NH DIVISION OF
Public Health Services
Improving health, preventing disease, reducing costs *for all*
Department of Health and Human Services

STATE OF NEW HAMPSHIRE
HEALTHCARE-ASSOCIATED INFECTIONS
2022 DIALYSIS CENTER REPORT

December 2023

New Hampshire Department of Health and Human Services
Division of Public Health Services

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ABBREVIATIONS USED IN THIS DOCUMENT

APIC	Association for Professionals in Infection Control and Epidemiology
ARBSI	Access Related Bloodstream Infection
Dialysis	Dialysis center(s)
BSI	Bloodstream infection(s)
CCN	CMS Certification Number
CDC	U.S. Centers for Disease Control and Prevention
CMS	Centers for Medicare and Medicaid Services
DHHS	New Hampshire Department of Health and Human Services
HAI	Healthcare-associated infection(s)
HCP	Healthcare personnel
HICPAC	Healthcare Infection Control Practices Advisory Committee
HHS	U.S. Department of Health and Human Services
IV	Intravenous
LASI	Local Access Site Infection
NH	New Hampshire
NHHCQAC	New Hampshire Health Care Quality Assurance Commission
NHSN	National Healthcare Safety Network
NQF	National Quality Forum
RSA	Revised Statutes Annotated
SIR	Standardized infection ratio(s)
TAW	Healthcare-Associated Infections Technical Advisory Workgroup
VAI	Vascular Access Infection

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EXECUTIVE SUMMARY

A healthcare-associated infection (HAI) is an infection that a patient acquires during the course of receiving treatment for another condition within a healthcare setting. Approximately 500,000 patients are treated with maintenance hemodialysis in the United States. Hemodialysis patients require a vascular access, which can be a catheter, or a graft or an enlarged blood vessel that can be punctured to remove and replace blood. Bloodstream infections and localized infections of the vascular access site cause substantial morbidity and mortality in hemodialysis patients. Hemodialysis vascular access types, in order of increasing risk of infection, include arteriovenous fistulas created from the patient's own blood vessels; arteriovenous grafts typically constructed from synthetic materials; tunneled central lines; and non-tunneled central lines. Other access devices, such as catheter graft hybrid devices, also exist. Because of frequent hospitalizations and receipt of antimicrobial drugs, hemodialysis patients are also at high risk for infection with antimicrobial-resistant bacteria. Measuring and tracking rates of infection and utilizing this information is an important part of prevention.[i]

During the 2011 legislative season, the New Hampshire (NH) Legislature passed a bill amending NH Revised Statutes Annotated (RSA) 151:32-35, requiring Dialysis Centers to identify, track, and report selected HAI to the NH Department of Health and Human Services (DHHS). All facilities reported in accordance to (RSA) 151:32-35. This report represents the first summary of HAI-related data reported by Dialysis Centers in NH.

In response to the ending of the Public Health Emergency (PHE) the Healthcare Associated Infections program (HAI) has begun to expand their report writing. Therefore, this report will be presented to the DHHS Oversight and Ways and Means committees annually. This document will accompany other reports including facilities such as Hospitals, Ambulatory Surgical Centers, and Long-Term Care Facilities. Presentation of these reports will give the NH legislature a more in-depth understanding of the work done in the HAI program as well be available for public use. This report is expected to evolve over the next few years as data validation, trend data, and reporting become increasingly robust.

Healthcare-Associated Infections in New Hampshire Dialysis Centers

All Dialysis Centers reported in accordance to RSA 151:32-35. There was a statistically significant lower number of infections in NH as predicted based on national data. Eighteen Dialysis Centers were licensed for the 2022 calendar year, eighteen Dialysis Centers reported into NHSN.

Vascular Access Infection Infections

Eighteen Dialysis Centers reported:

- Access Related Bloodstream Infection (ARBSI): Positive blood culture with the suspected source reported as the vascular access or uncertain. Eighteen Dialysis Centers participated in reporting ARBSI; overall, ARBSI rates were higher compared to national data.

- Bloodstream Infections (BSI): Any positive blood culture event. Eighteen Dialysis Centers participated in reporting BSI; overall, BSI rates were lower compared to national data.
- Local Access Site Infections (LASI): Pus, redness, or increased swelling of the vascular access site and access-related bloodstream infection not present. Eighteen Dialysis Centers participated in reporting LASI; overall, LABSI rates were higher compared to national data.
- Vascular Access Infection (VAI): Either a local access site infection or an access-related bloodstream infection. Eighteen Dialysis Centers participated in reporting VAI; overall, VAI rates were higher compared to national data.

Intravenous Antimicrobial Administration

Eighteen Dialysis that administer intravenous (IV) antimicrobial therapy were licensed for the entire 2022 calendar year and therefore required to report IV surgical antimicrobial therapy administration data.

Influenza Vaccination Coverage in Dialysis Center Healthcare Personnel

Eighteen Dialysis Centers licensed at any point during the 2022-23 influenza season were required to report healthcare personnel (HCP) influenza vaccination percentages. In the 2021-22 Flu season, due to the COVID-19 global pandemic not all Dialysis Centers reported their vaccination percentages. As a result, the HAI Program told facilities to prioritize COVID-19 prevention activities over reporting influenza data. While this was not explicitly repeated for the 2022-23 flu season, it is reasonable to say that Dialysis Centers were still focused on these efforts during the 2022-23 season.

COVID-19 Limitations

In response to the COVID-19 pandemic, many state and local health resources were reassigned to support COVID-19 containment and mitigation. The NH HAI program was also redirected and remains heavily involved with outbreak response in healthcare settings due to staff expertise in conducing infection control assessments. Many healthcare facilities statewide had to prioritize and reduce surveillance activities that were not related to COVID-19. Due to these factors and prioritizing COVID-19 activities, many of the standard data collection and validation activities for this report were limited, unable to be completed, or delayed. Though the COVID-19 public health emergency has ended, there is still potential for incomplete data in some areas and potential reporting errors.

National Healthcare Safety Network (NHSN) Dialysis Module

NHSN implemented a module for Dialysis Centers called the Dialysis Component. The Dialysis Component allows Dialysis Centers to report mandated, as well as optional measures, by using one web-based secure reporting system. This system contains two distinct modules: Dialysis Event Surveillance and Dialysis Prevention Process Measures.

All Dialysis Center-specific ratios, rates and corresponding p-values in this report were generated directly by NHSN using Poisson statistical methods. State-level rates and corresponding p-values were calculated by DHHS using exact methods.

Conclusion

This is the first report of NH Dialysis data and it is an important part of continuing progress toward the goal of eliminating HAI in NH. This report provides selected HAI data that can be used by healthcare facilities in the state to identify areas for improvement as well as by healthcare consumers to make informed healthcare decisions.

I. INTRODUCTION

Purpose

This report represents the first summary of healthcare-associated infection (HAI)-related data reported by Dialysis Centers in New Hampshire (NH) during calendar year 2022. This report can be used by healthcare facilities in the State to identify areas for improvement as well as by healthcare consumers to make informed healthcare decisions.

Audience

The intended audience may include, but is not limited to: healthcare personnel (HCP), infection control and prevention staff, facility leadership and management, clinicians, and healthcare consumers.

How to Use This Document

This document includes aggregate data reported by all licensed Dialysis Centers in NH. The document consists of five sections:

I) Introduction
II) Surveillance methods
III) Statewide data
   a. Overall NH data in DIALYSIS
   b. Vascular Access Site Infections (VASI) standardized infection ratios and rates for Bloodstream Infections, Local Access Site Infections, Access-related Bloodstream Infections, Vascular Access Infections.
   c. Intravenous Antimicrobial Administration
   d. Percentage of HCP receiving influenza vaccination
IV) Conclusions
V) Appendices
   a. Technical notes
   b. Influenza vaccination survey questions, 2022-2023 season
   c. Understanding the relationship between HAI comparison metrics

Please contact the NH Department of Health and Human Services (DHHS) HAI Program (603-271-4496) with any questions about the content or how to use this document.

Healthcare-Associated Infections in Outpatient Settings

Dialysis Centers are a growing and important healthcare setting and patients are potentially, susceptible to HAI as accessibility increases. In recent decades, healthcare delivery has shifted from acute care hospitals to a variety of outpatient and ambulatory settings. More than three quarters of all operations in the U.S. are performed on an outpatient basis.[ii] Approximately 500,000 patients are treated with maintenance hemodialysis in the United States. [i]

New Hampshire Healthcare-Associated Infections Program

DHHS has been developing and improving a HAI surveillance program since 2007. During the 2006 legislative season, the NH Legislature passed a bill creating NH Revised Statutes Annotated (RSA) 151:32-35, which requires hospitals to identify, track, and report HAI to DHHS. The intent of the bill is to provide HAI data by hospital or facility type in a publicly accessible forum. Because the bill did not identify funding to carry out these activities, mandatory reporting was not fully implemented until January 2009.

DHHS, with consideration of the law, required that eligible Dialysis Centers report the following measures:

- Vascular Access Site Infections following dialysis procedures (via National Healthcare Safety Network [NHSN]).
- Intravenous Antimicrobial Administration, reported via NHSN.
- Influenza vaccination in HCP (via DHHS web survey). All dialysis report influenza vaccination in HCP.

State of New Hampshire Healthcare-Associated Infections Plan

In response to increasing concerns about the public health impact of HAI, the U.S. Department of Health and Human Services (HHS) developed its "Action Plan to Prevent Healthcare-Associated Infections" (HHS Action Plan) in 2009. The HHS Action Plan includes recommendations for surveillance, research, communication, and metrics for measuring progress toward national goals. In a concurrent development, the 2009 Omnibus Appropriations Act required states receiving Preventive Health and Health Services Block Grant funds to certify that they would submit a plan to reduce HAI to the Secretary of HHS not later than January 1, 2010. In order to assist states in responding within the short timeline required by that language and to facilitate coordination with national HAI prevention efforts, CDC provided a template to assist state planning efforts in the prevention of HAI. The template targeted four areas: 1) Development or Enhancement of HAI Program Infrastructure; 2) Surveillance, Detection, Reporting, and Response; 3) Prevention; and 4) Evaluation, Oversight, and Communication. In 2009, DHHS drafted a State HAI Plan and submitted it to HHS.

Overview of Healthcare-Associated Infections Prevention Efforts

DHHS participates in statewide prevention activities through the NH Health Care Quality Assurance Commission (NHHCQAC), on which the Division of Public Health Services director serves. DHHS is active in various projects coordinated by the NHHCQAC and the CMS Quality Innovation Network-Quality Improvement Organization (QIN-QIO). Major statewide initiatives through these organizations have included hand hygiene campaigns, patient safety checklists, and programs to prevent bloodstream infections, antimicrobial resistance, and *Clostridioides difficile*. Additionally, the Foundation for Healthy Communities received a large grant through the Partnership for Patients program to conduct additional large, statewide prevention initiatives. For additional information on these various efforts, the following websites may be helpful:

New Hampshire Health Care Quality Assurance Commission:
http://www.healthynh.org/fhc-initiatives/nh-health-care-quality-assurance-commission.html

CMS QIN-QIO for Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont:
https://ipro.org

Foundation for Healthy Communities Partnership for Patients:
http://www.healthynh.org/
In addition to supporting and engaging in prevention activities with patient safety groups, the HAI Program provides educational opportunities to healthcare facilities across the state in order to share best practices for infection prevention and ultimately reduce HAI and facilitates the NH Antimicrobial Resistance Advisory Workgroup (NH ARAW)

II. SURVEILLANCE METHODS

2022 Healthcare-Associated Infections Reporting Requirements for New Hampshire Dialysis Centers

Reporting requirements are governed by RSA 151:33 with authority given to DHHS to develop administrative rules to provide specific reporting instructions and methodology. Administrative rules, "He-P 309 Healthcare Associated Infections," were drafted in 2010 with stakeholder input and approved January 14, 2011 by the Joint Legislative Committee on Administrative Rules. Reporting requirements for 2012-2022 included the following required measures for Dialysis Centers:

- VASI following Dialysis procedures, Bloodstream infections, local access site infections, access-related bloodstream infections, and vascular access infection
- Intravenous Antimicrobial Administration
- Influenza vaccination in HCP

All Dialysis are required to report in accordance with RSA 151:33

Selection of Reporting Requirements

RSA 151:33 broadly requires reporting of all VASI in Dialysis; however, it was not feasible to perform surveillance for all of these infections using NHSN. In order to generate infection measures for Dialysis and compare them with national data, infection reporting was limited to the capabilities of NHSN and measures were selected in accordance with national recommendations for HAI surveillance in the context of public reporting.

In 2005, CDC released a report titled "Guidance on Public Reporting of Healthcare-Associated Infections: Recommendations of the Healthcare Infection Control Practices Advisory Committee" (HICPAC).[iii] The group recommended selecting outcome measures for reporting based on the frequency, severity, and preventability of the outcomes and the likelihood that they can be detected and reported accurately.

National Healthcare Safety Network

NHSN is a voluntary, secure, internet-based surveillance system for healthcare facilities to monitor patient safety and infection prevention measures. Enrollment is open to all types of healthcare facilities in the U.S. DHHS selected NHSN because it is widely used across the U.S., offers already developed and accepted surveillance definitions and methods, provides national comparison data, and there is no cost to use or join the system.

More information about NHSN is available at: http://www.cdc.gov/nhsn/index.html.

Bloodstream Infection Surveillance

A Bloodstream infection is an infection that can develop as a result of Dialysis care. There are different ways to classify a BSI, such as whether it is a Local Access Site Infection (LASI), Access-related bloodstream infection (ARBSI), or Vascular access infection (VAI).

Limitations of SSI surveillance:

- BSI reporting only includes a subset of metrics. DHHS elected this subset based on national recommendations because it would not be feasible for Dialysis Centers to report information on every patient receiving Dialysis due to the burden of reporting through NHSN.
- Some procedures may be excluded from SIR analysis Rate analysis due to incomplete information.
- The SSI data presented in this report have not been validated internally and must be interpreted with the understanding that in general there are both under- and over-reporting of infections.

Surgical Intravenous Antimicrobial Prophylaxis Administration

IV antimicrobial start: Report all starts of intravenous (IV) antibiotics or antifungals administered in the reporting outpatient Dialysis Center, regardless of the reason for administration (e.g., include IV antimicrobial starts unrelated to vascular access infection) and regardless of the duration of treatment. A start is defined as a single outpatient dose or first outpatient dose of a course. Inter-facility patient transfers: If a patient at a Dialysis Center has an IV antimicrobial start and then transfers to another facility (as a transient or permanent patient) where the antimicrobial is continued, the second facility would report the IV antimicrobial start in their facility as well. 21-day rule: There must be 21 or more days from the end of one reported IV antimicrobial course to the beginning of a second IV antimicrobial start for two starts to be reported as separate dialysis events, even if different antimicrobials are used. If IV antimicrobials are stopped for fewer than 21 days and then restarted, the second start is NOT considered a new dialysis event and therefore, is not reported.

Influenza Vaccination Percentage Monitoring

All Dialysis are required to report HCP vaccination aggregate data directly to DHHS via an online survey that is provided to facilities. See Appendix 2 for the 2022-2023 survey questions regarding influenza vaccination. Submission of these data meets the requirements of both the HAI law (RSA 151:32-35) and the healthcare immunization law (RSA 151:9-b).

HCP influenza vaccination percentages were calculated by dividing the total number of HCP that worked or volunteered in each facility for at least one working day between October 1, 2022 and March 31, 2023 by the total number of HCP immunized against influenza for the 2022-23 influenza season.

Limitations for influenza vaccination monitoring:

- The data collection tools ask for the total number of HCP vaccinated. This may not reflect the number of HCP to whom the vaccine was offered. Dialysis Centers may vary in the refusal percentage for vaccination among HCP and the reasons for such refusal. Additionally, some HCP may not be eligible to receive the vaccine. DHHS attempted to assess why unvaccinated HCP did not receive the vaccine; however, not all Dialysis Centers were able to report this information.
- The web-based survey did not include options for facilities to report unknown vaccination status, patients and HCP with unknown vaccination status were analyzed as though they were not vaccinated. This results in a conservative estimate of vaccination status (e.g., lower than in reality).
- Vaccination status is not uniformly available by location where the vaccination was received (e.g., at the reporting facility or elsewhere).
- Data collection techniques at Dialysis Centers may vary from season to season, potentially affecting comparison of data. DHHS continues to work towards improving the validity and utility of this measure in order to eliminate issues that pose problems for such comparison.

III. STATEWIDE DATA

HAI data are presented throughout this report as both SIR and rates as appropriate. Presenting data as a SIR allows for aggregating data across risk group, procedure, and healthcare facility to gain a better understanding of the incidence of HAI while still adjusting for underlying patient or healthcare facility factors that may affect the occurrence of infections. The SIR allows comparison between how many infections actually occurred and how many were predicted to occur based on national data. Specific rate information is also provided where possible, which represents the number of infections that occurred, taking into account the number of procedures that were performed. Rate data are limited by the requirement to only calculate rates that are broken down by certain factors. See technical notes for additional information on rates and the SIR.

Because a SIR is a comparison of the number of actual observed infections to the number predicted based on national data, a SIR of 1.0 means that exactly the same number of infections were observed than were predicted. A SIR of less than one means that fewer infections were observed than were predicted (for example, SIR = 0.70 would be interpreted as 30% fewer infections observed than predicted). A SIR of more than one means that more infections were observed than were predicted (for example, SIR = 1.30 would be interpreted as 30% more infections observed than predicted). A confidence interval is calculated to determine whether the difference between observed and predicted infections is statistically significant. If the difference is not statistically significant, the observed and predicted numbers of infections are considered similar. See technical notes for additional information on confidence intervals.

This report provides comparisons with national and State data where appropriate. Comparisons are color coded consistently throughout. For infections, yellow represents infection rates or SIR that are similar to national data, red represents infection rates or SIR that are significantly higher than national data, and green represents infection rates or SIR that are significantly lower than national data.

SIR or rate: fewer than predicted SIR or rate: similar to predicted SIR or rate: more than predicted

For process measures, yellow represents rates that are similar to the State percentage, red represents rates that are significantly lower than the State percentage, and green represents rates that are significantly higher than the State percentage.

higher than State similar to State lower than State

Statistical significance is affected by sample size. If a value is almost or just barely significant, just a few additional observations can push significance one way or the other (i.e., not significant or significant).

Statewide Bloodstream Infection, Standard Infection Ratios

Table 1 below shows the number of BSI reported by Dialysis Centers in NH. In 2022, there were 41 BSIs reported by the 18 Dialysis Centers in NH. The predicted number of infections for the state of New Hampshire was 96.20 infections. All facilities have a similar number of infections when compared to the state. Data can be skewed for a multitude of reasons when analysis takes place, please refer to page for details about data analysis and presentation.

Statewide Bloodstream Infection Rates

Table 1 below shows the number of BSI reported by Dialysis Centers in NH. In 2022, there were 379 Vascular Access Site Infections (VASI) reported by the 18 Dialysis Centers in NH. All 18 Dialysis Centers were licensed for the entire 2022 calendar year and were required to report these data. The infections represent Bloodstream infection (BSI), Access-related bloodstream infections (ARBSI), Local access site infection (LASI), Vascular access infection (VAI) procedures. The overall state rate for VASI was lower when compared to the national rate.

Table 1. Statewide Dialysis Bloodstream Infection Rates, Jan 1–Dec 31, 2022

	Observed Infections	Patient Months	Dialysis Rate	National Rate	P-Value	State Rate Compared to National Rate
Overall State Infections	379	42,476	0.9	3.1	0.00	Lower
BSI	41	10,762	0.4	0.4	0.00	Lower
LASI	135	10,762	1.2	0.4	0.00	Higher
ARBSI	34	10,762	0.3	0.3	0.01	Higher
VAI	169	10,762	1.6	0.8	0.00	Higher

HAI: Healthcare-associated infection
BSI: Bloodstream infection
ARBSI: Access-related bloodstream infection
LASI: Local Access
VAI: Vascular access site infection

Table 2. Statewide Dialysis Bloodstream Infection, Standard Infection Ratio, Jan 1–Dec 31, 2022

Dialysis Name	Observed Infections	Predicted Infections	Standardized Infection Ratio (SIR)	95% Confidence Interval	Dialysis SIR Compared to the State SIR
Central New Hampshire Kidney Center LLC	4	5.66	0.71	0.22 , 1.70	Similar
Cocheco River Dialysis Center	1	4.94	0.20	0.01 , 1.00	Similar
Derry Dialysis	0	2.72	0.00	0.00 , 1.10	Similar
FMC Dialysis Services Exeter	3	5.01	0.60	0.15 , 1.63	Similar
FMC Strafford County	2	6.22	0.32	0.05 , 1.06	Similar
Fresenius Kidney Care of Nashua	2	2.53	0.79	0.13 , 2.61	Similar
Fresenius Medical Care Lebanon	4	9.65	0.41	0.13 , 1.00	Similar
Fresenius Medical Care of Lancaster	1	4.01	0.25	0.01 , 1.23	Similar
Fresenius Medical Care of Londonderry	0	2.05	0.00	0.00 , 1.46	Similar
Fresenius Medical Care of Rockingham County	1	4.18	0.24	0.01 , 1.18	Similar
Fresenius Medical Care of Southern NH	5	2.65	1.89	0.69 , 4.19	Similar
Manchester Dialysis	0	5.02	0.00	0.00 , 0.60	Similar
Manchester Kidney Center	2	7.71	0.26	0.04 , 0.86	Similar
Monadnock Dialysis Center	2	5.29	0.38	0.06 , 1.25	Similar
Mt Washington Valley Dialysis Center	1	2.67	0.37	0.02 , 1.85	Similar
Nashua Dialysis	9	9.44	0.95	0.46 , 1.75	Similar
New Hampshire Kidney Center	4	9.51	0.42	0.13 , 1.01	Similar
Seacoast Dialysis	0	6.95	0.00	0.00 , 0.43	Similar
State Total	**41**	**96.20**	**0.43**	**0.31 , 0.57**	**Lower**

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Vascular Access Site Infection Rates

The statewide rate for infections following Dialysis for patients were lower than national rates; statewide rate for infections for VASI were statistically significantly lower to national rates (Table 3). Seventeen Dialysis Centers had a rate similar to national data for all procedure categories selected, and one had a higher rate when compared to national data.

Table 1. Overall State Rate of VASI by Dialysis Center, Jan 1–Dec 31, 2022

Dialysis Name	Observed Infections	Patient Months	Dialysis Rate	National Rate	State Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	32	1,896	1.7	3.1	Lower
Cocheco River Dialysis Center	7	2,736	0.3	3.1	Lower
Derry Dialysis	4	1,312	0.3	3.1	Lower
FMC Dialysis Services Exeter	15	1,880	0.8	3.1	Lower
FMC Strafford County	18	3,044	0.6	3.1	Lower
Fresenius Kidney Care of Nashua	10	1,084	0.9	3.1	Lower
Fresenius Medical Care Lebanon	30	3,920	0.8	3.1	Lower
Fresenius Medical Care of Lancaster	7	1,236	0.6	3.1	Lower
Fresenius Medical Care of Londonderry	6	1,140	0.5	3.1	Lower
Fresenius Medical Care of Rockingham County	7	2,136	0.3	3.1	Lower
Fresenius Medical Care of Southern NH	11	1,432	0.8	3.1	Lower
Manchester Dialysis	14	2,264	0.6	3.1	Lower
Manchester Kidney Center	20	4,572	0.4	3.1	Lower
Monadnock Dialysis Center	98	2,348	4.2	3.1	Higher
Mt Washington Valley Dialysis Center	5	1,324	0.4	3.1	Lower
Nashua Dialysis	51	3,868	1.3	3.1	Lower
New Hampshire Kidney Center	26	3,356	0.8	3.1	Lower
Seacoast Dialysis	18	2,928	0.6	3.1	Lower
State Total	**379**	**42,476**	**0.9**	**3.1**	**Lower**

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Table 2. Bloodstream infection rates by Dialysis Center, Jan 1–Dec 31, 2022

Dialysis Name	Observed Infections	Patient Months	Dialysis Rate	National Rate	P-Value	Dialysis Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	4	474	0.8	0.4	0.19	Similar
Cocheco River Dialysis Center	1	684	0.1	0.4	0.28	Similar
Derry Dialysis	0	328	0.0	0.4	0.26	Similar
FMC Dialysis Services Exeter	3	470	0.6	0.4	0.44	Similar
FMC Strafford County	2	761	0.3	0.4	0.57	Similar
Fresenius Kidney Care of Nashua	2	271	0.7	0.4	0.41	Similar
Fresenius Medical Care Lebanon	4	980	0.4	0.4	1.00	Similar
Fresenius Medical Care of Lancaster	1	309	0.3	0.4	0.91	Similar
Fresenius Medical Care of Londonderry	0	285	0.0	0.4	0.31	Similar
Fresenius Medical Care of Rockingham County	1	534	0.2	0.4	0.46	Similar
Fresenius Medical Care of Southern NH	5	358	1.4	0.4	0.02	Higher
Manchester Dialysis	0	566	0.0	0.4	0.10	Similar
Manchester Kidney Center	2	1,143	0.2	0.4	0.20	Similar
Monadnock Dialysis Center	2	587	0.3	0.4	0.86	Similar
Mt Washington Valley Dialysis Center	1	331	0.3	0.4	0.85	Similar
Nashua Dialysis	9	967	0.9	0.4	0.03	Higher
New Hampshire Kidney Center	4	839	0.5	0.4	0.73	Similar
Seacoast Dialysis	0	732	0.0	0.4	0.05	Lower
State Total	**41**	**10,762**	**0.4**	**0.4**	**0.00**	**Lower**

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Table 3. Bloodstream Infection Rates by Access Type and Dialysis Center, Jan 1– Dec 31, 2022

Dialysis Name	Access Type	Observed Infections	Patient Months	Diaylsis Rate	National Rate	P-Value	Dialysis Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	Overall	4	474	0.8	0.4	0.19	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	226	0.0	0.2	0.68	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	4	232	1.7	1.2	0.46	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Cocheco River Dialysis Center	Overall	1	684	0.1	0.4	0.28	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	377	0.0	0.2	0.53	Similar
	Graft	0	151	0.0	0.3	0.62	Similar
	Tunneled Central Line	1	156	0.6	1.2	0.59	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Derry Dialysis	Overall	0	328	0.0	0.4	0.26	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	216	0.0	0.2	0.70	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	0	90	0.0	1.2	0.34	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-
FMC Dialysis Services Exeter	Overall	3	470	0.6	0.4	0.44	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	172	0.6	0.2	0.28	Similar
	Graft	1	106	0.9	0.3	0.33	Similar
	Tunneled Central Line	1	192	0.5	1.2	0.42	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 4. (*Continued*) Bloodstream Infection Rates by Access Type and Dialysis Center, Jan 1– Dec 31, 2022

FMC Strafford County	Overall	2	761	0.3	0.4	0.57	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	426	0.0	0.2	0.49	Similar
	Graft	0	120	0.0	0.3	0.68	Similar
	Tunneled Central Line	2	215	0.9	1.2	0.79	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Kidney Care of Nashua	Overall	2	271	0.7	0.4	0.41	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	175	0.6	0.2	0.29	Similar
	Graft	-	-	-	-	-	-
	Tunneled Central Line	1	96	1.0	1.2	0.99	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care Lebanon	Overall	4	980	0.4	0.4	1.00	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	515	0.2	0.2	0.79	Similar
	Graft	0	98	0.0	0.3	0.73	Similar
	Tunneled Central Line	3	366	0.8	1.2	0.54	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Lancaster	Overall	1	309	0.3	0.4	0.91	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	0	127	0.0	0.2	0.81	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	1	168	0.6	1.2	0.53	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 5. (*Continued*) Bloodstream Infection Rates by Access Type and Dialysis Center, Jan 1–Dec 31, 2022

Fresenius Medical Care of Londonderry	Overall	0	285	0.0	0.4	0.31	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	203	0.0	0.2	0.71	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	0	68	0.0	1.2	0.44	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Rockingham County	Overall	1	534	0.2	0.4	0.46	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	335	0.0	0.2	0.57	Similar
	Graft	0	56	0.0	0.3	0.84	Similar
	Tunneled Central Line	1	143	0.7	1.2	0.66	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Southern NH	Overall	5	358	1.4	0.4	0.02	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	1	223	0.4	0.2	0.37	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	2	87	2.3	1.2	0.37	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Manchester Dialysis	Overall	0	566	0.0	0.4	0.10	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	344	0.0	0.2	0.56	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	0	182	0.0	1.2	0.11	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-

Table 6. (*Continued*) Bloodstream Infection Rates by Access Type and Dialysis Center, Jan 1–Dec 31, 2022

Manchester Kidney Center	Overall	2	1143	0.2	0.4	0.20	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	0	804	0.0	0.2	0.26	Similar
	Graft	0	96	0.0	0.3	0.73	Similar
	Tunneled Central Line	2	243	0.8	1.2	0.65	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Monadnock Dialysis Center	Overall	2	587	0.3	0.4	0.86	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	316	0.3	0.2	0.51	Similar
	Graft	0	78	0.0	0.3	0.78	Similar
	Tunneled Central Line	1	193	0.5	1.2	0.42	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Mt Washington Valley Dialysis Center	Overall	1	331	0.3	0.4	0.85	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	1	235	0.4	0.2	0.39	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	0	95	0.0	1.2	0.32	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Nashua Dialysis	Overall	9	967	0.9	0.4	0.03	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	3	538	0.6	0.2	0.08	Similar
	Graft	3	69	4.3	0.3	0.00	Higher
	Tunneled Central Line	3	360	0.8	1.2	0.56	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 7. (*Continued*) Bloodstream Infection Rates by Access Type and Dialysis Center, Jan 1–Dec 31, 2022

New Hampshire Kidney Center	Overall	4	839	0.5	0.4	0.73	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	0	419	0.0	0.2	0.50	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	4	383	1.0	1.2	0.83	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Seacoast Dialysis	Overall	0	732	0.0	0.4	0.05	Lower
	Buttonhole	-	-	-	-	-	-
	Fistula	0	287	0.0	0.2	0.62	Similar
	Graft	0	190	0.0	0.3	0.54	Similar
	Tunneled Central Line	0	252	0.0	1.2	0.05	Lower
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	†	†	†	†	†	†

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Table 8. Local access site infection rates by Dialysis, Jan 1– Dec 31, 2022

Dialysis Name	Observed Infections	Patient Months	Dialysis Rate	National Rate	P-Value	Dialysis Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	10	474	2.1	0.4	0.00	Higher
Cocheco River Dialysis Center	2	684	0.3	0.4	0.60	Similar
Derry Dialysis	2	328	0.6	0.4	0.61	Similar
FMC Dialysis Services Exeter	3	470	0.6	0.4	0.51	Similar
FMC Strafford County	7	761	0.9	0.4	0.08	Similar
Fresenius Kidney Care of Nashua	3	271	1.1	0.4	0.16	Similar
Fresenius Medical Care Lebanon	9	980	0.9	0.4	0.05	Higher
Fresenius Medical Care of Lancaster	2	309	0.6	0.4	0.56	Similar
Fresenius Medical Care of Londonderry	3	285	1.1	0.4	0.18	Similar
Fresenius Medical Care of Rockingham County	2	534	0.4	0.4	0.89	Similar
Fresenius Medical Care of Southern NH	1	358	0.3	0.4	0.73	Similar
Manchester Dialysis	7	566	1.2	0.4	0.02	Higher
Manchester Kidney Center	9	1,143	0.8	0.4	0.11	Similar
Monadnock Dialysis Center	46	587	7.8	0.4	0.00	Higher
Mt Washington Valley Dialysis Center	1	331	0.3	0.4	0.79	Similar
Nashua Dialysis	12	967	1.2	0.4	0.00	Higher
New Hampshire Kidney Center	7	839	0.8	0.4	0.12	Similar
Seacoast Dialysis	9	732	1.2	0.4	0.01	Higher
State Total	**135**	**10,762**	**1.2**	**0.4**	**0.00**	**Higher**

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Table 9. Local access site infection rates by Access Type and Dialysis Center, Jan 1– Dec 31, 2022

Dialysis Name	Access Type	Observed Infections	Patient Months	Diaylsis Rate	National Rate	P-Value	Dialysis Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	Overall	10	474	2.1	0.4	0.00	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	2	226	0.9	0.2	0.06	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	7	232	3.0	1.4	0.07	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Cocheco River Dialysis Center	Overall	2	684	0.3	0.4	0.60	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	2	377	0.5	0.2	0.15	Similar
	Graft	0	151	0.0	0.3	0.65	Similar
	Tunneled Central Line	0	156	0.0	1.4	0.11	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Derry Dialysis	Overall	2	328	0.6	0.4	0.61	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	216	0.5	0.2	0.35	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	1	90	1.1	1.4	0.92	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-
FMC Dialysis Services Exeter	Overall	3	470	0.6	0.4	0.51	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	172	0.0	0.2	0.76	Similar
	Graft	0	106	0.0	0.3	0.74	Similar
	Tunneled Central Line	3	192	1.6	1.4	0.80	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 10. (*Continued)* Local access site infection rates by Access Type and Dialysis Center, Jan 1–Dec 31, 2022

FMC Strafford County	Overall	7	761	0.9	0.4	0.08	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	2	426	0.5	0.2	0.19	Similar
	Graft	1	120	0.8	0.3	0.33	Similar
	Tunneled Central Line	4	215	1.9	1.4	0.56	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Kidney Care of Nashua	Overall	3	271	1.1	0.4	0.16	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	175	0.6	0.2	0.28	Similar
	Graft	-	-	-	-	-	-
	Tunneled Central Line	2	96	2.1	1.4	0.55	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care Lebanon	Overall	9	980	0.9	0.4	0.05	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	2	515	0.4	0.2	0.26	Similar
	Graft	1	98	1.0	0.3	0.27	Similar
	Tunneled Central Line	6	366	1.6	1.4	0.68	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Lancaster	Overall	2	309	0.6	0.4	0.56	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	0	127	0.0	0.2	0.81	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	2	168	1.2	1.4	0.89	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 11. (*Continued)* Local access site infection rates by Access Type and Dialysis Center, Jan 1–Dec 31, 2022

Fresenius Medical Care of Londonderry	Overall	3	285	1.1	0.4	0.18	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	203	0.5	0.2	0.33	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	2	68	2.9	1.4	0.32	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Rockingham County	Overall	2	534	0.4	0.4	0.89	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	335	0.0	0.2	0.58	Similar
	Graft	0	56	0.0	0.3	0.85	Similar
	Tunneled Central Line	2	143	1.4	1.4	1.00	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Southern NH	Overall	1	358	0.3	0.4	0.73	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	223	0.0	0.2	0.70	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	1	87	1.1	1.4	0.94	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Manchester Dialysis	Overall	7	566	1.2	0.4	0.02	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	0	344	0.0	0.2	0.57	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	6	182	3.3	1.4	0.06	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-

Table 12. (*Continued)* Local access site infection rates by Access Type and Dialysis Center, Jan 1–Dec 31, 2022

Manchester Kidney Center	Overall	9	1143	0.8	0.4	0.11	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	1	804	0.1	0.2	0.89	Similar
	Graft	2	96	2.1	0.3	0.03	Higher
	Tunneled Central Line	6	243	2.5	1.4	0.20	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Monadnock Dialysis Center	Overall	46	587	7.8	0.4	0.00	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	12	316	3.8	0.2	0.00	Higher
	Graft	1	78	1.3	0.3	0.22	Similar
	Tunneled Central Line	33	193	17.1	1.4	0.00	Higher
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Mt Washington Valley Dialysis Center	Overall	1	331	0.3	0.4	0.79	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	0	235	0.0	0.2	0.68	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	1	95	1.1	1.4	0.87	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Nashua Dialysis	Overall	12	967	1.2	0.4	0.00	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	4	538	0.7	0.2	0.01	Higher
	Graft	0	69	0.0	0.3	0.82	Similar
	Tunneled Central Line	8	360	2.2	1.4	0.22	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 13. (*Continued)* Local access site infection rates by Access Type and Dialysis Center, Jan 1–Dec 31, 2022

New Hampshire Kidney Center	Overall	7	839	0.8	0.4	0.12	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	1	419	0.2	0.2	0.64	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	6	383	1.6	1.4	0.76	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Seacoast Dialysis	Overall	9	732	1.2	0.4	0.01	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	0	287	0.0	0.2	0.63	Similar
	Graft	0	190	0.0	0.3	0.59	Similar
	Tunneled Central Line	9	252	3.6	1.4	0.01	Higher
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	†	†	†	†	†	†

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Table 8. Access Related Bloodstream Infection Rate by Dialysis Center, Jan 1– Dec 31, 2022

Dialysis Name	Observed Infections	Patient Months	Dialysis Rate	National Rate	P-Value	Dialysis Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	4	474	0.8	0.3	0.08	Similar
Cocheco River Dialysis Center	1	684	0.1	0.3	0.48	Similar
Derry Dialysis	0	328	0.0	0.3	0.36	Similar
FMC Dialysis Services Exeter	3	470	0.6	0.3	0.25	Similar
FMC Strafford County	1	761	0.1	0.3	0.40	Similar
Fresenius Kidney Care of Nashua	1	271	0.4	0.3	0.78	Similar
Fresenius Medical Care Lebanon	4	980	0.4	0.3	0.57	Similar
Fresenius Medical Care of Lancaster	1	309	0.3	0.3	0.87	Similar
Fresenius Medical Care of Londonderry	0	285	0.0	0.3	0.41	Similar
Fresenius Medical Care of Rockingham County	1	534	0.2	0.3	0.69	Similar
Fresenius Medical Care of Southern NH	2	358	0.6	0.3	0.41	Similar
Manchester Dialysis	0	566	0.0	0.3	0.17	Similar
Manchester Kidney Center	0	1,143	0.0	0.3	0.03	Lower
Monadnock Dialysis Center	2	587	0.3	0.3	0.83	Similar
Mt Washington Valley Dialysis Center	1	331	0.3	0.3	1.00	Similar
Nashua Dialysis	9	967	0.9	0.3	0.01	Higher
New Hampshire Kidney Center	4	839	0.5	0.3	0.40	Similar
Seacoast Dialysis	0	732	0.0	0.3	0.10	Similar
State Total	**34**	**10,762**	**0.3**	**0.3**	**0.01**	**Higher**

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Table 9. Access Related Bloodstream Infection Rate by Type and by Dialysis Center, Jan 1–Dec 31, 2022

Dialysis Name	Access Type	Observed Infections	Patient Months	Diaylsis Rate	National Rate	P-Value	Dialysis Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	Overall	4	474	0.8	0.3	0.08	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	226	0.0	0.1	0.80	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	4	232	1.7	1.0	0.30	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Cocheco River Dialysis Center	Overall	1	684	0.1	0.3	0.48	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	377	0.0	0.1	0.69	Similar
	Graft	0	151	0.0	0.2	0.70	Similar
	Tunneled Central Line	1	156	0.6	1.0	0.74	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Derry Dialysis	Overall	0	328	0.0	0.3	0.36	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	216	0.0	0.1	0.81	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	0	90	0.0	1.0	0.40	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-
FMC Dialysis Services Exeter	Overall	3	470	0.6	0.3	0.25	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	172	0.6	0.1	0.17	Similar
	Graft	1	106	0.9	0.2	0.24	Similar
	Tunneled Central Line	1	192	0.5	1.0	0.57	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 9. (*Continued*) Access Related Bloodstream Infection Rate by Type and by Dialysis, Jan 1– Dec 31, 2022

FMC Strafford County	Overall	1	761	0.1	0.3	0.40	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	426	0.0	0.1	0.66	Similar
	Graft	0	120	0.0	0.2	0.76	Similar
	Tunneled Central Line	1	215	0.5	1.0	0.48	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Kidney Care of Nashua	Overall	1	271	0.4	0.3	0.78	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	175	0.0	0.1	0.84	Similar
	Graft	-	-	-	-	-	-
	Tunneled Central Line	1	96	1.0	1.0	0.87	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care Lebanon	Overall	4	980	0.4	0.3	0.57	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	515	0.2	0.1	0.49	Similar
	Graft	0	98	0.0	0.2	0.80	Similar
	Tunneled Central Line	3	366	0.8	1.0	0.79	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Lancaster	Overall	1	309	0.3	0.3	0.87	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	0	127	0.0	0.1	0.88	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	1	168	0.6	1.0	0.68	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 9. (*Continued*) Access Related Bloodstream Infection Rate by Type and by Dialysis, Jan 1– Dec 31, 2022

Fresenius Medical Care of Londonderry	Overall	0	285	0.0	0.3	0.41	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	203	0.0	0.1	0.82	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	0	68	0.0	1.0	0.50	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Rockingham County	Overall	1	534	0.2	0.3	0.69	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	335	0.0	0.1	0.72	Similar
	Graft	0	56	0.0	0.2	0.88	Similar
	Tunneled Central Line	1	143	0.7	1.0	0.82	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Southern NH	Overall	2	358	0.6	0.3	0.41	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	223	0.0	0.1	0.80	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	2	87	2.3	1.0	0.28	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Manchester Dialysis	Overall	0	566	0.0	0.3	0.17	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	344	0.0	0.1	0.71	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	0	182	0.0	1.0	0.16	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-

Table 9. (*Continued*) Access Related Bloodstream Infection Rate by Type and by Dialysis Center, Jan 1– Dec 31, 2022

Manchester Kidney Center	Overall	0	1143	0.0	0.3	0.03	Lower
	Buttonhole	†	†	†	†	†	†
	Fistula	0	804	0.0	0.1	0.46	Similar
	Graft	0	96	0.0	0.2	0.80	Similar
	Tunneled Central Line	0	243	0.0	1.0	0.09	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Monadnock Dialysis Center	Overall	2	587	0.3	0.3	0.83	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	316	0.3	0.1	0.30	Similar
	Graft	0	78	0.0	0.2	0.83	Similar
	Tunneled Central Line	1	193	0.5	1.0	0.56	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Mt Washington Valley Dialysis Center	Overall	1	331	0.3	0.3	1.00	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	1	235	0.4	0.1	0.23	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	0	95	0.0	1.0	0.38	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Nashua Dialysis	Overall	9	967	0.9	0.3	0.01	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	3	538	0.6	0.1	0.02	Higher
	Graft	3	69	4.3	0.2	0.00	Higher
	Tunneled Central Line	3	360	0.8	1.0	0.81	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 9. (*Continued*) Access Related Bloodstream Infection Rate by Type and by Dialysis Center, Jan 1– Dec 31, 2022

New Hampshire Kidney Center	Overall	4	839	0.5	0.3	0.40	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	0	419	0.0	0.1	0.66	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	4	383	1.0	1.0	0.88	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Seacoast Dialysis	Overall	0	732	0.0	0.3	0.10	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	287	0.0	0.1	0.76	Similar
	Graft	0	190	0.0	0.2	0.64	Similar
	Tunneled Central Line	0	252	0.0	1.0	0.08	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	†	†	†	†	†	†

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Table 10. Vascular Access Infection Rate by Dialysis Center, Jan 1– Dec 31, 2022

Dialysis Name	Observed Infections	Patient Months	Dialysis Rate	National Rate	P-Value	Dialysis Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	14	474	3.0	0.8	0.00	Higher
Cocheco River Dialysis Center	3	684	0.4	0.8	0.35	Similar
Derry Dialysis	2	328	0.6	0.8	0.83	Similar
FMC Dialysis Services Exeter	6	470	1.3	0.8	0.22	Similar
FMC Strafford County	8	761	1.1	0.8	0.36	Similar
Fresenius Kidney Care of Nashua	4	271	1.5	0.8	0.21	Similar
Fresenius Medical Care Lebanon	13	980	1.3	0.8	0.06	Similar
Fresenius Medical Care of Lancaster	3	309	1.0	0.8	0.63	Similar
Fresenius Medical Care of Londonderry	3	285	1.1	0.8	0.54	Similar
Fresenius Medical Care of Rockingham County	3	534	0.6	0.8	0.65	Similar
Fresenius Medical Care of Southern NH	3	358	0.8	0.8	0.80	Similar
Manchester Dialysis	7	566	1.2	0.8	0.22	Similar
Manchester Kidney Center	9	1,143	0.8	0.8	0.87	Similar
Monadnock Dialysis Center	48	587	8.2	0.8	0.00	Higher
Mt Washington Valley Dialysis Center	2	331	0.6	0.8	0.82	Similar
Nashua Dialysis	21	967	2.2	0.8	0.00	Higher
New Hampshire Kidney Center	11	839	1.3	0.8	0.09	Similar
Seacoast Dialysis	9	732	1.2	0.8	0.17	Similar
State Total	**169**	**10,762**	**1.6**	**0.8**	**0.00**	**Higher**

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Table 11. Vascular Access Infection Rate by Access Type and by Dialysis Center, Jan 1– Dec 31, 2022

Dialysis Name	Access Type	Observed Infections	Patient Months	Diaylsis Rate	National Rate	P-Value	Dialysis Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	Overall	14	474	3.0	0.8	0.00	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	2	226	0.9	0.3	0.14	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	11	232	4.7	2.4	0.04	Higher
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Cocheco River Dialysis Center	Overall	3	684	0.4	0.8	0.35	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	2	377	0.5	0.3	0.33	Similar
	Graft	0	151	0.0	0.5	0.46	Similar
	Tunneled Central Line	1	156	0.6	2.4	0.13	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Derry Dialysis	Overall	2	328	0.6	0.8	0.83	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	216	0.5	0.3	0.54	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	1	90	1.1	2.4	0.47	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-
FMC Dialysis Services Exeter	Overall	6	470	1.3	0.8	0.22	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	172	0.6	0.3	0.44	Similar
	Graft	1	106	0.9	0.5	0.52	Similar
	Tunneled Central Line	4	192	2.1	2.4	0.82	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 11. (*Continued*) Vascular Access Infection Rate by Access Type and by Facility, Jan 1–Dec 31, 2022

FMC Strafford County	Overall	8	761	1.1	0.8	0.36	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	2	426	0.5	0.3	0.41	Similar
	Graft	1	120	0.8	0.5	0.59	Similar
	Tunneled Central Line	5	215	2.3	2.4	0.98	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Kidney Care of Nashua	Overall	4	271	1.5	0.8	0.21	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	175	0.6	0.3	0.44	Similar
	Graft	-	-	-	-	-	-
	Tunneled Central Line	3	96	3.1	2.4	0.62	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care Lebanon	Overall	13	980	1.3	0.8	0.06	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	3	515	0.6	0.3	0.20	Similar
	Graft	1	98	1.0	0.5	0.49	Similar
	Tunneled Central Line	9	366	2.5	2.4	0.92	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Lancaster	Overall	3	309	1.0	0.8	0.63	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	0	127	0.0	0.3	0.72	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	3	168	1.8	2.4	0.65	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 11. (*Continued*) Vascular Access Infection Rate by Access Type and by Facility, Jan 1–Dec 31, 2022

Fresenius Medical Care of Londonderry	Overall	3	285	1.1	0.8	0.54	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	1	203	0.5	0.3	0.51	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	2	68	2.9	2.4	0.72	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Rockingham County	Overall	3	534	0.6	0.8	0.65	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	335	0.0	0.3	0.42	Similar
	Graft	0	56	0.0	0.5	0.75	Similar
	Tunneled Central Line	3	143	2.1	2.4	0.87	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Fresenius Medical Care of Southern NH	Overall	3	358	0.8	0.8	0.80	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	223	0.0	0.3	0.56	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	3	87	3.4	2.4	0.52	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Manchester Dialysis	Overall	7	566	1.2	0.8	0.22	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	344	0.0	0.3	0.41	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	6	182	3.3	2.4	0.44	Similar
	Nontunneled Central Line	†	†	†	†	†	†
	Other Access	-	-	-	-	-	-

Table 11. (*Continued*) Vascular Access Infection Rate by Access Type and by Facility, Jan 1–Dec 31, 2022

Manchester Kidney Center	Overall	9	1143	0.8	0.8	0.87	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	1	804	0.1	0.3	0.51	Similar
	Graft	2	96	2.1	0.5	0.10	Similar
	Tunneled Central Line	6	243	2.5	2.4	0.91	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Monadnock Dialysis Center	Overall	48	587	8.2	0.8	0.00	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	13	316	4.1	0.3	0.00	Higher
	Graft	1	78	1.3	0.5	0.39	Similar
	Tunneled Central Line	34	193	17.6	2.4	0.00	Higher
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Mt Washington Valley Dialysis Center	Overall	2	331	0.6	0.8	0.82	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	1	235	0.4	0.3	0.58	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	1	95	1.1	2.4	0.43	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Nashua Dialysis	Overall	21	967	2.2	0.8	0.00	Higher
	Buttonhole	-	-	-	-	-	-
	Fistula	7	538	1.3	0.3	0.00	Higher
	Graft	3	69	4.3	0.5	0.01	Higher
	Tunneled Central Line	11	360	3.1	2.4	0.43	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-

Table 11. (*Continued*) Vascular Access Infection Rate by Access Type and by Facility, Jan 1–Dec 31, 2022

New Hampshire Kidney Center	Overall	11	839	1.3	0.8	0.09	Similar
	Buttonhole	†	†	†	†	†	†
	Fistula	1	419	0.2	0.3	1.00	Similar
	Graft	†	†	†	†	†	†
	Tunneled Central Line	10	383	2.6	2.4	0.78	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	-	-	-	-	-	-
Seacoast Dialysis	Overall	9	732	1.2	0.8	0.17	Similar
	Buttonhole	-	-	-	-	-	-
	Fistula	0	287	0.0	0.3	0.47	Similar
	Graft	0	190	0.0	0.5	0.38	Similar
	Tunneled Central Line	9	252	3.6	2.4	0.26	Similar
	Nontunneled Central Line	-	-	-	-	-	-
	Other Access	†	†	†	†	†	†

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Table 12. Rate of Antimicrobial starts per patient months, Jan 1- Dec 31, 2022

Dialysis Name	Number of IV Antimicrobial Starts	Patient Months	Dialysis Rate	National Rate	P-Value	Dialysis Rate Compared to National Rate
Central New Hampshire Kidney Center LLC	29	474	6.1	2.4	0.00	Higher
Cocheco River Dialysis Center	8	684	1.2	2.4	0.03	Lower
Derry Dialysis	8	328	2.4	2.4	0.88	Similar
FMC Dialysis Services Exeter	12	470	2.6	2.4	0.75	Similar
FMC Strafford County	18	761	2.4	2.4	0.96	Similar
Fresenius Kidney Care of Nashua	13	271	4.8	2.4	0.02	Higher
Fresenius Medical Care Lebanon	18	980	1.8	2.4	0.29	Similar
Fresenius Medical Care of Lancaster	5	309	1.6	2.4	0.42	Similar
Fresenius Medical Care of Londonderry	2	285	0.7	2.4	0.05	Lower
Fresenius Medical Care of Rockingham County	19	534	3.6	2.4	0.09	Similar
Fresenius Medical Care of Southern NH	8	358	2.2	2.4	0.93	Similar
Manchester Dialysis	10	566	1.8	2.4	0.37	Similar
Manchester Kidney Center	15	1,143	1.3	2.4	0.01	Lower
Monadnock Dialysis Center	10	587	1.7	2.4	0.30	Similar
Mt Washington Valley Dialysis Center	6	331	1.8	2.4	0.55	Similar
Nashua Dialysis	33	967	3.4	2.4	0.04	Higher
New Hampshire Kidney Center	17	839	2.0	2.4	0.55	Similar
Seacoast Dialysis	18	732	2.5	2.4	0.83	Similar

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Influenza Vaccination Percentages

Table 13 below shows the total number of HCP and the number of HCP vaccinated against seasonal influenza at each Dialysis Center during the 2022-23 influenza season. Vaccination coverage by Dialysis ranged from 23.3% to 69.5%, and the overall State vaccination percentage was 55.0% (Table 13). The analysis presented in Table 13 shows that one Dialysis Centers reported vaccination percentages that were significantly lower than the overall State vaccination percentage and thirteen Dialysis Centers reported vaccination percentages similar to the overall State vaccination percentage. Four Dialysis Centers are not included in this table due to not having viable data, not reporting, or other exclusionary criteria.

Table 13. Influenza Vaccination Percentages for Dialysis HCP by Dialysis, 2022–23 Influenza Season, Oct 1, 2022–Mar 31, 2023

Dialysis Name	HCP Vaccinated	Total HCP	% HCP Vaccinated	95% Confidence Interval	Dialysis % Compared to State %
Cocheco River Dialysis Center	25	50	50.0	36.3 , 63.7	Similar
FMC Dialysis Services Exeter	16	35	45.7	29.9 , 62.2	Similar
FMC Strafford County	24	42	57.1	41.9 , 71.4	Similar
Fresenius Kidney Care of Nashua	14	27	51.9	33.3 , 70.0	Similar
Fresenius Medical Care Lebanon	41	59	69.5	56.9 , 80.2	Similar
Fresenius Medical Care of Lancaster	22	40	55.0	39.5 , 69.8	Similar
Fresenius Medical Care of Londonderry	10	43	23.3	12.5 , 37.6	Lower
Fresenius Medical Care of Rockingham County	38	77	49.4	38.3 , 60.4	Similar
Fresenius Medical Care of Southern NH	28	44	63.6	48.8 , 76.8	Similar
Manchester Kidney Center	34	66	51.5	39.5 , 63.4	Similar
Monadnock Dialysis Center	31	49	63.3	49.2 , 75.8	Similar
Mt Washington Valley Dialysis Center	21	37	56.8	40.6 , 71.9	Similar
New Hampshire Kidney Center	37	57	64.9	51.9 , 76.4	Similar
Seacoast Dialysis	40	67	59.7	47.7 , 70.9	Similar
State Total	**381**	**693**	**55.0**	**51.3 , 58.7**	**Similar**

† Data are not shown for facilities reporting less than 50 patient months.
- Facility did not report any data contributing to SIR or Rates during this time period.
N/A or not applicable: Comparison between two years of data at a given facility is not applicable if no data were reported by that facility and/or if data must be censored for one or more of the years presented.

Influenza Vaccination Percentages: Comparison to 2021-22 Data

The overall statewide Dialysis Center HCP vaccination percentage was similar between the 2021-22 and 2022-23 influenza seasons (see Table 14). The analysis presented in Table 14 shows that, overall, fourteen Dialysis Center had similar HCP influenza vaccination rate in the 2021-22 influenza season compared to the 2022-23 influenza season. Four Dialysis Center could not be compared to previous seasons due to having data limitations.

Table 14. Influenza vaccination percentages for Dialysis healthcare personnel by Dialysis, comparison between 2021-2022 and 2022-23 influenza seasons

Dialysis Name	% HCP Vaccinated 2021-2022	95% Confidence Interval 2021-2022	% HCP Vaccinated 2022-2023	95% Confidence Interval 2022-2023	2021-2022 Compared to 2022-2023
Cocheco River Dialysis Center	62.8	47.7 , 76.2	50.0	36.3 , 63.7	Similar
FMC Dialysis Services Exeter	56.8	40.6 , 71.9	45.7	29.9 , 62.2	Similar
FMC Strafford County	60.4	46.8 , 72.8	57.1	41.9 , 71.4	Similar
Fresenius Kidney Care of Nashua	69.6	58.0 , 79.5	51.9	33.3 , 70.0	Similar
Fresenius Medical Care Lebanon	67.2	54.7 , 78.1	69.5	56.9 , 80.2	Similar
Fresenius Medical Care of Lancaster	51.6	34.3 , 68.7	55.0	39.5 , 69.8	Similar
Fresenius Medical Care of Londonderry	34.2	20.5 , 50.2	23.3	12.5 , 37.6	Similar
Fresenius Medical Care of Rockingham County	32.3	21.8 , 44.4	49.4	38.3 , 60.4	Similar
Fresenius Medical Care of Southern NH	66.7	52.5 , 78.9	63.6	48.8 , 76.8	Similar
Manchester Kidney Center	48.4	36.4 , 60.6	51.5	39.5 , 63.4	Similar
Monadnock Dialysis Center	75.6	61.5 , 86.4	63.3	49.2 , 75.8	Similar
Mt Washington Valley Dialysis Center	51.7	33.8 , 69.3	56.8	40.6 , 71.9	Similar
New Hampshire Kidney Center	54.5	41.3 , 67.3	64.9	51.9 , 76.4	Similar
Seacoast Dialysis	63.9	52.3 , 74.3	59.7	47.7 , 70.9	Similar
State Total	**57.3**	**53.7 , 60.9**	**55.0**	**51.3 , 58.7**	**Similar**

Influenza Vaccination Policies for Healthcare Personnel

During the 2022-23 influenza season, 58% Dialysis Center had a HCP vaccination policy in place (Table 12). Among the Dialysis Centers with a policy, one allowed for only medical and religious exemptions, and five allowed for medical, religious, and personal/philosophical exemptions, and zero allowed for medical only exemption. Thirteen Dialysis Centers required unvaccinated HCP with an approved exemption to wear a mask, 10 stated that unvaccinated HCP without an acceptable reason for exemption would be subject to progressive discipline, potentially including termination.

Table 15. Influenza Vaccination Policies and Consequences for Healthcare Personnel by Dialysis, 2022-23 influenza season

Dialysis Name	Exemptions Allowed in Policy*	Requirements for Unvaccinated HCP with Accepted Exemption	Consequences for Unvaccinated HCP without Accepted Exemption
Cocheco River Dialysis Center	Other	Wear a mask	Wear a mask, Progressive discipline, potentially including termination
FMC Dialysis Services Exeter	No Acceptable Exemptions Listed in Policy	Wear a mask	Wear a mask, Progressive discipline, potentially including termination
FMC Strafford County	No Acceptable Exemptions Listed in Policy	Wear a mask	Wear a mask, Progressive discipline, potentially including termination
Fresenius Kidney Care of Nashua	Medical, Religious, Personal/philosophical	Wear a mask, Receive verbal and/or written education	Personal Choice Allowed
Fresenius Medical Care Lebanon	No Acceptable Exemptions Listed in Policy	Wear a mask	Wear a mask, Progressive discipline, potentially including termination
Fresenius Medical Care Rockingham County	Personal/philosophical	Wear a mask	Wear a mask, Progressive discipline, potentially including termination
Fresenius Medical Care of Lancaster	Medical, Religious, Personal/philosophical	Wear a mask	Wear a mask
Fresenius Medical Care of Londonderry	Other	Wear a mask	Wear a mask, Progressive discipline, potentially including termination
Fresenius Medical Care of Southern NH	Medical, Religious, Personal/philosophical	Wear a mask, Receive verbal and/or written education	Wear a mask

Table 16. (*Continued)* Influenza Vaccination Policies and Consequenc0es for Healthcare Personnel by Dialysis, 2022-23 influenza season

Manchester Dialysis	Medical, Religious	Wear a mask	Wear a mask
Manchester Kidney Center	No Acceptable Exemptions Listed in Policy	Wear a mask	Wear a mask, Progressive discipline, potentially including termination
Monadnock Dialysis Center	Medical, Religious, Personal/philosophical	Wear a mask, Receive verbal and/or written education	Wear a mask, Receive verbal and/or written education
Mt Washington Valley Dialysis Center	Other	Wear a mask	Wear a mask, Progressive discipline, potentially including termination
New Hampshire Kidney Center	Medical, Religious, Personal/philosophical	Wear a mask, Receive verbal and/or written education	Wear a mask
New Hampshire Kidney Center	Other	Wear a mask	Wear a mask
Seacoast Dialysis Center	No Acceptable Exemptions Listed in Policy	Wear a mask	Wear a mask

IV. CONCLUSIONS

This first report of Dialysis Center HAI data is an important part of continuing progress toward the goal of eliminating HAI in NH. This report provides a picture of selected HAI data, which can be used by healthcare facilities in the state to identify areas for improvement and prevention as well as healthcare consumers to make informed healthcare decisions.

Key findings described in this report include the following:

- Compliance in reporting in accordance with (RSA) 151:32-35 was observed.
- NH Dialysis Centers reported lower infection rates for Bloodstream Infections as predicted based on national data.
- Vaccination coverage by Dialysis Center during the 2022-23 influenza season ranged from 23.3% to 69.5%. The overall State percentage was 55.0%, which is lower than the 2021-22 influenza season when the statewide vaccination rate was 57.3%. This is similar to the 2022-23 influenza season.
- HAI is actively working to build systems in order to perform external data validation for future reports.
- HAI is expecting to expand and this Dialysis report as methods evolve.

While this report only includes information on a subset of HAI, the information provided can be used as an important indicator of healthcare quality and infection prevention efforts in NH Dialysis Center.

APPENDIX 1: Technical Notes

1. The majority of data in this report were extracted from NHSN on 10/5/2022; influenza vaccination data and surgical antimicrobial prophylaxis data were extracted from other data sources on the same date. Changes or new infections reported by DIALYSIS after this date are not reflected in this report.
2. The SSI national comparison data used in this report come from the 2009 NHSN Report. The 2009 NHSN report summarizes data reported to NHSN from 2006-2008. This report is available at: http://www.cdc.gov/nhsn/PDFs/dataStat/2009NHSNReport.pdf.
3. Rates for any grouping were not presented if data were insufficient to generate a stable rate.
   a. SSI: There must be at least 20 procedures in the denominator to present a rate.
4. All confidence intervals presented in this report are 95% confidence intervals. A confidence interval is a measure of certainty (usually with 95% confidence) of an estimate (such as a percentage). Because we can never obtain a facility's true "population" data (e.g., all patients for all time), we use statistical procedures to estimate various measurements using "sample" data. Since estimates are variable, we use 95% confidence limits to describe the variability around the estimate. The confidence interval gives us the range within which the TRUE value will fall 95% of the time, assuming that the sample data are reflective of the true population. If the confidence intervals for the two rates overlap, then it is reasonably possible that the REAL rates are not different from one another.
5. Statistical significance is affected by sample size. Small sample sizes are more prone to fluctuations in the data.

Standardized Infection Ratios

6. Calculating a SIR: The SIR is the number of observed infections divided by the number of predicted infections based on most recent national data. In order to calculate an SIR, it is recommended that there be at least one predicted infection. See Appendix 3 for more information on the SIR.
7. Interpreting a SIR: The resulting SIR is a comparison between the number of observed infections and the number predicted.
   a. An SIR of 1.0 means that exactly the same number of infections was observed as was predicted.
   b. An SIR of less than one means that fewer infections were observed than were predicted (for example, SIR = 0.70 would be interpreted as 30% fewer infections observed than predicted).
   c. An SIR of more than one means that fewer infections were observed than were predicted (for example, SIR = 1.30 would be interpreted as 30% more infections observed than predicted).
8. Calculating a corresponding confidence interval for a SIR: The calculations for determining the 95% confidence interval for SIRs in this report are taken from: Liddell FD. Simple exact analysis of the standardized mortality ratio. Journal of Epidemiology and Community Health, 1984; 38:85-88. [iv]

9. Interpreting a SIR confidence interval: A confidence interval is a measure of certainty (usually with 95% confidence) of an estimate (such as a SIR). Confidence intervals can be used to assess whether differences in the number of observed and predicted infections are statistically significant (different or similar).

    a. For confidence intervals that contain the value 1.0, the observed number of infections will be considered "Similar" to the predicted number of infections based on national data (e.g., 0.27 , 1.49).
    b. For confidence intervals that are lower than and do not contain the value 1.0, the observed number of infections will be considered "Lower" than the predicted number of infections based on national data (e.g., 0.13 , 0.74).
    c. For confidence intervals that are higher than and do not contain the value 1.0, the observed number of infections will be considered "Higher" than the predicted number of infections based on national data (e.g., 1.09 , 2.63).

Infection Rates

10. Calculating a SSI rate and associated p-value: SSI rates are presented as the number of infections per 100 procedures.

    SSI rate = (number of infections / number of procedures) x 100

11. Interpreting a p-value: All DIALYSIS-specific rates and corresponding p-values in this report were generated directly by NHSN using Poisson statistical methods. State-level rates and corresponding p-values were calculated by DHHS using exact methods. A p-value provides a statistical comparison of two values in order to determine whether those values are statistically different or similar. In this report, p-values are used to assess whether DIALYSIS infection rates are similar or different to national infection rates. A p-value of <0.05 would indicate the DIALYSIS rate is significantly different than the national rate.

    a. If the p-value is ≥0.05, then the DIALYSIS rate would be considered statistically "Similar" to the national rate.
    b. If the DIALYSIS rate is lower than the national rate and the p-value is <0.05, then the DIALYSIS rate would be considered significantly "Lower" than the national rate.
    c. If the DIALYSIS rate is higher than the national rate and the p-value is <0.05, then the DIALYSIS rate would be considered significantly "Higher" than the national rate.

Process Measure Percentages

12. Calculating an influenza vaccination percentage: Influenza vaccination percentages are presented as the number of HCP vaccinated divided by the total number of HCP expressed as a percent.

    Influenza vaccination (%) = (number of HCP vaccinated / total number of HCP) x 100

13. A. Calculating a surgical IV antimicrobial prophylaxis adherence percentage: Surgical IV antimicrobial prophylaxis adherence percentages are presented as the number of orders for

which administration adhered to the measure divided by the total number of orders expressed as a percent.

Surgical antimicrobial prophylaxis adherence (%) = (number of orders administered on time / total number of orders) x 100

Note: Administrations of surgical antimicrobial prophylaxis recorded as having an interval of 0:00, 1:00, or 2:00 (for select antibiotics) between administration and procedure start were excluded from the analysis. This is because time in minutes, not seconds, from administration to procedure start are documented and it is impossible to determine if antibiotic was administered exactly within one or two hours (depending on the antibiotic).

B. Calculating a corresponding confidence interval for an influenza vaccination percentage: Confidence intervals for influenza vaccination data presented in this report are mid-p exact 95% confidence intervals, which were calculated using a statistical software program.

14. Calculating a corresponding confidence interval for a surgical IV antimicrobial prophylaxis adherence percentage: Confidence intervals calculated for IV antimicrobial prophylaxis data presented in this report are mid-p exact 95% confidence intervals, which were calculated using a statistical software program.

15. Interpreting a proportion confidence interval for vaccination data: A confidence interval is a measure of certainty (usually with 95% confidence) of an estimate (such as a percentage). Confidence intervals can be used to assess whether differences in the percentages observed for each group (for example, DIALYSIS vs. State) are statistically significant.

    a. Confidence intervals that overlap the State confidence interval are considered "Similar" to the overall State percentage.
    b. Confidence intervals that are lower than and do not overlap the State confidence interval are considered "Lower" than the overall State percentage.
    c. Confidence intervals that are higher than and do not overlap the State confidence interval are considered "Higher" than the overall State percentage.

APPENDIX 2: Influenza Vaccination Survey Questions, 2022-2023 Season

1. Background information (facility and survey respondent)
2. How many HCP worked or volunteered in your facility for at least one working day between October 1, 2022 and March 31, 2023?
3. How many HCP received a seasonal influenza vaccination (at your facility or elsewhere) for the 2022-23 season? Influenza vaccine for a given influenza season may be available as early as July or August. Include all immunized HCP that received the 2022-23 vaccine product, even if administered prior to October 1, 2023.
   3a. Total number of HCP immunized against influenza for the 2022-23 season:
   3b. Total number of HCP not immunized against influenza for the 2022-23 season:
4. Of the HCP not immunized against influenza for the 2022-23 influenza season, how many HCP did not receive the seasonal influenza vaccine for each of the following reasons (medical contraindications, religious, other (e.g., personal/philosophical), unknown)?
5. Does your facility have a seasonal influenza vaccination policy? Such a policy means that the facility requires all or some portion of HCP working at that facility to receive a seasonal influenza vaccine. If NO, skip to item 10.
   5a. Yes, there is a policy currently in place
   5b. No, but we are considering a policy
   5c. No, and we are not considering a policy
   5d. Other
6. If your facility has a seasonal influenza vaccination policy, what reasons for exemption are acceptable (medical, religious, personal/philosophical, other)? Check all that apply.
7. If your facility has a seasonal influenza vaccination policy, what do you require of unvaccinated HCP with an acceptable reason for exemption (wear a mask, receive verbal and/or written education, other)? Check all that apply.
8. If your facility has a seasonal influenza vaccination policy, what are the potential consequences for unvaccinated HCP without an acceptable reason for exemption (wear a mask, progressive discipline, potentially including termination, receive verbal and/or written education, other)? Check all that apply.
9. If your facility has a seasonal influenza vaccination policy, how many people were terminated, suspended, resigned, or dismissed as a result of noncompliance with the policy during the 2022-23 influenza season?
   9a. Terminated:
   9b. Temporarily suspended:
   9c. Resigned:
   9d: Dismissed permanently:
10. Please enter any comments you would like to share.

APPENDIX 3: Understanding the Relationship between Healthcare-Associated Infection Rates and Standardized Infection Ratio Comparison Metrics

HAI Elimination Metrics are very useful for performing evaluations.[v] Several metrics are based on the science employed in NHSN. While national aggregate SSI data are published in the annual NHSN reports, these rates must be stratified by types of risk category and procedure-specific factors. This scientifically sound risk-adjustment strategy creates a practical challenge to summarizing this information nationally, regionally, or even for an individual healthcare facility.

A SIR can be used as an indirect standardization method for summarizing HAI experienced across any number of stratified groups of data. To illustrate the method for using an SIR as an HAI comparison metric, the following example data are displayed below:

Risk Group Stratifiers	Observed SSI Rates			NHSN SSI Rates for Outpatient Breast Procedures (Standard Population)		
Procedure Risk Category	#SSI	#Breast Procedures	SSI Rate*	#SSI	#Breast Procedures	SSI Rate*
Risk Category 0	8	6,589	0.1	3	944	0.32
Risk Category 1-3	21	7,652	0.3	7	659	1.06

$$\text{SIR} = \frac{\text{observed}}{\text{predicted}} = \frac{8+21}{6{,}589\times\left(\frac{0.32}{100}\right)+7{,}652\times\left(\frac{1.06}{100}\right)} = \frac{29}{21+81} = \frac{29}{102} = 0.28$$

95% CI = (0.190 , 0.408)

*Defined as the number of SSI per 100 associated procedures

In the table above, there are two strata to illustrate risk-adjustment by risk category for which national data exist from NHSN. The SIR calculation is based on dividing the total number of observed SSI events by a "predicted" number using the SSI rates from the outpatient breast procedures. This "predicted" number is calculated by multiplying the national SSI rate from the standard population by the observed number of procedures for each stratum, which can also be understood as a prediction or projection. If the observed data represented a follow-up period, such as 2017, one would state that an SIR of 0.28 indicates that there were 72% fewer infections for the facility than were predicted.

The SIR concept and calculation is completely based on the underlying rate data that exist across a potentially large group of strata. Thus, the SIR provides a single metric for performing comparisons rather than attempting to perform multiple comparisons across many strata

which makes the task cumbersome. The SIR concept and calculation can be applied equitably to other HAI metrics. This is especially true for HAI metrics for which national data are available and reasonably precise using a measurement system such as NHSN. The SIR calculation methods differ in the risk group stratification only. See the following example data and SIR calculation.

Risk Group Stratifiers		Observed SSI Rates			NHSN SSI Rates for 2008 (Standard Population)		
Procedure Code	**Risk Index Category**	**#SSI†**	**#Procedures**	**SSI Rate***	**#SSI†**	**#Procedures**	**SSI Rate***
CBGB	1	315	12,600	2.5	2100	70,000	3.0
CBGB	2,3	210	7,000	3.0	1000	20,000	5.0
HPRO	1	111	7,400	1.5	1020	60,000	1.7

$$\text{SIR} = \frac{\text{observed}}{\text{expected}} = \frac{315+210+111}{12600\times\left(\frac{3.0}{100}\right)+7000\times\left(\frac{5.0}{100}\right)+7400\left(\frac{1.7}{100}\right)} = \frac{636}{378+350+125.8} = \frac{636}{853.8} = 0.74$$

95% CI = (0.649 , 0.851)

† SSI: Surgical site infection * Defined as the number of deep incisional or organ/space SSI per 100 procedures HPRO: Arthroplasty of hip
CBGB: Coronary artery bypass graft

This example uses SSI rate data stratified by procedure and risk index category. The SIR for this set of observed data is 0.74, which indicates there is a 26% reduction in the number of SSI events based on the baseline NHSN SSI rates as representing the standard population.

APPENDIX 4: Preventing Healthcare-Associated Infections

What You Can Do to Prevent Healthcare-Associated Infections

There are several prevention tips you can follow all the time to reduce your chance of getting an infection or spreading your infection to others.

1. Clean your hands.
   - Use soap and warm water. Rub your hands for at least 20 seconds. Rub your palms, fingernails, in between your fingers, and the backs of your hands.
   - If your hands do not look dirty, you can clean them with alcohol-based hand rub. Rub the gel all over your hands, especially under your nails and between your fingers, until your hands are dry.
   - Clean your hands before touching or eating food. Clean them after you use the bathroom, take out the trash, change a diaper, visit someone who is ill, or play with a pet.

2. Make sure healthcare providers clean their hands first, even if they wear gloves, before touching you or performing any procedure.
   - Doctors, nurses, dentists, and other healthcare providers come into contact with many bacteria and viruses. If you do not see your healthcare provider wash their hands or use an alcohol-based hand rub before they treat you, ask them if they have cleaned their hands.
   - Healthcare providers should wear clean gloves when they perform tasks such as taking throat cultures, pulling teeth, taking blood, touching wounds or body fluids, while suctioning tubes, and examining your mouth or genitalia. Don't be afraid to ask if they should wear gloves.

3. Cover your mouth and nose.
   - Many diseases are spread through sneezes and coughs. When you sneeze or cough, the germs can travel three feet or more. Cover your mouth and nose to prevent the spread of infection to others.
   - Use a tissue. Keep tissues handy at home, at work, and in your pocket. Be sure to throw away used tissues and clean your hands after coughing or sneezing.
   - If you don't have a tissue, cover your mouth and nose with the bend of your elbow or hands. If you use your hands, clean them right away.

4. If you are sick, avoid close contact with others.
   - If you are sick, stay away from other people or stay home. Don't shake hands or touch others.
   - When you go for medical treatment, call ahead and ask if there is anything you can do to avoid infecting people in the waiting room.

5. Get shots to avoid disease and fight the spread of infection.
   - Make sure that your vaccinations are current—even for adults. Check with your doctor about shots you may need.

6. If you are prescribed an antibiotic for an illness, take them exactly as directed by your doctor.

- Don't take half-doses or stop before you complete your prescribed course even if you feel better. Not taking them as directed can lead to infections that become resistant to antibiotics, making them more difficult to treat.

What You Can Do to Help Prevent Surgical Site Infections

- Tell your doctor about other medical problems you may have. Health problems such as allergies, diabetes, and obesity could affect your surgery and your treatment.
- Quit smoking. Patients who smoke get more infections. Talk to your doctor about how you can quit before your surgery.
- Do not shave near where you will have surgery. Shaving with a razor can irritate your skin and make it easier to develop an infection.
- You may have some of your hair removed immediately before your surgery using electric clippers if the hair is in the same area where the procedure will occur, however you should not be shaved with a razor. Speak up if someone tries to shave you with a razor before surgery. Ask why you need to be shaved and talk with your surgeon if you have any concerns.
- Ask if you will get antibiotics before surgery.
- After your surgery, make sure that your healthcare providers clean their hands before examining you, either with soap and water or an alcohol-based hand rub. If you do not see your providers clean their hands, please ask them to do so.
- Family and friends who visit you should not touch the surgical wound or dressings and prevent pets from coming into contact with your wound.
- Family and friends should clean their hands with soap and water or an alcohol-based hand rub before and after visiting you. If you do not see them clean their hands, ask them to do so.
- Before you go home, your doctor or nurse should explain everything you need to know about taking care of your wound. Make sure you understand how to care for your wound before you leave the healthcare facility. If you do develop an infection at the healthcare facility, be sure to ask what type of infection you have, whether you need antibiotics for it, what steps you should take to prevent it from spreading, and make plans for follow up care for the infection.
- Always clean your hands before and after caring for your wound.
- Before you go home, make sure you know who to contact if you have questions or problems after you get home.
- If you have any symptoms of an infection, such as redness and pain at the surgery site, drainage, or fever, call your doctor immediately.

What Healthcare Facilities Can Do to Prevent Surgical Site Infections

To prevent surgical site infections, doctors, nurses, and other healthcare providers:

- Clean their hands and arms up to their elbows with an antiseptic agent before the surgery.
- Clean their hands with soap and water or an alcohol-based hand rub before and after caring for each patient.
- May remove some of your hair immediately before your surgery using electric clippers if the hair is in the same area where the procedure will occur. They should not shave you with a razor.
- Wear special hair covers, masks, gowns, and gloves during surgery to keep the surgery area clean.
- Give you antibiotics before your surgery starts. In most cases, you should get antibiotics within 60 minutes before the surgery starts and the antibiotics should be stopped within 24 hours after surgery.
- Clean the skin at the site of your surgery with a special soap that kills germs.

This information was adapted from materials developed by the Centers for Disease Control and Prevention (CDC), the Association for Professionals in Infection Control and Epidemiology (APIC), the Joint Commission, and Society of Healthcare Epidemiology of America (SHEA).

Other Useful Resources

Access the New Hampshire Healthcare-Associated Infections (HAI) Program website for public reports, guidelines, and other materials at: http://www.dhhs.nh.gov/dphs/cdcs/hai/index.htm.

For more information about HAI nationally and patient safety, visit the Centers for Disease Control and Prevention (CDC) website at: http://www.cdc.gov/HAI/ and http://www.cdc.gov/HAI/patientSafety/patient-safety.html.

The Agency for Healthcare Quality and Research (AHRQ) has information for patients including care planning, diagnosis and treatment, and patient engagement. Visit their website at: http://www.ahrq.gov/patients-consumers/index.html.

The Society for Healthcare Epidemiology of America (SHEA) has several patient resources and guides. Visit their website at:
https://www.shea-online.org/index.php/practice-resources/patients

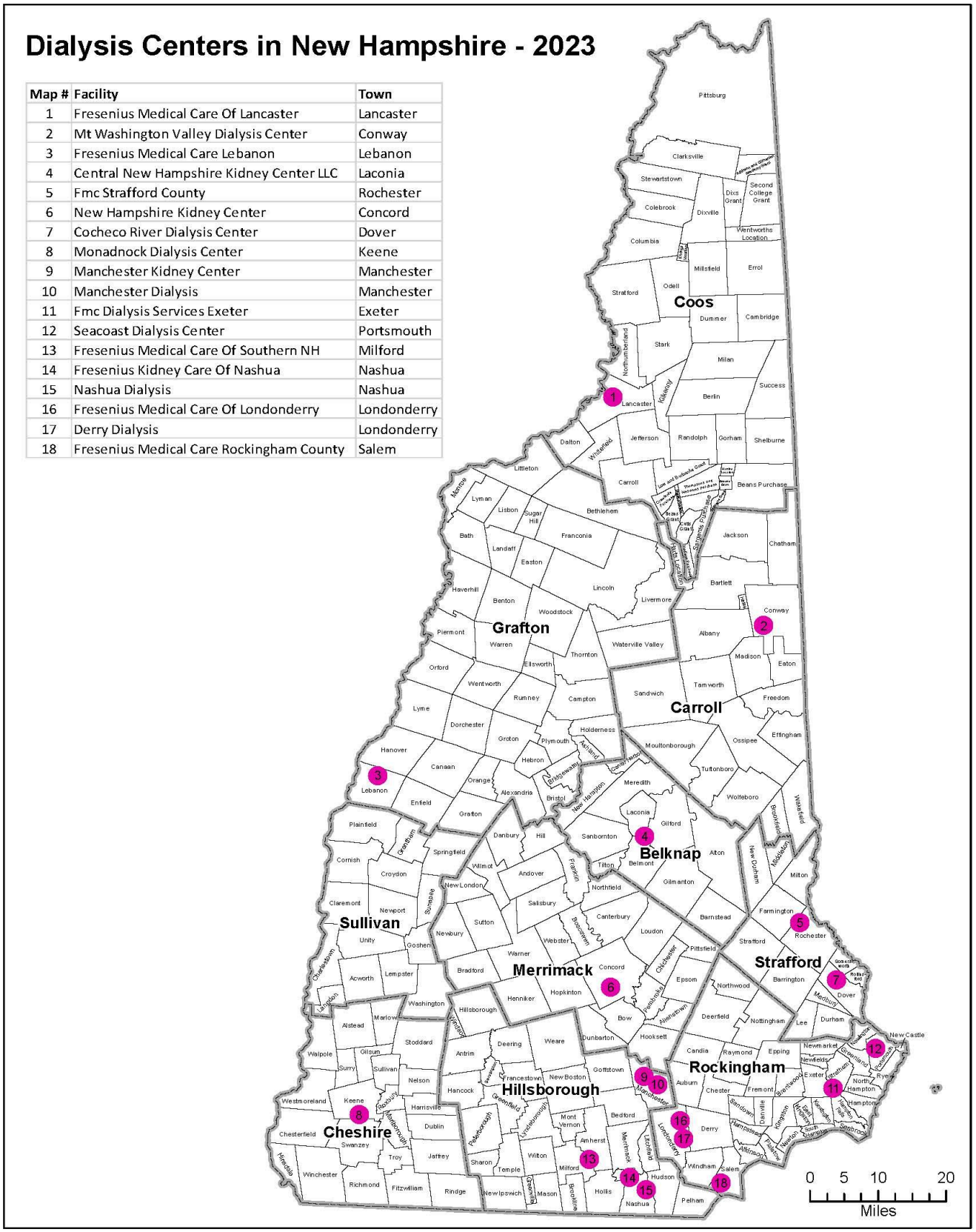
The Association of Professionals in Infection Control and Epidemiology (APIC) have infection prevention updates, materials for healthcare facilities, and information about HAI. Visit their website to learn more: https://apic.org/consumers/patient-safety-resources/

To learn more about accreditation, certification and standards, visit the Joint Commission Website at: http://www.jointcommission.org/.

APPENDIX 5: Map of New Hampshire Dialysis Centers 2022

Dialysis Centers in New Hampshire - 2023

Map #	Facility	Town
1	Fresenius Medical Care Of Lancaster	Lancaster
2	Mt Washington Valley Dialysis Center	Conway
3	Fresenius Medical Care Lebanon	Lebanon
4	Central New Hampshire Kidney Center LLC	Laconia
5	Fmc Strafford County	Rochester
6	New Hampshire Kidney Center	Concord
7	Cocheco River Dialysis Center	Dover
8	Monadnock Dialysis Center	Keene
9	Manchester Kidney Center	Manchester
10	Manchester Dialysis	Manchester
11	Fmc Dialysis Services Exeter	Exeter
12	Seacoast Dialysis Center	Portsmouth
13	Fresenius Medical Care Of Southern NH	Milford
14	Fresenius Kidney Care Of Nashua	Nashua
15	Nashua Dialysis	Nashua
16	Fresenius Medical Care Of Londonderry	Londonderry
17	Derry Dialysis	Londonderry
18	Fresenius Medical Care Rockingham County	Salem



REFERENCES

[i] CDC. (2023, February 6). *Dialysis safety*. Centers for Disease Control and Prevention. https://www.cdc.gov/dialysis/

[ii] CDC. Guide to Infection Prevention for Outpatient Settings: Minimum Expectations for Safe Care. Accessed online from: http://www.cdc.gov/HAI/settings/outpatient/outpatient-care-guidelines.html

[iii] Linda McKibben, MD, Teresa Horan, MPH, Jerome I. Tokars. Guidance on Public Reporting of Healthcare-Associated Infections: Recommendations of the Healthcare Infection Control Practices Advisory Committee. American Journal of Infection Control. 2005;33:217-26. Accessed online from: http://www.cdc.gov/ncidod/dhqp/pdf/hicpac/PublicReportingGuide.pdf

Note: referenced according to citation order of appearance within the report.