

Dialysis Prevention Process Measures (PPM) Protocol

Infections are the second most common cause of death in end-stage renal disease patients receiving hemodialysis, and they account for nearly 10% of deaths in 2018.¹ NHSN prevention process measure surveillance tracks staff adherence to CDC's recommended practices that are shown to prevent infections in dialysis settings.²

Audit adherence to recommended practices to:

- Ensure complete and correct implementation.
- Promote and reinforce recommended practices among staff.
- Track practice adherence over time
- Help inform where quality improvements should be directed

Setting: Surveillance occurs in outpatient hemodialysis centers. These centers may be attached to or affiliated with a hospital but should serve hemodialysis outpatients.

Requirements: Participating facilities are required to report data according to this protocol, using the NHSN definitions described herein, to ensure data are uniformly reported across participating facilities. Facilities can participate in any combination of these six PPM options. When a PPM surveillance option is selected on the *Dialysis Monthly Reporting Plan*, users must complete a minimum number of observations that month. Report data to NHSN within 30 days of the end of the month in which they were collected (for example, data from September 2020 should be reported no later than October 30, 2020).

Data Collection Instructions:

For each PPM followed in-plan, use the corresponding audit tool to collect the minimum number of observations each month:

Audit Tool	Observations per Month
Hand Hygiene Observations	30
Hemodialysis Catheter Connection/Disconnection Observations	10
Hemodialysis Catheter Exit Site Care Observations	5
Arteriovenous Fistula and Graft Cannulation/Decannulation Observations	10
Dialysis Station Routine Disinfection Observations	10
Injection Safety Medication Preparation Observations	10
Injection Safety Medication Administration Observations	20

Please see the CDC's Dialysis Safety website: <http://www.cdc.gov/dialysis/prevention-tools/index.html> for additional resources and updates.

Observers should try to ensure that observations are as representative as possible of normal practice at the facility. This might include observing many different staff members on different days and shifts. Observers should also consider observing staff members at particularly busy times, when staff may be less attentive to proper practices.

NHSN Reporting Instructions

Complete Dialysis Monthly Reporting Plans

The *Monthly Reporting Plan* (CDC 57.501) is used by NHSN facilities to inform CDC that they are committed to following the NHSN surveillance protocol, in its entirety, for each monitoring selection on the plan. These data are referred to as "in-plan." A *Monthly Reporting Plan* must be completed before data can be entered into NHSN for that month. To indicate the facility is reporting in accordance with this protocol, save a Monthly Reporting Plan with the PPM checkbox(es) selected for the 'outpatient hemodialysis clinic' location for each month of participation.

Report Summary Data Monthly

Results of each audit tool are summarized into two numbers:

1. The number of successful observations (instances where adherence to each audit tool step was observed).
2. The total number of observations performed.

Report these summary numbers to NHSN using the *Prevention Process Measures* form (NHSN 57.504). In NHSN, this form is accessed via "Summary Data," then "Add," and then "Prevention Process Measures."

NHSN Data Analysis

Feedback to staff on the adherence to recommended practices is crucial to improvement. Facilities should consider regularly posting and/or reporting aggregate data to staff. In addition, feedback (positive or negative) to individuals can be useful.

Percent adherence is calculated by dividing the number of successful observations by the total number of observations and multiplying the result by 100:

$$\text{Percent Adherence} = \frac{\text{Number of Successful Observations}}{\text{Total Number of Observations}} \times 100$$

Effective April 2015, NHSN analysis includes output options (reports) that calculate percent adherence for each measure.

Additional Resources:

[CDC's Dialysis Safety website](#)

Hand Hygiene:

- [Hand Hygiene in Healthcare Settings](#)
- [World Health Organization's My 5 Moments for Hand Hygiene](#)

Dialysis Station Disinfection

- [Environmental Surface Disinfection in Dialysis Facilities: Notes for Clinical Managers](#)

Injection Safety

- [Protect Patients Against Preventable Harm from Improper Use of Single-Dose/Single-Use Vials](#)
- [Injection Safety Checklist](#)

References

1. United States Renal Data System. 2020 *USRDS Annual Data Report: Epidemiology of kidney disease in the United States*. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2020. CDC: Guidelines for the prevention of intravascular catheter-related infections, 2011.
<https://www.cdc.gov/infectioncontrol/pdf/guidelines/bsi-guidelines-H.pdf>