Confidentiality:** The information obtained in this surveillance system that would permit identification of any individual or institution is collected with a guarantee that it will be held in strict confidence, will be used only for the purposes stated, and will not otherwise be disclosed or released without the consent of the individual, or the institution in accordance with Sections 304, 306 and 308(d) of the Public Health Service Act (42 USC 242b, 242k, and 242m(d)).

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Once you are logged into NHSN and are on the Hemovigilance Module Home Page, select Analysis from the left navigation bar. If you do not see Analysis in your navigation bar it means that you do not have the rights to perform analysis as described in Slide 2. Contact your NHSN facility administrator or Biovigilance Primary Contact to have the proper rights set up.



# Step 1: Generate Data Sets

- By “generating data sets,” SAS data sets are created containing individual patient, adverse reaction, and incident records that have been entered into NHSN up to that moment
- Must be done prior to selecting Output Options.

Department of Health and Human Services  
Centers for Disease Control and Prevention

NHSN - National Healthcare Safety Network (ISD-CLFT-NHSN1) | NHSN Home | My Info | Con

Logged into Pleasant Valley Hospital (ID 10312) as RUBY.  
Facility Pleasant Valley Hospital (ID 10312) is following the BV component.

## Generate Data Sets

[HELP](#)

Generate Biovigilance Analysis Data Sets

| Date Last Generated | Action                                      |
|---------------------|---|
| Apr 6 2009 2:34PM   | <input type="button" value="Generate New"/> |

The data set generation process will take several minutes. Do not logoff or close this window while the process is running. You may minimize the browser window and work in other applications while you wait.

**Do not navigate away from the screen while data sets are being generated!**

**DON'T FORGET!**

The first task you must perform is to generate data sets. By generating data sets, SAS data sets are created containing individual patient, adverse reaction, incident records, and denominator data that have been entered into NHSN up to that moment. This step must be performed before selecting “Output Options.” Please take note of the instruction that you must stay on this screen while the data sets are being generated.



# Step 2: Output Options



- Once data sets have been generated, select Output Options

The screenshot shows the NHSN interface. At the top, it says "Department of Health and Human Services Centers for Disease Control and Prevention". Below that, it says "NHSN - National Healthcare Safety Network (ISD-CLFT-NHSN1)". The user is logged into Pleasant Valley Hospital (ID 10312) as RUBY. The left navigation bar includes "NHSN Home", "Reporting Plan", "Patient", "Incident", "Reaction", "Summary Data", "Analysis", "Surveys", "Users", and "Facility". The "Analysis" section is expanded, showing "Generate Data Sets" and "Output Options". The "Output Options" section is further expanded, showing "Hemovigilance Module", "Advanced", "My Custom Output", and "Published Output". The "Collapse All" button is circled in red, and a yellow box highlights the text "Lists major options available".

Once data sets have been generated, select “Output Options” from the left navigation bar. The first screen will show the major analysis output options available.



# “Expand All”

- Lists every output option that is available
  - Some reports are “canned” with pre-defined variables but can be modified by the user

The screenshot shows the Biovigilance Component interface. At the top, it displays the CDC logo and the text "Department of Health and Human Services Centers for Disease Control and Prevention". Below this, it shows the user is logged into Pleasant Valley Hospital (ID 10312) as RUBY. The main content area is titled "Biovigilance Component Analysis Output Options". There are two buttons: "Expand All" and "Collapse All". A red arrow points to the "Expand All" button. Below the buttons, there is a section for "Hemovigilance Module" which includes "HV Adverse Reaction Data" and "CDC Defined Output". Under "CDC Defined Output", there are four options: "Line Listing - All Adverse Reaction Data", "Frequency Table - All Adverse Reaction Data", "Bar Chart - All Adverse Reaction Data", and "Pie Chart - All Adverse Reaction Data". Each option has "Run" and "Modify" buttons. A red circle highlights these options and their buttons.

If you click on the left button “Expand All,” you will see a list of every option that is available to you in Biovigilance. Some of the reports you see listed are “canned” reports with pre-defined variables, but any report can be modified.



# Output Options

- Line Listing
- Frequency Table
- Bar Chart
- Pie Chart

Four “canned” output options or report styles are available: line listing, frequency table, bar chart, and pie chart.



# Line Listing

- Sample adverse reaction line list (using test records)
- “Canned report” of data reported for all adverse reactions but can be modified

National Healthcare Safety Network  
Adverse Reactions in February 2009  
As of: April 9, 2009 at 10:19 AM  
Date Range: HVADVRXH advRxnDate 02/01/2009 to 02/28/2009

| Adverse Reaction ID | Patient ID | Age At Reaction | Gender | Location  | CDC Component Code Description            | Expiration Date | Date/Time Unit Administered | Adverse Reaction Date/Time | Hours: Admin to Reaction | Linked Incident 1 | Adverse Reaction | Grade Description     | Case Definition Criteria Description | Rel De    |
|---------------------|------------|-----------------|--------|-----------|---|-----------------|-----------------------------|----------------------------|--------------------------|-------------------|------------------|-----------------------|--------------------------------------|-----------|
| 111                 | DS1514     | 0               | F      | INMEDCC   | RBC - Red blood cells                     | 02/05/2009      | 02FEB09:10:00               | 02FEB09:12:12              | 2                        | .                 | FNHTR            | LT - Life-threatening | POS - Possible                       | PO<br>Pos |
| 112                 | DA1234     | 72              | F      | INPLSWARD | IRRBC - Irradiated red blood cells        | 02/15/2009      | 02FEB09:13:13               | 02FEB09:13:40              | 0                        | .                 | UNK              | D - Death             | DEF - Definitive                     | DE<br>Def |
| 113                 | DA2345     | 12              | M      | PEDSOTSCA | RBC - Red blood cells                     | 02/11/2010      | 01FEB08:16:16               | 12FEB09:12:12              | 9044                     | .                 | ALLERG           | LT - Life-threatening | DEF - Definitive                     | PR<br>Prg |
| 115                 | A100       | 64              | F      | INORCATH  | LRRBC - Leukocyte reduced red blood cells | 02/10/2009      | 02FEB09:11:45               | 02FEB09:12:12              | 1                        | .                 | TAD              | IIS - Non-severe      | POS - Possible                       | DC<br>Do  |

This slide shows a line listing using adverse reaction test records. We provide a “canned” report with a pre-defined set of variables but you can also modify this report as we will show later in this training session.



# Line Listing

- Sample incident report line list
- “Canned report” of data reported for incidents but can be modified

| Incident ID | Date/Time of Occurrence | Occurrence Location | When Occurred Process Code Description | Incident Code Description                    | Incident Result Description     | Product Action: Retrieved? | Product Action: Destroyed? | Product Action: Issued? | Product Action: Transfused? | Product Action: Not Applicable? | Associated Patient Reaction? | Date Dis |
|-------------|-------------------------|---------------------|--|--|---------------------------------|----------------------------|----------------------------|-------------------------|-----------------------------|---------------------------------|------------------------------|----------|
| 100         | 05JAN09:10:05           | INLTACSCA           | PC - Product check-in                  | PC 00 - Not specified                        | 4 - Near miss, planned recovery | Y                          | N                          | N                       | N                           |                                 |                              | 05JAN    |
| 105         | 10JAN09:08:00           | NPTCBLOOD           | SE - Product selection                 | SE 01 - Incorrect product/component selected | 1 - No recovery, harm           | N                          | N                          | N                       | Y                           | N                               | Y                            | 10JAN    |
| 110         | 01FEB09:00:00           | NPTCBLOOD           | US - Product storage                   | US 00 - Not specified                        | 4 - Near miss, planned recovery | Y                          | N                          | N                       | N                           | N                               |                              | 12FEB    |
| 118         | 02MAR09:16:05           | NPTCBLOOD           | AV - Available for issue               | AV 00 - Not specified                        | 4 - Near miss, planned          | N                          | N                          | N                       | N                           | Y                               |                              | 02MAR    |

Here is an example of a line listing using sample incident reports. Again, this report has a pre-defined set of variables, but can be modified.



# Frequency Table

- Default variables are *adverse reaction by product type*
- Can be modified
- Variable names & labels will be discussed later in this training

National Healthcare Safety Network  
 Frequency Table for All Adverse Reactions  
 As of: May 5, 2009 at 8:39 AM  
 Date Range: All HVADVRXN

| Frequency<br>Percent<br>Row Pct<br>Col Pct | Table of productType by advRxn |        |        |        |        |       |        |        |        |         |        |        |        | Total  |      |
|--|--------------------------------|--------|--------|--------|--------|-------|--------|--------|--------|---------|--------|--------|--------|--------|------|
|  | productType                    | advRxn |        |        |        |       |        |        |        |         |        |        |        |        |      |
|  |                                | AHTR   | ALLERG | DHTR   | DSTR   | FNHTR | HTR    | INF    | PTP    | TA-GVHD | TACO   | TAD    | TRALI  |        | UNK  |
| Plasma                                     | 1                              | 0      | 0      | 0      | 0      | 0     | 0      | 0      | 0      | 0       | 0      | 0      | 0      | 0      | 1    |
|  | 2.70                           | 0.00   | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 2.70 |
|  | 100.00                         | 0.00   | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00 |
|  | 20.00                          | 0.00   | 0.00   | 0.00   | 0.00   | 0.00  | 0.00   | 0.00   | 0.00   | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00 |
| RBCs                                       | 4                              | 2      | 1      | 3      | 3      | 1     | 9      | 2      | 1      | 1       | 2      | 1      | 3      | 33     |      |
|  | 10.81                          | 5.41   | 2.70   | 8.11   | 8.11   | 2.70  | 24.32  | 5.41   | 2.70   | 2.70    | 5.41   | 2.70   | 8.11   | 89.19  |      |
|  | 12.12                          | 6.06   | 3.03   | 9.09   | 9.09   | 3.03  | 27.27  | 6.06   | 3.03   | 3.03    | 6.06   | 3.03   | 9.09   | 100.00 |      |
|  | 80.00                          | 50.00  | 100.00 | 100.00 | 100.00 | 50.00 | 100.00 | 100.00 | 100.00 | 100.00  | 100.00 | 100.00 | 100.00 | 100.00 |      |
| WholeBlood                                 | 0                              | 2      | 0      | 0      | 0      | 1     | 0      | 0      | 0      | 0       | 0      | 0      | 0      | 3      |      |
|  | 0.00                           | 5.41   | 0.00   | 0.00   | 0.00   | 2.70  | 0.00   | 0.00   | 0.00   | 0.00    | 0.00   | 0.00   | 0.00   | 8.11   |      |
|  | 0.00                           | 66.67  | 0.00   | 0.00   | 0.00   | 33.33 | 0.00   | 0.00   | 0.00   | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   |      |
|  | 0.00                           | 50.00  | 0.00   | 0.00   | 0.00   | 50.00 | 0.00   | 0.00   | 0.00   | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   |      |
| Total                                      | 5                              | 4      | 1      | 3      | 3      | 2     | 9      | 2      | 1      | 1       | 2      | 1      | 3      | 37     |      |
|  | 13.51                          | 10.81  | 2.70   | 8.11   | 8.11   | 5.41  | 24.32  | 5.41   | 2.70   | 2.70    | 5.41   | 2.70   | 8.11   | 100.00 |      |

On this slide is an example of a frequency table. We've provided default variables of adverse reaction by (blood) product type, but you can modify using other variables.



# Frequency Table for Incidents



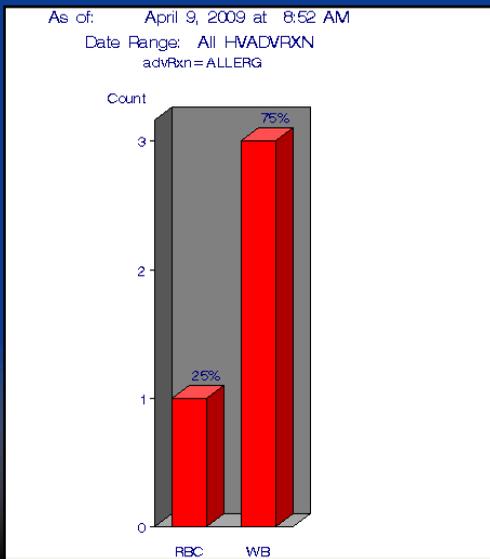
National Healthcare Safety Network  
Frequency Table for All Incident Data  
As of: May 28, 2009 at 8:17 AM  
Date Range: All HVINCID

| Frequency             | Table of whenOccurDesc by incidResultDesc                |  |                                   |                                 |   |       |
|-----------------------|--|--|-----------------------------------|---------------------------------|---|-------|
|                       | whenOccurDesc(When Occurred<br>Process-Code Description) | incidResultDesc(Incident Result-Description) |                                   |                                 |   | Total |
| 1 - No recovery, harm |  | 2 - No recovery, no harm                     | 3 - Near miss, unplanned recovery | 4 - Near miss, planned recovery |   |       |
|                       | AV - Available for issue                                 | 0  | 0                                 | 1                               | 1 | 2     |
|                       | PC - Product check-in                                    | 0  | 0                                 | 4                               | 3 | 7     |
|                       | PR - Product/test request                                | 0  | 0                                 | 2                               | 0 | 2     |
|                       | RP - Request for pick-up                                 | 0  | 1                                 | 0                               | 0 | 1     |
|                       | SC - Sample collection                                   | 2  | 1                                 | 7                               | 6 | 16    |
|                       | SE - Product selection                                   | 3  | 0                                 | 2                               | 1 | 6     |
|                       | SH - Sample handling                                     | 0  | 0                                 | 1                               | 2 | 3     |
|                       | SR - Sample receipt                                      | 0  | 0                                 | 0                               | 1 | 1     |
|                       | UI - Product issue                                       | 0  | 1                                 | 1                               | 0 | 2     |
|                       | UM - Product manipulation                                | 1  | 0                                 | 0                               | 0 | 1     |
|                       | US - Product storage                                     | 0  | 1                                 | 5                               | 4 | 10    |
|                       | UT - Product administration                              | 0  | 0                                 | 0                               | 1 | 1     |

This is an example of an incidents frequency table that has been modified to show frequency numbers without row and column percents.



# Bar Chart

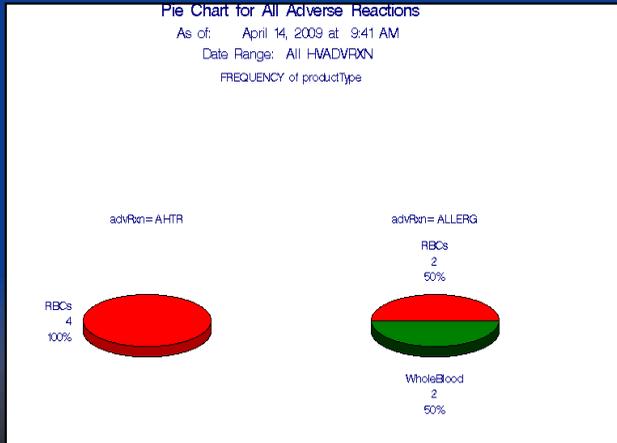


Default variables for bar chart are *adverse reaction* by *product type*

This is a bar chart for adverse reactions. The default variables are adverse reaction by product type. In this example we are showing the number of allergic reactions by blood product received.



# Pie Chart



Default variables for pie chart are *adverse reaction by product type*

Finally, here we have an example of the pie chart. The default variables are adverse reaction type and product type transfused with each pie showing a single reaction by percent of product type transfused. For example, for adverse reaction AHTR or Acute Hemolytic Transfusion Reaction, all blood products associated with the reaction were red blood cells or RBCs. For allergic reaction, 50% of reactions were in patients who received RBCs and 50% in patients who received whole blood.



# Modifying (Customizing) Output

- Variable names vs. variable labels
- Changing title of reports
- Modifying date variables
- Selecting a time period
- Using selection criteria
- Displaying different variables
- Changing sort order
- Modifying a pie chart
- Saving modified output
- Creating new reports
- Exporting data sets

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Now let's discuss ways to modify or customize your reports in order to change the way your data are displayed or change the data elements in your report. We'll discuss the difference between variable names and variable labels, how to change the title of your report, modifying date variables, selecting records from a particular time period, using selection criteria, displaying different variables, changing sort order, modifying a pie chart, saving modified output, creating new reports, and exporting data sets.



# Variable Names vs. Labels

- Output headers shown in two ways:

## Variable name

| patId   | ageAtHVAdvRxn | gender | location  | compCDCDesc           | expireDate | adminDateTime | advRxnDateTime | adminToAdvRxnHrs | linkedIncid1 | advRxn |
|---------|---------------|--------|-----------|-----------------------|------------|---------------|----------------|------------------|--------------|--------|
| DA6789  | 11            | F      | INSOPTSCA | WB - Whole blood      | 12/12/2009 | 02JAN09:21:02 | 06JAN09:12:06  | 87               |              | ALLERG |
| RP57923 | 48            | F      | INHONCSA  | RBC - Red blood cells | 01/15/2009 | 10JAN09:09:30 | 10JAN09:10:00  | 1                | 105          | AHTR   |
| HEM22   | 69            | M      | INLDWARD  | RBC - Red blood cells | 02/02/2010 | 02JAN09:03:33 | 20JAN09:13:15  | 442              |              | DSTR   |

## Variable label

| Patient ID | Age At Reaction | Gender | Location  | CDC Component Code Description | Expiration Date | Date/Time Unit Administered | Adverse Reaction Date/Time | Hours: Admin to Reaction | Linked Incident 1 | Adverse Reaction |
|------------|-----------------|--------|-----------|--------------------------------|-----------------|-----------------------------|----------------------------|--------------------------|-------------------|------------------|
| DA6789     | 11              | F      | INSOPTSCA | WB - Whole blood               | 12/12/2009      | 02JAN09:21:02               | 06JAN09:12:06              | 87                       |                   | ALLERG           |
| RP57923    | 48              | F      | INHONCSA  | RBC - Red blood cells          | 01/15/2009      | 10JAN09:09:30               | 10JAN09:10:00              | 1                        | 105               | AHTR             |
| HEM22      | 69              | M      | INLDWARD  | RBC - Red blood cells          | 02/02/2010      | 02JAN09:03:33               | 20JAN09:13:15              | 442                      |                   | DSTR             |

Output headers can be shown in one of two ways, either by variable name or variable label. Variable name is the name of the field as it is stored in the NHSN database. Variable label is more familiar and “user friendly.” It is what the user sees on the screen or on the form. The default for reports is the variable name.



# To Show Variable Labels

- Use Modify and check box “Use Variable Labels,” then run the report

**Line Listing**

**Analysis Data Set:** HVAdvrRxn

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**Modify Attributes of the Output:**

Last Modified On: **04/08/2009**

Output Type:

Output Name:

Output Title:

---

**Select output format:**

Output Format:

Use Variable Labels

**Output formats include:**  
HTML  
PDF  
CSV (comma separated value)  
RTF (rich text format)

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To show variable labels, go to the Modify screen and under “Select output format” you will see a check box next to, “Use Variable Labels.” Note that you can also select the file format for your output. Options include: HTML, PDF, CSV or comma separated value, and RTF or rich text format.



# Where to Find Variable Names

- Click on Modify
- Variables are listed alphabetically

**Other Options:**

Modify Variables To Display By Clicking: [Modify List](#)

Specify Sort Variables By Clicking: [Modify List](#)

[Print Variable Reference List](#)

| <u>Variable Name</u> | <u>Label</u>                   |
|----------------------|--------------------------------|
| abx_mean             | NHSN ABX Pooled Mean           |
| ABX_pct10            | NHSN ABX 10th Percentile       |
| ABX_pct25            | NHSN ABX 25th Percentile       |
| ABX_pct50            | NHSN ABX 50th Percentile       |
| ABX_pct75            | NHSN ABX 75th Percentile       |
| ABX_pct90            | NHSN ABX 90th Percentile       |
| ABXCount             | ABX Incident Count             |
| ABXFistulaCount      | ABX Count - Fistula            |
| ABXGraftCount        | ABX Count - Graft              |
| ABXPCLCount          | ABX Count - Perm Central Line  |
| ABXPortCount         | ABX Count - Port               |
| ABXRate              | ABX Rate                       |
| abxStandards         | Use ABX Susc Stds?             |
| abxStart             | In-unit IV Antimicrobial Start |
| ABXTCLCount          | ABX Count - Temp Central Line  |

If you are customizing your reports, it's possible that information from the form or screen is not shown on the standard or "canned" reports we have provided. In order to select or change the variables to be shown on a report, you need to know the name of the variable. In the Modify screen you will see a link titled: "Print Variable Reference List" on the right side under "Other Options." This contains an alphabetical list of all variables and variable names. The use of some variables is limited by output type.



# Changing Title of Reports

- Output Name can be changed
- Output Title can be changed

**NHSN Home** | Logged into Pleasant Valley Hospital (ID 10312) as RUBY.  
Facility Pleasant Valley Hospital (ID 10312) is following the BV component.

## Line Listing

Analysis Data Set: HVAdvRxn

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**Modify Attributes of the Output:**

Last Modified On: **04/08/2009**

Output Type:

Output Name:

Output Title:

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To change the title of your reports, go to the section on the Modify screen to “Modify Attributes of the Output.” You can change the Output Name or the Output Title by simply typing in a new name.



# Modifying Date Variables

- For any date variable you can select month, quarter, half-year, or year instead of specific dates. For example:
  - Month (February 1 – February 28)
    - Beginning: 02/2009
    - Ending: 02/2009
    - Can also span multiple months (for example, 02/2009 – 03/2009)
  - Quarter (January 1 – March 31)
    - Beginning: 2009Q1 (or, Q2, Q3, Q4)
    - Ending: 2009Q1
  - Half-year (January 1 – June 30)
    - Beginning: 2009H1 (or, H2)
    - Ending: 2009H1
  - Year (January 1 – December 31)
    - Beginning: 2009
    - Ending: 2009



Select the variable with the same time period (for example: YM = Year/Month)

Select a time period or Leave Blank for Cumulative Time Period:

|               |           |         |                   |
|---------------|-----------|---------|-------------------|
| Date Variable | Beginning | Ending  | Clear Time Period |
| advRxnDateYM  | 02/2009   | 02/2009 |                   |

Enter Date variable/Time period at the time you click the Run button

You can modify date variables in a number of ways using specific dates or time periods. For example, you can run a report for an entire month by selecting only the month and the year, run a quarterly report by selecting a year and specifying Q1, Q2, Q3, or Q4. Run a semi-annual report using H (for the first or 2nd half of year) or just specify the year for a yearly report. If you choose to run a report by time period, be sure to select the variable name that fits the time period.



# Selecting a Time Period

**Select output format:**

Output Format:

Use Variable Labels

---

**Select a time period or Leave Blank for Cumulative Time Period:**

Date Variable Beginning Ending

Enter Date variable/Time period at the time you click the Run button

**In this example we would get a line list of all adverse reactions reported in February 2009**

This slide shows an example of creating a report using date variables. Here you would get a report of all adverse reactions that occurred in the month of February, 2009. Note that entering month, day, year is another way of selecting records by month.



# Using Selection Criteria

| Operator | Means                          |
|----------|--------------------------------|
| =        | Equal to                       |
| >        | Greater than                   |
| >=       | Greater than or equal to       |
| <        | Less than                      |
| <=       | Less than or equal to          |
| ~=       | Not equal to                   |
| In       | In a set of defined values     |
| ~In      | Not in a set of defined values |
| Between  | Within a range of values       |

Specify an operator and value(s) for selection criteria:

| Variable | Operator | Value(s)   |
|----------|----------|------------|
| gender   | =        | F - Female |

Save Clear Close

Specify Other Selection Criteria:

[Show Criteria](#) [Column +](#) [Row +](#) [Clear Criteria](#)

|        |   |   |
|--------|---|---|
| gender | = | F |
|        |   |   |
|        |   |   |
|        |   |   |
|        |   |   |

Here we are selecting records for females only

As you gain experience modifying reports, you may want to refine your report further by using additional selection criteria. You can select records meeting certain criteria through the use of operators that are listed here. In this example we select only the records where gender = female.



# Using Selection Criteria

- Adverse reaction line list for 2/1/2009 2/28/2009
- Selected for gender = female

National Healthcare Safety Network  
Adverse Reactions in Females - February 2009  **Custom title**

As of: April 9, 2009 at 10:16 AM  
Date Range: HVADVRXN advRxnDate 02/01/2009 to 02/28/2009

| Adverse Reaction ID | Patient ID | Age At Reaction | Gender | Location  | CDC Component Code Description            | Expiration Date | Date/Time Unit Administered | Adverse Reaction Date/Time | Hours: Admin to Reaction | Linked Incident 1 | Adverse Reaction | De       |
|---------------------|------------|-----------------|--------|-----------|---|-----------------|-----------------------------|----------------------------|--------------------------|-------------------|------------------|----------|
| 111                 | DS1514     | 0               | F      | INMEDCC   | RBC - Red blood cells                     | 02/05/2009      | 02FEB09:10:00               | 02FEB09:12:12              | 2                        |                   | FNHTR            | De       |
| 112                 | DA1234     | 72              | F      | IMPLSWARD | IRRBC - Irradiated red blood cells        | 02/15/2009      | 02FEB09:13:13               | 02FEB09:13:40              | 0                        |                   | UNK              | D        |
| 115                 | A100       | 54              | F      | NORCATH   | LRRBC - Leukocyte reduced red blood cells | 02/10/2009      | 02FEB09:11:45               | 02FEB09:12:12              | 1                        |                   | TAD              | Na<br>se |

This is an example of the output we generated for February 2009 that shows all adverse reactions for females. Notice that it includes our custom title and variable labels.

# Selection Criteria

- Further details of how to use are contained in the **Online HELP Manual** within NHSN (click on top right of page)

The screenshot shows the NHSN Online Manual interface. At the top right, the 'Help' link is circled in red. The main content area displays a 'Welcome to the NHSN Online Manual!' message and a list of links, including 'Guidance for Handling MDRO and CDAD Module Infection Surveillance and Lab When Also Following Other NHSN Modules'. The left sidebar contains a tree view of topics, with 'How to Use Selection Criteria' highlighted in a red box. The date '(Updated 04/23/2009)' is visible below the main content.

tion

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- Search - Go

## Welcome to the NHSN Online Manual!

The NHSN Online Manual that guides the NHSN user through the definitions, reporting instructions, and capabilities relevant to the NHSN application. In an effort to ensure standardization of data collection and reporting procedures, considerable detail is provided throughout this help system.

- [to a positive blood culture?](#)
- [Guidance for Handling MDRO and CDAD Module Infection Surveillance and Lab When Also Following Other NHSN Modules](#)

(Updated 04/23/2009)

How to Use Selection Criteria

Further details and instructions for using selection criteria are contained in the NHSN Online Manual which you can access by clicking on Help in the upper right hand corner of the page.

# Displaying Different Variables



**1 Other Options:**  
 Modify Variables To Display By Clicking: **Modify List**

**2 Select Variables to include in Line Listing:**

**Available Variables**

- advRxnDesc
- advRxnOutcome
- advRxnToDeathDay
- bedsize
- birthWt
- birthWtCode
- birthWtCodeDesc
- bloodGroupUnit
- compCDC
- compCode
- deathDate
- deathDateYH
- deathDateYM
- deathDateYQ
- deathDateYr
- dob**
- ethnicity
- hemo

**Selected Variables**

- hemoAdvRxnID
- patID
- ageAtHVAAdvRxn**
- gender
- location
- comCDCDesc
- expireDate
- adminDateTime
- advRxnDateTime
- AdminToAdvRxnHrs
- linkedIncid1
- advRxn
- protoGradeDesc
- protoCritDesc
- protoRelationDesc
- advRxnOutcomeDesc

In this example we will add date of birth (dob) to our line list and remove age (at time of adverse reaction).



**3**

| Expiration Date | Date/Time Unit Administered | Adverse Reaction Date/Time | Hours: Admin to Reaction | Linked Incident 1 | Adverse Reaction | Grade Description | Case Definition Criteria Description | Relationship Description | Outcome Description               | Date of Birth |
|-----------------|-----------------------------|----------------------------|--------------------------|-------------------|------------------|-------------------|--------------------------------------|--------------------------|-----------------------------------|---------------|
| 12/12/2009      | 02JAN09: 21:02              | 06JAN09: 12:06             | 87                       |                   | ALLERG           | NS - Non-severe   | POS - Possible                       | POS - Possible           | ND - Not determined               | 08/05/1997    |
| 01/15/2009      | 10JAN09: 09:30              | 10JAN09: 10:00             | 1                        | 105               | AHTR             | S - Severe        | DEF - Definitive                     | DEF - Definite           | SEQ - Major or long-term sequelae | 10/22/1960    |

Here we have an example of how you would change the variables displayed on a report. First, under "Other Options" you click on "Modify List." On the right hand side of the screen you will see variables displayed that appear on the default report. On the left hand side are all the variables available for displaying on your report. Use the right arrow in the center to add variables to the report and the left arrow to remove variables from the report. In this example we added date of birth or "dob" to the report and removed age (at the time of the adverse reaction). Once you've made the change be sure to click on "save" at the bottom of the window.

# Changing Sort Order

**Select Sort Order in Line Listing:**

**Available Variables**

- advRxnDateYQ
- advRxnDateYr
- advRxnDesc
- advRxnOutcome
- advRxnOutcomeDesc
- advRxnToDeathDay
- ageAtHVAAdvRxn
- bedsize
- birthWt
- birthWtCode
- birthWtCodeDesc
- bloodGroupUnit
- compCDC
- compCDCDesc
- compCode
- deathDate
- deathDateYH
- deathDateYM
- deathDateYQ
- deathDateYr
- dob
- ethnicity
- ethnicityDesc
- expireDate

**Selected Variables**

- hemoAdvRxnID

**Select Sort Order in Line Listing:**

**Available Variables**

- adminDate
- adminDate Time
- adminDateYH
- adminDateYM
- adminDateYQ
- adminDateYr
- adminToAdvRxnDay
- adminToAdvRxnHrs
- adminToDeathDays
- advRxn
- advRxnDate
- advRxnDate Time
- advRxnDateYH
- advRxnDateYM
- advRxnDateYQ
- advRxnDateYr
- advRxnDesc
- advRxnOutcome
- advRxnOutcomeDesc
- advRxnToDeathDay
- ageAtHVAAdvRxn
- bedsize
- birthWt
- birthWtCode
- birthWtCodeDesc
- bloodGroupUnit
- compCDC
- compCDCDesc
- compCode
- deathDate
- deathDateYH
- deathDateYM
- deathDateYQ
- deathDateYr
- dob
- ethnicity
- ethnicityDesc
- expireDate

**Selected Variables**

- compCDCDesc

**In this example we will sort by CDC component code description instead of adverse reaction ID (hemoAdvRxnID)**

**DON'T FORGET!**

Save Reset Close

You can specify the sort order of your report by clicking on “Modify List” next to Specify Sort Variables under “Other Options.” The default sort variable is listed in the right hand column. Use the right arrow to add a sort variable and the left arrow to remove the sort variable as shown on this slide. Once you’ve made the change, don’t forget to save.



# Change Sort Order Output

Date Range: All HVADVRXN

| Adverse Reaction ID | Patient ID | Age At Reaction | Gender | Location  | CDC Component Code Description | Expiration Date | Date/Time Adminis | Hours:        |      |
|---------------------|------------|-----------------|--------|-----------|--------------------------------|-----------------|-------------------|---------------|------|
| 125                 | P00987     | 31              | M      | INNSWARD  | IRLRAPHRBC                     | 04/06/2010      | 08FEB09:03:33     |               |      |
| 138                 | RP56789    | 40              | M      | INBMTSCA  | IRLRAPHRBC                     | 01/20/2009      | 15JAN09:03:33     |               |      |
| 160                 | ET114A     | 65              | F      | INLTCHSP  | IRLRWDRBC                      | 04/15/2010      | 09MAR09:10:10     | 10MAR09:10:10 | 24   |
| 110                 | HEM22      | 69              | M      | INLDWARD  | IRWDRBC                        | 02/02/2010      | 02JAN09:03:33     | 20JAN09:13:15 | 442  |
| 111                 | DS1514     | 0               | F      | INMEDCC   | IRWDRBC                        | 02/05/2009      | 02FEB09:10:00     | 02FEB09:12:12 | 2    |
| 113                 | DA2345     | 12              | M      | PEDSOTSCA | IRWDRBC                        | 02/11/2010      | 01FEB08:16:16     | 12FEB09:12:12 | 9044 |
| 115                 | A100       | 64              | F      | INORCATH  | IRWDRBC                        | 02/10/2009      | 02FEB09:11:45     | 02FEB09:12:12 | 1    |
| 122                 | RP37923    | 33              | M      | INBMTSCA  | IRWDRBC                        | 01/20/2009      | 17JAN09:03:00     | 25JAN09:03:00 | 192  |

This list is sorted by CDC component code description



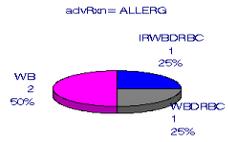
This slide shows an example of your output that has been modified to be sorted by CDC component code description



# Modifying a Pie Chart

**National Healthcare Safety Network**  
**Pie Chart for All Adverse Reactions**  
As of: April 14, 2009 at 9:43 AM  
Date Range: All HVADVRXN  
FREQUENCY of compCDCDesc

**In this example we modified our pie chart to show frequency of each adverse reaction type by component code description.**



**Other Options:**

Select Variables to include:

Chart Variable:  ← → Stratification Variable:  Page by:

Number of pies across a page =

Number of pies down a page =

Placement of the Percent =

Placement of the Slice Label =

Placement of the Value =

You have a few options to choose from when creating a pie chart. In the example shown here we modified our pie chart to show percent frequency of each adverse reaction type by component code description. Notice that you can also change the number of pies across the page, down a page, and specify where values are placed.



# Saving Modified Output

**Modify Attributes of the Output:**

Last Modified On: **04/21/2009**

Output Type:

**Output Name:**

Output Title:

**1. Change Output Name**

**Other Options:**

Modify Variables To Display By Clicking: [Modify List](#)

Specify Sort Variables By Clicking: [Modify List](#)

Select Page by variable:

**2. Click on "Save As"**

Expand All Collapse All

Hemovigilance Module

- HV Adverse Reaction Data
  - CDC Defined Output
    - Line Listing - All Adverse Reaction Data
    - Frequency Table - All Adverse Reaction Data
    - Bar Chart - All Adverse Reaction Data
    - Pie Chart - All Adverse Reaction Data
  - Custom Output
    - February Adverse Reactions**
    - All Monthly Adverse Reactions - Males

**3. Report will appear under Custom Output**

Once you have modified your report you may want to save the new format as an additional output option. Change the output name, click on "Save As," and now it will appear under your Custom Output option.



# Additional Tips about Modified Output

Check this box if you will be running the same report format for any time period (for example, monthly)



Select a time period or Leave Blank for Cumulative Time Period:

Date Variable Beginning Ending Clear Time Period

Enter Date variable/Time period at the time you click the Run button

Other Options: Print Variables

Modify Variables To Display By Clicking: [Modify List](#)

Specify Sort Variables By Clicking: [Modify List](#)

Select Page by variable:

Run Save Save As Reset Back Publish Export Output Data Set

Click "Publish" if you want to share this custom output with other users in your facility

If you want to be queried for the time period at the moment when you run a particular report (for example, if you run the same report once a month, every month), check the box to, "Enter Date variable/Time period at the time you click the Run button." Click on the "Publish" button if you want to make your custom output available to all NHSN users with analysis rights in your facility.



# Documentation Needed to Create Custom Output in Hemovigilance

- Variable names (shown previously)
- Blood product mapping list
- Pathogen code list



Documentation needed if you want to create custom output in Hemovigilance includes the variable name list that was shown previously, the blood product mapping list, and the pathogen code list.



# Blood Product Mapping for Reports and Analysis



- Two product code systems: Codabar and ISBT-128
- Combines multiple codes based on blood product
- Variable:
  - compCDCdesc
    - Categories of interest created by Hemovigilance Working Group
    - Monthly denominator form has same categories

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As has been discussed in other Hemovigilance training sets, there are two blood product code lists supported in NHSN: ISBT-128 and Codabar. To facilitate analysis of adverse events by blood product, the codes have been mapped to several primary categories of blood product based on feedback from Hemovigilance Working Group members and are called by variable name: compCDCdesc. The same categories are used for the Hemovigilance Monthly Denominator form.



# Blood Product Codes



## Codabar (being phased out)

|       |  |         |
|-------|--|---------|
| 02461 | CPDA-1 WHOLE BLOOD LEUKOCYTES REDUCED <sup>1</sup> IRRADIATED LOW VOLUME   | WB      |
| 02465 | CPDA-1 WHOLE BLOOD LEUKOCYTES REDUCED <sup>1</sup> IRRADIATED (250 ml)   | WB      |
| 02480 | CPDZ WHOLE BLOOD LEUKOCYTES REDUCED <sup>1</sup> IRRADIATED  | WB      |
| 03311 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED (ACDA anticoagulant) (by pheresis)(for second bag of a double red blood cell pheresis) | LRRBC   |
| 03320 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED IRRADIATED (ACDA anticoagulant) (by pheresis)  | IRLRRBC |
| 03321 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED DIVIDED (ACDA anticoagulant)(by pheresis)(Part A or 1)                                 | LRRBC   |
| 03322 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED DIVIDED(ACDA anticoagulant)(by pheresis)(Part B or 2)                                  | LRRBC   |
| 03323 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED DIVIDED(ACDA anticoagulant)(by pheresis)(Part C or 3)                                  | LRRBC   |
| 03324 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED DIVIDED(ACDA anticoagulant)(by pheresis)(Part D or 4)                                  | LRRBC   |
| 03325 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED DIVIDED(ACDA anticoagulant)(by pheresis)(Part E or 5)                                  | LRRBC   |
| 03326 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED DIVIDED(ACDA anticoagulant)(by pheresis)(Part F or 6)                                  | LRRBC   |
| 03327 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED DIVIDED(ACDA anticoagulant)(by pheresis)(Part G or 7)                                  | LRRBC   |
| 03328 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED DIVIDED(ACDA anticoagulant)(by pheresis)(Part H or 8)                                  | LRRBC   |
| 03329 | AS-1 RED BLOOD CELLS LEUKOCYTES REDUCED IRRADIATED(ACDA anticoagulant)(by pheresis)(for second bag of a double red blood       | LRRBC   |

For surveillance we are only interested in this part of the product code

## ISBT-128 (new standard)

|       |  |         |
|-------|--|---------|
| E0150 | RED BLOOD CELLS CPD/450mL/refg                               | RBC     |
| E0154 | RED BLOOD CELLS CPD/450mL/refg Open                          | RBC     |
| E0155 | RED BLOOD CELLS CPD/450mL/refg Open Irradiated               | IRRBBC  |
| E0156 | RED BLOOD CELLS CPD/450mL/refg Open Irradiated ResLeu:<5log6 | IRLRRBC |
| E0157 | RED BLOOD CELLS CPD/450mL/refg Open Irradiated Plasma added  | IRRBBC  |
| E0158 | RED BLOOD CELLS CPD/450mL/refg Open ResLeu:<5log6            | LRRBC   |
| E0159 | RED BLOOD CELLS CPD/450mL/refg Open Albumin added            | RBC     |
| E0160 | RED BLOOD CELLS CPD/450mL/refg Open Plasma added             | RBC     |
| E0161 | RED BLOOD CELLS CPD/450mL/refg Irradiated                    | IRRBBC  |
| E0162 | RED BLOOD CELLS CPD/450mL/refg Irradiated ResLeu:<5log6      | IRLRRBC |

NHSN mapping codes

To illustrate how the mapping works this slide shows a snapshot of a section from each of the two code lists. The NHSN mapping codes are shown in the right hand column.



# Blood Product Mapping for Analysis



|    | <b>Product Description</b>                                       | <b>compCDCdesc</b> | <b>prodTYPE</b> |
|----|--|--------------------|-----------------|
| 4  | Apheresis platelets  | APHPLAT            | Platelets       |
| 5  | Irradiated apheresis platelets                                   | IRAPHPLAT          | Platelets       |
| 6  | Leukocyte reduced apheresis platelets                            | LRAPHPLAT          | Platelets       |
| 7  | Irradiated leukocyte reduced apheresis platelets                 | IRLRAPHPLAT        | Platelets       |
| 8  | Whole blood derived platelets                                    | WBDPLAT            | Platelets       |
| 9  | Irradiated whole blood derived platelets                         | IRWBDPLAT          | Platelets       |
| 10 | Leukocyte reduced whole blood derived platelets                  | LRWBDPLAT          | Platelets       |
| 11 | Irradiated leukocyte reduced whole blood derived platelets       | IRLRWBDPLAT        | Platelets       |
| 12 | Whole blood derived red blood cells                              | WBDRBC             | RBCs            |
| 13 | Irradiated whole blood derived red blood cells                   | IRWBDRBC           | RBCs            |
| 14 | Leukocyte reduced whole blood derived red blood cells            | LRWBDRBC           | RBCs            |
| 15 | Irradiated leukocyte reduced whole blood derived red blood cells | IRLRWBDRBC         | RBCs            |
| 16 | Apheresis red blood cells  | APHRBC             | RBCs            |
| 17 | Irradiated apheresis red blood cells                             | IRAPHRBC           | RBCs            |
| 18 | Leukocyte reduced apheresis red blood cells                      | LRAPHRBC           | RBCs            |
| 19 | Irradiated leukocyte reduced apheresis red blood cells           | IRLRAPHRBC         | RBCs            |
| 20 | Whole blood derived plasma                                       | WBDPLASMA          | Plasma          |
| 21 | Apheresis plasma   | APHPLASMA          | Plasma          |
| 22 | Cryoprecipitate  | CRYO               | Cryo            |
| 23 | Granulocytes   | GRAN               | Other           |
| 24 | Lymphocytes  | LYMPH              | Other           |
| 25 | Whole blood  | WB                 | WholeBlood      |
| 26 | Serum  | SERUM              | Serum           |
| 27 | Mononuclear cells  | MNC                | Other           |
| 28 | Leukocytes   | LEUK               | Other           |

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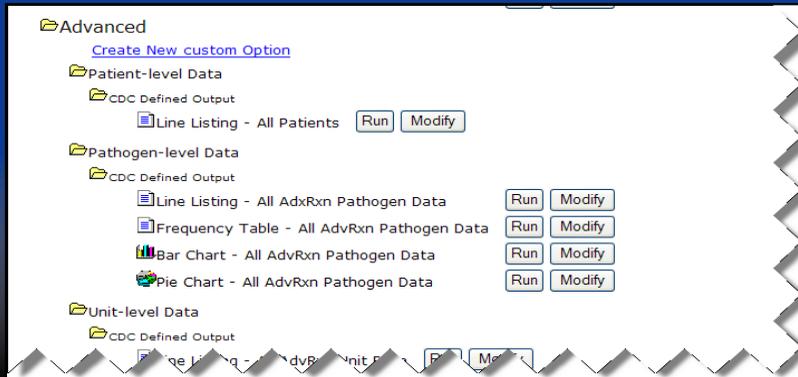
Further blood product mapping for only the primary blood product types is shown on this list. While compCDCdesc provides detailed mapping of products, an additional variable, prodType, has been created that lists a broader category of blood product (for example, platelets, RBCs, plasma, etc.).



# Advanced Options



- Pathogen data for any reported infections
- Unit-level – Component details from Adverse Reaction forms



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There are also some additional output options included in the “Advanced” section. Because pathogen information for infections and blood component details contain more information than can be comfortably viewed in your standard adverse reaction line list, the information is available separately.



# Unit-level Data (Blood Component List)



- Too much information to include on the Adverse Reaction line list

Healthcare Safety Network  
for All Adverse Reaction Unit Data  
at 9:12 AM  
VBRXCOMP

| patID   | adRxn  | hemoCode | implicated | compCode | compCDCDesc   | productType | numUnits | unitNumber | bloodGroupUnit | adminDateTime | adminTo |
|---------|--------|----------|------------|----------|---|-------------|----------|------------|----------------|---------------|---------|
| DA6789  | ALLERG | CODABAR  | N          | 04900    | WDBRBC - Whole blood derived red blood cells              | RBCs        | 2        |            | A-             | 02JAN09:21:02 |         |
| RP57923 | AHTR   | CODABAR  | Y          | 03323    | LRAPHRBC - Leukocyte reduced apheresis red blood cells    | RBCs        | 1        | 123456778  | B+             | 10JAN09:09:30 |         |
| HEM22   | DSTR   | ISBT128  | N          | E0155    | IRWDBRBC - Irradiated whole blood derived red blood cells | RBCs        | 2        |            | O+             | 02JAN09:03:33 |         |
| DS1514  | FNHTR  | ISBT128  | N          | E0155    | IRWDBRBC - Irradiated whole blood derived red blood cells | RBCs        | 1        |            | A+             | 02FEB09:10:00 |         |
| DA1234  | UNK    | ISBT128  | Y          | E0176    | WDBRBC - Whole blood derived red blood cells              | RBCs        | 1        |            | AB-            | 02FEB09:13:13 |         |

This slide provides an example of unit-level data for blood components transfused per patient record.



# Pathogen Data for Infections



## ■ Under Advanced Options

National Healthcare Safety Network  
Line Listing for All Adverse Reaction Pathogen Data  
As of: April 21, 2009 at 8:55 AM  
Date Range: All HVADVRXNCOMP

| hemoAdvRxnID | patID    | location   | advRxn | hemoCode | compCode | implicated | infPath1 | infPath2 | infPath3 | unitPath1 | unitPath2 | unitPath3 | rcpntPath1 | rcpntPath2 | rcpntPath3 |
|--------------|----------|------------|--------|----------|----------|------------|----------|----------|----------|-----------|-----------|-----------|------------|------------|------------|
| 130          | RP2134   | INBURNCC   | INF    | CODABAR  | 03323    | Y          | ACBA     | BABMI    | SA       | ACBA      | BABMI     | SA        | ACBA       | BABMI      | SA         |
| 137          | RP32123  | INCARDCC   | INF    | CODABAR  | 04900    | Y          | ACBA     |          |          | ACBA      |           |           | ACBA       |            |            |
| 176          | RP3245   | INCARDCC   | INF    | CODABAR  | 03311    | Y          | ACBA     |          |          | ACBA      |           |           | ACBA       |            |            |
| 140          | DS1314   | INOR       | INF    | CODABAR  | 03311    | Y          | CT       |          |          |           |           |           |            |            |            |
| 140          | DS1314   | INOR       | INF    | CODABAR  | 03311    | N          | CT       |          |          |           |           |           |            |            |            |
| 121          | RP579232 | INMEDCC    | INF    | CODABAR  | 04900    | N          | HEPC     | CMV      | WNV      | WNV       |           |           | WNV        |            |            |
| 121          | RP579232 | INMEDCC    | INF    | CODABAR  | 04900    | Y          | HEPC     | CMV      | WNV      | WNV       |           |           | WNV        |            |            |
| 123          | RP379923 | INBURNUNIT | INF    | CODABAR  | 03323    | Y          | HEPC     | GAS      |          | HEPC      | STRCR     |           | HEPC       | STRVG      |            |
| 123          | RP379923 | INBURNUNIT | INF    | CODABAR  | 03323    | N          | HEPC     | GAS      |          | HEPC      | STRCR     |           | HEPC       | STRVG      |            |
| 120          | RP2379   | INBMTSCA   | INF    | CODABAR  | 04900    | Y          | KO       | STALU    | ACS      | ACS       |           |           | ACHSP      |            |            |
| 120          | RP2379   | INBMTSCA   | INF    | CODABAR  | 03311    | N          | KO       | STALU    | ACS      | ACS       |           |           | ACHSP      |            |            |
| 120          | RP2379   | INBMTSCA   | INF    | CODABAR  | 03311    | N          | KO       | STALU    | ACS      | ACS       |           |           | ACHSP      |            |            |

The Pathogen Data for Infections list shows results of pathogen testing in donor, unit, and recipient as entered on the Adverse Reaction form for transfusion-associated infections.



# Pathogen Code List

Code

|                                |       |
|--------------------------------|-------|
| ACBA - Acinetobacter baumannii | ACBA  |
| ADV - Adenovirus               | ADV   |
| BF - Bacteroides fragilis      | BF    |
| BURCE - Burkholderia cepacia   | BURCE |
| CA - Candida albicans          | CA    |
| CD - Clostridium difficile     | CD    |
| CF - Citrobacter freundii      | CF    |
| CID - Citrobacter diversus     | CID   |
| CMV - Cytomegalovirus          | CMV   |
| CNS - Staphylococcus coagulase | CNS   |
| CP - Candida parapsilosis      | CP    |
| CT - Candida tropicalis        | CT    |
| EA - Enterobacter aerogenes    | EA    |
| EC - Escherichia coli          | EC    |
| ENC - Enterobacter cloacae     | ENC   |
| ENTFM - Enterococcus faecium   | ENTFM |
| ENTFS - Enterococcus faecalis  | ENTFS |
| ENTRO - Enterovirus            | ENTRO |
| FLUA - Influenzae A            | FLUA  |
| FLUB - Influenzae B            | FLUB  |
| GAS - Streptococcus group A    | GAS   |



**Short pathogen list occurs at top of drop down list in Adverse Reaction screen if reaction = infection. Long list includes every known pathogen. You will become familiar with the codes most often used.**

The pathogen code list in NHSN is extensive. To reduce the burden of scrolling through a long list, we have what we call the, “short list.” This list appears at the top of the pathogen drop down box and, in Hemovigilance, contains pathogens that are tested for in blood donors or are more commonly seen in transfusion-associated infections. What you see on the drop down list is the pathogen code followed by the more detailed description.



# Create Output Sets

- Use when you have multiple reports to run at standard intervals (for example, monthly)



Use the “Create Output Set” option when you have multiple reports to run at standard intervals.



# Create Output Sets

- Select the reports you need

Logged into Pleasant Valley Hospital (ID 10312) as RUBY.  
Facility Pleasant Valley Hospital (ID 10312) is following the BV component.

### Available Output Options

| Select                              | Output Name   | Analysis Data Set | Date Created |
|-------------------------------------|---|-------------------|--------------|
| <input type="checkbox"/>            | <a href="#">Line Listing - All AdvRxn Pathogen Data</a>     | HVAdvRxnComp      | 04/13/2009   |
| <input type="checkbox"/>            | <a href="#">Frequency Table - All AdvRxn Pathogen Data</a>  | HVAdvRxnComp      | 04/13/2009   |
| <input type="checkbox"/>            | <a href="#">Bar Chart - All AdvRxn Pathogen Data</a>        | HVAdvRxnComp      | 04/13/2009   |
| <input type="checkbox"/>            | <a href="#">Pie Chart - All AdvRxn Pathogen Data</a>        | HVAdvRxnComp      | 04/13/2009   |
| <input type="checkbox"/>            | <a href="#">Line Listing - All Patients</a>                 | BVPatients        | 04/06/2009   |
| <input type="checkbox"/>            | <a href="#">Line Listing - All AdvRxn Unit Data</a>         | HVAdvRxnComp      | 04/13/2009   |
| <input checked="" type="checkbox"/> | <a href="#">Line Listing - All Incident Unit Data</a>       | HVIncidComp       | 04/13/2009   |
| <input checked="" type="checkbox"/> | <a href="#">Line Listing - All Adverse Reaction Data</a>    | HVAdvRxn          | 04/06/2009   |
| <input type="checkbox"/>            | <a href="#">Frequency Table - All Adverse Reaction Data</a> | HVAdvRxn          | 04/06/2009   |
| <input type="checkbox"/>            | <a href="#">Bar Chart - All Adverse Reaction Data</a>       | HVAdvRxn          | 04/06/2009   |
| <input type="checkbox"/>            | <a href="#">Pie Chart - All Adverse Reaction Data</a>       | HVAdvRxn          | 04/06/2009   |

When you select “Create New Output Set,” you will be shown a list of all the reports (standard and custom) that are available to you. Select the ones you want by checking the left hand box.



# Create Output Sets

Facility Pleasant Valley Hospital (ID 10312) is following the EV component.

## Output Set

Mandatory fields marked with \*

Output Set Name\*:  ←

Output Set Title:

**Output Options\***

Output Name

|  |                                   |                                     |                                       |                                       |
|--|-----------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|
| Line Listing - All Incident Unit Data    | <input type="button" value="Up"/> | <input type="button" value="Down"/> | <input type="button" value="Modify"/> | <input type="button" value="Delete"/> |
| Line Listing - All Adverse Reaction Data | <input type="button" value="Up"/> | <input type="button" value="Down"/> | <input type="button" value="Modify"/> | <input type="button" value="Delete"/> |

My Custom Output

Output Sets

[Create New Output Set](#)

←

Here's an example of an output set that has been created. Once a month a line listing of Incident Unit data and a line listing of Adverse Reaction data can be run at one time by selecting the "Run" button.



# Export Data Sets



- Option under “Modify,” button is at top of page
- Use to display and manipulate your data outside of NHSN
- Exports the entire dataset without modifications.

The screenshot shows the NHSN interface. The top navigation bar includes 'NHSN Home', 'Reporting Plan', 'Patient', 'Incident', 'Reaction', 'Summary Data', 'Analysis', 'Surveys', 'Users', 'Facility', 'Group', and 'Log Out'. The main content area is titled 'Line Listing' and shows 'Analysis Data Set: HVAdvRxn' with an 'Export Analysis Data Set' button. Below this, there are options to 'Modify Attributes of the Output', including 'Last Modified On: 04/21/2009', 'Output Type: Line Listing', and 'Output Name: Line Listing - All Adverse Reaction Data'. A red oval highlights the 'Analysis Data Set' and the 'Export Analysis Data Set' button.

The second screenshot shows the 'Export Output Options' screen. It prompts the user to 'Exporting data set HVAdvRxn: Select data export format' and has a dropdown menu set to 'Microsoft Access table (\*.mdb)'. A blue arrow points from the 'Export Analysis Data Set' button in the previous screenshot to this dropdown menu. A yellow box on the right lists other export formats available: Microsoft Access 97 table (\*.mdb), Delimited file (comma-separated values) (\*.csv), Delimited file (tab-delimited values) (\*.txt), Excel spreadsheet (\*.xls), Excel 5.0 or 7.0 (95) spreadsheet (\*.xls), Dbase 5.0 IV, III+, III, and II files (.dbf), and SAS for windows V7/8/9 (\*.sas7bdat).

Use “Export Data Sets” if you want to manipulate your NHSN data using other software outside of NHSN. This is the first option you see on the “Modify” screen. There are two types of datasets that can be exported. These are analysis data sets. There are also output data sets, i.e. just contain data of the output option as seen on the previous slides.



# Getting Started



- Generate data sets
- Try modifying reports and charts using different variables as shown in this session
- You can't "hurt" anything by "playing" with the options available.

We've covered a lot of material in this training, but getting started in analysis is easy. The first thing you should do is generate your data sets. Try modifying reports and charts using different variables as we have shown in this session. While you may change the appearance of reports in the Analysis section of NHSN, previously entered data in patient, adverse reaction, and incident records remain unchanged. In other words, you can't hurt anything by playing with the report options.



## What's Next?



- Additional analysis features (including the ability to calculate rates) will be coming soon
- User feedback on additional reports and analysis features that would be useful is always welcome!

As more data are input into the Hemovigilance Module, additional features, such as the ability to calculate rates, will be provided. Feedback on additional report and analysis features that would be of benefit to you and your facility is strongly encouraged to give comments!



## Questions or Need Help? Contact User Support



If you have any questions or problems NHSN User Support is here to help. Just send an e-mail to [NHSN@cdc.gov](mailto:NHSN@cdc.gov). Thank you!