

Release 8.6 scheduled January 7, 2017

# **NHSN 8.6 RELEASE**

# NHSN User Interface Upgrade



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



**NHSN**  
National Healthcare  
Safety Network



NHSN - National Healthcare Safety Network



**PREETI**  
Dialysis Group Example

**NHSN Home**

Reporting Plan ▶

Event ▶

Summary Data ▶

Surveys ▶

Analysis ▶

Users ▶

Group ▶

Tools ▶

Logout



## NHSN Dialysis Component Home Page

**Assurance of Confidentiality:** The voluntarily provided information obtained in this surveillance system that will be held in strict confidence, will be used only for the purposes for which it was collected, and will not be disclosed or released without the consent of the individual, or the institution in accordance with Section 262 of the Public Health Service Act (42 USC 242b, 242k, and 242m(d)).



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Welcome **PREETI**  
All Facilities Selected.

NHSN Home

My Info

Contact us

Help

Log Out

# Form Changes

## □ Dialysis Event

- “If new antimicrobial start, was a blood sample collected for culture?”
  - Yes/No

**Event Details** [Help](#)

Specify Event (check one or more) \*:

IV antimicrobial start

Was vancomycin the antimicrobial used for this start?:

Was this a new outpatient start or a continuation of an inpatient course? \*:

If new antimicrobial start, was a blood sample collected for culture?:

Positive blood culture

Suspected source of positive blood culture:

Pus, redness, or increased swelling at vascular access site

Check the access site(s) with pus, redness, or increased swelling:

Fistula  Graft  Tunneled Central Line  Nontunneled Central Line  Other vascular access device

## □ Annual Survey

- “What form of saline flush is most commonly used?”

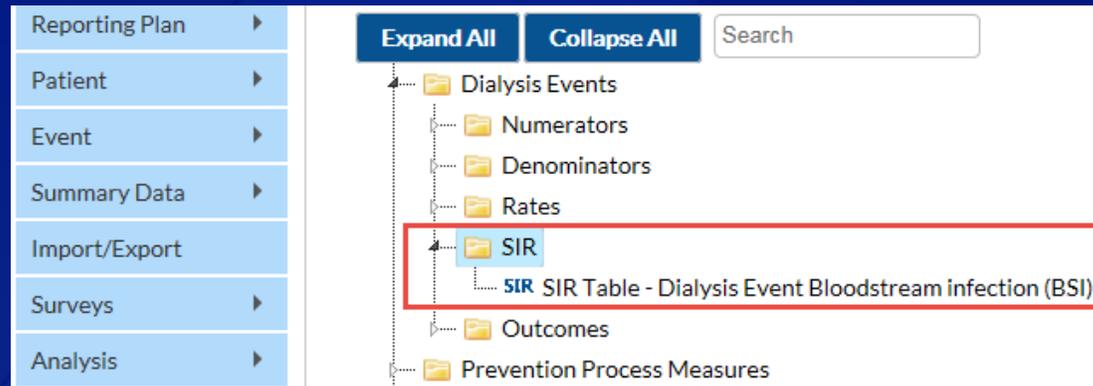
37. What form of **saline flush** is most commonly used? (choose one) \*\*

38.  antibiotic use? \*\*

b. Formulary restrictions? \*\*

# Analysis and Data Quality

- **New Facility-Level Standardized Infection Ratio (SIR) report**
  - Available to both facilities and groups



- SIR report will display facility's observed BSI rate, patient-months, predicted number of BSI, SIR, and 95% Confidence Interval for SIR

# Analysis and Data Quality

## ❑ 21 Day Rule Hard Stop - impacts manual entry and CDA

- Manual entry error message:

**Error** [X]

One or more dialysis events were reported for this patient less than 21 days from this event date. Please review the events to determine which should be reported to NHSN. To learn about the 21 day rule, refer to the Dialysis Event Protocol.

Click the Event link to view the event(s) (current data will be lost). Click OK to return to the current event.

[Help](#)

Event Number	Event Type	Event Date
<a href="#">46301</a>	Blood Culture	04/13/2016

OK

- CDA error message:

Reason for failure:		
2.1		Error in Data registration : DS_74.zip/481_2.xml. Error message: Error in adding/updating record of DS_74.zip/481_2.xml Duplicate import records or violation of 21 day rule.
2.2		Error in Data registration : DS_74.zip/481_1.xml. Error message: Error in adding/updating record of DS_74.zip/481_1.xml Duplicate import records or violation of 21 day rule.

# Analysis and Data Quality

## ❑ New Facility-Level Unusual Susceptibility Profiles

- Users receive alert when entering an event that fits an Unusual Susceptibility Profile
- Line listing report to view facilities with pending alerts available to groups

**USP Alert**

**YOU HAVE ENTERED A VRSA**

-Click here for more information on this alert: [details](#)

-Review data for errors.

-If data entry is correct, contact laboratory to confirm results.

-If confirmed by your laboratory, save isolate and notify public health in your area.

For additional information see: [cdc.gov/hai](http://cdc.gov/hai)

If confirmed as a correct result, press CONFIRM

If results were entered in error, press CANCEL to return to the data entry screen and make corrections.

To exit without confirming or making corrections, press OK to save the record and generate an alert.

**CONFIRM** **CANCEL** **OK**

**Expand All** **Collapse All**

- 📁 Dialysis Events
- 📁 Prevention Process Measures
- 📁 Central Line Insertion Practices
- 📁 Patient Vaccination
- 📁 Data Quality
- 📁 CMS Reports
- 📁 Advanced
  - 📁 Patient-level Data
  - 📁 Event-level Data
  - 📁 Summary-level Data
  - 📁 Plan Data
  - 📁 Pathogen-level Data
    - 📄 Line Listing - Antibigram
    - 📄 **Line Listing - Unusual Susceptibility Profiles**
  - 📁 Facility-level Data
  - 📁 Dialysis Event Data (pre-June 2011)
- 📁 My Custom Reports



Unusual Susceptibility Profiles	Profile Codes	Definition of Unusual Susceptibility Profiles	Alert Message Type
Carbapenem-resistant Enterobacteriaceae	CRE	Carbapenem (imipenem, meropenem, doripenem, ertapenem) is Resistant(R)	CR
Highly Drug-Resistant Enterobacteriaceae	HDR_E	Defined as highly drug-resistant if all <b>five</b> drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R): <ul style="list-style-type: none"> <li>Extended spectrum cephalosporin (cefepime, cefotaxime, ceftriaxone, ceftazidime)</li> <li>Fluoroquinolones (ciprofloxacin, levofloxacin, moxifloxacin)</li> <li>Aminoglycosides (amikacin, gentamicin, tobramycin)</li> <li>Carbapenems (imipenem, meropenem, doripenem, ertapenem)</li> <li>Piperacillin/tazobactam</li> </ul>	Other
Colistin/Polymyxin B-resistant <i>Pseudomonas aeruginosa</i>	PR_PA	Colistin/polymyxin B is Intermediate(I) or Resistant(R)	Other
Carbapenem-intermediate or -resistant <i>Pseudomonas aeruginosa</i>	CR_PA	Carbapenem (imipenem, meropenem, doripenem) is Intermediate(I) or Resistant(R)	CR
Highly Drug-Resistant <i>Pseudomonas aeruginosa</i>	HDR_PA	Defined as highly drug-resistant if all <b>five</b> drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R): <ul style="list-style-type: none"> <li>Extended spectrum cephalosporin (cefepime, ceftazidime),</li> <li>Fluoroquinolones (ciprofloxacin, levofloxacin)</li> <li>Aminoglycosides (amikacin, gentamicin, tobramycin)</li> <li>Carbapenems (imipenem, meropenem, doripenem)</li> <li>Piperacillin or piperacillin/tazobactam</li> </ul>	Other
Colistin/Polymyxin B-resistant <i>Acinetobacter baumannii</i>	PR_ACBA	Colistin/polymyxin B is Resistant(R)	Other
Carbapenem-intermediate or -resistant <i>Acinetobacter baumannii</i>	CR_ACBA	Carbapenem (imipenem, meropenem, doripenem) is Intermediate(I) or Resistant(R)	CR
Highly Drug-Resistant <i>Acinetobacter baumannii</i>	HDR_ACBA	Defined as highly drug-resistant if all <b>six</b> drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R): <ul style="list-style-type: none"> <li>Extended spectrum cephalosporin (cefepime, ceftazidime),</li> <li>Fluoroquinolones (ciprofloxacin, levofloxacin)</li> <li>Aminoglycosides (amikacin, gentamicin, tobramycin)</li> <li>Carbapenems (imipenem, meropenem, doripenem)</li> <li>Piperacillin or piperacillin/tazobactam</li> <li>Ampicillin/sulbactam</li> </ul>	Other
Daptomycin non-susceptible and Linezolid-resistant <i>Enterococcus</i> spp.	HDR_ENTSP	Daptomycin is Non Susceptible(NS) AND Linezolid is Resistant(R)	Other
Vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA)	VR_SA	Vancomycin is Resistant(R)	VRSA
Daptomycin non-susceptible and Linezolid-resistant and Vancomycin-intermediate <i>Staphylococcus aureus</i>	HDR_SA	Daptomycin is Non Susceptible(NS) AND Linezolid is Resistant(R) AND Vancomycin is Intermediate(I)	Other
Vancomycin-resistant <i>Staphylococcus</i> , coagulase negative (VRSE)	VR_CSN	Vancomycin is Resistant(R)	Other

## Analysis and Data Quality

- ❑ New alert when 'Other vascular access device' checked and 'Catheter-graft hybrid' is No
- ❑ Warning when facility enters duplicate CCN

The screenshot shows a form with several input fields and checkboxes. A warning dialog box is overlaid on the form. The form fields include:

- Fistula
- Buttonhole?
- Graft
- Tunneled Central Line
- Nontunneled Central Line
- Other vascular access device
- Is this a catheter-graft hybrid? \*
- Vascular access comment:
- Patient's dialyzer is reused? \* :
- Event Details [Help](#)
- Specify Event (check one or more) \*:
  - IV antimicrobial start
  - Was vancomycin the antimicrobial used for th
  - Was this a new outpatient start or a continuation of an inpatient course?

The warning dialog box contains the following text:

**Warning**

You have selected "Other vascular access device" and indicated this is not a catheter-graft hybrid. Please make sure the access type you are reporting is a vascular access type and is correctly categorized. **Do not report peritoneal dialysis (PD) catheters in this field.** Some access devices, (e.g., femoral catheters) should fall under the central line category. Check the protocol or discuss with your team to determine the correct classification.

The screenshot shows a table with a warning dialog box overlaid. The table has columns for 'Delete', a checkbox, and 'Add Row'. The warning dialog box contains the following text:

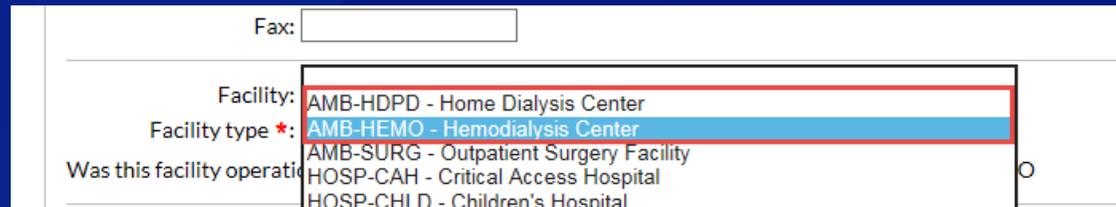
**Warning**

The CCN already exists for another facility enrolled in NHSN. Please verify that the CCN you entered is correct. If the CCN is correct, click OK and contact the NHSN help desk ([nhsn@cdc.gov](mailto:nhsn@cdc.gov)) for further assistance. Otherwise, click CANCEL and enter a different CCN. Click here for more information on this warning: [details](#).

## NHSN Facilities

### □ New facility type for home/peritoneal dialysis (AMB-HDPD)

- Facilities already enrolled automatically migrated over to new facility type in NHSN
- New facilities can select facility type upon enrollment
- Facility Administrators can log in to facilities to change facility type in the 'Facility Info' screen



The screenshot shows a web form with a 'Fax:' field at the top. Below it, there is a 'Facility:' label and a dropdown menu. The dropdown menu is open, showing several options: 'AMB-HDPD - Home Dialysis Center', 'AMB-HEMO - Hemodialysis Center', 'AMB-SURG - Outpatient Surgery Facility', 'HOSP-CAH - Critical Access Hospital', and 'HOSP-CHILD - Children's Hospital'. The 'AMB-HEMO - Hemodialysis Center' option is highlighted in blue. To the left of the dropdown, there is a 'Facility type \*:' label. Below the dropdown, there is a 'Was this facility operational?' label and a radio button.

### □ Home facilities and peritoneal facilities must fill out an annual survey in Healthcare Personnel Safety (HPS) Component

- If a 2017 annual survey has not been entered, facilities will be prevented from creating Monthly Reporting Plans for the 2017/2018 flu season

## Resolution of System Defects

- ❑ **New loophole to create duplicate events involving patient ID**
  - After release, this loophole will be closed
- ❑ **Rate Table – IV Antimicrobial Start not running when grouped by summaryYM**
  - After release, the report will run when summaryYM is selected as the group by variable
- ❑ **All rate tables not running as CSV when grouped by summaryYM**
  - After release, all rate tables will run when the output option is csv and summaryYM is selected as a group by variable

# **NHSN RELEASE 8.6 ANALYSIS UPDATES**

# NHSN User Interface Upgrade

## □ New Analysis Modify screen

- Tabs for each section
- Displays descriptive variable names (can toggle on/off)
- New data filters tool

Modify "Rate Table - Bloodstream Infection Data"

Show descriptive variable names (Print List) Analysis Data Set: PBC\_Rates Type: Rate Table Data Set Generated On: 11/02/2016 15:53:00

Title/Format Time Period **Filters** Display Options

Additional Filters: Show Clear

AND OR Add group

AND OR Add rule

Access Type equal Fistula Delete Delete

Access Type  
CMS Certification Number  
City  
County Name  
Location  
Location Type  
CDC Location  
Location Label  
Facility Name  
Patient-months  
Events  
OID of Facility  
Facility Org ID  
In-Plan Patient Months  
Number Bloodstream Infections  
Bloodstream Infection Rate/100 patient-months  
State  
Summary~Yr/Half  
Summary Year/Month  
Summary~Yr/Qtr  
Summary~Yr  
Zip

Run Save... Export... Close

# How to Run a Report with Default Settings

- ❑ Click “Analysis” and then “Reports”
- ❑ Click the report name and then “Run Report”

The screenshot displays the NHSN Analysis Reports interface. On the left is a navigation menu with the following items: NHSN Home, Alerts, Reporting Plan, Patient, Event, Summary Data, Import/Export, Surveys, Analysis, Users, and Facility. The main content area is titled 'Analysis Reports' and features a search bar and two buttons: 'Expand All' and 'Collapse All'. Below these are two expandable folders: 'Dialysis Events' and 'Numerators'. The 'Numerators' folder is expanded, showing a list of reports. The report 'Line Listing - Dialysis Events' is selected and highlighted. A context menu is open over this report, containing three options: 'Run Report', 'Modify Report', and 'Export Data Set'. The 'Run Report' option is highlighted with a black box. Other reports visible in the list include 'Line Listing - Positive Blood Culture Pathogens' and 'Line Listing - Blood Culture Antimicrobial Susceptibilities'.

## How to Modify the Format of a Report

- ❑ Click the report name and then click “Modify Report”
- ❑ The report format can be changed on the “Title/Format” tab
- ❑ Click the box next to the desired format
- ❑ Then, click “Run” to run the report, “Save” to save the modifications as a custom report, or click another tab on the Modify screen to make additional modifications

Modify "Line Listing - Dialysis Events"

Show descriptive variable names ([Print List](#))      Analysis Data Set: DE\_Events    Type: Line Listing    Data Set Generated On: 10/20/2016 08:49:00

**Title/Format**    Time Period    Filters    Display Variables    Sort Variables    Display Options

**Title:**  
Line Listing for Dialysis Events

**Format:**

## How to Modify the Date Range of a Report

- ❑ The date range can be changed on the “Time Period” tab
- ❑ Select the Date Variable and enter at least a beginning date
- ❑ Then, click “Run” to run the report, “Save” to save the modifications as a custom report, or click another tab on the Modify screen to make additional modifications

Modify "Line Listing - Dialysis Events"

Show descriptive variable names ([Print List](#))      Analysis Data Set: DE\_Events    Type: Line Listing    Data Set Generated On: 10/20/2016 08:49:00

Title/Format    **Time Period**    Filters    Display Variables    Sort Variables    Display Options

Time Period:

Date Variable	Beginning	Ending	
Event Date	06/10/2016	12/01/2016	<input type="button" value="✕ Clear Time Period"/>

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

## How to Filter a Report for Specific Values

- ❑ Filters can be applied on the “Filters” tab
- ❑ Use the operators: Equal, Not Equal, In, Not In
- ❑ In the example below, event data will only display for patients with AVF only and a positive blood culture

Modify "Line Listing - Dialysis Events"

Show descriptive variable names ([Print List](#))      Analysis Data Set: DE\_Events    Type: Line Listing    Data Set Generated On: 10/20/2016 08:49:00

Title/Format    Time Period    **Filters**    Display Variables    Sort Variables    Display Options

Additional Filters:

AND OR

AND OR

Access Type    equal    Fistula   

AND OR

Positive Blood Culture    equal    Y

## How to Specify Which Variables Display

- ❑ Specify which variables will display in the report on the “Display Variables” tab
- ❑ Move variables to display from the “Available Variables” list to the “Selected Variables” list by using the “Selected >” button

**Modify "Line Listing - Dialysis Events"**

Show descriptive variable names (Print List)      Analysis Data Set: DE\_Events    Type: Line Listing    Data Set Generated On: 10/20/2016 08:49:00

**Display Variables:**

Available Variables:	Selected Variables:
(Old) Bleeding	Event Date
(Old) Blood Culture	Admitted on DE Date
(Old) Blood Culture Description	Fistula
(Old) Cardiovascular Event	Graft
(Old) Clotting	Other Access Device
(Old) Fistula with Pus/Red/Swell Problem?	Tunneled Central Line
(Old) Graft with Pus, Red, Swelling Problem?	Nontunneled Central Line
(Old) Hospitalization Dialysis Event type	IV Antimicrobial Start
(Old) Local Access Infection	Positive Blood Culture
(Old) Other noninfection access problem	Local Access Site Infection
(Old) Perm Central Line with Pus, Red, Swell problem?	Access Related Bloodstream Infection
(Old) Pneumonia	Vascular Access Infection
(Old) Port	Hospitalization Outcome
(Old) Port Placement Date	Death Outcome
(Old) Port Placement Date Unknown	Loss of vascular access

## How to Sort the Report on Specific Variables

- ❑ Specify which variables to use for sorting the data on the “Sort Variables” tab
- ❑ Select variable(s) to use for sorting by moving them from the “Available Variables” list to the “Selected Variables” list by using the “Selected >” button

The screenshot displays the 'Modify "Line Listing - Dialysis Events"' interface. At the top, there are navigation tabs: 'Title/Format', 'Time Period', 'Filters', 'Display Variables', 'Sort Variables' (which is highlighted in green), and 'Display Options'. Below the tabs, the 'Sort Variables' section is active. It features two main columns: 'Available Variables' on the left and 'Selected Variables' on the right. The 'Available Variables' list includes items such as '(Old) Bleeding', '(Old) Blood Culture', '(Old) Blood Culture Description', '(Old) Cardiovascular Event', '(Old) Clotting', '(Old) Fistula with Pus/Red/Swell Problem?', '(Old) Graft with Pus, Red, Swelling Problem?', '(old) Hospitalization Dialysis Event type', '(Old) Local Access Infection', '(Old) Other noninfection access problem', '(Old) Perm Central Line with Pus, Red, Swell problem?', '(Old) Pneumonia', '(Old) Port', '(Old) Port Placement Date', and '(Old) Port Placement Date Unknown'. Between these columns are four buttons: 'All >>', 'Selected >', '< Selected', and '<< All'. To the right of the 'Selected Variables' column are three buttons: '^ Up', 'v Down', and '↶ Undo'. The top of the interface shows a checked box for 'Show descriptive variable names (Print List)', the 'Analysis Data Set: DE\_Events', 'Type: Line Listing', and 'Data Set Generated On: 10/20/2016 08:49:00'.

## How to Separate Data into Tables

- ❑ Variables used to separate the data into tables can be selected on the “Display Options” tab
- ❑ Select a “Page by” variable from the drop-down menu

Modify "Line Listing - Dialysis Events"

Show descriptive variable names ([Print List](#)) Analysis Data Set: DE\_Events    Type: Line Listing    Data Set Generated On: 10/20/2016 08:49:00

Title/Format    Time Period    Filters    Display Variables    Sort Variables    **Display Options**

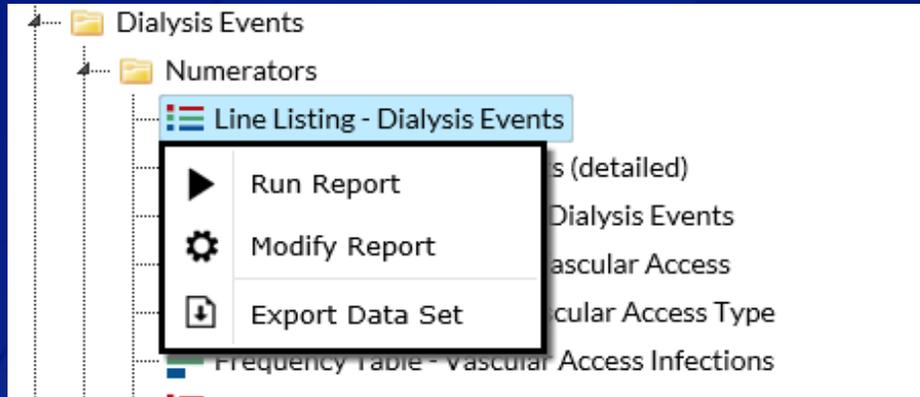
Line Listing Options:

Page by variable:

## How to Export Data

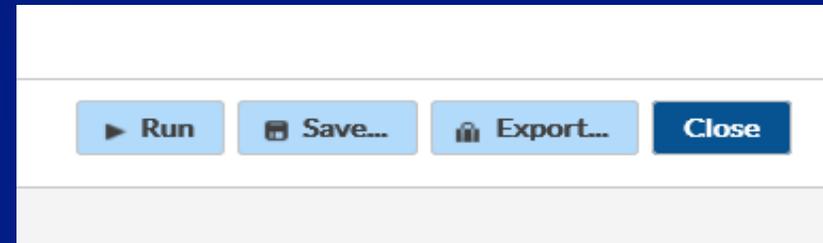
### ❑ Option 1: export the entire data set

- Click the report name and then click “Export Data Set”



### ❑ Option 2: export a report with the default settings or after making modifications

- Click the “Export” button at the bottom of the Modify screen



## Questions?

Email [nhsn@cdc.gov](mailto:nhsn@cdc.gov) and include 'Dialysis' in the subject line

**For more information please contact Centers for Disease Control and Prevention**

1600 Clifton Road NE, Atlanta, GA 30333  
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348  
E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov) Web: [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

