Dialysis Event Reporting
ESRD Network 8 LAN
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Tennessee Department of Health
Acknowledgements

- Alicia Shugart, CDC
- Priti Patel, CDC
- Tamara Hoxworth, Colorado Dept. of Health
QUESTION 1

What type of facility are you from?

A. TN LDO (i.e., Fresenius, DaVita, DCI)
B. TN Independent
C. MS LDO (i.e., Fresenius, DaVita, DCI)
D. MS Independent
E. AL LDO (i.e., Fresenius, DaVita, DCI)
F. AL Independent
QUESTION 2

- What is your role?
  A. Nurse Manager
  B. Floor Nurse
  C. Dialysis Tech
  D. Physician
  E. Infection Preventionist
  F. Corporate
  G. Other
QUESTION 3

Are you responsible for collecting/entering NHSN data?

A. Yes
B. No
C. Not sure
QUESTION 4

Is there someone designated at your facility (not corporate) who is responsible for collecting/entering NHSN data for your facility?

A. Yes
B. No
C. Don’t know
QUESTION 5

How many facilities is that person responsible for?

A. 1
B. 2-4
C. 5 or more
D. Don’t know
QUESTION 6

Which of the following statements about the digital certificate for NHSN is true?

A. Is specific to the facility and can be shared with others
B. Is specific to the LDO and can be shared with others within the LDO
C. Is specific to the individual and facility; if an individual works at multiple facilities must get another digital certificate
D. Is specific to the individual and can not be shared with anyone else within the facility, but can be used by the same individual for multiple facilities
Why are we doing this?

Surveillance Can Improve Practices

- Dialysis unit in London implemented CDC dialysis surveillance; described their experience over 18 months.
- Without any other intervention, tracking rates and feeding back data to staff resulted in reductions in:
  - Access-related bloodstream infections
  - Antibiotic usage
- “Surveillance raised awareness and provided a cornerstone for improved infection control and line care involving all staff of the dialysis unit.”

CMS (and Tennessee) Reporting Requirement

- All outpatient hemodialysis facilities (includes those attached to hospitals and freestanding centers) must report

- 12 months of:
  - Dialysis Event numerator and
  - Dialysis Event denominator data
  - per the NHSN Protocol
NHSN Dialysis Event Protocol

- Dialysis Event Protocol design
- Surveillance population
- Data collection forms:
  - Outpatient Dialysis Center Practices Survey
  - Monthly Reporting Plan
  - Denominators for Outpatient Dialysis Census Form
  - Dialysis Event Form
- Dialysis Event definitions:
  - IV antimicrobial start
  - Positive blood culture
  - Pus, redness, or increased swelling at the vascular access site
Dialysis Event Protocol Design

- Designed for implementation in dialysis facilities with limited surveillance resources
  - Goal: generate data that are useful for informing quality improvement decisions
  - Requires reliable data capture
  - Protocol is designed for optimal balance of low data collection burden with high data validity

- Data must be collected uniformly so that meaningful comparisons can be made
  - Requires all users follow the Dialysis Event Protocol
  - Dialysis Event definitions are standardized and simplified to minimize subjectivity
Dialysis Event Surveillance Population

- Maintenance hemodialysis patients treated in-center

- Other dialysis patients should be excluded:
  - Peritoneal dialysis
  - Home hemodialysis
  - Inpatient dialysis
Required Reading: Dialysis Event Protocol

- The Dialysis Event Protocol is a document that provides instructions for reporting in NHSN.
- All users must read the Dialysis Event Protocol to become familiar with instructions, definitions and procedures.

[Link to the full document]

QUESTION 7

Do you have a copy of the NHSN Dialysis Event (DE) protocol?

A. Yes and have read it
B. Yes (but have not read it)
C. No
Data Reporting Requirements

1. Outpatient Dialysis Center Practices Survey
   - Completed upon enrollment and annually thereafter

2. Monthly Reporting Plan
   - Indicate what NHSN surveillance your facility will do each month

3. Denominators for Outpatient Dialysis form
   - Completed once monthly

4. Numerator: Dialysis Event form
   - Completed when a dialysis event occurs
1. Outpatient Dialysis Center Practices Survey

- Completed during enrollment and every January thereafter
- Data are collected by someone at the facility who is familiar with facility practices; survey is entered in NHSN by a user with administrative rights
- Includes: facility information, patient and staff census, vaccines, hepatitis B and C, policies and practices, and vascular accesses
- Survey includes questions about staff and patients during the first week of January
  - Complete the survey in January each year
  - Must be entered by April 1
Data Reporting Requirements

1. Outpatient Dialysis Center Practices Survey
   - Completed upon enrollment and annually thereafter

2. Monthly Reporting Plan
   - Indicate what NHSN surveillance your facility will do each month

3. Denominators for Outpatient Dialysis form
   - Completed once monthly

4. Numerator: Dialysis Event form
   - Completed when a dialysis event occurs
2. Monthly Reporting Plan

- Informs CDC what Patient Safety surveillance the facility is following according to protocol each month

- A Monthly Reporting Plan must be completed before data are entered into NHSN for that month

- Indicate Dialysis Event surveillance in your plan:
  - Under the Device-Associated Module >> Dialysis Event is abbreviated “DE”
  - Checking this box tells CDC that your facility is following the protocol for all Dialysis Event numerator and denominator data reported for that month

- Up to one year of Monthly Reporting Plans can be saved in advance
After first month is completed, choose “copy from previous month” for each additional month.
Data Reporting Requirements

1. Outpatient Dialysis Center Practices Survey
   - Completed upon enrollment and annually thereafter

2. Monthly Reporting Plan
   - Indicate what NHSN surveillance your facility will do each month

3. Denominators for Outpatient Dialysis form
   - Completed once monthly

4. Numerator: Dialysis Event form
   - Completed when a dialysis event occurs
Infection Risk by Vascular Access

- NHSN data are stratified by vascular access type

- Risk of infection varies by vascular access type:

  - **LOWER RISK**
    - Arteriovenous fistulas (F)
    - Arteriovenous grafts (G)
    - Other access devices (e.g., hybrids) (O)
    - Tunneled central lines (TCL)

  - **HIGHER RISK**
    - Nontunneled central lines (NTCL)
3. Denominators for Outpatient Dialysis form

- Report all maintenance hemodialysis outpatients (including transients) treated at your facility on the first 2 working days of the month, separated by vascular access type

- Count each patient only once
  - If they have more than 1 vascular access, count that patient once, under their highest infection risk access
  - If a patient is present on both working days (e.g., for a make-up appointment) do not count them twice

- Consider ALL vascular accesses present, not just those being used for dialysis

- Complete this form once per month

Refer to Table of Instructions for guidance.
### Denominators for Outpatient Dialysis – Census Form

**Mandatory fields marked with **

**Facility ID**: 10055 (Dialysis Test Facility 2)

<table>
<thead>
<tr>
<th>Location Code</th>
<th>Month</th>
<th>Year</th>
</tr>
</thead>
</table>

Report No Events: [ ]

<table>
<thead>
<tr>
<th>Vascular Access Type</th>
<th>Number of Chronic Hemodialysis Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fistula*</td>
<td>Number of these Fistula Patients who undergo Buttonhole Cannulation:</td>
</tr>
<tr>
<td>Graft*</td>
<td></td>
</tr>
<tr>
<td>Tunneled Central Line*</td>
<td></td>
</tr>
<tr>
<td>Nontunneled Central Line*</td>
<td></td>
</tr>
<tr>
<td>Other Access Device (e.g., hybrid access)*</td>
<td></td>
</tr>
<tr>
<td>Total Patients*</td>
<td></td>
</tr>
</tbody>
</table>

**Custom Fields**

**Save**  **Back**
Denominator Example

Hemodialysis Outpatients

Vascular Access | Abbreviation
--- | ---
Fistula | (F)
Graft | (G)
Tunneled CL | (TCL)
Nontunneled CL | (NTCL)
Other Access Device | (O)

Transient Patient

1. Fistula (F)
2. Tunneled CL (TCL)
3. Fistula (F)
4. Graft (G)
5. Nontunneled CL (NTCL)
6. Graft (G)
7. Other Access Device (O)
8. Nontunneled CL (NTCL)
For the Denominator form, exclude patients who are not physically present for outpatient maintenance hemodialysis treatment on the first two working days of the month (such as hospitalized patients).
For the Denominator form, count each patient only once.

Among patients with more than 1 vascular access, identify their highest infection risk access.

**Denominator Example**

**Hemodialysis Outpatients**

1. **F**
2. **TCL**
3. **F**
4. **G**
5. **NTCL**
6. **G**
7. **F**
8. **NTCL**

**Lower Risk**
- Arteriovenous fistulas
- Arteriovenous grafts
- Other access devices
- Tunneled central lines
- Nontunneled central lines

**Higher Risk**

For the Denominator form, count each patient only once.

Among patients with more than 1 vascular access, identify their highest infection risk access.
Denominator Example

Hemodialysis Outpatients

<table>
<thead>
<tr>
<th>Vascular Access</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fistula</td>
<td>(F)</td>
</tr>
<tr>
<td>Graft</td>
<td>(G)</td>
</tr>
<tr>
<td>Tunneled CL</td>
<td>(TCL)</td>
</tr>
<tr>
<td>Nontunneled CL</td>
<td>(NTCL)</td>
</tr>
<tr>
<td>Other Access Device</td>
<td>(O)</td>
</tr>
</tbody>
</table>
Questions 8-12

<table>
<thead>
<tr>
<th>Question</th>
<th>Vascular Access</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q8</td>
<td>Fistula</td>
<td>(F)</td>
</tr>
<tr>
<td>Q9</td>
<td>Graft</td>
<td>(G)</td>
</tr>
<tr>
<td>Q10</td>
<td>Tunneled CL</td>
<td>(TCL)</td>
</tr>
<tr>
<td>Q11</td>
<td>Nontunneled CL</td>
<td>(NTCL)</td>
</tr>
<tr>
<td>Q12</td>
<td>Other Access Device</td>
<td>(O)</td>
</tr>
</tbody>
</table>

Answer Choices:
A. 1  
B. 2  
C. 3  
D. 0
## Example

<table>
<thead>
<tr>
<th>Patient</th>
<th>Access Type(s)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Graft</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Fistula</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>TCL, Fistula</td>
<td>Absent -- hospitalized</td>
</tr>
<tr>
<td>D</td>
<td>Graft, Fistula</td>
<td></td>
</tr>
</tbody>
</table>

**July 1**

<table>
<thead>
<tr>
<th>Patient</th>
<th>Access Type(s)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>NTCL</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Other</td>
<td>Absent – birthday party</td>
</tr>
<tr>
<td>C</td>
<td>TCL, Fistula</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Graft, Fistula</td>
<td></td>
</tr>
<tr>
<td>G (Transient Patient)</td>
<td>Graft</td>
<td></td>
</tr>
</tbody>
</table>
## Questions 8-12

<table>
<thead>
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<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q8 Fistula</td>
<td>(F)</td>
</tr>
<tr>
<td>Q9 Graft</td>
<td>(G)</td>
</tr>
<tr>
<td>Q10 Tunneled CL (TCL)</td>
<td></td>
</tr>
<tr>
<td>Q11 Nontunneled CL (NTCL)</td>
<td></td>
</tr>
<tr>
<td>Q12 Other Access Device (O)</td>
<td></td>
</tr>
</tbody>
</table>

**Answer Choices:**
A. 1
B. 2
C. 3
D. 0
### Explanation

#### Arteriovenous Fistulas
- Patient A: **Graft**
- Patient B: **Fistula**
- Patient C: **TCL, Fistula**
  - Notes: Absent -- hospitalized
- Patient D: **Graft, Fistula**

#### Arteriovenous Grafts
- Patient E: **NTCL**
- Patient F: **Other**
  - Notes: Absent – birthday party
- Patient G (Transient Patient): **Graft**

#### Other Access Devices
- Tunneled Central Lines
- Nontunneled Central Lines
## Answers

<table>
<thead>
<tr>
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<th>Vascular Access</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q8</td>
<td>Fistula (F)</td>
<td>1</td>
</tr>
<tr>
<td>Q9</td>
<td>Graft (G)</td>
<td>3</td>
</tr>
<tr>
<td>Q10</td>
<td>Tunneled CL (TCL)</td>
<td>1</td>
</tr>
<tr>
<td>Q11</td>
<td>Nontunneled CL (NTCL)</td>
<td>1</td>
</tr>
<tr>
<td>Q12</td>
<td>Other Access Device (O)</td>
<td>0</td>
</tr>
</tbody>
</table>
Resources

- Use other supporting resources:
  - BSI Prevention
    - CDC/HICPAC Guidelines
    - ESRD Networks
    - Health departments
  - General Infection Control
  - NHSN
    - Dialysis Event Homepage: [http://www.cdc.gov/nhsn/psc_da_de.html](http://www.cdc.gov/nhsn/psc_da_de.html)
    - NHSN Helpdesk: nhsn@cdc.gov
    - ESRD Network 8
    - Tennessee Facilities: Tennessee Department of Health HAI team: hai.health@tn.gov