

2021 Nat

Introduction:

Welcome to the 2021 National and State HAI Progress Report using the 2015 bas by comparing the number of observed device days to the number of predicted dev This report is created by CDC staff with the National Healthcare Safety Network (N

Scope of report:

Device Days Types
Central line days (CLDs) by locations
Urinary catheter days (UCDs) by locations
Ventilator days (VDs) by locations

National and State HAI Progress Report

Standardized Utilization Ratios

<h3>Acute Care Hospitals</h3>

eline and risk adjustment calculations. Standardized utilization ratios (SURs) are used to describe device
ice days.
IHSN).

ACH	
National	State
p	p
p	p
p	p

]

» utilization

Development of the NHSN Standardized Utilization Ratio (SUR): Methodology

Rationale

Traditionally, NHSN has been providing a crude measure of device utilization rate to the healthcare facilities. To make these rates standardized to compare with a reference baseline population as well as over time. Accordingly, CDC has developed

Development of SUR models

SUR models were developed for the following measures: central line days, urinary catheter days and ventilator days in inpatient rehabilitation facilities (IRF), long-term acute care hospitals (LTACH) (and NICU for central line days). Using the NHSN data (2021) in sync with rebaseline work, CDC has developed multivariable logistic regression models (“Extra-binomial Variation in Logistic Linear Models,” Applied Statistics, 31, 144–148.). Unit of analysis in all the SUR

STEPS to compute SUR at the location level

1: First, calculate the logit scale value of p_{hat} , using parameter estimates of corresponding SUR model.

Logit p_{hat} = intercept + x_1 + x_2 + x_3 +

(Risk factors are provided in appendices for individual matrix of measure and healthcare setting)

2: Then, compute the probability of device use

$p_{hat} = [e^{\text{logit}(p_{hat})}] / [1 + e^{\text{logit}(p_{hat})}]$

3: Calculate predicted device days as follows:

Predicted Device Days = p_{hat} * In-patient days

4: Finally, derive SUR value at the location by dividing number of observed device days with number of predicted device days

$SUR = \text{Observed Device Days} / \text{Predicted Device Days}$

Note that SUR will not be calculated if Predicted Device Days is < 1 due to minimum precision criteria of 1.0.

STEPS to compute SUR at higher level above location

Do the same computation as in step 1, 2, 3 at location level.

Sum the observed device days and predicted device days up to the level of aggregation desired (e.g., facility-level)

Then, derive SUR value at the desired aggregate level by dividing number of observed device days with number of predicted device days

SUR Guide: <https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sur-guide-508.pdf>

Revised Notes (2.2.2023): List of location included in the SUR calculation is located in the SUR guide referenced

monitor the progress of healthcare acquired infections (HAI) prevention efforts, device utilization in any healthcare
used statistical models to make SUR values available for different measures (e.g., central line days, urinary catheter

days. They were available for the healthcare setting of acute care hospitals (ACH), critical access hospitals (CAH)

models that correct over dispersion by the Williams' method (Reference: Williams, D. A. (1982),
JR models are at the location level.

device days;

l).
of predicted device days.

l above

e setting/location needs to be
after days) at various healthcare settings.

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2021 Annual National and State HAI Progress Report
Acute Care Hospitals: Full series of tables for all national and state data

Table 1 **National standardized utilization ratios (SURs) and facility-specific summary**
Central line days (CLDs)
Urinary catheter days (UCDs)
Ventilator days (VDs)

Table 2 **State-specific SURs for CLDs from Acute Care Hospitals**
2a. All locations combined
2b. Critical care locations only
2c. Ward (non-critical care) locations only
2d. Neonatal critical care locations only

Table 3 **State-specific SURs for UCDs from Acute Care Hospitals**
3a. All locations combined
3b. Critical care locations only
3c. Ward (non-critical care) locations only

Table 4 **State-specific SURs for VDs from Acute Care Hospitals**
4a. All locations combined
4b. Critical care locations only
4c. Ward (non-critical care) locations only

Table 5 **Changes in national SURs, 2021 compared to 2020**
Central Line Days (CLDs)
Urinary Catheter Days (UCDs)
Ventilator days (VDs)

Table 6 **Changes in state SURs, 2021 compared to 2020**
6a. Central Line Days (CLDs)
6b. Urinary Catheter Days (UCDs)
6c. Ventilator Days (VDs)

Appendix A Factors used in NHSN risk-adjusted SUR calculation of the device utilization in :

Additional Resources Technical Appendix
HAI Progress Report Home Page
SUR Guide: <https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nh>

ry SURs

acute care hospitals (ACHs)

isn-sur-guide-508.pdf

Device and Patient Population	No. of Facilities	No. of L
	Reporting ¹	Observed
Central line days, all⁴	3,820	29,124,008
ICUs⁵	3,125	10,751,699
Wards⁶	3,794	17,032,856
NICUs⁷	1,041	1,339,453
Urinary catheter days, all⁸	3,818	27,011,393
	3,124	11,416,888
Wards⁶	3,803	15,594,505
Ventilator days, all⁸	1,948	4,957,755
	1,877	4,688,858
	537	268,897

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated w

2. Percent of facilities with at least one predicted device day that had an SUR significantly grea

3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted num

4. Data from all ICUs, wards (and other non-critical care locations), and NICUs. Data contained

5. Data from all ICUs; excludes wards (and other non-critical care locations), and NICUs. Data c

6. Data from all wards (for this table, wards also include step-down, mixed acuity, and specialty

7. Data from all NICU locations, including Level II/III and Level III and Level IV nurseries.

[See the Location Chapter of the NHSN manual for detailed definitions of each nursery level:](#)

8. Data from all ICUs, wards, and other non-critical care locations. This excludes NICUs. Data c

Table 1. National standardized utilization ratios (SURs) and facility-specific summary SURs
Table 1a. Central line days (

<u>Device Days</u>		<u>95% CI for SUR</u>		<u>Facility-specific SURs</u>		
Predicted	SUR	Lower	Upper	No. Facilities with ≥1	No. Facilities with SUR	
				Predicted	Significantly > National SUR	
				Device Days	N	%²
32,176,037.1089	0.9051	0.9048	0.9054	3,815	1,711	45%
10,552,248.8688	1.0189	1.0183	1.0195	3,121	1,457	47%
20,104,671.4751	0.8472	0.8468	0.8476	3,789	1,645	43%
1,519,116.7650	0.8817	0.8803	0.8832	1,041	283	27%
32,055,249.1082	0.8427	0.8423	0.8430	3,815	1,792	47%
12,127,249.8880	0.9414	0.9409	0.9420	3,122	1,407	45%
19,927,999.2202	0.7825	0.7821	0.7829	3,800	1,871	49%
4,101,026.0169	1.2089	1.2078	1.2100	1,939	897	46%
3,851,901.7970	1.2173	1.2162	1.2184	1,872	882	47%
249,124.2200	1.0794	1.0753	1.0834	528	182	34%

When there are less than 5 reporting facilities. This may be different from those reported in the SIR tables due to the number of facilities that are greater than or less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had a predicted number of device days in 2021. If a facility's predicted number of device days was <1.0, a facility-specific SUR was not reported in this table. Data contained in this table are reported from acute care hospitals; as such, data from CAHs, IRFs and LTACHs are excluded. Data contained in this table are reported from acute care hospitals; as such, data from CAHs, IRFs and LTACHs are excluded. Data contained in this table are reported from acute care areas [including hematology/oncology, bone marrow transplant]. Data contained in this table are reported from acute care hospitals; as such, data from CAHs, IRFs and LTACHs are excluded.

Data contained in this table are reported from acute care hospitals; as such, data from CAHs, IRFs and LTACHs are excluded.

using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by device type and facility type (CLDs), urinary catheter days (UCDs), and ventilator days (VDs).

JRs								
No. Facilities with SUR								
Significantly < National SUR		5%	10%	15%	20%	25%	30%	35%
N								
1,784	47%	0.1924	0.4278	0.5252	0.5938	0.6579	0.7042	0.7494
1,345	43%	0.3925	0.5482	0.6435	0.7161	0.7744	0.8358	0.8884
1,785	47%	0.1717	0.3621	0.4490	0.5196	0.5786	0.6326	0.6789
642	62%	0.0633	0.2107	0.3084	0.3590	0.4151	0.4869	0.5333
1,719	45%	0.3542	0.5072	0.5764	0.6268	0.6691	0.7066	0.7438
1,341	43%	0.4437	0.5647	0.6435	0.6982	0.7497	0.7921	0.8340
1,623	43%	0.3348	0.4438	0.5122	0.5588	0.6046	0.6416	0.6797
823	42%	0.1605	0.4918	0.6869	0.7939	0.8776	0.9580	1.0312
775	41%	0.3253	0.6155	0.7512	0.8585	0.9290	0.9989	1.0660
310	59%	0.0000	0.0000	0.0000	0.0000	0.0087	0.0505	0.1296

to exclusion and inclusion criteria. Refer to the technical appendix for details.

≥ 1.0 predicted device days in 2021.

is neither calculated nor included in the distribution of facility-specific SURs.

is excluded.

is excluded.

is excluded from acute care hospitals; as such, data from CAHs, IRFs and LTACHs are excluded.

is excluded.

d patient population:

Percentile Distribution of Facility-specific SURs³

Median									
40%	45%	50%	55%	60%	65%	70%	75%	80%	85%
0.7966	0.8441	0.8924	0.9417	0.9858	1.0413	1.1025	1.1793	1.2674	1.3892
0.9340	0.9907	1.0324	1.0810	1.1278	1.1783	1.2349	1.3135	1.3963	1.4990
0.7259	0.7748	0.8283	0.8770	0.9351	1.0003	1.0741	1.1644	1.2636	1.3965
0.5844	0.6238	0.6842	0.7396	0.7923	0.8412	0.9037	0.9767	1.0740	1.1681
0.7761	0.8118	0.8492	0.8886	0.9236	0.9738	1.0225	1.0768	1.1475	1.2380
0.8758	0.9136	0.9512	0.9817	1.0202	1.0525	1.0827	1.1242	1.1654	1.2112
0.7253	0.7662	0.8108	0.8610	0.9146	0.9653	1.0305	1.1050	1.1998	1.3210
1.1013	1.1687	1.2276	1.2897	1.3609	1.4452	1.5230	1.6127	1.7514	1.9279
1.1346	1.1911	1.2513	1.3148	1.3799	1.4571	1.5335	1.6266	1.7506	1.9214
0.2512	0.3485	0.5092	0.7155	0.8906	1.1913	1.5570	1.9205	2.5788	3.2682

90%

95%

1.5832

1.9873

1.6504

1.9127

1.6282

2.0754

1.2875

1.4743

1.3405

1.5950

1.2668

1.3488

1.4889

1.8368

2.2011

2.6501

2.1478

2.5999

4.7309

7.4419

Table 2. State-specific standardized utilization ratios (SURs) and facility-specific summary
Table 2a. Central line days (CL

State	No. of Facilities	No. of Device Days			95% CI
		Observed	Predicted	SUR	Lower
Alabama	89	517,192	610,166.7999	0.8476	0.8453
Alaska	10	47,597	42,714.5948	1.1143	1.1043
Arizona	72	669,879	670,142.0873	0.9996	0.9972
Arkansas	52	293,511	335,067.3647	0.8760	0.8728
California	347	2,919,836	3,026,615.4598	0.9647	0.9636
Colorado	59	414,407	412,103.9880	1.0056	1.0026
Connecticut	30	285,128	348,530.1754	0.8181	0.8151
D.C.	9	106,719	131,927.7055	0.8089	0.8041
Delaware	9	151,839	175,478.2950	0.8653	0.8609
Florida	223	2,142,510	2,624,977.9769	0.8162	0.8151
Georgia	111	952,803	1,067,025.6499	0.8930	0.8912
Guam	2	.	.	.	.
Hawaii	17	116,570	103,124.3276	1.1304	1.1239
Idaho	18	93,258	93,653.4645	0.9958	0.9894
Illinois	137	1,067,967	1,212,467.2401	0.8808	0.8791
Indiana	93	664,464	666,814.1050	0.9965	0.9941
Iowa	40	229,095	232,406.2515	0.9858	0.9817
Kansas	62	227,630	235,850.5635	0.9651	0.9612
Kentucky	71	487,826	527,828.5404	0.9242	0.9216
Louisiana	107	458,242	492,615.3883	0.9302	0.9275
Maine	20	99,557	107,388.3941	0.9271	0.9213
Maryland	49	489,911	554,264.7617	0.8839	0.8814
Massachusetts	68	640,332	704,259.0930	0.9092	0.9070
Michigan	101	726,300	896,005.8630	0.8106	0.8087
Minnesota	51	417,005	388,277.4581	1.0740	1.0707
Mississippi	63	288,812	309,308.0847	0.9337	0.9304
Missouri	80	741,355	777,564.2526	0.9534	0.9513
Montana	14	46,916	70,518.8007	0.6653	0.6593
Nebraska	29	173,534	175,729.7717	0.9875	0.9829
Nevada	29	309,478	349,279.6954	0.8860	0.8829
New Hampshire	13	89,162	93,791.8460	0.9506	0.9444
New Jersey	72	644,605	843,575.9258	0.7641	0.7622
New Mexico	32	144,447	147,486.2703	0.9794	0.9744
New York	178	1,729,303	2,267,291.6404	0.7627	0.7616
North Carolina	103	957,417	1,005,585.3585	0.9521	0.9502
North Dakota	11	69,592	72,588.9462	0.9587	0.9516
Ohio	151	1,327,138	1,427,219.8195	0.9299	0.9283
Oklahoma	85	437,076	351,645.4596	1.2429	1.2393
Oregon	37	273,475	308,797.8479	0.8856	0.8823
Pennsylvania	187	1,359,339	1,613,423.9821	0.8425	0.8411
Puerto Rico	16	74,679	102,823.5965	0.7263	0.7211
Rhode Island	11	81,438	97,751.6169	0.8331	0.8274
South Carolina	64	439,189	529,864.9725	0.8289	0.8264

South Dakota	22	70,477	78,630.5685	0.8963	0.8897
Tennessee	98	771,437	819,106.2288	0.9418	0.9397
Texas	363	2,728,419	2,804,802.1307	0.9728	0.9716
Utah	38	171,840	198,388.3857	0.8662	0.8621
Vermont	7	34,530	37,911.6727	0.9108	0.9012
Virgin Islands	2	.	.	.	.
Virginia	83	645,555	747,282.3534	0.8639	0.8617
Washington	58	571,358	568,749.7478	1.0046	1.0020
West Virginia	32	217,635	212,568.9642	1.0238	1.0196
Wisconsin	82	475,602	478,407.1525	0.9941	0.9913
Wyoming	13	21,756	18,034.2011	1.2064	1.1904
All US	3,820	29,124,008	32,176,037.1089	0.9051	0.9048

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when there a
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than or le
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of device
4. Data from all ICUs, wards (and other non-critical care locations), and NICUs. Data contained in this table

γ SURs using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by dev
 .Ds), all locations⁴

for SUR	Facility-specific SURs						10%
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		No. Facilities with SUR	10%	
			Significantly > National SUR	Significantly < National SUR			
		N	N				
0.8499	89	23	26%	54	61%	0.1953	
1.1243	10	7	70%	3	30%	.	
1.0020	72	40	56%	28	39%	0.2160	
0.8792	51	20	39%	25	49%	0.3106	
0.9658	346	194	56%	128	37%	0.5556	
1.0086	59	31	53%	23	39%	0.5181	
0.8211	30	9	30%	18	60%	0.5653	
0.8138	9	.	.	.	.	.
0.8697	9	.	.	.	.	.
0.8173	223	70	31%	143	64%	0.4579	
0.8947	111	54	49%	51	46%	0.4418	
.	
1.1369	17	11	65%	4	24%	.	
1.0022	18	9	50%	5	28%	.	
0.8825	137	62	45%	62	45%	0.4645	
0.9989	93	57	61%	30	32%	0.5786	
0.9898	40	16	40%	17	43%	0.4031	
0.9691	62	33	53%	21	34%	0.0548	
0.9268	71	38	54%	29	41%	0.5636	
0.9329	107	48	45%	47	44%	0.2303	
0.9328	20	10	50%	8	40%	0.3356	
0.8864	49	24	49%	24	49%	0.4760	
0.9115	68	28	41%	36	53%	0.4557	
0.8125	101	35	35%	58	57%	0.4448	
1.0772	50	24	48%	22	44%	0.5517	
0.9371	63	29	46%	28	44%	0.0700	
0.9556	80	38	48%	37	46%	0.4513	
0.6713	14	3	21%	10	71%	.	
0.9921	29	15	52%	13	45%	0.1466	
0.8892	29	11	38%	12	41%	0.5180	
0.9569	13	4	31%	6	46%	.	
0.7660	72	23	32%	44	61%	0.4790	
0.9845	32	14	44%	15	47%	0.2817	
0.7639	178	48	27%	117	66%	0.3906	
0.9540	103	48	47%	47	46%	0.5603	
0.9659	11	5	45%	6	55%	.	
0.9314	151	59	39%	74	49%	0.4970	
1.2466	85	58	68%	21	25%	0.2903	
0.8889	37	17	46%	15	41%	0.6359	
0.8439	187	52	28%	122	65%	0.1634	
0.7315	16	7	44%	9	56%	.	
0.8389	11	4	36%	6	55%	.	
0.8313	64	28	44%	33	52%	0.4071	

0.9029	22	8	36%	13	59%	0.2953
0.9439	98	45	46%	48	49%	0.4546
0.9739	362	187	52%	136	38%	0.2243
0.8703	38	13	34%	21	55%	0.2863
0.9205	7	.	.	.	.	.
.
0.8660	83	35	42%	38	46%	0.4984
1.0072	58	41	71%	16	28%	0.6996
1.0281	31	17	55%	11	35%	0.4215
0.9970	82	43	52%	30	37%	0.4367
1.2225	13	4	31%	6	46%	.
0.9054	3,815	1,711	45%	1,784	47%	0.4278

are less than 5 reporting facilities. This may be different from those reported in the SIR tables due to exclusions less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0 predicted device days in 2021. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was neither calculated nor reported from acute care hospitals.

rice type and patient population:

Median			
25%	50%	75%	90%
0.5083	0.7612	0.9519	1.1776
.	.	.	.
0.5987	0.9797	1.1790	1.5523
0.5525	0.8471	1.0669	1.5586
0.7494	0.9873	1.2596	1.5832
0.6839	1.0552	1.4808	2.2157
0.6428	0.7745	0.9721	1.1326
.	.	.	.
.	.	.	.
0.6139	0.7650	0.9778	1.2080
0.7032	0.9318	1.2157	1.5456
.	.	.	.
.	.	.	.
.	.	.	.
0.7068	0.9156	1.1371	1.4373
0.7657	1.0594	1.4011	1.7894
0.6497	0.8920	1.2133	1.6120
0.6899	1.0265	1.3963	2.0083
0.7454	0.9458	1.1820	1.4547
0.6406	0.9109	1.3600	2.1393
0.7388	0.9320	1.2489	2.2869
0.6853	0.9096	1.1512	1.5848
0.6232	0.8519	1.0757	1.2576
0.5469	0.7919	1.0120	1.4691
0.6943	0.9307	1.2458	1.8749
0.5250	0.9403	1.2234	1.5980
0.6863	0.9079	1.1455	1.4192
.	.	.	.
0.6953	0.9914	1.3149	1.9395
0.7060	0.8766	1.0218	1.8214
.	.	.	.
0.5583	0.7767	0.9783	1.2252
0.6638	0.8940	1.2826	1.9754
0.5198	0.7230	0.9710	1.1900
0.7134	0.9013	1.1880	1.5939
.	.	.	.
0.6769	0.8619	1.1389	1.4480
0.7867	1.3464	1.7326	2.2814
0.7307	0.8955	1.0677	1.3538
0.5574	0.7407	0.9732	1.2562
.	.	.	.
.	.	.	.
0.6476	0.8734	1.1232	1.6866

0.5954	0.7392	1.5026	1.7793
0.6731	0.8736	1.1664	1.4311
0.7060	0.9698	1.2675	1.9082
0.4911	0.8009	1.0238	1.4025
.	.	.	.
.	.	.	.
0.6256	0.8857	1.0746	1.4181
0.7921	1.0324	1.3179	1.9154
0.6899	0.9837	1.2557	1.4027
0.7226	0.9726	1.2692	1.5031
.	.	.	.
0.6579	0.8924	1.1793	1.5832

n and inclusion criteria. Refer to the technical appendix for details.
 cted device days in 2021.
 alculated nor included in the distribution of facility-specific SURs.

Table 2. State-specific standardized utilization ratios (SURs) and facility-specific summary statistics (Table 2b. Central line days (CLDs)),

State	No. of Facilities	No. of Device Days			95% CI
		Observed	Predicted	SUR	Lower
Alabama	68	227,460	239,866.6195	0.9483	0.9444
Alaska	7	15,011	14,292.2271	1.0503	1.0336
Arizona	54	268,521	240,868.0461	1.1148	1.1106
Arkansas	40	117,033	131,583.9010	0.8894	0.8843
California	317	1,098,547	966,067.7782	1.1371	1.1350
Colorado	49	149,353	137,637.8515	1.0851	1.0796
Connecticut	26	96,120	97,271.0632	0.9882	0.9820
D.C.	9	28,634	32,264.8171	0.8875	0.8772
Delaware	8	50,686	57,777.0519	0.8773	0.8696
Florida	202	814,804	851,598.9791	0.9568	0.9547
Georgia	95	395,361	385,167.5192	1.0265	1.0232
Guam	2	.	.	.	.
Hawaii	15	36,206	30,554.8973	1.1849	1.1728
Idaho	14	35,714	32,099.4348	1.1126	1.1011
Illinois	124	370,506	393,801.5972	0.9408	0.9378
Indiana	75	258,032	230,534.0806	1.1193	1.1150
Iowa	36	74,062	68,093.8682	1.0876	1.0798
Kansas	39	79,086	88,253.7871	0.8961	0.8899
Kentucky	66	199,163	194,980.2967	1.0215	1.0169
Louisiana	75	176,297	177,040.0017	0.9958	0.9912
Maine	14	29,287	29,281.9085	1.0002	0.9888
Maryland	45	162,370	171,888.0646	0.9446	0.9401
Massachusetts	58	225,851	201,762.0601	1.1194	1.1148
Michigan	77	290,241	301,490.9860	0.9627	0.9592
Minnesota	31	134,473	113,763.1121	1.1820	1.1758
Mississippi	45	113,557	107,740.9310	1.0540	1.0479
Missouri	71	249,978	246,423.1249	1.0144	1.0104
Montana	10	16,368	19,324.5180	0.8470	0.8341
Nebraska	17	45,809	47,538.5642	0.9636	0.9548
Nevada	21	125,635	126,002.9727	0.9971	0.9916
New Hampshire	13	28,841	26,017.6315	1.1085	1.0958
New Jersey	72	223,023	237,102.3792	0.9406	0.9367
New Mexico	28	63,661	53,708.9133	1.1853	1.1761
New York	161	592,216	647,790.0379	0.9142	0.9119
North Carolina	87	330,860	323,761.0421	1.0219	1.0185
North Dakota	7	20,287	16,871.1083	1.2025	1.1860
Ohio	127	497,214	480,882.1381	1.0340	1.0311
Oklahoma	52	173,345	129,829.1516	1.3352	1.3289
Oregon	33	86,637	88,819.7242	0.9754	0.9689
Pennsylvania	142	486,011	511,105.5816	0.9509	0.9482

Puerto Rico	13	21,852	27,401.8777	0.7975	0.7869
Rhode Island	10	29,868	27,077.2689	1.1031	1.0906
South Carolina	54	166,322	172,919.2082	0.9618	0.9573
South Dakota	12	14,552	20,611.2387	0.7060	0.6946
Tennessee	82	284,996	292,398.0453	0.9747	0.9711
Texas	258	1,106,998	1,015,880.8655	1.0897	1.0877
Utah	30	71,350	80,430.9338	0.8871	0.8806
Vermont	5	8,001	10183.6217	0.7857	0.7686
Virgin Islands	2				
Virginia	76	225,448	239,397.8957	0.9417	0.9379
Washington	49	179,414	174,283.2423	1.0294	1.0247
West Virginia	28	93,862	82,049.3141	1.1440	1.1366
Wisconsin	63	151,910	148,426.3811	1.0235	1.0183
Wyoming	11	7,926	6,613.2145	1.1985	1.1724
All US	3,125	10,751,699	10,552,248.8688	1.0189	1.0183

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when there :
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than or l
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of devic
4. Data from all ICUs; excludes wards (and other non-critical care locations), and NICUs. Data contained in

y SURs using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by de critical care locations⁴

for SUR	Facility-specific SURs					
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		No. Facilities with SUR	
			Significantly > National SUR	Significantly < National SUR	10%	
			N	N		
0.9522	67	21	31%	40	60%	0.3550
1.0672	7	.	.	.	.	.
1.1190	54	38	70%	13	24%	0.5765
0.8945	40	14	35%	23	58%	0.3944
1.1393	317	198	62%	90	28%	0.7223
1.0906	49	26	53%	17	35%	0.3640
0.9944	26	9	35%	14	54%	0.5064
0.8978	9	.	.	.	.	.
0.8849	8	.	.	.	.	.
0.9589	202	77	38%	106	52%	0.5533
1.0297	95	52	55%	30	32%	0.5864
.
1.1972	15	12	80%	2	13%	.
1.1242	14	8	57%	5	36%	.
0.9439	124	46	37%	60	48%	0.4572
1.1236	75	44	59%	21	28%	0.7197
1.0955	36	13	36%	20	56%	0.1333
0.9024	39	18	46%	17	44%	0.3583
1.0259	66	32	48%	27	41%	0.4672
1.0005	73	40	55%	23	32%	0.6390
1.0117	14	6	43%	8	57%	.
0.9492	45	18	40%	25	56%	0.7039
1.1240	58	34	59%	16	28%	0.6724
0.9662	77	29	38%	41	53%	0.5067
1.1884	31	15	48%	14	45%	0.3491
1.0602	45	24	53%	18	40%	0.5112
1.0184	71	33	46%	30	42%	0.5307
0.8601	10	2	20%	7	70%	.
0.9725	16	6	38%	10	63%	.
1.0026	21	8	38%	10	48%	0.6832
1.1214	13	6	46%	5	38%	.
0.9445	72	28	39%	39	54%	0.5482
1.1945	28	14	50%	11	39%	0.3047
0.9165	161	49	30%	96	60%	0.5668
1.0254	87	41	47%	40	46%	0.6127
1.2191	7	.	.	.	.	.
1.0368	127	60	47%	56	44%	0.6127
1.3414	52	42	81%	7	13%	0.8536
0.9819	33	10	30%	16	48%	0.6036
0.9536	142	48	34%	81	57%	0.4333

0.8081	13	4	31%	6	46%	.
1.1156	10	6	60%	3	30%	.
0.9665	54	22	41%	26	48%	0.5616
0.7176	12	2	17%	10	83%	.
0.9783	82	33	40%	37	45%	0.5351
1.0917	258	153	59%	77	30%	0.7092
0.8936	30	7	23%	21	70%	0.2249
0.8030	5	.	.	.	.	.
.
0.9456	76	31	41%	39	51%	0.3499
1.0342	49	25	51%	21	43%	0.6387
1.1513	28	16	57%	10	36%	0.3841
1.0286	63	22	35%	27	43%	0.6187
1.2251	11	3	27%	6	55%	.
1.0195	3,121	1,457	47%	1,345	43%	0.5482

are less than 5 reporting facilities. This may be different from those reported in the SIR tables due to exclusions less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0 percentage days in 2021. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was neither reported in this table nor from acute care hospitals.

vice type and patient population:

Median			
25%	50%	75%	90%
0.7470	0.9128	1.1485	1.4297
.	.	.	.
0.9389	1.2161	1.5305	1.9950
0.5089	0.8977	1.1457	1.4335
0.9358	1.1909	1.4749	1.8455
0.8509	1.0807	1.4406	1.8840
0.8398	0.9662	1.1212	1.2671
.	.	.	.
.	.	.	.
0.7439	0.9590	1.1911	1.5106
0.8945	1.0863	1.3188	1.7659
.	.	.	.
.	.	.	.
0.7284	1.0019	1.1904	1.3792
0.8920	1.1600	1.4507	1.7778
0.4813	0.9281	1.2185	1.5079
0.6912	1.0304	1.5045	1.7491
0.7742	1.0323	1.3778	1.5225
0.8447	1.1225	1.4005	1.9462
.	.	.	.
0.7970	0.9273	1.3392	1.7782
0.9342	1.1201	1.3193	1.5967
0.7324	0.9591	1.1304	1.4691
0.5505	1.0380	1.2528	1.4055
0.7726	1.1236	1.4584	1.8746
0.7456	1.0354	1.3445	1.5129
.	.	.	.
.	.	.	.
0.8377	1.0187	1.0713	1.2213
.	.	.	.
0.7250	0.9297	1.2308	1.7598
0.7342	1.0632	1.5754	2.4142
0.7010	0.8729	1.1382	1.4150
0.7600	1.0492	1.3519	1.5897
.	.	.	.
0.7441	1.0373	1.2585	1.4579
1.2724	1.5065	1.8408	2.3350
0.7976	0.9869	1.0932	1.2707
0.7213	0.8990	1.1332	1.2791

.	.	.	.
0.7267	1.0005	1.2003	1.5392
.	.	.	.
0.7765	1.0032	1.2590	1.6124
0.9053	1.1348	1.4680	1.9922
0.4345	0.8631	1.0527	1.6084
.	.	.	.
0.6788	0.9564	1.1861	1.3766
0.8397	1.0881	1.2700	1.4877
0.7539	1.1291	1.4115	1.8088
0.8611	1.0079	1.2454	1.4617
.	.	.	.
0.7744	1.0324	1.3135	1.6504

ion and inclusion criteria. Refer to the technical appendix for details.
dicted device days in 2021.
calculated nor included in the distribution of facility-specific SURs.

Table 2. State-specific standardized utilization ratios (SURs) and facility-specific summary :

Table 2c. Central line days

State	No. of Facilities	No. of Device Days			95% CI	
		Observed	Predicted	SUR	Lower	Upper
Alabama	87	256,904	337,016.6627	0.7623	0.7593	
Alaska	10	29,637	24,965.5176	1.1871	1.1736	
Arizona	72	377,351	402,780.7223	0.9369	0.9339	
Arkansas	51	154,935	183,618.4862	0.8438	0.8396	
California	344	1,689,053	1,917,217.3953	0.8810	0.8797	
Colorado	57	248,037	247,592.3194	1.0018	0.9979	
Connecticut	30	179,418	237,677.4732	0.7549	0.7514	
D.C.	9	71,941	93,297.5120	0.7711	0.7655	
Delaware	9	89,995	107,025.6865	0.8409	0.8354	
Florida	219	1,236,111	1,667,441.3434	0.7413	0.7400	
Georgia	110	507,261	621,717.6114	0.8159	0.8136	
Guam	1					
Hawaii	17	69,491	65,642.5077	1.0586	1.0508	
Idaho	18	52,978	55,751.3174	0.9503	0.9422	
Illinois	136	650,845	768,038.9483	0.8474	0.8454	
Indiana	91	383,714	399,879.9395	0.9596	0.9566	
Iowa	40	140,024	150,068.6011	0.9331	0.9282	
Kansas	62	140,260	137,593.2886	1.0194	1.0141	
Kentucky	71	268,863	310,131.9564	0.8669	0.8636	
Louisiana	107	248,838	281,849.0441	0.8829	0.8794	
Maine	20	67,568	74,637.4240	0.9053	0.8985	
Maryland	49	309,979	360,727.5393	0.8593	0.8563	
Massachusetts	68	398,342	481,188.9218	0.8278	0.8253	
Michigan	101	394,413	548,192.5425	0.7195	0.7172	
Minnesota	51	269,896	260,587.9139	1.0357	1.0318	
Mississippi	63	159,327	184,943.9306	0.8615	0.8573	
Missouri	80	451,709	483,356.5935	0.9345	0.9318	
Montana	14	28,513	48,231.8932	0.5912	0.5843	
Nebraska	29	119,775	117,126.9270	1.0226	1.0169	
Nevada	29	161,719	208,331.1594	0.7763	0.7725	
New Hampshire	13	57,583	65,178.6335	0.8835	0.8763	
New Jersey	72	401,526	578,895.3334	0.6936	0.6915	
New Mexico	32	75,027	89,252.7983	0.8406	0.8346	
New York	177	1,057,548	1,530,977.6217	0.6908	0.6894	
North Carolina	103	584,099	637,229.6213	0.9166	0.9142	
North Dakota	11	44,533	50,733.0506	0.8778	0.8697	
Ohio	150	775,011	874,284.2513	0.8865	0.8845	
Oklahoma	84	241,515	203,992.1258	1.1839	1.1792	
Oregon	37	178,606	208,454.0812	0.8568	0.8528	
Pennsylvania	187	828,516	1,037,768.1424	0.7984	0.7966	
Puerto Rico	15	52,300	74,922.4924	0.6981	0.6921	
Rhode Island	11	48,435	65,770.3769	0.7364	0.7299	
South Carolina	64	255,939	334,170.4613	0.7659	0.7629	

South Dakota	22	51,050	52,751.6946	0.9677	0.9594
Tennessee	98	443,364	481,591.5792	0.9206	0.9179
Texas	359	1,459,378	1,620,288.0911	0.9007	0.8992
Utah	38	86,673	99,995.9338	0.8668	0.8610
Vermont	7	25,363	26,730.1971	0.9489	0.9372
Virgin Islands	2				
Virginia	83	390,802	475,734.1831	0.8215	0.8189
Washington	58	373,320	370,451.8670	1.0077	1.0045
West Virginia	31	118,091	123,340.2290	0.9574	0.9520
Wisconsin	82	307,544	309,709.4332	0.9930	0.9895
Wyoming	13	13,830	11,420.9866	1.2109	1.1909
All US	3,794	17,032,856	20,104,671.4751	0.8472	0.8468

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when there are
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than or less
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of device c
4. Data from all wards (for this table, wards also include step-down, mixed acuity, and specialty care areas [in

SURs using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by dev (CLDs), wards⁴

for SUR	Facility-specific SURs						10%
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		No. Facilities with SUR		
			Significantly > National SUR	Significantly < National SUR	Significantly > National SUR	Significantly < National SUR	
		N	N	N	N		
0.7653	87	24	28%	55	63%	0.1429	
1.2007	10	7	70%	2	20%	.	
0.9399	72	33	46%	32	44%	0.2160	
0.8480	50	18	36%	26	52%	0.2391	
0.8823	343	171	50%	150	44%	0.4536	
1.0058	57	31	54%	20	35%	0.5181	
0.7584	30	10	33%	18	60%	0.4840	
0.7767	9	.	.	.	.	.
0.8464	9	.	.	.	.	.
0.7426	219	56	26%	145	66%	0.3753	
0.8182	110	44	40%	53	48%	0.2391	
.	
1.0665	17	10	59%	6	35%	.	
0.9584	18	10	56%	7	39%	.	
0.8495	136	68	50%	61	45%	0.4426	
0.9626	91	56	62%	27	30%	0.5096	
0.9380	40	20	50%	17	43%	0.4257	
1.0247	62	32	52%	21	34%	0.0371	
0.8702	71	36	51%	30	42%	0.4955	
0.8864	107	50	47%	47	44%	0.2519	
0.9121	20	9	45%	6	30%	0.4164	
0.8623	49	25	51%	21	43%	0.4588	
0.8304	68	22	32%	42	62%	0.3585	
0.7217	101	31	31%	61	60%	0.2984	
1.0396	50	27	54%	17	34%	0.5437	
0.8657	63	29	46%	24	38%	0.0700	
0.9372	80	38	48%	34	43%	0.4541	
0.5981	14	4	29%	9	64%	.	
1.0284	29	17	59%	11	38%	0.0571	
0.7800	29	9	31%	17	59%	0.4028	
0.8907	13	5	38%	6	46%	.	
0.6958	72	18	25%	49	68%	0.4275	
0.8466	32	11	34%	15	47%	0.2190	
0.6921	177	48	27%	115	65%	0.3023	
0.9189	103	43	42%	46	45%	0.5028	
0.8860	11	5	45%	5	45%	.	
0.8884	150	66	44%	70	47%	0.4718	
1.1887	84	56	67%	20	24%	0.2903	
0.8608	37	18	49%	15	41%	0.6161	
0.8001	187	57	30%	113	60%	0.1634	
0.7040	15	5	33%	9	60%	.	
0.7430	11	5	45%	5	45%	.	
0.7689	64	24	38%	35	55%	0.3956	

0.9762	22	11	50%	9	41%	0.4374
0.9234	98	42	43%	47	48%	0.3769
0.9021	358	174	49%	144	40%	0.2243
0.8725	38	15	39%	19	50%	0.2113
0.9606	7	.	.	.	.	.
.
0.8241	83	31	37%	40	48%	0.4401
1.0110	58	43	74%	13	22%	0.6111
0.9629	30	17	57%	9	30%	0.3204
0.9965	82	47	57%	26	32%	0.3752
1.2313	13	6	46%	4	31%	.
0.8476	3,789	1,645	43%	1,785	47%	0.3621

less than 5 reporting facilities. This may be different from those reported in the SIR tables due to exclusions less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0 predicted days in 2021. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was neither calculated (including hematology/oncology, bone marrow transplant). Data contained in this table are reported from actual

ice type and patient population:

Median			
25%	50%	75%	90%
0.4262	0.6708	0.9406	1.1600
.	.	.	.
0.5856	0.8341	1.0598	1.3934
0.5029	0.7897	0.9971	1.6307
0.6411	0.8858	1.2177	1.5950
0.7209	1.0489	1.4278	2.4871
0.5555	0.6685	0.9783	1.2996
.	.	.	.
.	.	.	.
0.5109	0.6759	0.8871	1.1136
0.6065	0.8295	1.1362	1.5441
.	.	.	.
.	.	.	.
.	.	.	.
0.6390	0.8749	1.1335	1.6235
0.7251	1.0044	1.3402	1.9414
0.5940	0.8533	1.2838	1.7744
0.6118	1.0495	1.4610	2.1059
0.6433	0.8822	1.1731	1.8375
0.5141	0.8315	1.4052	2.3989
0.7617	0.8972	1.4183	2.3377
0.6552	0.9036	1.1407	1.5613
0.5146	0.7272	0.9638	1.1933
0.4513	0.6629	0.9864	1.2797
0.6998	0.9669	1.2458	1.8625
0.4587	0.9035	1.1277	1.6687
0.6369	0.8703	1.1487	1.5063
.	.	.	.
0.6300	1.1233	1.3978	1.9395
0.6584	0.7660	0.9928	1.8214
.	.	.	.
0.5158	0.6941	0.8770	1.1445
0.5394	0.8083	0.9990	1.7082
0.4201	0.6460	0.8990	1.2309
0.6514	0.8304	1.2338	1.4804
.	.	.	.
0.6244	0.8299	1.1472	1.5679
0.7464	1.2969	1.6832	2.2956
0.6834	0.8606	1.1033	1.5840
0.4847	0.6921	0.9383	1.3656
.	.	.	.
.	.	.	.
0.5680	0.7515	1.1605	1.6902

0.5954	0.9337	1.5929	1.9724
0.5805	0.7849	1.1932	1.4955
0.6351	0.8909	1.2427	2.0475
0.4982	0.8114	1.0207	1.2614
.	.	.	.
.	.	.	.
0.6147	0.8120	1.0933	1.6674
0.8423	1.0744	1.4325	1.9102
0.7585	0.9284	1.3372	1.4467
0.7071	0.9987	1.3476	1.8152
.	.	.	.
0.5786	0.8283	1.1644	1.6282

and inclusion criteria. Refer to the technical appendix for details.
 ted device days in 2021.
 alculated nor included in the distribution of facility-specific SURs.
 te care hospitals.

Table 2. State-specific standardized utilization ratios (SURs) and facility-specific summary
Table 2d. Central line days (CLDs), ne

State	No. of Facilities	No. of Device Days			95% CI	
		Observed	Predicted	SUR	Lower	Upper
Alabama	14	32,828	33,283.5176	0.9863	0.9757	
Alaska	2	.	.	.	.	.
Arizona	19	24,007	26,493.3189	0.9062	0.8947	
Arkansas	10	21,543	19,864.9774	1.0845	1.0701	
California	137	132,236	143,330.2864	0.9226	0.9176	
Colorado	23	17,017	26,873.8172	0.6332	0.6238	
Connecticut	13	9,590	13,581.6390	0.7061	0.6921	
D.C.	2	.	.	.	.	.
Delaware	5	11,158	10,675.5566	1.0452	1.0259	
Florida	63	91,595	105,937.6544	0.8646	0.8590	
Georgia	37	50,181	60,140.5192	0.8344	0.8271	
Guam	0	.	.	.	.	.
Hawaii	2	.	.	.	.	.
Idaho	11	4,566	5,802.7123	0.7869	0.7643	
Illinois	36	46,616	50,626.6946	0.9208	0.9124	
Indiana	28	22,718	36,400.0849	0.6241	0.6160	
Iowa	12	15,009	14,243.7822	1.0537	1.0370	
Kansas	10	8,284	10,003.4877	0.8281	0.8104	
Kentucky	16	19,800	22,716.2873	0.8716	0.8595	
Louisiana	30	33,107	33,726.3426	0.9816	0.9711	
Maine	3	.	.	.	.	.
Maryland	15	17,562	21,649.1578	0.8112	0.7993	
Massachusetts	10	16,139	21,308.1111	0.7574	0.7458	
Michigan	20	41,646	46,322.3346	0.8990	0.8905	
Minnesota	11	12,636	13,926.4322	0.9073	0.8916	
Mississippi	15	15,928	16,623.2231	0.9582	0.9434	
Missouri	24	39,668	47,784.5342	0.8301	0.8220	
Montana	6	2,035	2,962.3896	0.6869	0.6576	
Nebraska	8	7,950	11,064.2805	0.7185	0.7029	
Nevada	10	22,124	14,945.5633	1.4803	1.4609	
New Hampshire	3	.	.	.	.	.
New Jersey	24	20,056	27,578.2132	0.7272	0.7172	
New Mexico	5	5,759	4,524.5586	1.2728	1.2403	
New York	53	79,539	88,523.9808	0.8985	0.8923	
North Carolina	25	42,458	44,594.6951	0.9521	0.9431	
North Dakota	6	4,772	4,984.7873	0.9573	0.9305	
Ohio	19	54,913	72,053.4302	0.7621	0.7558	
Oklahoma	8	22,216	17,824.1823	1.2464	1.2301	
Oregon	10	8,232	11,524.0425	0.7143	0.6990	
Pennsylvania	46	44,812	64,550.2581	0.6942	0.6878	
Puerto Rico	4	.	.	.	.	.
Rhode Island	1	.	.	.	.	.
South Carolina	8	16,928	22,775.3031	0.7433	0.7321	

South Dakota	3	.	.	.	.
Tennessee	23	43,077	45,116.6043	0.9548	0.9458
Texas	129	162,043	168,633.1741	0.9609	0.9563
Utah	13	13,817	17,961.5181	0.7693	0.7565
Vermont	1	.	.	.	.
Virgin Islands	2	.	.	.	.
Virginia	27	29,305	32,150.2745	0.9115	0.9011
Washington	16	18,624	24,014.6385	0.7755	0.7645
West Virginia	6	5,682	7,179.4211	0.7914	0.7710
Wisconsin	17	16,148	20,271.3381	0.7966	0.7844
Wyoming	0	.	.	.	.
All US	1,041	1,339,453	1,519,116.7650	0.8817	0.8803

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when there
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than or
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of dev
4. Data from all NICU locations, including Level II/III and Level III nurseries.

γ SURs using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by neonatal critical care units⁴

for SUR	Facility-specific SURs						10%
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		No. Facilities with SUR	No. Facilities with SUR	
			Significantly > National SUR	Significantly < National SUR			
		N	N				
0.9970	14	3	21%	10	71%	.	
.	
0.9177	19	6	32%	9	47%	.	
1.0990	10	5	50%	4	40%	.	
0.9276	137	36	26%	84	61%	0.0486	
0.6428	23	1	4%	21	91%	0.1192	
0.7203	13	0	0%	11	85%	.	
.	
1.0647	5	.	.	.	.	.
0.8702	63	19	30%	37	59%	0.1609	
0.8417	37	12	32%	24	65%	0.2107	
.	
.	
0.8099	11	2	18%	8	73%	.	
0.9292	36	11	31%	17	47%	0.1674	
0.6323	28	3	11%	21	75%	0.2538	
1.0707	12	5	42%	6	50%	.	
0.8461	10	2	20%	7	70%	.	
0.8838	16	5	31%	10	63%	.	
0.9922	30	10	33%	17	57%	0.1952	
.	
0.8233	15	2	13%	13	87%	.	
0.7692	10	3	30%	7	70%	.	
0.9077	20	8	40%	10	50%	0.3505	
0.9232	11	2	18%	8	73%	.	
0.9731	15	3	20%	10	67%	.	
0.8383	24	4	17%	16	67%	0.0000	
0.7173	6	.	.	.	.	.
0.7345	8	.	.	.	.	.
1.4999	10	9	90%	0	0%	.	
.	
0.7374	24	4	17%	19	79%	0.1694	
1.3060	5	.	.	.	.	.
0.9048	53	17	32%	29	55%	0.3423	
0.9612	25	6	24%	18	72%	0.2777	
0.9847	6	.	.	.	.	.
0.7685	19	5	26%	13	68%	.	
1.2629	8	.	.	.	.	.
0.7299	10	2	20%	8	80%	.	
0.7007	46	7	15%	36	78%	0.2510	
.	
.	
0.7545	8	.	.	.	.	.

0.9639	23	7	30%	12	52%	0.1655
0.9656	129	41	32%	71	55%	0.3211
0.7822	13	2	15%	9	69%	.
.
0.9220	27	11	41%	16	59%	0.3137
0.7867	16	2	13%	11	69%	.
0.8122	6	.	.	.	.	.
0.8090	17	2	12%	10	59%	.
.
0.8832	1,041	283	27%	642	62%	0.2107

are less than 5 reporting facilities. This may be different from those reported in the SIR tables due to exclusion of facilities with a predicted number of device days less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0 predicted device days in 2021. If a facility's predicted number of device days was <1.0, a facility-specific SUR was neither calculated nor reported.

ervice type and patient population:

Median			
25%	50%	75%	90%
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.
0.4615	0.6842	0.9580	1.2475
0.2231	0.3164	0.4920	0.8496
.	.	.	.
.	.	.	.
.	.	.	.
0.4057	0.7278	1.1187	1.3360
0.4333	0.6465	0.9994	1.5211
.	.	.	.
.	.	.	.
.	.	.	.
0.4031	0.8361	1.1238	1.2875
0.4010	0.5905	0.7895	1.0740
.	.	.	.
.	.	.	.
.	.	.	.
0.5145	0.7759	1.0166	1.6586
.	.	.	.
.	.	.	.
.	.	.	.
0.5339	0.8576	1.1623	1.4063
.	.	.	.
.	.	.	.
0.2575	0.6513	0.9053	1.0196
.	.	.	.
.	.	.	.
.	.	.	.
0.3927	0.5924	0.7499	1.0202
.	.	.	.
0.5448	0.7031	1.0128	1.1631
0.3288	0.5693	0.7927	1.2315
.	.	.	.
.	.	.	.
.	.	.	.
0.3271	0.5371	0.7224	0.9656
.	.	.	.
.	.	.	.
.	.	.	.

0.3753	0.7236	1.0768	1.2462
0.4841	0.7705	1.0520	1.3690
0.5869	0.7682	1.2215	1.3506
0.4151	0.6842	0.9767	1.2875

usion and inclusion criteria. Refer to the technical appendix for details.
 redicted device days in 2021.
 er calculated nor included in the distribution of facility-specific SURs.

Table 3. State-specific standardized utilization ratios (SURs) and facility-specific summary
Table 3a. Urinary catheter days (I

State	No. of Facilities	No. of Device Days			95% CI	
		Observed	Predicted	SUR	Lower	Upper
Alabama	90	606,850	607,923.3757	0.9982	0.9957	1.0007
Alaska	10	41,385	53,220.2628	0.7776	0.7701	0.7851
Arizona	72	640,505	682,329.0524	0.9387	0.9364	0.9410
Arkansas	51	338,438	330,329.0957	1.0245	1.0211	1.0279
California	340	2,761,969	3,067,084.2470	0.9005	0.8994	0.9016
Colorado	58	371,456	436,268.8086	0.8514	0.8487	0.8541
Connecticut	29	239,332	323,155.9434	0.7406	0.7377	0.7435
D.C	9	64,417	121,110.7416	0.5319	0.5278	0.5360
Delaware	9	101,408	130,528.5600	0.7769	0.7721	0.7817
Florida	222	1,844,656	2,674,459.6158	0.6897	0.6887	0.6907
Georgia	113	872,740	1,045,789.1048	0.8345	0.8328	0.8362
Guam	2	.	.	.	.	.
Hawaii	17	95,592	111,138.3976	0.8601	0.8547	0.8655
Idaho	18	100,952	101,740.6812	0.9922	0.9861	0.9983
Illinois	137	950,674	1,188,948.9553	0.7996	0.7980	0.8012
Indiana	92	590,916	688,607.6073	0.8581	0.8560	0.8602
Iowa	41	246,901	235,371.7155	1.0490	1.0449	1.0531
Kansas	63	203,375	253,880.3893	0.8011	0.7976	0.8046
Kentucky	71	509,950	567,015.7174	0.8994	0.8969	0.9019
Louisiana	107	484,271	492,551.9004	0.9832	0.9804	0.9860
Maine	20	93,315	116,301.1539	0.8024	0.7972	0.8076
Maryland	49	424,173	552,829.1787	0.7673	0.7650	0.7696
Massachusetts	68	534,701	655,031.3700	0.8163	0.8141	0.8185
Michigan	101	728,499	851,328.0897	0.8557	0.8538	0.8576
Minnesota	51	348,741	375,509.4639	0.9287	0.9256	0.9318
Mississippi	63	353,867	326,918.6679	1.0824	1.0788	1.0860
Missouri	79	634,653	742,406.3372	0.8549	0.8528	0.8570
Montana	14	75,419	80,705.1405	0.9345	0.9278	0.9412
Nebraska	28	129,002	164,558.1076	0.7839	0.7797	0.7881
Nevada	29	272,016	346,163.0986	0.7858	0.7829	0.7887
New Hampshire	13	98,197	111,519.6505	0.8805	0.8751	0.8859
New Jersey	72	566,662	828,281.0259	0.6841	0.6824	0.6858
New Mexico	32	173,811	177,054.7108	0.9817	0.9771	0.9863
New York	177	1,643,016	2,003,361.3967	0.8201	0.8189	0.8213
North Carolina	103	846,720	1,032,009.7786	0.8205	0.8187	0.8223
North Dakota	11	59,048	64,867.9185	0.9103	0.9030	0.9176
Ohio	151	1,245,846	1,401,427.4763	0.8890	0.8874	0.8906
Oklahoma	85	419,919	398,054.2953	1.0549	1.0517	1.0581
Oregon	37	269,620	331,573.7197	0.8132	0.8101	0.8163
Pennsylvania	194	1,307,191	1,529,250.9686	0.8548	0.8533	0.8563
Puerto Rico	16	129,752	106,302.4868	1.2206	1.2140	1.2272
Rhode Island	11	72,773	93,209.5690	0.7807	0.7751	0.7863
South Carolina	64	435,473	563,928.9462	0.7722	0.7699	0.7745

South Dakota	22	72,945	79,305.0605	0.9198	0.9131
Tennessee	98	711,455	839,602.2475	0.8474	0.8454
Texas	362	2,354,652	2,810,105.1722	0.8379	0.8369
Utah	38	142,403	182,370.7772	0.7808	0.7768
Vermont	7	37,132	39,022.9691	0.9515	0.9419
Virgin Islands	2	.	.	.	.
Virginia	84	569,363	781,378.1116	0.7287	0.7268
Washington	59	492,082	593,724.4608	0.8288	0.8265
West Virginia	32	253,362	240,878.2981	1.0518	1.0478
Wisconsin	82	406,677	481,842.4990	0.8440	0.8414
Wyoming	13	30,939	28,895.9601	1.0707	1.0588
All US	3,818	27,011,393	32,055,249.1082	0.8427	0.8423

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when there are
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than or less than
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of device days
4. Data from all ICUs, wards, and other non-critical care locations. This excludes NICUs. Data contained in

· SURs using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by de UCDs), all locations⁴

for SUR	Facility-specific SURs						10%
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		No. Facilities with SUR		
			Significantly > National SUR	N	Significantly < National SUR	N	
1.0008	90	62	69%	20	22%	0.4967	
0.7851	10	3	30%	4	40%	.	
0.9410	72	38	53%	29	40%	0.2660	
1.0280	50	32	64%	12	24%	0.6725	
0.9016	339	195	58%	123	36%	0.6222	
0.8542	58	25	43%	26	45%	0.4300	
0.7436	29	7	24%	19	66%	0.5611	
0.5360	9	.	.	.	.	.
0.7817	9	.	.	.	.	.
0.6907	222	44	20%	169	76%	0.4584	
0.8363	113	54	48%	53	47%	0.5231	
.	
0.8656	17	7	41%	7	41%	.	
0.9984	18	13	72%	4	22%	.	
0.8012	137	64	47%	65	47%	0.5072	
0.8603	92	46	50%	35	38%	0.5363	
1.0531	41	28	68%	11	27%	0.6666	
0.8046	63	28	44%	32	51%	0.2717	
0.9018	71	45	63%	22	31%	0.6079	
0.9860	107	74	69%	29	27%	0.5525	
0.8075	20	7	35%	9	45%	0.6136	
0.7696	49	16	33%	29	59%	0.4865	
0.8185	68	21	31%	39	57%	0.4162	
0.8577	101	45	45%	44	44%	0.5699	
0.9318	51	27	53%	17	33%	0.5651	
1.0860	63	44	70%	14	22%	0.2045	
0.8570	79	33	42%	39	49%	0.4667	
0.9412	14	11	79%	3	21%	.	
0.7882	28	10	36%	16	57%	0.4102	
0.7888	29	9	31%	19	66%	0.2138	
0.8861	13	6	46%	7	54%	.	
0.6859	72	11	15%	54	75%	0.4478	
0.9863	32	18	56%	11	34%	0.6023	
0.8214	177	78	44%	91	51%	0.5236	
0.8222	103	42	41%	56	54%	0.5523	
0.9176	11	6	55%	4	36%	.	
0.8905	151	80	53%	51	34%	0.6501	
1.0581	85	58	68%	21	25%	0.4382	
0.8162	37	16	43%	21	57%	0.6280	
0.8563	194	79	41%	100	52%	0.3078	
1.2272	16	14	88%	2	13%	.	
0.7864	11	3	27%	7	64%	.	
0.7745	64	26	41%	37	58%	0.4484	

0.9265	22	12	55%	7	32%	0.4916
0.8494	98	48	49%	44	45%	0.4671
0.8390	361	178	49%	144	40%	0.5603
0.7849	38	10	26%	24	63%	0.3466
0.9612	7	.	.	.	.	.
.
0.7306	84	24	29%	48	57%	0.4744
0.8311	59	26	44%	26	44%	0.6123
1.0559	32	22	69%	9	28%	0.2490
0.8466	82	31	38%	45	55%	0.4738
1.0827	13	5	38%	6	46%	.
0.8430	3,815	1,792	47%	1,719	45%	0.5072

are less than 5 reporting facilities. This may be different from those reported in the SIR tables due to exclusions less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0 pre-emptive days in 2021. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was neither reported in this table nor reported from acute care hospitals.

service type and patient population:

Median			
25%	50%	75%	90%
0.8266	1.0177	1.2335	1.4117
.	.	.	.
0.7343	0.8773	1.1140	1.4140
0.8180	0.9549	1.1755	1.6667
0.7533	0.9124	1.1070	1.3229
0.6619	0.8307	0.9127	1.2281
0.6199	0.7033	0.8818	1.0940
.	.	.	.
.	.	.	.
0.5707	0.6933	0.8070	0.9630
0.6756	0.8440	1.0630	1.3137
.	.	.	.
.	.	.	.
0.6863	0.8279	1.0619	1.2668
0.7165	0.8821	1.0903	1.2295
0.7991	1.0668	1.2380	1.4570
0.5988	0.8147	1.1785	1.4712
0.7764	0.9752	1.2842	1.4969
0.7767	1.1821	1.5556	2.1783
0.7203	0.8682	0.9851	1.1950
0.6426	0.7561	0.9679	1.2665
0.5541	0.7607	0.9147	1.0844
0.7077	0.8398	1.0302	1.1571
0.7189	0.9224	1.0528	1.2457
0.7745	1.0705	1.3157	1.7493
0.6393	0.8078	1.0113	1.2976
.	.	.	.
0.5640	0.7356	1.0800	1.3337
0.6232	0.7353	0.8696	1.1663
.	.	.	.
0.5573	0.6547	0.8289	0.9204
0.7454	0.9435	1.2293	1.6208
0.6157	0.8039	1.0294	1.1699
0.6239	0.7891	1.0156	1.2379
.	.	.	.
0.7751	0.9087	1.0456	1.2290
0.8095	1.0086	1.3665	1.7064
0.6913	0.7919	1.0224	1.2204
0.5802	0.7906	1.0432	1.2675
.	.	.	.
.	.	.	.
0.6293	0.7179	0.9773	1.3976

0.7085	0.9537	1.2429	1.2706
0.7009	0.8791	1.1522	1.4959
0.7089	0.8735	1.1800	1.5755
0.5812	0.7503	0.8577	1.1466
.	.	.	.
.	.	.	.
0.5960	0.7338	0.9401	1.2117
0.7098	0.8478	0.9510	1.1987
0.7600	0.9884	1.2848	1.4011
0.6555	0.7949	0.9548	1.2165
.	.	.	.
0.6691	0.8492	1.0768	1.3405

sion and inclusion criteria. Refer to the technical appendix for details.
 dicted device days in 2021.
 r calculated nor included in the distribution of facility-specific SURs.

Table 3. State-specific standardized utilization ratios (SURs) and facility-specific summary statistics
Table 3b. Urinary catheter days (UCDs)

State	No. of Facilities	No. of Device Days			95% CI	
		Observed	Predicted	SUR	Lower	Upper
Alabama	68	302,547	281,311.2795	1.0755	1.0717	1.0793
Alaska	7	16,210	18,268.0364	0.8873	0.8738	0.9008
Arizona	54	288,129	276,225.3567	1.0431	1.0393	1.0469
Arkansas	40	155,399	151,983.2978	1.0225	1.0174	1.0276
California	317	1,098,110	1,125,079.0004	0.9760	0.9742	0.9778
Colorado	49	157,480	170,064.3886	0.9260	0.9214	0.9306
Connecticut	26	103,257	108,855.1777	0.9486	0.9428	0.9544
D.C	9	23,368	33,431.9040	0.6990	0.6900	0.7080
Delaware	8	47,762	54,063.2790	0.8834	0.8755	0.8913
Florida	202	838,591	974,096.5463	0.8609	0.8590	0.8628
Georgia	95	404,346	438,760.2006	0.9216	0.9187	0.9245
Guam	2	.	.	.	.	.
Hawaii	15	34,832	38,015.0054	0.9163	0.9067	0.9259
Idaho	14	43,542	38,141.1976	1.1416	1.1309	1.1523
Illinois	124	378,904	445,805.2913	0.8499	0.8472	0.8526
Indiana	75	258,221	272,236.9575	0.9485	0.9449	0.9521
Iowa	36	90,846	83,452.5547	1.0886	1.0816	1.0956
Kansas	39	86,004	103,185.2123	0.8335	0.8279	0.8391
Kentucky	65	231,319	229,288.4844	1.0089	1.0048	1.0130
Louisiana	75	199,147	206,108.3402	0.9662	0.9620	0.9704
Maine	14	32,803	36,701.8289	0.8938	0.8841	0.9035
Maryland	45	164,666	197,024.3488	0.8358	0.8317	0.8399
Massachusetts	58	227,442	219,185.2406	1.0377	1.0334	1.0420
Michigan	77	324,276	331,797.0544	0.9773	0.9740	0.9806
Minnesota	31	137,395	130,130.1674	1.0558	1.0503	1.0613
Mississippi	45	148,275	136,282.2547	1.0880	1.0825	1.0935
Missouri	71	262,382	274,599.8184	0.9555	0.9519	0.9591
Montana	10	26,400	25,445.3801	1.0375	1.0251	1.0499
Nebraska	16	39,393	49,271.7164	0.7995	0.7916	0.8074
Nevada	21	127,902	141,466.2769	0.9041	0.8992	0.9090
New Hampshire	13	36,094	33,645.7353	1.0728	1.0618	1.0838
New Jersey	72	218,572	270,951.9491	0.8067	0.8033	0.8101
New Mexico	28	74,812	67,487.8065	1.1085	1.1006	1.1164
New York	161	640,306	704,039.7954	0.9095	0.9072	0.9118
North Carolina	87	359,019	375,383.3423	0.9564	0.9533	0.9595
North Dakota	7	21,082	19,016.3771	1.1086	1.0937	1.1235
Ohio	127	529,114	545,433.1218	0.9701	0.9675	0.9727
Oklahoma	52	177,036	158,313.9954	1.1183	1.1131	1.1235
Oregon	33	97,228	108,415.2654	0.8968	0.8912	0.9024
Pennsylvania	142	538,021	562,848.3305	0.9559	0.9534	0.9584
Puerto Rico	14	34,900	31,053.8002	1.1239	1.1121	1.1357
Rhode Island	10	29,618	29,705.0234	0.9971	0.9858	1.0084
South Carolina	54	188,936	208,058.1300	0.9081	0.9040	0.9122

South Dakota	12	20,131	24,194.9829	0.8320	0.8206
Tennessee	82	315,997	346,567.5735	0.9118	0.9086
Texas	258	1,105,232	1,173,847.6109	0.9415	0.9398
Utah	30	76,927	92,034.5989	0.8358	0.8299
Vermont	5	11,882	12,657.8194	0.9387	0.9220
Virgin Islands	2	.	.	.	.
Virginia	76	232,068	278,852.2403	0.8322	0.8289
Washington	49	179,787	203,376.7983	0.8840	0.8800
West Virginia	28	111,115	99,761.6807	1.1138	1.1073
Wisconsin	63	157,546	173,702.8320	0.9070	0.9025
Wyoming	11	8,672	11,177.6810	0.7758	0.7596
All US	3,124	11,416,888	12,127,249.8880	0.9414	0.9409

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when th
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of c
4. Data from all ICUs; excludes wards (and other non-critical care locations), and NICUs. Data contain

ary SURs using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by s), critical care locations⁴

for SUR	Facility-specific SURs					
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		10%	
			Significantly > National SUR	Significantly < National SUR		
		N	N			
1.0793	68	44	65%	12	18%	0.6784
0.9011	7	.	.	.	.	.
1.0469	54	38	70%	13	24%	0.7659
1.0276	40	23	58%	10	25%	0.6177
0.9778	317	169	53%	119	38%	0.6644
0.9306	49	16	33%	30	61%	0.4311
0.9544	26	9	35%	15	58%	0.4812
0.7080	9	.	.	.	.	.
0.8914	8	.	.	.	.	.
0.8628	202	64	32%	108	53%	0.5082
0.9244	95	39	41%	43	45%	0.6132
.
0.9259	15	9	60%	5	33%	.
1.1524	14	11	79%	2	14%	.
0.8527	124	44	35%	69	56%	0.5282
0.9522	75	40	53%	24	32%	0.6384
1.0957	36	16	44%	13	36%	0.3997
0.8391	39	15	38%	21	54%	0.2277
1.0130	65	34	52%	20	31%	0.6437
0.9705	74	43	58%	24	32%	0.6546
0.9035	14	6	43%	8	57%	.
0.8398	45	17	38%	21	47%	0.4719
1.0420	58	32	55%	17	29%	0.6098
0.9807	77	40	52%	29	38%	0.5784
1.0614	31	14	45%	15	48%	0.5028
1.0936	45	30	67%	9	20%	0.6761
0.9592	71	29	41%	32	45%	0.5161
1.0501	10	5	50%	4	40%	.
0.8074	15	3	20%	11	73%	.
0.9091	21	9	43%	8	38%	0.6692
1.0839	13	7	54%	3	23%	.
0.8101	72	17	24%	45	63%	0.4565
1.1165	28	17	61%	7	25%	0.5338
0.9117	161	67	42%	80	50%	0.6070
0.9595	87	41	47%	37	43%	0.5543
1.1237	7	.	.	.	.	.
0.9727	127	63	50%	54	43%	0.6319
1.1235	52	37	71%	10	19%	0.7582
0.9024	33	8	24%	19	58%	0.5017
0.9584	142	63	44%	59	42%	0.5170
1.1357	14	12	86%	1	7%	.
1.0085	10	4	40%	6	60%	.
0.9122	54	22	41%	24	44%	0.6051

0.8436	12	2	17%	8	67%	.
0.9150	82	34	41%	37	45%	0.5849
0.9433	258	116	45%	110	43%	0.6594
0.8418	30	5	17%	22	73%	0.3528
0.9557	5	.	.	.	.	.
.
0.8356	76	20	26%	46	61%	0.4646
0.8881	49	18	37%	22	45%	0.5417
1.1204	28	18	64%	8	29%	0.4652
0.9115	63	18	29%	33	52%	0.4968
0.7923	11	3	27%	8	73%	.
0.9420	3,122	1,407	45%	1,341	43%	0.5647

ere are less than 5 reporting facilities. This may be different from those reported in the SIR tables due to e:
 1 or less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0
 device days in 2021. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was ne
 ed in this table are reported from acute care hospitals.

device type and patient population:

Median			
25%	50%	75%	90%
0.9172	1.0744	1.1781	1.3163
.	.	.	.
0.8586	1.0583	1.1774	1.3638
0.8330	1.0340	1.1964	1.3725
0.8059	1.0116	1.1829	1.2892
0.7281	0.8601	1.0154	1.1550
0.6646	0.8637	1.0288	1.3363
.	.	.	.
.	.	.	.
0.6775	0.8824	1.0210	1.1438
0.7661	0.9274	1.0798	1.3149
.	.	.	.
.	.	.	.
0.7025	0.8667	1.0760	1.1968
0.8213	0.9938	1.1241	1.2381
0.6961	0.9828	1.1360	1.2762
0.5469	0.8040	1.0898	1.1890
0.8519	0.9913	1.1505	1.3393
0.8087	1.0673	1.2262	1.3436
.	.	.	.
0.6877	0.9054	1.0869	1.2526
0.8599	0.9968	1.1533	1.3324
0.8108	0.9974	1.1147	1.2494
0.6948	0.8862	1.0922	1.1931
0.9622	1.1260	1.2572	1.3599
0.7062	0.9141	1.1401	1.2882
.	.	.	.
.	.	.	.
0.8429	0.9376	1.0562	1.0837
.	.	.	.
0.6444	0.8149	0.9820	1.0832
0.8156	1.0224	1.2447	1.3799
0.7114	0.9124	1.0786	1.2354
0.7500	0.9677	1.1272	1.2972
.	.	.	.
0.7816	0.9780	1.0858	1.1907
0.9402	1.1712	1.2977	1.3849
0.6982	0.8562	0.9590	1.1268
0.7578	0.9515	1.0912	1.2401
.	.	.	.
.	.	.	.
0.7473	0.9348	1.0731	1.2341

0.7454	0.9264	1.1163	1.2513
0.7942	0.9516	1.1476	1.3221
0.5251	0.6717	0.9327	1.1295
0.6178	0.8556	0.9753	1.1686
0.7201	0.9357	1.0264	1.1209
0.8409	1.1443	1.2143	1.2770
0.6522	0.8889	1.0570	1.1345
0.7497	0.9512	1.1242	1.2668

exclusion and inclusion criteria. Refer to the technical appendix for details
) predicted device days in 2021.
) either calculated nor included in the distribution of facility-specific SURs.

Table 3. State-specific standardized utilization ratios (SURs) and facility-specific summary
Table 3c. Urinary catheter day

State	No. of Facilities	No. of Device days			95% CI
		Observed	Predicted	SUR	Lower
Alabama	90	304,303	326,612.0962	0.9317	0.9284
Alaska	10	25,175	34,952.2263	0.7203	0.7114
Arizona	72	352,376	406,103.6957	0.8677	0.8648
Arkansas	51	183,039	178,345.7979	1.0263	1.0216
California	339	1,663,859	1,942,005.2466	0.8568	0.8555
Colorado	58	213,976	266,204.4199	0.8038	0.8004
Connecticut	29	136,075	214,300.7658	0.6350	0.6316
D.C	9	41,049	87,678.8376	0.4682	0.4637
Delaware	9	53,646	76,465.2810	0.7016	0.6956
Florida	219	1,006,065	1,700,363.0695	0.5917	0.5905
Georgia	112	468,394	607,028.9042	0.7716	0.7694
Guam	1	.	.	.	.
Hawaii	17	60,760	73,123.3922	0.8309	0.8243
Idaho	18	57,410	63,599.4837	0.9027	0.8953
Illinois	136	571,770	743,143.6640	0.7694	0.7674
Indiana	91	332,695	416,370.6498	0.7990	0.7963
Iowa	41	156,055	151,919.1607	1.0272	1.0221
Kansas	63	117,371	150,695.1770	0.7789	0.7744
Kentucky	71	278,631	337,727.2330	0.8250	0.8220
Louisiana	107	285,124	286,443.5602	0.9954	0.9917
Maine	20	60,512	79,599.3250	0.7602	0.7542
Maryland	49	259,507	355,804.8299	0.7294	0.7265
Massachusetts	68	307,259	435,846.1294	0.7050	0.7025
Michigan	101	404,223	519,531.0354	0.7781	0.7757
Minnesota	51	211,346	245,379.2965	0.8613	0.8577
Mississippi	63	205,592	190,636.4132	1.0785	1.0738
Missouri	79	372,271	467,806.5188	0.7958	0.7932
Montana	14	49,019	55,259.7604	0.8871	0.8792
Nebraska	28	89,609	115,286.3912	0.7773	0.7722
Nevada	29	144,114	204,696.8217	0.7040	0.7004
New Hampshire	13	62,103	77,873.9152	0.7975	0.7912
New Jersey	72	348,090	557,329.0768	0.6246	0.6225
New Mexico	32	98,999	109,566.9042	0.9035	0.8979
New York	176	1,002,710	1,299,321.6013	0.7717	0.7702
North Carolina	103	487,701	656,626.4363	0.7427	0.7406
North Dakota	11	37,966	45,851.5415	0.8280	0.8197
Ohio	150	716,732	855,994.3545	0.8373	0.8354
Oklahoma	84	242,883	239,740.2998	1.0131	1.0091
Oregon	37	172,392	223,158.4543	0.7725	0.7689
Pennsylvania	194	769,170	966,402.6381	0.7959	0.7941
Puerto Rico	15	94,852	75,248.6866	1.2605	1.2525
Rhode Island	11	43,155	63,504.5456	0.6796	0.6732
South Carolina	64	246,537	355,870.8163	0.6928	0.6901

South Dakota	22	52,814	55,110.0776	0.9583	0.9502
Tennessee	98	395,458	493,034.6740	0.8021	0.7996
Texas	360	1,249,420	1,636,257.5614	0.7636	0.7623
Utah	38	65,476	90,336.1783	0.7248	0.7193
Vermont	7	25,250	26,365.1497	0.9577	0.9459
Virgin Islands	2	.	.	.	.
Virginia	84	337,295	502,525.8713	0.6712	0.6689
Washington	59	312,295	390,347.6625	0.8000	0.7972
West Virginia	31	142,247	141,116.6174	1.0080	1.0028
Wisconsin	82	249,131	308,139.6670	0.8085	0.8053
Wyoming	13	22,267	17,718.2791	1.2567	1.2403
All US	3,803	15,594,505	19,927,999.2202	0.7825	0.7821

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when there are no reported device days.
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than or less than the expected SUR.
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of device days.
4. Data from all wards (for this table wards also include step-down, mixed acuity, and specialty care areas [i.e., behavioral health, etc.]).

SURs using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by device (UCDs), wards⁴

for SUR	Facility-specific SURs						10%
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		No. Facilities with SUR		
			Significantly > National SUR	N	Significantly < National SUR	N	
0.9350	90	63	70%	24	27%	0.4800	
0.7292	10	5	50%	4	40%	.	
0.8706	72	33	46%	31	43%	0.2660	
1.0310	50	37	74%	11	22%	0.6344	
0.8581	338	194	57%	115	34%	0.5495	
0.8072	58	26	45%	25	43%	0.4300	
0.6383	29	6	21%	19	66%	0.5125	
0.4727	9	.	.	.	.	.
0.7075	9	.	.	.	.	.
0.5928	219	45	21%	164	75%	0.3583	
0.7738	112	53	47%	49	44%	0.4347	
.	
0.8375	17	7	41%	9	53%	.	
0.9101	18	12	67%	4	22%	.	
0.7714	136	68	50%	57	42%	0.4775	
0.8017	91	49	54%	31	34%	0.4550	
1.0324	41	31	76%	7	17%	0.7212	
0.7833	63	32	51%	24	38%	0.2717	
0.8281	71	46	65%	23	32%	0.5139	
0.9991	107	75	70%	26	24%	0.4974	
0.7663	20	13	65%	7	35%	0.5895	
0.7321	49	16	33%	28	57%	0.4762	
0.7075	68	19	28%	46	68%	0.3734	
0.7805	101	44	44%	52	51%	0.5113	
0.8650	51	31	61%	17	33%	0.5651	
1.0831	63	45	71%	13	21%	0.2045	
0.7983	79	38	48%	37	47%	0.4366	
0.8949	14	9	64%	3	21%	.	
0.7824	28	13	46%	14	50%	0.4102	
0.7077	29	7	24%	19	66%	0.2138	
0.8038	13	5	38%	7	54%	.	
0.6267	72	12	17%	53	74%	0.3519	
0.9092	32	18	56%	7	22%	0.5666	
0.7733	176	82	47%	87	49%	0.4512	
0.7448	103	40	39%	55	53%	0.4921	
0.8364	11	6	55%	4	36%	.	
0.8392	150	92	61%	43	29%	0.6140	
1.0172	84	57	68%	22	26%	0.4382	
0.7762	37	19	51%	14	38%	0.5696	
0.7977	194	81	42%	93	48%	0.2970	
1.2686	15	13	87%	1	7%	.	
0.6860	11	4	36%	7	64%	.	
0.6955	64	22	34%	40	63%	0.4176	

0.9665	22	14	64%	5	23%	0.4916
0.8046	98	51	52%	36	37%	0.3855
0.7649	359	175	49%	153	43%	0.5031
0.7304	38	16	42%	17	45%	0.3825
0.9696	7	.	.	.	.	.
.
0.6735	84	33	39%	44	52%	0.4259
0.8029	59	33	56%	22	37%	0.6020
1.0132	31	21	68%	7	23%	0.5133
0.8117	82	37	45%	32	39%	0.3861
1.2733	13	10	77%	2	15%	.
0.7829	3,800	1,871	49%	1,623	43%	0.4438

le less than 5 reporting facilities. This may be different from those reported in the SIR tables due to exclusions less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0 predicted days in 2021. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was neither calculated (including hematology/oncology, bone marrow transplant]). Data contained in this table are reported from ac

vice type and patient population:

Median			
25%	50%	75%	90%
0.7211	0.9986	1.3982	1.6892
.	.	.	.
0.6106	0.7862	1.0525	1.5488
0.8372	0.9885	1.2875	1.9636
0.6868	0.8847	1.1133	1.4229
0.6302	0.8163	0.9823	1.4062
0.6000	0.6643	0.8022	1.0197
.	.	.	.
.	.	.	.
0.4842	0.5864	0.7462	0.9324
0.5814	0.7925	1.0771	1.3862
.	.	.	.
.	.	.	.
.	.	.	.
0.6175	0.8160	1.1248	1.4949
0.6454	0.8431	1.0593	1.2969
0.9042	1.1145	1.3415	1.5100
0.5900	0.8811	1.2146	1.6152
0.6871	1.0252	1.3309	1.7424
0.7228	1.1821	1.6385	2.3114
0.6714	0.8682	1.0704	1.2708
0.6185	0.7132	0.9095	1.2729
0.4864	0.6268	0.8659	1.0391
0.6000	0.7439	0.9644	1.2865
0.6546	0.9013	1.0611	1.3236
0.7950	1.0470	1.4656	2.0033
0.5851	0.7952	1.0835	1.6047
.	.	.	.
0.5127	0.7259	1.1332	1.3826
0.4660	0.7090	0.7971	1.1846
.	.	.	.
0.4563	0.6000	0.7608	0.8632
0.7016	1.0345	1.2932	1.9744
0.5580	0.7674	1.0444	1.3015
0.5805	0.7323	1.0489	1.2346
.	.	.	.
0.7095	0.8944	1.1082	1.3633
0.6763	1.0038	1.5180	1.9308
0.6664	0.8327	1.0831	1.2957
0.5627	0.7485	1.0522	1.3303
.	.	.	.
.	.	.	.
0.5080	0.6999	0.9922	1.4551

0.8088	1.0658	1.2939	1.6654
0.6493	0.8322	1.2032	1.8765
0.6098	0.8115	1.2035	1.7242
0.5667	0.7736	0.9037	1.2657
.	.	.	.
.	.	.	.
0.5478	0.7387	0.9272	1.4406
0.6754	0.8210	1.0365	1.3001
0.7456	0.9999	1.4039	1.7203
0.6469	0.7957	1.0089	1.2631
.	.	.	.
0.6046	0.8108	1.1050	1.4889

on and inclusion criteria. Refer to the technical appendix for details.
 icted device days in 2021.
 ;calculated nor included in the distribution of facility-specific SURs.
 ute care hospitals.

Table 4. State-specific standardized utilization ratios (SURs) and facility-specific summary
Table 4a. Ventilator days (VD)

State	No. of Facilities	No. of Device Days			95% CI	
		Observed	Predicted	SUR	Lower	Upper
Alabama	44	96,206	69,336.6414	1.3875	1.3788	
Alaska	4	.	.	.	.	.
Arizona	26	77,248	59,051.4032	1.3081	1.2990	
Arkansas	25	49,886	44,938.2591	1.1101	1.1004	
California	184	538,133	383,457.2310	1.4034	1.3997	
Colorado	41	95,977	76,521.5715	1.2542	1.2464	
Connecticut	16	45,731	34,014.6640	1.3444	1.3322	
D.C.	4	.	.	.	.	.
Delaware	2	.	.	.	.	.
Florida	134	405,946	344,052.9506	1.1799	1.1763	
Georgia	71	272,439	213,359.8595	1.2769	1.2721	
Guam	2	.	.	.	.	.
Hawaii	6	7,185	5,778.9834	1.2433	1.2148	
Idaho	6	14,177	10,416.6901	1.3610	1.3387	
Illinois	51	96,091	91,527.3123	1.0499	1.0433	
Indiana	56	102,572	86,582.6578	1.1847	1.1774	
Iowa	13	12,700	10,237.5205	1.2405	1.2191	
Kansas	29	37,145	40,714.4621	0.9123	0.9031	
Kentucky	41	79,289	65,760.5319	1.2057	1.1973	
Louisiana	42	72,308	66,423.3358	1.0886	1.0807	
Maine	13	18,401	18,251.8351	1.0082	0.9937	
Maryland	19	44,180	31,451.2963	1.4047	1.3916	
Massachusetts	24	33,874	30,937.4098	1.0949	1.0833	
Michigan	51	133,100	109,029.6532	1.2208	1.2142	
Minnesota	11	45,502	34,227.2726	1.3294	1.3172	
Mississippi	29	53,586	42,095.2886	1.2730	1.2622	
Missouri	40	124,221	109,264.5310	1.1369	1.1306	
Montana	6	10,008	9,318.6822	1.0740	1.0531	
Nebraska	11	16,742	16,564.8288	1.0107	0.9955	
Nevada	18	101,229	89,210.9035	1.1347	1.1277	
New Hampshire	10	15,048	10,775.3686	1.3965	1.3743	
New Jersey	52	160,341	128,025.0014	1.2524	1.2463	
New Mexico	18	25,197	14,561.9731	1.7303	1.7090	
New York	113	365,725	301,627.9123	1.2125	1.2086	
North Carolina	41	80,052	63,367.7931	1.2633	1.2546	
North Dakota	2	.	.	.	.	.
Ohio	82	203,195	183,816.0798	1.1054	1.1006	
Oklahoma	35	60,825	43,989.1225	1.3827	1.3718	
Oregon	18	25,325	24,766.7740	1.0225	1.0100	
Pennsylvania	135	374,835	342,794.4514	1.0935	1.0900	
Puerto Rico	14	14,641	18,001.3904	0.8133	0.8002	
Rhode Island	9	17,494	17,827.2413	0.9813	0.9668	
South Carolina	53	142,074	117,953.7825	1.2045	1.1982	

South Dakota	6	8,393	8,321.3863	1.0086	0.9872
Tennessee	48	118,016	110,542.4019	1.0676	1.0615
Texas	149	428,408	338,708.7311	1.2648	1.2610
Utah	7	17,243	16,176.1535	1.0660	1.0502
Vermont	1	.	.	.	.
Virgin Islands	2	.	.	.	.
Virginia	61	154,052	134,176.7315	1.1481	1.1424
Washington	22	43,528	40,373.6451	1.0781	1.0680
West Virginia	14	33,688	27,155.2140	1.2406	1.2274
Wisconsin	30	41,033	32,286.9070	1.2709	1.2586
Wyoming	7	3,535	2,762.1615	1.2798	1.2382
All US	1,948	4,957,755	4,101,026.0169	1.2089	1.2078

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when there are no predicted device days.
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than 1.0.
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of device days.
4. Data from all ICUs, wards, and other non-critical care locations. This excludes NICUs. Data contained in this table are for facilities that reported data for at least one predicted device day.

y SURs using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by d
s), all locations⁴

for SUR	Facility-specific SURs					10%
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		No. Facilities with SUR	
			Significantly > National SUR	Significantly < National SUR		
		N	N			
1.3963	44	27	61%	14	32%	0.5429
.
1.3174	26	13	50%	8	31%	0.0555
1.1199	25	12	48%	13	52%	0.6310
1.4071	183	121	66%	49	27%	0.7062
1.2622	41	17	41%	17	41%	0.3282
1.3568	15	9	60%	5	33%	.
.
.
1.1835	134	62	46%	57	43%	0.6604
1.2817	70	47	67%	17	24%	0.6901
.
1.2723	6	.	.	.	.	.
1.3835	6	.	.	.	.	.
1.0565	51	17	33%	27	53%	0.4787
1.1920	56	23	41%	28	50%	0.5340
1.2623	12	5	42%	6	50%	.
0.9216	28	8	29%	12	43%	0.3705
1.2141	41	22	54%	14	34%	0.6130
1.0966	41	11	27%	18	44%	0.0877
1.0228	13	4	31%	9	69%	.
1.4179	19	12	63%	6	32%	.
1.1066	24	6	25%	15	63%	0.0634
1.2273	51	22	43%	26	51%	0.3277
1.3417	11	6	55%	4	36%	.
1.2838	29	18	62%	8	28%	0.2414
1.1432	40	16	40%	21	53%	0.3181
1.0952	6	.	.	.	.	.
1.0261	10	3	30%	5	50%	.
1.1417	18	8	44%	10	56%	.
1.4190	10	6	60%	2	20%	.
1.2586	52	23	44%	20	38%	0.7507
1.7518	18	7	39%	9	50%	.
1.2165	113	53	47%	49	43%	0.6178
1.2721	41	20	49%	14	34%	0.5021
.
1.1103	82	26	32%	47	57%	0.3489
1.3937	34	20	59%	10	29%	0.2280
1.0352	18	5	28%	11	61%	.
1.0970	135	46	34%	75	56%	0.3831
0.8266	14	7	50%	7	50%	.
0.9959	9	.	.	.	.	.
1.2108	53	26	49%	19	36%	0.7706

1.0304	6	.	.	.	.	.	.
1.0737	48	16	33%	25	52%	0.6663	.
1.2687	148	78	53%	54	36%	0.5295	.
1.0820	7	.	.	.	.	.	.
.
1.1539	61	22	36%	29	48%	0.5277	.
1.0883	22	7	32%	13	59%	0.3196	.
1.2539	14	7	50%	4	29%	.	.
1.2832	30	11	37%	16	53%	0.4952	.
1.3225	7	.	.	.	.	.	.
1.2100	1,939	897	46%	823	42%	0.4918	.

are less than 5 reporting facilities. This may be different from those reported in the SIR tables due to exc or less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0 p vice days in 2021. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was neitl in this table are reported from acute care hospitals.

levi ce type and patient population:

Median			
25%	50%	75%	90%
0.9745	1.4859	2.0158	2.5241
.	.	.	.
1.0544	1.2477	1.6339	2.2883
0.8738	1.1373	1.6278	2.2376
1.0775	1.4772	1.9426	2.5999
0.8215	1.1979	1.6241	1.8420
.	.	.	.
.	.	.	.
.	.	.	.
0.8664	1.2292	1.4915	2.0336
1.1122	1.3616	2.0485	2.6539
.	.	.	.
.	.	.	.
.	.	.	.
0.7707	1.1102	1.5025	1.9214
0.8566	1.1306	1.5154	2.6235
.	.	.	.
0.8046	1.1804	1.5798	2.1830
0.8628	1.3458	2.1184	2.5437
0.7647	1.0516	1.4514	1.7305
.	.	.	.
.	.	.	.
0.6155	1.0030	1.2789	1.5496
0.6869	1.1332	1.5473	1.7215
.	.	.	.
1.1222	1.5358	1.7770	2.5653
0.8234	1.1570	1.5877	1.7821
.	.	.	.
.	.	.	.
.	.	.	.
0.9206	1.2252	1.6206	2.1873
.	.	.	.
0.9224	1.2524	1.5752	1.9291
0.9729	1.2852	1.7462	2.0885
.	.	.	.
0.7627	1.0664	1.4244	1.8042
0.9809	1.3639	1.8067	2.3962
.	.	.	.
0.7889	1.0745	1.4087	1.7514
.	.	.	.
.	.	.	.
1.0016	1.2664	1.6040	2.1811

0.8365	1.0542	1.3880	1.9591
0.9676	1.3247	1.7379	2.3736
0.8419	1.1823	1.3519	1.8865
0.6721	1.0746	1.4408	1.5226
0.8852	1.1339	1.6044	2.5193
0.8776	1.2276	1.6127	2.2011

clusion and inclusion criteria. Refer to the technical appendix for details.
predicted device days in 2021.
her calculated nor included in the distribution of facility-specific SURs.

Table 4. State-specific standardized utilization ratios (SURs) and facility-specific summary
Table 4b. Ventilator days (VDs), c

State	No. of Facilities	No. of Device Days			95% CI
		Observed	Predicted	SUR	Lower
Alabama	43	93,828	65,630.0682	1.4296	1.4205
Alaska	4	.	.	.	.
Arizona	24	76,984	58,959.0264	1.3057	1.2965
Arkansas	25	49,886	44,493.7910	1.1212	1.1114
California	177	496,100	360,208.5788	1.3773	1.3734
Colorado	40	95,499	75,441.0727	1.2659	1.2578
Connecticut	15	44,491	32,165.2830	1.3832	1.3704
D.C.	4	.	.	.	.
Delaware	2	.	.	.	.
Florida	132	392,292	330,150.8728	1.1882	1.1845
Georgia	68	263,072	205,838.9091	1.2780	1.2732
Guam	2	.	.	.	.
Hawaii	6	7,159	5,542.3315	1.2917	1.2621
Idaho	6	14,177	10,416.6901	1.3610	1.3387
Illinois	50	91,148	86,671.0067	1.0517	1.0449
Indiana	55	99,103	83,758.6566	1.1832	1.1758
Iowa	13	12,700	10,237.5205	1.2405	1.2191
Kansas	28	36,918	39,964.8678	0.9238	0.9144
Kentucky	40	79,185	65,513.7672	1.2087	1.2003
Louisiana	35	67,864	63,359.0507	1.0711	1.0631
Maine	12	18,393	18,174.9780	1.0120	0.9974
Maryland	19	39,837	29,844.4605	1.3348	1.3218
Massachusetts	22	33,263	30,086.2308	1.1056	1.0938
Michigan	48	122,785	104,352.1261	1.1766	1.1701
Minnesota	10	43,791	33,441.8559	1.3095	1.2972
Mississippi	27	53,163	41,451.9966	1.2825	1.2717
Missouri	40	120,411	104,653.7346	1.1506	1.1441
Montana	5	9,901	9,296.0650	1.0651	1.0442
Nebraska	11	16,194	16,233.4628	0.9976	0.9823
Nevada	18	87,188	73,703.0737	1.1830	1.1751
New Hampshire	10	15,048	10,615.9260	1.4175	1.3950
New Jersey	52	142,964	114,489.2025	1.2487	1.2422
New Mexico	18	23,582	13,916.7752	1.6945	1.6729
New York	110	307,191	264,226.9098	1.1626	1.1585
North Carolina	40	76,376	59,249.3470	1.2891	1.2799
North Dakota	2	.	.	.	.
Ohio	78	191,347	159,926.0279	1.1965	1.1911
Oklahoma	31	60,047	43,721.0452	1.3734	1.3625
Oregon	17	24,440	22,306.0475	1.0957	1.0820
Pennsylvania	131	358,633	313,176.4377	1.1451	1.1414
Puerto Rico	11	11,059	13,014.0535	0.8498	0.8340
Rhode Island	9	17,444	16,554.5455	1.0537	1.0382

South Carolina	52	138,442	111,154.1946	1.2455	1.2389
South Dakota	6	7,850	8,061.8541	0.9737	0.9524
Tennessee	47	110,383	105,475.9772	1.0465	1.0404
Texas	140	417,458	329,113.0953	1.2684	1.2646
Utah	7	17,170	15,487.8936	1.1086	1.0921
Vermont	1	.	.	.	.
Virgin Islands	2	.	.	.	.
Virginia	61	147,785	126,026.4637	1.1727	1.1667
Washington	20	41,592	38,816.6615	1.0715	1.0612
West Virginia	14	33,606	25,475.0915	1.3192	1.3052
Wisconsin	30	40,426	29,710.5494	1.3607	1.3474
Wyoming	7	3,535	2,737.9567	1.2911	1.2491
All US	1,877	4,688,858	3,851,901.7970	1.2173	1.2162

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when there
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than o
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of dev
4. Data from all ICUs; excludes wards (and other non-critical care locations), and NICUs. Data contained

by SURs using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by critical care locations⁴

for SUR	Facility-specific SURs						10%
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		No. Facilities with SUR		
			Significantly > National SUR	Significantly < National SUR			
			N	N			
1.4388	42	28	67%	12	29%	0.7271	
.	
1.3150	23	12	52%	9	39%	0.2861	
1.1311	25	12	48%	13	52%	0.6310	
1.3811	177	118	67%	48	27%	0.7062	
1.2739	40	17	43%	16	40%	0.3917	
1.3961	15	9	60%	5	33%	.	
.	
1.1920	132	60	45%	58	44%	0.7029	
1.2829	68	45	66%	16	24%	0.7764	
.	
1.3219	6	.	.	.	.	.
1.3835	6	.	.	.	.	.
1.0585	50	16	32%	27	54%	0.4913	
1.1906	55	21	38%	27	49%	0.5798	
1.2623	12	5	42%	6	50%	.	
0.9332	28	9	32%	12	43%	0.3705	
1.2171	40	22	55%	13	33%	0.7053	
1.0792	34	11	32%	16	47%	0.7730	
1.0267	12	4	33%	8	67%	.	
1.3480	19	11	58%	6	32%	.	
1.1175	22	6	27%	12	55%	0.1700	
1.1832	48	19	40%	25	52%	0.4320	
1.3217	10	6	60%	3	30%	.	
1.2934	27	18	67%	7	26%	1.1043	
1.1571	40	18	45%	21	53%	0.3356	
1.0862	5	.	.	.	.	.
1.0130	10	3	30%	6	60%	.	
1.1908	18	10	56%	8	44%	.	
1.4403	10	6	60%	1	10%	.	
1.2552	52	21	40%	20	38%	0.7927	
1.7163	18	7	39%	10	56%	.	
1.1667	110	50	45%	49	45%	0.7304	
1.2982	40	20	50%	14	35%	0.4652	
.	
1.2019	78	27	35%	39	50%	0.4763	
1.3844	31	20	65%	7	23%	0.9478	
1.1095	17	6	35%	9	53%	.	
1.1489	131	49	37%	68	52%	0.4565	
0.8657	11	5	45%	5	45%	.	
1.0694	9	.	.	.	.	.

1.2521	52	29	56%	17	33%	0.8422
0.9955	6	.	.	.	.	.
1.0527	47	15	32%	26	55%	0.6663
1.2723	140	76	54%	46	33%	0.7672
1.1253	7	.	.	.	.	.
.
1.1787	61	21	34%	28	46%	0.5277
1.0818	20	5	25%	12	60%	0.3518
1.3333	14	7	50%	4	29%	.
1.3740	30	12	40%	15	50%	0.5365
1.3342	7	.	.	.	.	.
1.2184	1,872	882	47%	775	41%	0.6155

are less than 5 reporting facilities. This may be different from those reported in the SIR tables due to exclusion of facilities with less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0 predicted device days in 2021. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was neither reported in this table nor reported from acute care hospitals.

ervice type and patient population:

Median			
25%	50%	75%	90%
1.0877	1.6374	2.0432	2.5241
.	.	.	.
1.0559	1.2743	1.6339	2.2541
0.8738	1.1373	1.6278	2.3321
1.1305	1.4772	1.9081	2.4653
0.8640	1.2132	1.6247	2.0076
.	.	.	.
.	.	.	.
0.9183	1.2330	1.4956	2.0032
1.1535	1.3616	2.0727	2.7149
.	.	.	.
.	.	.	.
.	.	.	.
0.7707	1.0865	1.4499	1.8769
0.8801	1.1347	1.5128	2.8470
.	.	.	.
0.8046	1.1804	1.5798	2.1830
0.9166	1.3549	2.1636	2.5945
0.8985	1.1722	1.5053	1.8528
.	.	.	.
.	.	.	.
0.7424	1.0679	1.3148	1.5496
0.7790	1.1257	1.4880	1.7443
.	.	.	.
1.1611	1.5436	1.8040	2.5653
0.8234	1.1389	1.5877	1.7821
.	.	.	.
.	.	.	.
.	.	.	.
0.9895	1.2084	1.6206	2.0592
.	.	.	.
0.9734	1.2297	1.5044	1.7994
0.9473	1.2928	1.8246	2.0846
.	.	.	.
0.8697	1.1685	1.5653	1.9409
1.1405	1.3837	1.8527	2.3962
.	.	.	.
0.8558	1.1098	1.4566	1.7251
.	.	.	.
.	.	.	.

1.0961	1.3259	1.8120	2.1811
.	.	.	.
0.8464	1.0356	1.4218	1.9591
1.0463	1.3571	1.7379	2.3235
.	.	.	.
.	.	.	.
0.8521	1.1838	1.4888	1.8865
0.6735	1.0460	1.3388	1.5189
.	.	.	.
0.8852	1.1691	1.7005	2.5193
.	.	.	.
0.9290	1.2513	1.6266	2.1478

usion and inclusion criteria. Refer to the technical appendix for details.
 redicted device days in 2021.
 er calculated nor included in the distribution of facility-specific SURs.

Table 4. State-specific standardized utilization ratios (SURs) and facility-specific summary
Table 4c. Ventilator days (

State	No. of Facilities	No. of Device Days			95% CI
		Observed	Predicted	SUR	Lower
Alabama	10	2,378	3,706.5732	0.6416	0.6162
Alaska	0	.	.	.	.
Arizona	6	264	92.3768	2.8579	2.5285
Arkansas	2	.	.	.	.
California	60	42,033	23,248.6521	1.8080	1.7907
Colorado	6	478	1,080.4989	0.4424	0.4040
Connecticut	5	1,240	1,849.3811	0.6705	0.6339
D.C	0	.	.	.	.
Delaware	1	.	.	.	.
Florida	31	13,654	13,902.0777	0.9822	0.9658
Georgia	26	9,367	7,520.9504	1.2455	1.2204
Guam	1	.	.	.	.
Hawaii	1	.	.	.	.
Idaho	0	.	.	.	.
Illinois	13	4,943	4,856.3056	1.0179	0.9898
Indiana	11	3,469	2,824.0012	1.2284	1.1880
Iowa	0	.	.	.	.
Kansas	5	227	749.5943	0.3028	0.2653
Kentucky	6	104	246.7647	0.4215	0.3461
Louisiana	16	4,444	3,064.2850	1.4503	1.4081
Maine	3	.	.	.	.
Maryland	7	4,343	1,606.8358	2.7028	2.6234
Massachusetts	5	611	851.1790	0.7178	0.6626
Michigan	13	10,315	4,677.5270	2.2052	2.1630
Minnesota	4	.	.	.	.
Mississippi	4	.	.	.	.
Missouri	12	3,810	4,610.7963	0.8263	0.8004
Montana	1	.	.	.	.
Nebraska	2	.	.	.	.
Nevada	11	14,041	15,507.8298	0.9054	0.8905
New Hampshire	1	.	.	.	.
New Jersey	15	17,377	13,535.7989	1.2838	1.2648
New Mexico	5	1,615	645.1979	2.5031	2.3833
New York	44	58,534	37,401.0024	1.5650	1.5524
North Carolina	6	3,676	4,118.4461	0.8926	0.8640
North Dakota	0	.	.	.	.
Ohio	35	11,848	23,890.0520	0.4959	0.4871
Oklahoma	8	778	268.0773	2.9021	2.7036
Oregon	3	.	.	.	.
Pennsylvania	49	16,202	29,618.0137	0.5470	0.5387
Puerto Rico	10	3,582	4,987.3369	0.7182	0.6950
Rhode Island	1	.	.	.	.

South Carolina	18	3,632	6,799.5879	0.5342	0.5170
South Dakota	3	.	.	.	.
Tennessee	11	7,633	5,066.4247	1.5066	1.4731
Texas	36	10,950	9,595.6358	1.1411	1.1199
Utah	1	.	.	.	.
Vermont	0	.	.	.	.
Virgin Islands	1	.	.	.	.
Virginia	16	6,267	8,150.2679	0.7689	0.7501
Washington	6	1,936	1,556.9836	1.2434	1.1889
West Virginia	2	.	.	.	.
Wisconsin	3	.	.	.	.
Wyoming	1	.	.	.	.
All US	537	268,897	249,124.2200	1.0794	1.0753

1. The number of reporting facilities included in the SUR calculation; SURs are not calculated when there are no predicted device days.
2. Percent of facilities with at least one predicted device day that had an SUR significantly greater than or less than the expected SUR.
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥ 1.0 predicted number of device days.
4. Data from all wards (for this table, wards also include step-down, mixed acuity, and specialty care areas).

Surveillance of Surgical Site Infections (SSIs) using device days data reported to NHSN during 2021 for acute care hospitals (ACHs), by device (VDs), wards⁴

for SUR	Facility-specific SURs					10%
	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR Significantly > National SUR	No. Facilities with SUR Significantly < National SUR			
Upper		N		N		
0.6678	10	2	20%	7	70%	.
.
3.2186	6	.	.	.	.	.
.
1.8254	59	29	49%	23	39%	0.0000
0.4834	6	.	.	.	.	.
0.7086	4	.	.	.	.	.
.
.
0.9988	31	15	48%	13	42%	0.0073
1.2709	25	12	48%	10	40%	0.0000
.
.
1.0465	12	5	42%	6	50%	.
1.2698	11	4	36%	7	64%	.
.
0.3442	4	.	.	.	.	.
0.5086	6	.	.	.	.	.
1.4934	16	3	19%	8	50%	.
.
2.7841	7	.	.	.	.	.
0.7765	5	.	.	.	.	.
2.2480	13	8	62%	4	31%	.
.
.
0.8529	12	4	33%	7	58%	.
.
.
0.9205	11	2	18%	9	82%	.
.
1.3030	15	7	47%	7	47%	.
2.6275	5	.	.	.	.	.
1.5778	44	22	50%	20	45%	0.0000
0.9218	6	.	.	.	.	.
.
0.5049	35	6	17%	27	77%	0.0000
3.1115	7	.	.	.	.	.
.
0.5555	48	9	19%	38	79%	0.0000
0.7420	10	4	40%	6.00	60%	.
.

0.5517	18	5	28%	13	72%	.
.
1.5407	11	6	55%	4	36%	.
1.1627	35	9	26%	23	66%	0.0000
.
.
0.7881	16	5	31%	11	69%	.
1.2998	6	.	.	.	.	.
.
.
.
1.0834	528	182	34%	310	59%	0.0000

are less than 5 reporting facilities. This may be different from those reported in the SIR tables due to exclusions less than the nominal value of the national SUR. This is only calculated if at least 10 facilities had ≥ 1.0 predicted device days in 2021. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was neither calculated nor reported (including hematology/oncology, bone marrow transplant). Data contained in this table are reported from :

service type and patient population:

Median				
25%	50%	75%	90%	
.
.
.
0.2774	1.2642	4.2338	10.6490	.
.
.
0.0568	1.0812	2.3399	4.1651	.
0.2157	1.1536	2.8966	9.9122	.
.
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.
.
0.3983	1.4173	2.4088	4.3262	.
.
0.0000	0.2762	0.8980	1.5455	.
.
0.0013	0.2568	0.7457	3.3005	.
.
.

Table 5. Changes in national standardized utilization ratios (SURs) using HAI data reported from all NHSN acute care hospitals reporting during 2021 by HAI and patient population: Central line days (CLDs), urinary catheter days (UCDs), and ventilator days (VDs), 2021 compared to 2020

	2020 SUR	2021 SUR	Percent Change	Direction of Change, Based on Statistical Significance	p-value
CLDs, all locations¹	0.9038	0.9051	0%	Increase	<0.0001
ICU ²	0.9814	1.0189	4%	Increase	<0.0001
Ward ³	0.8649	0.8472	-2%	Decrease	<0.0001
NICU ⁴	0.8638	0.8817	2%	Increase	<0.0001
UCDs, all locations⁵	0.8352	0.8427	1%	Increase	<0.0001
	0.9224	0.9414	2%	Increase	<0.0001
	0.7804	0.7825	0%	Increase	<0.0001
VDs, all⁵	1.1239	1.2089	8%	Increase	<0.0001
ICUs ²	1.1324	1.2173	7%	Increase	<0.0001
Wards ³	0.9809	1.0794	10%	Increase	<0.0001

* Statistically significant, p < 0.0500

1. Data from all ICUs, wards (and other non-critical care locations), and NICUs. This excludes LTAC locations (or facilities) and IRF locations (or facilities).
2. Data from all ICUs; excludes wards (and other non-critical care locations), NICUs, LTAC locations (or facilities), and IRF locations (or facilities).
3. Data from all wards (for this table, wards also include step-down and specialty care areas [including hematology/oncology, bone marrow transplanta
4. Data from all NICU locations, including Level II/III and Level III nurseries.
5. Data from all ICUs, wards, and other non-critical care locations. This excludes NICUs, LTAC locations (or facilities), and IRF locations (or facilities).

cilities).

int]). This excludes LTAC locations (or facilities) and IRF locations (or facilities).

s).

Table 6. Changes in state-specific standardized utilization ratios (SURs) between 2020 and 2021 from NHSN Acute Care Hospitals

6a. Central line days (CLDs), all locations¹

State ²	All Acute Care Hospitals Reporting to NHSN				
	2020 SUR	2021 SUR	Percent Change ³	Direction of Change, Based on Statistical Significance	p-value
Alabama	0.8363	0.8476	1%	Increase	<0.0001
Alaska	1.0948	1.1143	2%	Increase	0.0090
Arizona	0.9919	0.9996	1%	Increase	<0.0001
Arkansas	0.8833	0.8760	-1%	Decrease	0.0023
California	0.9637	0.9647	0%	No Change	0.2338
Colorado	0.9989	1.0056	1%	Increase	0.0029
Connecticut	0.8462	0.8181	-3%	Decrease	<0.0001
D.C.	0.8190	0.8089	-1%	Decrease	0.0062
Delaware	0.8833	0.8653	-2%	Decrease	<0.0001
Florida	0.8260	0.8162	-1%	Decrease	<0.0001
Georgia	0.8924	0.8930	0%	No Change	0.6831
Guam	.	.	.	.	.
Hawaii	1.1420	1.1304	-1%	Decrease	0.0151
Idaho	0.9535	0.9958	4%	Increase	<0.0001
Illinois	0.8647	0.8808	2%	Increase	<0.0001
Indiana	0.9947	0.9965	0%	No Change	0.3329
Iowa	0.9823	0.9858	0%	No Change	0.2559
Kansas	0.9172	0.9651	5%	Increase	<0.0001
Kentucky	0.9199	0.9242	0%	Increase	0.0265
Louisiana	0.9189	0.9302	1%	Increase	<0.0001
Maine	0.9507	0.9271	-2%	Decrease	<0.0001
Maryland	0.8580	0.8839	3%	Increase	<0.0001
Massachusetts	0.9149	0.9092	-1%	Decrease	0.0007
Michigan	0.8008	0.8106	1%	Increase	<0.0001
Minnesota	1.0501	1.0740	2%	Increase	<0.0001
Mississippi	0.9103	0.9337	3%	Increase	<0.0001
Missouri	0.9333	0.9534	2%	Increase	<0.0001
Montana	0.6727	0.6653	1%	No Change	0.1044
Nebraska	1.0290	0.9875	-4%	Decrease	<0.0001
Nevada	0.9282	0.8860	-5%	Decrease	<0.0001
New Hampshire	0.8744	0.9506	9%	Increase	<0.0001
New Jersey	0.7664	0.7641	0%	No Change	0.1411
New Mexico	0.9597	0.9794	2%	Increase	<0.0001
New York	0.7987	0.7627	-5%	Decrease	<0.0001
North Carolina	0.9245	0.9521	3%	Increase	<0.0001
North Dakota	0.9878	0.9587	-3%	Decrease	<0.0001
Ohio	0.9111	0.9299	2%	Increase	<0.0001
Oklahoma	1.2472	1.2429	0%	No Change	0.1152
Oregon	0.8545	0.8856	4%	Increase	<0.0001
Pennsylvania	0.8453	0.8425	0%	Decrease	0.0086
Puerto Rico	0.7472	0.7263	-3%	Decrease	<0.0001
Rhode Island	0.9165	0.8331	-9%	Decrease	<0.0001
South Carolina	0.7950	0.8289	4%	Increase	<0.0001
South Dakota	0.9244	0.8963	-3%	Decrease	<0.0001
Tennessee	0.9089	0.9418	4%	Increase	<0.0001
Texas	0.9456	0.9728	3%	Increase	<0.0001
Utah	0.8430	0.8662	3%	Increase	<0.0001
Vermont	0.8933	0.9108	2%	Increase	0.0148
Virgin Islands	.	.	.	.	.
Virginia	0.8526	0.8639	1%	Increase	<0.0001
Washington	1.0330	1.0046	-3%	Decrease	<0.0001
West Virginia	0.9849	1.0238	4%	Increase	<0.0001
Wisconsin	1.0031	0.9941	-1%	Decrease	<0.0001
Wyoming	1.1359	1.2064	6%	Increase	<0.0001
All US	0.9038	0.9051	0%	Increase	<0.0001

* Statistically significant, p < 0.0500

1. Data from all ICUs, wards (and other non-critical care locations), and NICUs.

2. Percent change and subsequent calculations are not calculated for states without SUR in either 2020 and/or 2021.

3. For states with >>100% value in the percent change field, the p-value cannot be estimated due to sparse data reported within the facility type.

The p-value is indicated as inestimable when the numerator and/or denominator of percent change = 0.

Table 6. Changes in state-specific standardized utilization ratios (SURs) between 2020 and 2021 from NHSN Acute Care Hospitals
6b. Urinary catheter days (UCDs), all locations¹

	All Acute Care Hospitals Reporting to NHSN				
	2020 SUR	2021 SUR	Direction of Change, Based on Statistical Significance		p-value
Alabama	0.9532	0.9982	5%	Increase	<0.0001
Alaska	0.7979	0.7776	-3%	Decrease	0.0004
Arizona	0.8668	0.9387	8%	Increase	<0.0001
Arkansas	0.9960	1.0245	3%	Increase	<0.0001
California	0.8885	0.9005	1%	Increase	<0.0001
Colorado	0.8517	0.8514	0%	No Change	0.9062
Connecticut	0.7372	0.7406	0%	No Change	0.1359
D.C	0.5098	0.5319	4%	Increase	<0.0001
Delaware	0.7455	0.7769	4%	Increase	<0.0001
Florida	0.6845	0.6897	1%	Increase	<0.0001
Georgia	0.8030	0.8345	4%	Increase	<0.0001
Guam	.	.	.	.	.
Hawaii	0.8477	0.8601	1%	Increase	0.0022
Idaho	0.9569	0.9922	4%	Increase	<0.0001
Illinois	0.8045	0.7996	-1%	Decrease	<0.0001
Indiana	0.8582	0.8581	0%	No Change	0.9780
Iowa	1.0384	1.0490	1%	Increase	0.0006
Kansas	0.8058	0.8011	1%	No Change	0.0648
Kentucky	0.8808	0.8994	2%	Increase	<0.0001
Louisiana	1.0002	0.9832	-2%	Decrease	<0.0001
Maine	0.7539	0.8024	6%	Increase	<0.0001
Maryland	0.7794	0.7673	-2%	Decrease	<0.0001
Massachusetts	0.8449	0.8163	-3%	Decrease	<0.0001
Michigan	0.8357	0.8557	2%	Increase	<0.0001
Minnesota	0.9101	0.9287	2%	Increase	<0.0001
Mississippi	1.0695	1.0824	1%	Increase	<0.0001
Missouri	0.8421	0.8549	2%	Increase	<0.0001
Montana	0.8891	0.9345	5%	Increase	<0.0001
Nebraska	0.8023	0.7839	-2%	Decrease	<0.0001
Nevada	0.7943	0.7858	-1%	Decrease	0.0001
New Hampshire	0.8691	0.8805	1%	Increase	0.0051
New Jersey	0.7089	0.6841	-3%	Decrease	<0.0001
New Mexico	0.9549	0.9817	3%	Increase	<0.0001
New York	0.8334	0.8201	-2%	Decrease	<0.0001
North Carolina	0.8027	0.8205	2%	Increase	<0.0001
North Dakota	0.9384	0.9103	-3%	Decrease	<0.0001
Ohio	0.8935	0.8890	-1%	Decrease	0.0002
Oklahoma	1.0346	1.0549	2%	Increase	<0.0001
Oregon	0.7877	0.8132	3%	Increase	<0.0001
Pennsylvania	0.8459	0.8548	1%	Increase	<0.0001
Puerto Rico	1.0988	1.2206	11%	Increase	<0.0001
Rhode Island	0.8094	0.7807	-4%	Decrease	<0.0001
South Carolina	0.7622	0.7722	1%	Increase	<0.0001
South Dakota	0.9577	0.9198	-4%	Decrease	<0.0001
Tennessee	0.8262	0.8474	3%	Increase	<0.0001
Texas	0.8220	0.8379	2%	Increase	<0.0001
Utah	0.8038	0.7808	-3%	Decrease	<0.0001
Vermont	0.9438	0.9515	1%	No Change	0.2891
Virgin Islands	.	.	.	.	.
Virginia	0.7238	0.7287	1%	Increase	0.0006
Washington	0.8546	0.8288	-3%	Decrease	<0.0001
West Virginia	0.9899	1.0518	6%	Increase	<0.0001
Wisconsin	0.8488	0.8440	-1%	Decrease	0.0121
Wyoming	1.0324	1.0707	4%	Increase	<0.0001
All US	0.8352	0.8427	1%	Increase	<0.0001

* Statistically significant, p < 0.0500

1. Data from all ICUs, wards, and other non-critical care locations.

2. Percent change and subsequent calculations are not calculated for states without SUR in either 2020 and/or 2021.

3. For states with >>100% value in the percent change field, the p-value cannot be estimated due to sparse data reported within the facility type.

The p-value is indicated as inestimable when the numerator and/or denominator of percent change = 0.

Table 6. Changes in state-specific standardized utilization ratios (SURs) between 2020 and 2021 from NHSN Acute Care Hospitals
6c. Ventilator days (VDs), all locations¹

	All Acute Care Hospitals Reporting to NHSN				
	2020 SUR	2021 SUR	Direction of Change, Based on Statistical Significance		p-value
Alabama	1.2556	1.3875	11%	Increase	<0.0001
Alaska	.	.	.	.	.
Arizona	1.2212	1.3081	7%	Increase	<0.0001
Arkansas	0.9811	1.1101	13%	Increase	<0.0001
California	1.3433	1.4034	4%	Increase	<0.0001
Colorado	1.0699	1.2542	17%	Increase	<0.0001
Connecticut	1.2838	1.3444	5%	Increase	<0.0001
D.C.	.	.	.	.	.
Delaware	.	.	.	.	.
Florida	0.9973	1.1799	18%	Increase	<0.0001
Georgia	1.1858	1.2769	8%	Increase	<0.0001
Guam	.	.	.	.	.
Hawaii	1.4293	1.2433	-13%	Decrease	<0.0001
Idaho	1.0527	1.3610	29%	Increase	<0.0001
Illinois	1.0320	1.0499	2%	Increase	0.0001
Indiana	1.0787	1.1847	10%	Increase	<0.0001
Iowa	1.1442	1.2405	8%	Increase	<0.0001
Kansas	0.8104	0.9123	13%	Increase	<0.0001
Kentucky	1.0140	1.2057	19%	Increase	<0.0001
Louisiana	1.0589	1.0886	3%	Increase	<0.0001
Maine	0.8933	1.0082	13%	Increase	<0.0001
Maryland	1.3338	1.4047	5%	Increase	<0.0001
Massachusetts	1.2105	1.0949	-10%	Decrease	<0.0001
Michigan	1.1782	1.2208	4%	Increase	<0.0001
Minnesota	1.3041	1.3294	2%	Increase	0.0211
Mississippi	1.3116	1.2730	-3%	Decrease	<0.0001
Missouri	1.0637	1.1369	7%	Increase	<0.0001
Montana	1.3016	1.0740	-17%	Decrease	<0.0001
Nebraska	1.0390	1.0107	-3%	Decrease	0.0063
Nevada	1.1000	1.1347	3%	Increase	<0.0001
New Hampshire	1.1494	1.3965	22%	Increase	<0.0001
New Jersey	1.2303	1.2524	2%	Increase	<0.0001
New Mexico	1.3926	1.7303	24%	Increase	<0.0001
New York	1.2029	1.2125	1%	Increase	0.0019
North Carolina	1.1331	1.2633	11%	Increase	<0.0001
North Dakota	.	.	.	.	.
Ohio	1.0172	1.1054	9%	Increase	<0.0001
Oklahoma	1.3483	1.3827	3%	Increase	0.0001
Oregon	0.8714	1.0225	17%	Increase	<0.0001
Pennsylvania	1.0718	1.0935	2%	Increase	<0.0001
Puerto Rico	0.8919	0.8133	-9%	Decrease	<0.0001
Rhode Island	1.0813	0.9813	-9%	Decrease	<0.0001
South Carolina	1.0734	1.2045	12%	Increase	<0.0001
South Dakota	0.8998	1.0086	12%	Increase	<0.0001
Tennessee	0.9847	1.0676	8%	Increase	<0.0001
Texas	1.1467	1.2648	10%	Increase	<0.0001
Utah	0.8891	1.0660	20%	Increase	<0.0001
Vermont	.	.	.	.	.
Virgin Islands	.	.	.	.	.
Virginia	1.0135	1.1481	13%	Increase	<0.0001
Washington	1.0274	1.0781	5%	Increase	<0.0001
West Virginia	0.9105	1.2406	36%	Increase	<0.0001
Wisconsin	1.2296	1.2709	3%	Increase	<0.0001
Wyoming	1.3338	1.2798	4%	No Change	0.1170
All US	1.1239	1.2089	8%	Increase	<0.0001

* Statistically significant, p < 0.0500

1. Data from all ICUs, wards, and other non-critical care locations.

2. Percent change and subsequent calculations are not calculated for states without SUR in either 2020 and/or 2021.

3. For states with >>100% value in the percent change field, the p-value cannot be estimated due to sparse data reported within the facility type.

The p-value is indicated as inestimable when the numerator and/or denominator of percent change = 0.

Appendix A. Factors used in NHSN risk adjusted standard utilization ratios (SUR) calculation of the device utilization in Acute Care Hospitals (ACHs).

Device Type	Validated Parameters for Risk Model
CLDs (non-NICU)	Intercept Location type Facility bed size* Facility type* Medical school type*
CLDs (NICU)	Intercept Birthweight type size* type* school type* Location Facility bed Facility Medical
UCDs	Intercept Location type Facility bed size* Facility type* Medical school type*
VDs	Intercept type size* type* school type* Location Facility bed Facility Medical

* Facility bed size, facility type and medical school type are taken from the Annual Hospital Survey.

Additional Resources

Technical Appendix: <http://www.cdc.gov/hai/pdfs/progress-report/tech-appendix.pdf>

Explains the methodology used to procedure the HAI Progress Report.

HAI Progress Report Home Page: <http://www.cdc.gov/hai/progress-report/index.html>

The complete HAI Progress Report, including state-specific fact sheets and the Executive Summary, can be found

The new SUR Guide:<https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sur-guide-508.pdf>

at the above website.