

Introduction:

Welcome to the 2020 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

Acute Care Hospitals

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

ACH	
National	State
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<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

]

» 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 (2020) 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 cathete

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

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

device days;

l).
if predicted device days.

I above

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

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2020 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, 2020 compared to 2019**
Central Line Days (CLDs)
Urinary Catheter Days (UCDs)
Ventilator days (VDs)

Table 6 **Changes in state SURs, 2020 compared to 2019**
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 I
	Reporting ¹	Observed
Central line days, all⁴	3,803	24,799,106
ICUs⁵	3,146	9,011,299
Wards⁶	3,774	14,606,348
NICUs⁷	1,036	1,181,459
Urinary catheter days, all⁸	3,799	22,886,575
	3,146	9,751,998
Wards⁶	3,780	13,134,577
Ventilator days, all⁸	1,985	4,159,448
	1,923	3,957,295
	511	202,153

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
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 nurseries.
8. Data from all ICUs and wards (and other non-critical care locations). This excludes NICUs. I

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 Device Days	Significantly > National SUR	
					N	%²
27,438,480.7246	0.9038	0.9034	0.9042	3,799	1,572	41%
9,182,429.0809	0.9814	0.9807	0.9820	3,140	1,302	41%
16,888,291.8679	0.8649	0.8644	0.8653	3,770	1,569	42%
1,367,759.7758	0.8638	0.8622	0.8653	1,035	259	25%
27,403,158.7469	0.8352	0.8348	0.8355	3,798	1,752	46%
10,572,424.4551	0.9224	0.9218	0.9230	3,144	1,299	41%
16,830,734.2918	0.7804	0.7800	0.7808	3,779	1,861	49%
3,700,770.8043	1.1239	1.1229	1.1250	1,977	824	42%
3,494,676.6607	1.1324	1.1312	1.1335	1,919	807	42%
206,094.1436	0.9809	0.9766	0.9852	499	166	33%

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 reported device days in 2020. 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 2020 for acute care hospitals (ACHs), by device type and facility size (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								
1,888	50%	0.1569	0.3982	0.4986	0.5677	0.6326	0.6792	0.7197
1,489	47%	0.3130	0.4597	0.5647	0.6433	0.7045	0.7603	0.8112
1,824	48%	0.1526	0.3533	0.4542	0.5192	0.5805	0.6268	0.6793
631	61%	0.0625	0.2008	0.2824	0.3672	0.4320	0.4876	0.5368
1,686	44%	0.3491	0.4945	0.5690	0.6225	0.6676	0.7024	0.7369
1,406	45%	0.4153	0.5270	0.6130	0.6736	0.7192	0.7671	0.8035
1,553	41%	0.3204	0.4440	0.5075	0.5663	0.6119	0.6479	0.6884
941	48%	0.1445	0.3828	0.5195	0.6573	0.7512	0.8291	0.8893
884	46%	0.2578	0.4339	0.5934	0.7066	0.7900	0.8615	0.9225
294	59%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0518	0.1336

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

≥ 1.0 predicted device days in 2020.

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

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re excluded.

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

Hs are excluded.

d patient population:

Percentile Distribution of Facility-specific SURs³

Median									
40%	45%	50%	55%	60%	65%	70%	75%	80%	85%
0.7661	0.8106	0.8598	0.9055	0.9563	1.0051	1.0571	1.1243	1.2150	1.3331
0.8632	0.9077	0.9501	0.9998	1.0476	1.0904	1.1418	1.2063	1.2754	1.3577
0.7258	0.7693	0.8169	0.8738	0.9318	0.9939	1.0601	1.1478	1.2617	1.3941
0.5902	0.6308	0.6757	0.7173	0.7700	0.8268	0.8741	0.9353	1.0344	1.1389
0.7699	0.8050	0.8387	0.8748	0.9133	0.9545	1.0023	1.0551	1.1270	1.2031
0.8394	0.8744	0.9130	0.9431	0.9758	1.0118	1.0462	1.0865	1.1280	1.1718
0.7270	0.7731	0.8097	0.8549	0.9071	0.9645	1.0321	1.1089	1.1985	1.3043
0.9550	1.0153	1.0824	1.1493	1.2039	1.2758	1.3542	1.4432	1.5647	1.7055
0.9877	1.0478	1.1118	1.1672	1.2212	1.2900	1.3701	1.4437	1.5721	1.7063
0.2823	0.3865	0.4888	0.6235	0.7781	1.0289	1.4219	1.7632	2.2674	2.8852

90%	95%
1.4948	1.8873
1.5065	1.7281
1.5776	2.0220
1.2809	1.5013
1.3117	1.5549
1.2212	1.3040
1.4512	1.7907
1.9139	2.3540
1.8981	2.2859
3.9401	7.4108

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	Upper
Alabama	90	478,521	572,183.8890	0.8363	0.8339	0.8387
Alaska	9	40,259	36,774.1270	1.0948	1.0841	1.1055
Arizona	71	585,340	590,105.9099	0.9919	0.9894	0.9944
Arkansas	52	242,296	274,294.6373	0.8833	0.8798	0.8868
California	344	2,584,694	2,681,942.7420	0.9637	0.9626	0.9648
Colorado	59	373,527	373,951.2061	0.9989	0.9957	1.0021
Connecticut	32	235,250	278,010.7705	0.8462	0.8428	0.8496
D.C.	9	91,070	111,201.7174	0.8190	0.8137	0.8243
Delaware	8	103,379	117,036.3173	0.8833	0.8779	0.8887
Florida	220	1,883,628	2,280,338.7466	0.8260	0.8248	0.8272
Georgia	111	857,473	960,851.1044	0.8924	0.8905	0.8943
Guam	2	.	.	.	.	.
Hawaii	17	108,682	95,165.6714	1.1420	1.1353	1.1487
Idaho	18	77,626	81,415.1741	0.9535	0.9468	0.9602
Illinois	138	920,827	1,064,930.8712	0.8647	0.8629	0.8665
Indiana	93	579,449	582,511.4413	0.9947	0.9922	0.9972
Iowa	39	197,827	201,387.2712	0.9823	0.9780	0.9866
Kansas	65	207,604	226,341.8631	0.9172	0.9133	0.9211
Kentucky	72	408,961	444,582.6931	0.9199	0.9170	0.9228
Louisiana	108	345,992	376,508.4762	0.9189	0.9159	0.9219
Maine	20	86,115	90,577.1299	0.9507	0.9444	0.9570
Maryland	49	368,015	428,928.5471	0.8580	0.8552	0.8608
Massachusetts	69	568,354	621,251.5962	0.9149	0.9125	0.9173
Michigan	103	613,705	766,347.2808	0.8008	0.7988	0.8028
Minnesota	51	355,184	338,244.6037	1.0501	1.0467	1.0535
Mississippi	62	271,004	297,708.7583	0.9103	0.9069	0.9137
Missouri	80	645,994	692,175.7889	0.9333	0.9310	0.9356
Montana	15	40,313	59,929.3219	0.6727	0.6661	0.6793
Nebraska	27	163,448	158,838.6013	1.0290	1.0240	1.0340
Nevada	29	299,394	322,548.7087	0.9282	0.9249	0.9315
New Hampshire	13	77,090	88,164.6395	0.8744	0.8683	0.8805
New Jersey	72	404,728	528,094.6681	0.7664	0.7640	0.7688
New Mexico	32	130,314	135,781.3271	0.9597	0.9545	0.9649
New York	178	1,247,669	1,562,060.9840	0.7987	0.7973	0.7999
North Carolina	101	796,210	861,243.2206	0.9245	0.9224	0.9266
North Dakota	11	68,758	69,605.6499	0.9878	0.9805	0.9951
Ohio	147	1,052,324	1,155,011.7255	0.9111	0.9093	0.9129
Oklahoma	83	398,576	319,566.1606	1.2472	1.2434	1.2510
Oregon	37	221,067	258,714.0738	0.8545	0.8509	0.8581
Pennsylvania	183	1,238,171	1,464,818.3796	0.8453	0.8438	0.8468
Puerto Rico	12	61,982	82,957.5819	0.7472	0.7413	0.7531
Rhode Island	11	81,613	89,052.5793	0.9165	0.9102	0.9228
South Carolina	64	379,066	476,796.8719	0.7950	0.7925	0.7975

South Dakota	23	65,230	70,567.3112	0.9244	0.9173
Tennessee	101	654,956	720,563.5112	0.9089	0.9068
Texas	361	2,318,042	2,451,271.0398	0.9456	0.9444
Utah	37	139,917	165,984.3493	0.8430	0.8385
Vermont	7	28,937	32,394.2168	0.8933	0.8830
Virgin Islands	1	.	.	.	.
Virginia	85	551,028	646,271.8269	0.8526	0.8504
Washington	59	496,749	480,857.9134	1.0330	1.0302
West Virginia	33	189,596	192,493.0641	0.9849	0.9805
Wisconsin	77	436,038	434,712.1151	1.0031	1.0001
Wyoming	13	18,040	15,882.2971	1.1359	1.1194
All US	3,803	24,799,106	27,438,480.7246	0.9038	0.9034

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 2020 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		
			Significantly > National SUR	Significantly < National SUR	N	N	
0.8387	90	21	23%	58	64%	0.0785	
1.1055	9	.	.	.	.	.
0.9944	71	37	52%	30	42%	0.3103	
0.8869	51	17	33%	28	55%	0.2563	
0.9649	344	185	54%	132	38%	0.5468	
1.0021	59	33	56%	23	39%	0.3411	
0.8496	32	9	28%	22	69%	0.5023	
0.8243	9	.	.	.	.	.
0.8887	8	.	.	.	.	.
0.8272	220	70	32%	138	63%	0.4591	
0.8943	110	53	48%	49	45%	0.2504	
.	
1.1489	17	11	65%	4	24%	.	
0.9602	18	8	44%	8	44%	.	
0.8665	138	60	43%	62	45%	0.5147	
0.9973	93	54	58%	30	32%	0.5310	
0.9867	39	17	44%	19	49%	0.4476	
0.9212	65	28	43%	28	43%	0.0000	
0.9227	72	36	50%	33	46%	0.5304	
0.9220	107	45	42%	48	45%	0.1994	
0.9571	20	12	60%	8	40%	0.3488	
0.8607	49	21	43%	26	53%	0.5434	
0.9172	69	23	33%	39	57%	0.4458	
0.8028	103	27	26%	67	65%	0.4221	
1.0535	51	21	41%	25	49%	0.5678	
0.9137	62	28	45%	30	48%	0.0848	
0.9355	80	35	44%	37	46%	0.4632	
0.6793	15	5	33%	7	47%	.	
1.0340	27	16	59%	11	41%	0.0870	
0.9315	29	11	38%	12	41%	0.3105	
0.8806	13	5	38%	8	62%	.	
0.7688	72	21	29%	47	65%	0.4659	
0.9649	32	9	28%	15	47%	0.2747	
0.8001	178	42	24%	124	70%	0.3968	
0.9265	101	36	36%	57	56%	0.4943	
0.9953	11	7	64%	4	36%	.	
0.9128	147	62	42%	70	48%	0.4835	
1.2511	83	55	66%	20	24%	0.4872	
0.8581	37	8	22%	24	65%	0.5221	
0.8467	183	54	30%	115	63%	0.1061	
0.7530	12	4	33%	7	58%	.	
0.9228	11	4	36%	6	55%	.	
0.7976	64	24	38%	35	55%	0.3849	

0.9315	23	6	26%	15	65%	0.0000
0.9111	101	34	34%	52	51%	0.3822
0.9469	360	155	43%	172	48%	0.1613
0.8474	37	9	24%	23	62%	0.3296
0.9036	7	.	.	.	.	.
.
0.8549	85	32	38%	46	54%	0.4321
1.0359	59	41	69%	13	22%	0.7318
0.9894	33	14	42%	14	42%	0.3174
1.0060	77	43	56%	29	38%	0.4918
1.1525	13	5	38%	6	46%	.
0.9042	3,799	1,572	41%	1,888	50%	0.3982

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 2020. 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%
0.4879	0.6918	0.9449	1.1027
.	.	.	.
0.6699	0.9430	1.1294	1.3587
0.4915	0.7804	1.0019	1.2644
0.7446	0.9691	1.2598	1.6807
0.6751	0.9972	1.3550	2.0632
0.6497	0.7379	1.0266	1.2308
.	.	.	.
.	.	.	.
0.6342	0.7842	0.9821	1.2331
0.6767	0.9142	1.1621	1.4789
.	.	.	.
.	.	.	.
.	.	.	.
0.7254	0.8947	1.0702	1.4433
0.7359	1.0418	1.3667	1.6814
0.6308	0.8548	1.2405	1.6078
0.4906	0.8377	1.3652	1.9539
0.6674	0.9558	1.2114	1.5915
0.6013	0.8580	1.3152	1.8990
0.7828	0.9725	1.2893	1.9696
0.6929	0.8584	1.1681	1.3886
0.6346	0.7827	1.0265	1.1955
0.5538	0.7119	0.9644	1.2652
0.6888	0.7992	1.1769	1.6146
0.4865	0.8435	1.2798	1.8483
0.6774	0.8649	1.1425	1.3839
.	.	.	.
0.6609	1.0872	1.2340	2.1030
0.6960	0.8970	1.0254	1.8057
.	.	.	.
0.6022	0.7832	1.0023	1.2066
0.5992	0.8689	0.9955	1.4358
0.5304	0.6877	0.9194	1.1982
0.6125	0.7954	1.0658	1.4716
.	.	.	.
0.6373	0.8773	1.0799	1.4168
0.8524	1.2346	1.8955	2.3729
0.6599	0.7661	0.9211	1.1869
0.5226	0.7392	0.9879	1.2275
.	.	.	.
.	.	.	.
0.5399	0.7985	1.0756	1.5090

0.3672	0.6767	1.2705	1.7862
0.5893	0.8168	1.0007	1.2010
0.6269	0.8671	1.2497	1.6810
0.4900	0.7479	0.9489	1.0501
.	.	.	.
.	.	.	.
0.5591	0.8264	1.0239	1.4217
0.8808	1.0798	1.3794	1.8552
0.6690	0.9080	1.0986	1.2162
0.7585	0.9910	1.1812	1.5751
.	.	.	.
0.6326	0.8598	1.1243	1.4948

n and inclusion criteria. Refer to the technical appendix for details.
 icted device days in 2020.
 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	70	203,428	231,499.8623	0.8787	0.8749
Alaska	7	8,344	10,010.4844	0.8335	0.8158
Arizona	53	228,891	215,528.1108	1.0620	1.0576
Arkansas	42	89,414	102,710.5251	0.8705	0.8649
California	315	963,827	879,606.2972	1.0957	1.0936
Colorado	48	131,935	125,355.7482	1.0525	1.0468
Connecticut	27	79,761	80,327.4446	0.9929	0.9860
D.C.	9	24,354	28,807.2310	0.8454	0.8349
Delaware	8	35,219	38,926.6983	0.9048	0.8954
Florida	202	705,723	767,395.1182	0.9196	0.9175
Georgia	95	345,002	347,598.5420	0.9925	0.9892
Guam	2	.	.	.	.
Hawaii	15	33,582	27,091.8320	1.2396	1.2264
Idaho	14	27,288	27,435.7939	0.9946	0.9829
Illinois	127	334,458	367,008.7015	0.9113	0.9082
Indiana	75	219,468	208,529.5178	1.0525	1.0481
Iowa	34	66,323	61,840.1561	1.0725	1.0643
Kansas	38	71,151	85,889.5017	0.8284	0.8223
Kentucky	66	156,068	163,716.2043	0.9533	0.9486
Louisiana	77	134,375	138,050.7933	0.9734	0.9682
Maine	14	21,641	23,172.1155	0.9339	0.9215
Maryland	44	126,156	137,512.5775	0.9174	0.9124
Massachusetts	60	200,552	179,877.4267	1.1149	1.1101
Michigan	82	251,352	267,879.9216	0.9383	0.9346
Minnesota	33	110,897	100,463.6277	1.1039	1.0974
Mississippi	45	102,511	102,311.8582	1.0019	0.9958
Missouri	73	217,994	223,308.3673	0.9762	0.9721
Montana	11	13,725	16,972.9507	0.8086	0.7952
Nebraska	14	43,293	41,721.7351	1.0377	1.0279
Nevada	21	122,861	121,272.9641	1.0131	1.0075
New Hampshire	13	24,177	24,875.5196	0.9719	0.9597
New Jersey	71	148,601	158,025.4692	0.9404	0.9356
New Mexico	28	55,325	50,758.3895	1.0900	1.0809
New York	162	404,428	440,183.0961	0.9188	0.9159
North Carolina	87	274,599	291,924.2400	0.9407	0.9371
North Dakota	7	20,080	16,719.2010	1.2010	1.1845
Ohio	123	379,711	393,498.9231	0.9650	0.9619
Oklahoma	51	146,393	114,453.0931	1.2791	1.2725
Oregon	33	64,984	73,264.2252	0.8870	0.8802
Pennsylvania	143	441,843	473,746.0148	0.9327	0.9299

Puerto Rico	12	17,592	22,243.3865	0.7909	0.7793
Rhode Island	10	26,660	23,947.5768	1.1133	1.1000
South Carolina	56	138,054	153,096.5606	0.9017	0.8970
South Dakota	12	12,095	16,733.9150	0.7228	0.7100
Tennessee	85	243,245	264,820.1522	0.9185	0.9149
Texas	261	921,427	895,148.4464	1.0294	1.0273
Utah	31	56,516	66,271.4575	0.8528	0.8458
Vermont	5	6026.00	8623.78	0.70	0.68
Virgin Islands	1	.	.	.	.
Virginia	77	185,201	205,789.3460	0.9000	0.8959
Washington	50	153,125	146,107.3152	1.0480	1.0428
West Virginia	30	73,548	73,906.8107	0.9951	0.9880
Wisconsin	66	139,693	136,852.7541	1.0208	1.0154
Wyoming	11	5,218	4,964.1168	1.0511	1.0229
All US	3,146	9,011,299	9,182,429.0809	0.9814	0.9807

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 2020 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		10%
			Significantly > National SUR	Significantly < National SUR	Significantly > National SUR	Significantly < National SUR	
			N	N	N	N	
0.8826	70	15	21%	51	73%	0.2482	
0.8515	7	.	.	.	.	.
1.0664	52	32	62%	14	27%	0.6680	
0.8763	42	15	36%	24	57%	0.2273	
1.0979	314	202	64%	80	25%	0.6990	
1.0582	48	25	52%	16	33%	0.3887	
0.9999	27	8	30%	10	37%	0.6394	
0.8561	9	.	.	.	.	.
0.9142	8	.	.	.	.	.
0.9218	202	79	39%	105	52%	0.5113	
0.9958	95	48	51%	41	43%	0.4281	
.	
1.2529	15	11	73%	1	7%	.	
1.0065	14	9	64%	5	36%	.	
0.9144	127	44	35%	69	54%	0.4871	
1.0569	75	44	59%	22	29%	0.5376	
1.0807	34	11	32%	18	53%	0.2159	
0.8345	38	11	29%	22	58%	0.3724	
0.9580	66	22	33%	37	56%	0.3143	
0.9786	76	39	51%	30	39%	0.5186	
0.9464	14	4	29%	7	50%	.	
0.9225	44	17	39%	22	50%	0.6898	
1.1198	60	35	58%	20	33%	0.7095	
0.9419	82	23	28%	48	59%	0.4588	
1.1104	33	11	33%	19	58%	0.2725	
1.0081	45	19	42%	21	47%	0.2269	
0.9803	73	34	47%	33	45%	0.3832	
0.8223	11	3	27%	6	55%	.	
1.0475	14	6	43%	8	57%	.	
1.0188	21	10	48%	8	38%	0.6832	
0.9842	13	6	46%	7	54%	.	
0.9452	71	29	41%	31	44%	0.5696	
1.0991	28	12	43%	12	43%	0.2680	
0.9216	162	39	24%	103	64%	0.4995	
0.9442	87	30	34%	48	55%	0.4630	
1.2177	7	.	.	.	.	.
0.9681	123	46	37%	62	50%	0.4713	
1.2856	51	34	67%	10	20%	0.7313	
0.8938	33	6	18%	26	79%	0.5006	
0.9354	143	34	24%	85	59%	0.4122	

0.8026	12	2	17%	8	67%	.
1.1267	10	6	60%	4	40%	.
0.9065	56	16	29%	32	57%	0.3506
0.7357	12	2	17%	10	83%	.
0.9222	84	26	31%	45	54%	0.3456
1.0315	259	131	51%	109	42%	0.5634
0.8598	31	5	16%	22	71%	0.2686
0.72	5	.	.	.	.	.
.
0.9041	77	22	29%	48	62%	0.3320
1.0533	50	24	48%	18	36%	0.7002
1.0024	30	8	27%	18	60%	0.4034
1.0261	66	30	45%	30	45%	0.4917
1.0799	11	4	36%	6	55%	.
0.9820	3,140	1,302	41%	1,489	47%	0.4597

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-charge days in 2020. 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%
0.4766	0.6896	0.9475	1.1334
.	.	.	.
0.8692	1.0942	1.3616	1.6497
0.4639	0.8064	1.0761	1.2044
0.9143	1.1464	1.3970	1.7613
0.7610	1.1200	1.3052	1.8618
0.8717	0.9705	1.1141	1.2379
.	.	.	.
.	.	.	.
0.6788	0.9267	1.1416	1.4337
0.7435	1.0105	1.2697	1.4548
.	.	.	.
.	.	.	.
0.7168	0.9224	1.1772	1.3803
0.8338	1.0995	1.4160	1.6814
0.4226	0.8834	1.2252	1.4120
0.5384	0.8883	1.2250	1.4993
0.5752	0.8548	1.1392	1.5801
0.7972	1.0651	1.3576	1.6753
.	.	.	.
0.7763	0.9439	1.2003	1.5161
0.8362	1.0932	1.2759	1.3935
0.7051	0.8858	1.0699	1.3068
0.3567	0.8737	1.1278	1.2107
0.7729	0.9977	1.3615	1.7243
0.6046	0.9323	1.1842	1.3411
.	.	.	.
.	.	.	.
0.8367	1.0030	1.1185	1.3247
.	.	.	.
0.7445	0.9832	1.1616	1.4246
0.5305	0.9490	1.2516	1.7687
0.6526	0.8252	1.0337	1.2948
0.6472	0.8387	1.0926	1.3645
.	.	.	.
0.6594	0.9239	1.1749	1.3671
0.9559	1.2769	1.5473	2.0919
0.5840	0.8098	0.9442	1.2472
0.6467	0.8764	1.0448	1.2209

.	.	.	.
0.6296	0.8390	1.0659	1.3223
.	.	.	.
0.6734	0.8917	1.0978	1.3826
0.7584	1.0229	1.2609	1.6693
0.4189	0.7937	0.9315	1.0992
.	.	.	.
0.5683	0.8089	1.1196	1.3777
0.8170	1.0466	1.2519	1.5913
0.5769	0.8832	1.0680	1.3033
0.7819	0.9909	1.1492	1.3272
.	.	.	.
0.7045	0.9501	1.2063	1.5065

ion and inclusion criteria. Refer to the technical appendix for details.
dicted device days in 2020.
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	88	246,706	308,578.5054	0.7995	0.7964	0.8026
Alaska	9	29,397	23,706.9314	1.2400	1.2259	1.2541
Arizona	71	333,155	349,627.8180	0.9529	0.9497	0.9561
Arkansas	51	134,577	153,337.5360	0.8777	0.8730	0.8824
California	341	1,500,830	1,671,340.6096	0.8980	0.8965	0.9000
Colorado	57	225,586	222,646.3630	1.0132	1.0090	1.0174
Connecticut	32	149,046	187,425.3288	0.7952	0.7912	0.7992
D.C.	9	62,031	76,043.2655	0.8157	0.8093	0.8221
Delaware	8	58,719	68,946.0299	0.8517	0.8448	0.8586
Florida	216	1,098,145	1,419,316.4687	0.7737	0.7723	0.7751
Georgia	110	466,521	559,070.1079	0.8345	0.8320	0.8370
Guam	1	.	.	.	.	.
Hawaii	17	63,953	60,666.5895	1.0542	1.0460	1.0624
Idaho	18	46,121	48,310.9372	0.9547	0.9460	0.9634
Illinois	137	542,555	649,116.7814	0.8358	0.8336	0.8380
Indiana	91	336,841	338,838.5259	0.9941	0.9907	0.9975
Iowa	39	117,428	126,354.3961	0.9294	0.9241	0.9347
Kansas	65	127,588	129,185.6186	0.9876	0.9822	0.9930
Kentucky	72	237,656	260,026.3008	0.9140	0.9103	0.9177
Louisiana	108	187,448	213,681.1738	0.8772	0.8733	0.8811
Maine	19	61,758	64,396.4093	0.9590	0.9515	0.9665
Maryland	49	228,172	274,327.4839	0.8318	0.8283	0.8353
Massachusetts	69	354,227	422,692.7076	0.8380	0.8352	0.8408
Michigan	103	330,773	459,786.7684	0.7194	0.7170	0.7218
Minnesota	51	233,645	226,294.5282	1.0325	1.0283	1.0367
Mississippi	62	155,013	180,864.4030	0.8571	0.8528	0.8614
Missouri	80	391,774	422,748.9220	0.9267	0.9238	0.9296
Montana	15	24,455	40,090.0663	0.6100	0.6024	0.6176
Nebraska	27	112,077	106,938.5430	1.0481	1.0419	1.0543
Nevada	29	156,665	187,330.8188	0.8363	0.8322	0.8404
New Hampshire	13	50,027	60,870.8787	0.8219	0.8147	0.8291
New Jersey	72	242,163	352,777.0680	0.6864	0.6837	0.6891
New Mexico	32	68,536	80,185.0375	0.8547	0.8483	0.8611
New York	177	787,157	1,059,465.4397	0.7430	0.7413	0.7447
North Carolina	101	479,221	527,653.5494	0.9082	0.9056	0.9108
North Dakota	11	44,555	48,264.6452	0.9231	0.9146	0.9316
Ohio	146	621,443	694,155.0379	0.8953	0.8930	0.8976
Oklahoma	82	231,367	188,110.0015	1.2300	1.2250	1.2350
Oregon	37	147,540	174,359.4766	0.8462	0.8419	0.8505
Pennsylvania	183	751,732	927,325.5737	0.8106	0.8088	0.8124
Puerto Rico	12	44,236	59,963.1704	0.7377	0.7309	0.7445
Rhode Island	11	50,677	58,495.0951	0.8663	0.8588	0.8738
South Carolina	64	224,644	302,008.8118	0.7438	0.7408	0.7468

South Dakota	23	48,744	49,280.9495	0.9891	0.9804
Tennessee	101	377,939	416,491.6664	0.9074	0.9045
Texas	354	1,252,208	1,396,324.4785	0.8968	0.8952
Utah	37	71,380	83,821.3070	0.8516	0.8453
Vermont	7	21,806	22,900.1391	0.9522	0.9396
Virgin Islands	1	.	.	.	.
Virginia	85	338,662	411,941.6877	0.8221	0.8193
Washington	59	326,715	313,865.0422	1.0409	1.0374
West Virginia	32	112,934	112,361.7828	1.0051	0.9993
Wisconsin	77	281,108	280,252.0218	1.0031	0.9994
Wyoming	13	12,822	10,918.1803	1.1744	1.1542
All US	3,774	14,606,348	16,888,291.8679	0.8649	0.8644

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 [inc

SURs using device days data reported to NHSN during 2020 for acute care hospitals (ACHs), by dev (CLDs), wards⁴

for SUR	Facility-specific SURs					
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		10%	
			Significantly > National SUR N	Significantly < National SUR N		
0.8026	88	25	28%	56	64%	0.0668
1.2543	9	.	.	.	.	.
0.9561	71	31	44%	32	45%	0.3103
0.8824	50	18	36%	27	54%	0.2734
0.8994	341	161	47%	148	43%	0.4415
1.0174	57	33	58%	19	33%	0.3971
0.7993	32	11	34%	19	59%	0.4183
0.8222	9	.	.	.	.	.
0.8586	8	.	.	.	.	.
0.7752	216	63	29%	132	61%	0.4327
0.8368	109	51	47%	52	48%	0.2238
.
1.0624	17	9	53%	7	41%	.
0.9634	18	7	39%	6	33%	.
0.8381	137	69	50%	63	46%	0.4186
0.9975	91	52	57%	29	32%	0.5295
0.9347	39	16	41%	15	38%	0.5140
0.9931	65	31	48%	25	38%	0.0000
0.9176	72	39	54%	21	29%	0.4886
0.8812	107	45	42%	46	43%	0.2274
0.9666	19	13	68%	6	32%	.
0.8352	49	17	35%	23	47%	0.5058
0.8408	69	20	29%	48	70%	0.3632
0.7218	103	26	25%	72	70%	0.3235
1.0367	51	25	49%	19	37%	0.5611
0.8613	62	25	40%	28	45%	0.0000
0.9296	80	34	43%	32	40%	0.5157
0.6177	15	6	40%	5	33%	.
1.0542	27	16	59%	11	41%	0.0612
0.8404	29	11	38%	13	45%	0.3105
0.8291	13	4	31%	7	54%	.
0.6892	72	19	26%	49	68%	0.4130
0.8612	32	10	31%	16	50%	0.3890
0.7446	177	44	25%	122	69%	0.3127
0.9108	101	36	36%	57	56%	0.4729
0.9317	11	6	55%	5	45%	.
0.8975	146	67	46%	58	40%	0.4625
1.2350	82	52	63%	23	28%	0.3355
0.8505	37	12	32%	23	62%	0.4585
0.8125	183	58	32%	106	58%	0.1942
0.7446	12	5	42%	7	58%	.
0.8739	11	6	55%	5	45%	.
0.7469	64	24	38%	35	55%	0.3726

0.9979	23	8	35%	12	52%	0.0000
0.9103	101	37	37%	52	51%	0.4009
0.8984	353	147	42%	170	48%	0.1602
0.8578	37	11	30%	17	46%	0.2955
0.9649	7	.	.	.	.	.
.
0.8249	85	32	38%	41	48%	0.3698
1.0445	59	45	76%	10	17%	0.7173
1.0110	32	16	50%	12	38%	0.5635
1.0068	77	46	60%	27	35%	0.4801
1.1948	13	8	62%	4	31%	.
0.8653	3,770	1,569	42%	1,824	48%	0.3533

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 2020. 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 accurate

ice type and patient population:

Median			
25%	50%	75%	90%
0.4888	0.6461	0.9609	1.1898
.	.	.	.
0.5189	0.8699	1.0982	1.2969
0.4987	0.7525	1.0377	1.3268
0.6574	0.8772	1.1787	1.7362
0.6991	1.0567	1.4195	2.0632
0.5348	0.6706	1.0510	1.5197
.	.	.	.
.	.	.	.
0.5743	0.7551	0.9348	1.2861
0.6305	0.8819	1.1635	1.5184
.	.	.	.
.	.	.	.
.	.	.	.
0.6327	0.8957	1.1342	1.5635
0.7531	0.9732	1.4077	1.8864
0.6332	0.8705	1.3154	1.6656
0.4446	0.9459	1.4839	2.0491
0.6247	0.9693	1.2989	1.6478
0.5066	0.8543	1.5344	2.1246
.	.	.	.
0.6419	0.8266	1.1723	1.6201
0.4787	0.6333	0.9654	1.0756
0.4229	0.6482	0.9182	1.3006
0.6868	0.8636	1.2425	1.6383
0.4766	0.8152	1.2445	2.0215
0.7198	0.8658	1.1064	1.3629
.	.	.	.
0.5954	1.0413	1.5277	2.1030
0.6232	0.8269	0.9602	1.7299
.	.	.	.
0.5044	0.6936	0.9183	1.2721
0.6003	0.8027	0.9598	1.4601
0.4557	0.6264	0.9019	1.2431
0.6140	0.7769	1.1139	1.3857
.	.	.	.
0.6670	0.8670	1.1166	1.4736
0.7100	1.2260	1.8038	2.3342
0.6534	0.7534	1.0201	1.3009
0.4692	0.7078	0.9968	1.2857
.	.	.	.
.	.	.	.
0.5565	0.7315	1.1824	1.5814

0.3831	0.7907	1.3497	1.8539
0.5575	0.7967	1.0626	1.3209
0.5748	0.7939	1.2373	1.8887
0.4793	0.7727	0.9646	1.1632
.	.	.	.
.	.	.	.
0.5600	0.8149	1.0373	1.5063
0.9599	1.1797	1.4395	1.9169
0.6679	0.9130	1.2368	1.5613
0.7441	0.9846	1.3082	1.8983
.	.	.	.
0.5805	0.8169	1.1478	1.5776

and inclusion criteria. Refer to the technical appendix for details.
 ted device days in 2020.
 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	28,387	32,105.5214	0.8842	0.8739	
Alaska	2	.	.	.	.	.
Arizona	19	23,294	24,949.9811	0.9336	0.9217	
Arkansas	9	18,305	18,246.5761	1.0032	0.9888	
California	136	120,037	130,995.8352	0.9163	0.9112	
Colorado	23	16,006	25,949.0949	0.6168	0.6073	
Connecticut	13	6,443	10,257.9971	0.6281	0.6129	
D.C.	2	.	.	.	.	.
Delaware	6	9,441	9,163.5891	1.0303	1.0096	
Florida	61	79,760	93,627.1597	0.8519	0.8460	
Georgia	37	45,950	54,182.4545	0.8481	0.8403	
Guam	0	.	.	.	.	.
Hawaii	2	.	.	.	.	.
Idaho	11	4,217	5,668.4430	0.7439	0.7217	
Illinois	37	43,814	48,805.3883	0.8977	0.8894	
Indiana	26	23,140	35,143.3976	0.6584	0.6500	
Iowa	12	14,076	13,192.7190	1.0670	1.0494	
Kansas	10	8,865	11,266.7428	0.7868	0.7706	
Kentucky	17	15,237	20,840.1879	0.7311	0.7196	
Louisiana	30	24,169	24,776.5091	0.9755	0.9632	
Maine	3	.	.	.	.	.
Maryland	16	13,687	17,088.4856	0.8009	0.7876	
Massachusetts	10	13,575	18,681.4620	0.7267	0.7145	
Michigan	20	31,580	38,680.5908	0.8164	0.8075	
Minnesota	11	10,642	11,486.4478	0.9265	0.9090	
Mississippi	15	13,480	14,532.4970	0.9276	0.9120	
Missouri	25	36,226	46,118.4996	0.7855	0.7774	
Montana	6	2,133	2,866.3048	0.7442	0.7131	
Nebraska	8	8,078	10,178.3231	0.7936	0.7765	
Nevada	10	19,868	13,944.9258	1.4247	1.4050	
New Hampshire	3	.	.	.	.	.
New Jersey	24	13,964	17,292.1309	0.8075	0.7942	
New Mexico	5	6,453	4,837.9001	1.3338	1.3016	
New York	52	56,084	62,412.4482	0.8986	0.8912	
North Carolina	26	42,390	41,665.4312	1.0174	1.0077	
North Dakota	6	4,123	4,621.8038	0.8921	0.8652	
Ohio	19	51,170	67,357.7645	0.7597	0.7531	
Oklahoma	8	20,816	17,003.0660	1.2242	1.2077	
Oregon	10	8,543	11,090.3720	0.7703	0.7541	
Pennsylvania	45	44,596	63,746.7911	0.6996	0.6931	
Puerto Rico	3	.	.	.	.	.
Rhode Island	1	.	.	.	.	.
South Carolina	8	16,368	21,691.4995	0.7546	0.7431	

South Dakota	3	.	.	.	.
Tennessee	23	33,772	39,251.6926	0.8604	0.8513
Texas	128	144,407	159,798.1148	0.9037	0.8990
Utah	13	12,021	15,891.5847	0.7564	0.7430
Vermont	1	.	.	.	.
Virgin Islands	1	.	.	.	.
Virginia	27	27,165	28,540.7932	0.9518	0.9405
Washington	16	16,909	20,885.5561	0.8096	0.7975
West Virginia	6	3,114	6,224.4706	0.5003	0.4829
Wisconsin	17	15,237	17,607.3392	0.8654	0.8517
Wyoming	0	.	.	.	.
All US	1,036	1,181,459	1,367,759.7758	0.8638	0.8622

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, Level III and Level IV nurseries.

γ SURs using device days data reported to NHSN during 2020 for acute care hospitals (ACHs), by neonatal critical care unit⁴

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				
0.8945	14	3	21%	11	79%	.	
.	
0.9457	19	4	21%	10	53%	.	
1.0178	9	.	.	.	.	.
0.9215	135	32	24%	85	63%	0.0847	
0.6264	23	1	4%	20	87%	0.1532	
0.6436	13	0	0%	13	100%	.	
.	
1.0512	6	.	.	.	.	.
0.8578	61	19	31%	35	57%	0.0922	
0.8559	37	12	32%	21	57%	0.2667	
.	
.	
0.7666	11	2	18%	6	55%	.	
0.9061	37	9	24%	21	57%	0.1511	
0.6670	26	4	15%	21	81%	0.3149	
1.0847	12	4	33%	6	50%	.	
0.8033	10	1	10%	8	80%	.	
0.7428	17	2	12%	12	71%	.	
0.9878	30	9	30%	16	53%	0.0000	
.	3	.	.	.	.	.
0.8144	16	2	13%	12	75%	.	
0.7389	10	2	20%	6	60%	.	
0.8255	20	6	30%	10	50%	0.3377	
0.9442	11	2	18%	8	73%	.	
0.9433	15	5	33%	9	60%	.	
0.7936	25	6	24%	17	68%	0.2542	
0.7762	6	.	.	.	.	.
0.8111	8	.	.	.	.	.
1.4447	10	7	70%	1	10%	.	
.	3	.	.	.	.	.
0.8210	24	5	21%	16	67%	0.2117	
1.3666	5	.	.	.	.	.
0.9061	52	15	29%	28	54%	0.2691	
1.0271	26	8	31%	17	65%	0.3138	
0.9196	6	.	.	.	.	.
0.7663	19	6	32%	13	68%	.	
1.2410	8	.	.	.	.	.
0.7868	10	2	20%	8	80%	.	
0.7061	45	5	11%	34	76%	0.1965	
.	3	.	.	.	.	.
.	
0.7662	8	.	.	.	.	.

.	3	.	.	.	.	.
0.8696	23	6	26%	13	57%	0.1030
0.9084	128	35	27%	72	56%	0.3188
0.7700	13	1	8%	9	69%	.
.
0.9631	27	8	30%	11	41%	0.2786
0.8219	16	3	19%	12	75%	.
0.5181	6	.	.	.	.	.
0.8792	17	5	29%	8	47%	.
.
0.8653	1,035	259	25%	631	61%	0.2008

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 2020. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was neither calculated nor reported.

evice type and patient population:

Median				
25%	50%	75%	90%	
.
.
.
.
0.4184	0.6683	0.9618	1.1874	.
0.2024	0.3999	0.5532	0.7485	.
.
.
.
0.4844	0.7670	0.9485	1.2823	.
0.4836	0.6905	1.0203	1.6007	.
.
.
.
0.4628	0.7278	0.9167	1.2592	.
0.4333	0.5626	0.7896	1.0000	.
.
.
.
0.4819	0.7132	1.0615	1.7339	.
.
.
.
0.4701	0.8024	1.1574	1.5251	.
.
.
0.4489	0.6075	0.8000	1.0999	.
.
.
.
0.3208	0.6342	0.8613	1.3460	.
.
0.5457	0.7349	1.0078	1.2970	.
0.4119	0.6975	0.9643	1.6156	.
.
.
.
.
0.3737	0.5278	0.7443	1.0020	.
.
.
.

.	.	.	.
0.2283	0.7204	0.9169	1.1418
0.4783	0.6935	0.9758	1.2665
.	.	.	.
.	.	.	.
0.5839	0.8413	1.1940	1.3417
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.
0.4320	0.6757	0.9353	1.2809

usion and inclusion criteria. Refer to the technical appendix for details.
 predicted device days in 2020.
 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	91	556,867	584,188.0164	0.9532	0.9507	0.9557
Alaska	9	35,476	44,460.9019	0.7979	0.7896	0.8062
Arizona	71	531,865	613,630.9454	0.8668	0.8644	0.8692
Arkansas	51	272,280	273,383.5801	0.9960	0.9922	0.9998
California	336	2,437,286	2,743,062.3096	0.8885	0.8874	0.8896
Colorado	57	327,173	384,150.5974	0.8517	0.8487	0.8547
Connecticut	32	191,196	259,344.1935	0.7372	0.7339	0.7405
D.C	9	53,212	104,381.5281	0.5098	0.5055	0.5141
Delaware	8	78,469	105,259.6152	0.7455	0.7403	0.7507
Florida	219	1,615,835	2,360,670.3568	0.6845	0.6834	0.6856
Georgia	112	756,606	942,251.5600	0.8030	0.8012	0.8048
Guam	2	.	.	.	.	.
Hawaii	17	83,593	98,606.0835	0.8477	0.8420	0.8534
Idaho	18	83,722	87,494.3252	0.9569	0.9504	0.9634
Illinois	138	838,618	1,042,411.4958	0.8045	0.8028	0.8062
Indiana	92	516,936	602,365.3970	0.8582	0.8559	0.8605
Iowa	41	212,540	204,689.3596	1.0384	1.0340	1.0428
Kansas	65	192,252	238,589.6846	0.8058	0.8022	0.8094
Kentucky	72	415,306	471,502.2943	0.8808	0.8782	0.8834
Louisiana	108	377,868	377,803.8634	1.0002	0.9970	1.0034
Maine	20	75,556	100,215.5689	0.7539	0.7486	0.7592
Maryland	49	338,557	434,356.5524	0.7794	0.7768	0.7820
Massachusetts	69	486,891	576,246.4419	0.8449	0.8425	0.8473
Michigan	103	604,218	723,027.5207	0.8357	0.8336	0.8378
Minnesota	51	297,906	327,338.2103	0.9101	0.9068	0.9134
Mississippi	62	332,779	311,144.5265	1.0695	1.0659	1.0731
Missouri	79	580,094	688,838.5708	0.8421	0.8400	0.8442
Montana	15	61,429	69,088.3451	0.8891	0.8822	0.8960
Nebraska	26	116,321	144,991.6542	0.8023	0.7977	0.8069
Nevada	29	255,570	321,749.7955	0.7943	0.7912	0.7974
New Hampshire	13	87,573	100,758.0883	0.8691	0.8634	0.8748
New Jersey	73	381,230	537,796.0465	0.7089	0.7066	0.7112
New Mexico	32	151,133	158,264.7921	0.9549	0.9501	0.9597
New York	177	1,152,301	1,382,675.1778	0.8334	0.8319	0.8349
North Carolina	101	696,109	867,192.0450	0.8027	0.8008	0.8046
North Dakota	10	56,410	60,113.9293	0.9384	0.9307	0.9461
Ohio	147	967,664	1,083,003.5994	0.8935	0.8917	0.8953
Oklahoma	83	370,227	357,851.1893	1.0346	1.0313	1.0379
Oregon	37	216,662	275,070.5104	0.7877	0.7843	0.7911
Pennsylvania	191	1,169,577	1,382,670.6121	0.8459	0.8444	0.8474
Puerto Rico	12	101,917	92,755.9944	1.0988	1.0921	1.1055
Rhode Island	11	67,357	83,216.2254	0.8094	0.8033	0.8155
South Carolina	64	374,196	490,956.9227	0.7622	0.7597	0.7647

South Dakota	23	67,989	70,993.1467	0.9577	0.9505
Tennessee	101	609,899	738,198.4889	0.8262	0.8241
Texas	360	1,996,763	2,429,104.6079	0.8220	0.8209
Utah	37	120,294	149,657.3557	0.8038	0.7993
Vermont	7	31,273	33,134.1161	0.9438	0.9334
Virgin Islands	1	.	.	.	.
Virginia	85	487,993	674,202.0618	0.7238	0.7218
Washington	60	435,021	509,045.5298	0.8546	0.8521
West Virginia	33	212,058	214,230.4037	0.9899	0.9857
Wisconsin	77	370,992	437,064.9709	0.8488	0.8461
Wyoming	13	25,533	24,731.8865	1.0324	1.0198
All US	3,799	22,886,575	27,403,158.7469	0.8352	0.8348

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 national average.
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 and wards (and other non-critical care locations). This excludes NICUs. Data contain only predicted device days.

· SURs using device days data reported to NHSN during 2020 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	
0.9557	91	55	60%	29	32%	0.4279	
0.8062	9	.	.	.	.	.
0.8691	71	29	41%	34	48%	0.2872	
0.9997	50	32	64%	12	24%	0.6440	
0.8896	336	188	56%	111	33%	0.6433	
0.8546	57	21	37%	32	56%	0.4966	
0.7405	32	8	25%	22	69%	0.5163	
0.5141	9	.	.	.	.	.
0.7507	8	.	.	.	.	.
0.6855	219	44	20%	160	73%	0.4422	
0.8048	112	51	46%	52	46%	0.4559	
.	
0.8535	17	5	29%	11	65%	.	
0.9634	18	10	56%	3	17%	.	
0.8062	138	61	44%	66	48%	0.5347	
0.8605	92	48	52%	34	37%	0.4981	
1.0428	41	28	68%	10	24%	0.6808	
0.8094	65	25	38%	37	57%	0.1123	
0.8835	72	44	61%	21	29%	0.6064	
1.0034	108	72	67%	26	24%	0.6210	
0.7593	20	4	20%	13	65%	0.4931	
0.7821	49	23	47%	22	45%	0.4521	
0.8473	69	27	39%	36	52%	0.5179	
0.8378	103	43	42%	46	45%	0.5816	
0.9133	51	23	45%	20	39%	0.5779	
1.0732	62	44	71%	14	23%	0.3997	
0.8443	79	33	42%	41	52%	0.3889	
0.8962	15	10	67%	4	27%	.	
0.8069	26	12	46%	13	50%	0.4812	
0.7974	29	8	28%	17	59%	0.2450	
0.8749	13	4	31%	8	62%	.	
0.7111	73	16	22%	49	67%	0.4290	
0.9598	32	18	56%	11	34%	0.5119	
0.8349	177	71	40%	83	47%	0.4884	
0.8046	101	36	36%	56	55%	0.4681	
0.9461	10	5	50%	3	30%	.	
0.8953	147	83	56%	50	34%	0.5445	
1.0379	83	58	70%	18	22%	0.4380	
0.7910	37	14	38%	18	49%	0.5687	
0.8474	191	82	43%	97	51%	0.3267	
1.1055	12	11	92%	1	8%	.	
0.8156	11	4	36%	6	55%	.	
0.7646	64	22	34%	39	61%	0.4587	

0.9649	23	12	52%	8	35%	0.2540
0.8283	101	47	47%	45	45%	0.5356
0.8231	360	180	50%	149	41%	0.5326
0.8084	37	13	35%	19	51%	0.4979
0.9543	7	.	.	.	.	.
.
0.7258	85	29	34%	49	58%	0.4930
0.8571	60	31	52%	21	35%	0.6106
0.9941	33	18	55%	10	30%	0.6032
0.8516	77	32	42%	32	42%	0.5388
1.0451	13	4	31%	8	62%	.
0.8355	3,798	1,752	46%	1,686	44%	0.4945

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 2020. 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%
0.6871	0.9575	1.1279	1.3208
.	.	.	.
0.6857	0.8217	1.0080	1.2143
0.8024	0.9236	1.1956	1.3687
0.7506	0.9017	1.0958	1.3279
0.6893	0.7767	0.9208	1.1575
0.6118	0.7337	0.9868	1.1194
.	.	.	.
.	.	.	.
0.5473	0.6997	0.8157	0.9818
0.6314	0.8261	1.0039	1.2381
.	.	.	.
.	.	.	.
.	.	.	.
0.6700	0.8244	1.0487	1.2544
0.7100	0.8771	1.0908	1.2346
0.8073	1.0414	1.1908	1.4260
0.5639	0.7485	1.0620	1.4633
0.7625	0.9672	1.2594	1.6054
0.8061	1.1390	1.4176	2.0570
0.6140	0.7304	0.8999	1.1579
0.6876	0.8356	0.9476	1.2126
0.6263	0.7660	0.9675	1.0477
0.7113	0.8207	0.9940	1.1985
0.6738	0.8394	1.0276	1.2334
0.8462	1.0303	1.2776	1.4816
0.6637	0.8041	0.9912	1.2675
.	.	.	.
0.6225	0.7967	1.0681	1.4819
0.6335	0.7633	0.8714	1.2567
.	.	.	.
0.5891	0.6905	0.8454	0.9624
0.6695	0.9203	1.2631	1.6325
0.6569	0.8119	0.9861	1.1637
0.6208	0.7718	0.9438	1.1470
.	.	.	.
0.7266	0.9000	1.0519	1.2339
0.8179	1.0342	1.2919	1.4477
0.6456	0.8078	1.0397	1.1853
0.5866	0.7968	0.9985	1.2528
.	.	.	.
.	.	.	.
0.5677	0.7146	1.0194	1.3038

0.5135	0.9580	1.2469	1.6181
0.6501	0.8314	1.1254	1.3164
0.6789	0.8720	1.1234	1.5569
0.6374	0.7827	0.9063	1.1564
.	.	.	.
.	.	.	.
0.6008	0.7586	0.9412	1.1720
0.7340	0.8768	1.0077	1.2843
0.7901	0.8877	1.1194	1.3137
0.7223	0.8316	0.9445	1.1814
.	.	.	.
0.6676	0.8387	1.0551	1.3117

sion and inclusion criteria. Refer to the technical appendix for details.
 edicted device days in 2020.
 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
Alabama	70	277,255	272,597.3757	1.0171	1.0133
Alaska	7	9,443	12,264.0151	0.7700	0.7545
Arizona	53	241,229	246,811.7361	0.9774	0.9735
Arkansas	42	118,516	120,148.8023	0.9864	0.9808
California	315	983,107	1,028,180.8713	0.9562	0.9543
Colorado	48	140,524	151,071.2634	0.9302	0.9253
Connecticut	27	86,081	89,871.9019	0.9578	0.9514
D.C	9	19,530	30,566.8344	0.6389	0.6300
Delaware	8	40,118	45,144.7555	0.8887	0.8800
Florida	202	745,879	887,390.0216	0.8405	0.8386
Georgia	95	356,639	395,194.6734	0.9024	0.8995
Guam	2	.	.	.	.
Hawaii	15	32,844	33,452.7065	0.9818	0.9713
Idaho	14	34,308	32,493.1046	1.0559	1.0447
Illinois	127	348,764	417,242.9970	0.8359	0.8331
Indiana	75	223,437	243,880.2313	0.9162	0.9124
Iowa	34	80,000	73,652.9495	1.0862	1.0787
Kansas	38	82,540	100,764.5493	0.8191	0.8135
Kentucky	66	183,159	189,556.9552	0.9662	0.9618
Louisiana	77	156,802	161,470.9423	0.9711	0.9663
Maine	14	24,648	29,110.6239	0.8467	0.8362
Maryland	44	131,121	158,575.9272	0.8269	0.8224
Massachusetts	60	207,143	192,825.1773	1.0743	1.0696
Michigan	82	282,166	295,700.8412	0.9542	0.9507
Minnesota	33	116,905	114,693.6217	1.0193	1.0134
Mississippi	45	138,916	127,670.1696	1.0881	1.0824
Missouri	73	242,171	258,655.5447	0.9363	0.9325
Montana	11	21,508	22,431.1895	0.9588	0.9461
Nebraska	13	36,446	41,566.0911	0.8768	0.8679
Nevada	21	125,849	136,799.0643	0.9200	0.9149
New Hampshire	13	31,479	30,536.0010	1.0309	1.0196
New Jersey	72	152,492	186,249.7769	0.8187	0.8146
New Mexico	28	65,350	61,839.9934	1.0568	1.0487
New York	162	443,973	486,548.0281	0.9125	0.9098
North Carolina	87	304,022	334,728.1251	0.9083	0.9050
North Dakota	7	19,614	18,380.5798	1.0671	1.0523
Ohio	123	414,381	437,463.4004	0.9472	0.9444
Oklahoma	51	151,103	139,201.1073	1.0855	1.0801
Oregon	33	75,105	89,100.7384	0.8429	0.8369
Pennsylvania	143	491,913	517,671.6609	0.9502	0.9476
Puerto Rico	12	29,914	28,690.7077	1.0426	1.0309
Rhode Island	10	26,033	27,235.5885	0.9558	0.9443
South Carolina	56	159,796	181,702.7925	0.8794	0.8751

South Dakota	12	16,158	19,379.3685	0.8338	0.8210
Tennessee	85	273,416	315,526.5489	0.8665	0.8633
Texas	261	934,088	1,027,718.8650	0.9089	0.9070
Utah	31	63,740	75,044.5919	0.8494	0.8428
Vermont	5	9,925	10,479	0.9471	0.9286
Virgin Islands	1	.	.	.	.
Virginia	77	199,277	238,373.4655	0.8360	0.8323
Washington	50	157,124	171,134.0682	0.9181	0.9136
West Virginia	30	90,816	87,727.2301	1.0352	1.0285
Wisconsin	66	145,186	162,205.7275	0.8951	0.8905
Wyoming	11	6,268	8,441.0493	0.7426	0.7243
All US	3,146	9,751,998	10,572,424.4551	0.9224	0.9218

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 thar
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 2020 for acute care hospitals (ACHs), by s), 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	N	Significantly < National SUR	N	
1.0209	70	36	51%	24	34%	0.5913	
0.7856	7	.	.	.	.	.
0.9813	53	28	53%	18	34%	0.6447	
0.9921	42	17	40%	15	36%	0.4706	
0.9581	314	163	52%	116	37%	0.6801	
0.9351	48	13	27%	22	46%	0.4456	
0.9643	27	11	41%	13	48%	0.4364	
0.6479	9	.	.	.	.	.
0.8974	8	.	.	.	.	.
0.8425	202	69	34%	109	54%	0.4878	
0.9054	95	37	39%	47	49%	0.5320	
.	
0.9925	15	9	60%	5	33%	.	
1.0671	14	9	64%	2	14%	.	
0.8387	127	43	34%	65	51%	0.5362	
0.9200	75	37	49%	29	39%	0.6004	
1.0937	34	16	47%	11	32%	0.5282	
0.8247	38	6	16%	26	68%	0.3428	
0.9707	66	34	52%	28	42%	0.5228	
0.9759	76	39	51%	26	34%	0.6339	
0.8573	14	4	29%	9	64%	.	
0.8314	44	19	43%	20	45%	0.5571	
1.0789	60	38	63%	16	27%	0.6976	
0.9578	82	38	46%	29	35%	0.5767	
1.0251	33	11	33%	18	55%	0.3133	
1.0938	45	28	62%	9	20%	0.6825	
0.9400	73	30	41%	30	41%	0.3185	
0.9717	11	4	36%	4	36%	.	
0.8859	13	3	23%	7	54%	.	
0.9251	21	8	38%	10	48%	0.4988	
1.0423	13	6	46%	2	15%	.	
0.8229	72	26	36%	38	53%	0.4584	
1.0649	28	14	50%	11	39%	0.3745	
0.9152	162	58	36%	75	46%	0.5524	
0.9115	87	32	37%	47	54%	0.4069	
1.0821	7	.	.	.	.	.
0.9501	123	46	37%	55	45%	0.5561	
1.0910	51	32	63%	11	22%	0.6912	
0.8489	33	7	21%	22	67%	0.4599	
0.9529	143	56	39%	61	43%	0.4797	
1.0545	12	11	92%	1	8%	.	
0.9675	10	4	40%	4	40%	.	
0.8838	56	20	36%	28	50%	0.5208	

0.8467	12	3	25%	9	75%	.
0.8698	85	31	36%	42	49%	0.4837
0.9108	261	104	40%	126	48%	0.5978
0.8560	31	4	13%	23	74%	0.3959
0.9658	5	.	.	.	.	.
.
0.8396	77	24	31%	47	61%	0.4620
0.9227	50	23	46%	22	44%	0.5714
1.0420	30	14	47%	11	37%	0.5240
0.8997	66	19	29%	36	55%	0.4892
0.7611	11	3	27%	8	73%	.
0.9230	3,144	1,299	41%	1,406	45%	0.5270

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 .
 device days in 2020. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was ne
 ned in this table are reported from acute care hospitals.

device type and patient population:

Median			
25%	50%	75%	90%
0.7991	0.9807	1.1476	1.2291
.	.	.	.
0.8526	1.0024	1.1517	1.2733
0.7198	0.9313	1.1174	1.3184
0.8056	0.9816	1.1342	1.2692
0.7130	0.9060	0.9817	1.1160
0.7025	0.9254	1.0795	1.2437
.	.	.	.
.	.	.	.
0.6836	0.8473	1.0106	1.1141
0.7285	0.8839	1.0375	1.1790
.	.	.	.
.	.	.	.
0.6865	0.8631	1.0942	1.1976
0.8063	0.9477	1.1130	1.2166
0.6476	0.9728	1.1499	1.2695
0.6606	0.7780	0.9280	1.0723
0.7296	0.9713	1.1619	1.3040
0.7487	1.0288	1.2160	1.3147
.	.	.	.
0.8008	0.8987	1.0494	1.1681
0.8639	1.0221	1.1753	1.2792
0.6912	0.9346	1.0967	1.1867
0.5917	0.8119	1.0703	1.2075
0.8618	1.1015	1.2073	1.3195
0.6759	0.9338	1.0657	1.2325
.	.	.	.
.	.	.	.
0.8042	0.9418	1.0451	1.1718
.	.	.	.
0.6755	0.8499	1.0415	1.1402
0.7268	0.9645	1.1292	1.2768
0.7114	0.8955	1.0550	1.2167
0.6647	0.8443	1.0825	1.2248
.	.	.	.
0.7067	0.9102	1.0496	1.1969
0.8829	1.0551	1.1917	1.3189
0.6678	0.7617	0.9722	1.0652
0.7698	0.9157	1.0839	1.2074
.	.	.	.
.	.	.	.
0.6330	0.8322	1.0304	1.1986

0.6355	0.8772	1.0453	1.2294
0.7119	0.8953	1.0897	1.2135
0.4827	0.7102	0.8690	0.9751
0.6050	0.7730	0.9730	1.1287
0.7335	0.9394	1.1004	1.1964
0.6735	0.9335	1.1008	1.1904
0.6458	0.8432	1.0161	1.1845
0.7192	0.9130	1.0865	1.2212

exclusion and inclusion criteria. Refer to the technical appendix for details on predicted device days in 2020. Neither 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	91	279,612	311,590.6407	0.8974	0.8941
Alaska	9	26,033	32,196.8868	0.8086	0.7988
Arizona	71	290,636	366,819.2094	0.7923	0.7894
Arkansas	51	153,764	153,234.7778	1.0035	0.9984
California	335	1,454,179	1,714,881.4382	0.8480	0.8466
Colorado	57	186,649	233,079.3339	0.8008	0.7972
Connecticut	32	105,115	169,472.2916	0.6202	0.6165
D.C	9	33,682	73,814.6937	0.4563	0.4515
Delaware	8	38,351	60,114.8597	0.6380	0.6316
Florida	215	869,956	1,473,280.3353	0.5905	0.5892
Georgia	111	399,967	547,056.8866	0.7311	0.7289
Guam	1	.	.	.	.
Hawaii	17	50,749	65,153.3769	0.7789	0.7721
Idaho	18	49,414	55,001.2206	0.8984	0.8905
Illinois	137	489,854	625,168.4988	0.7836	0.7814
Indiana	91	293,499	358,485.1657	0.8187	0.8158
Iowa	41	132,540	131,036.4101	1.0115	1.0060
Kansas	65	109,712	137,825.1353	0.7960	0.7913
Kentucky	72	232,147	281,945.3391	0.8234	0.8200
Louisiana	108	221,066	216,332.9211	1.0219	1.0176
Maine	19	50,908	71,104.9450	0.7160	0.7098
Maryland	49	207,436	275,780.6251	0.7522	0.7490
Massachusetts	69	279,748	383,421.2646	0.7296	0.7269
Michigan	103	322,052	427,326.6794	0.7536	0.7511
Minnesota	51	181,001	212,644.5886	0.8512	0.8473
Mississippi	62	193,863	183,474.3569	1.0566	1.0519
Missouri	79	337,923	430,183.0260	0.7855	0.7829
Montana	15	39,921	46,657.1556	0.8556	0.8473
Nebraska	26	79,875	103,425.5632	0.7723	0.7670
Nevada	29	129,721	184,950.7311	0.7014	0.6976
New Hampshire	13	56,094	70,222.0874	0.7988	0.7922
New Jersey	73	228,738	351,546.2696	0.6507	0.6480
New Mexico	32	85,783	96,424.7987	0.8896	0.8837
New York	176	708,328	896,127.1498	0.7904	0.7886
North Carolina	101	392,087	532,463.9199	0.7364	0.7341
North Dakota	10	36,796	41,733.3495	0.8817	0.8727
Ohio	145	553,283	645,540.1989	0.8571	0.8548
Oklahoma	82	219,124	218,650.0820	1.0022	0.9980
Oregon	37	141,557	185,969.7720	0.7612	0.7572
Pennsylvania	191	677,664	864,998.9511	0.7834	0.7815
Puerto Rico	12	72,003	64,065.2868	1.1239	1.1157
Rhode Island	11	41,324	55,980.6369	0.7382	0.7311
South Carolina	64	214,400	309,254.1302	0.6933	0.6903

South Dakota	23	51,831	51,613.7782	1.0042	0.9956
Tennessee	101	336,483	422,671.9400	0.7961	0.7934
Texas	356	1,062,675	1,401,385.7429	0.7583	0.7568
Utah	37	56,554	74,612.7638	0.7580	0.7517
Vermont	7	21,348	22,654.6950	0.9423	0.9298
Virgin Islands	1	.	.	.	.
Virginia	85	288,716	435,828.5962	0.6625	0.6601
Washington	60	277,897	337,911.4616	0.8224	0.8193
West Virginia	32	121,242	126,503.1736	0.9584	0.9530
Wisconsin	77	225,806	274,859.2434	0.8215	0.8182
Wyoming	13	19,265	16,290.8372	1.1826	1.1660
All US	3,780	13,134,577	16,830,734.2918	0.7804	0.7800

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 national average.
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 2020 for acute care hospitals (ACHs), by device (UCDs), wards⁴

for SUR	Facility-specific SURs					
	Upper	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR		10%	
			Significantly > National SUR N	Significantly < National SUR N		
0.9007	91	58	64%	25	27%	0.4079
0.8184	9	.	.	.	.	.
0.7952	71	31	44%	34	48%	0.2872
1.0085	50	35	70%	6	12%	0.6317
0.8493	335	192	57%	110	33%	0.5788
0.8044	57	27	47%	26	46%	0.4881
0.6240	32	8	25%	18	56%	0.4953
0.4612	9	.	.	.	.	.
0.6444	8	.	.	.	.	.
0.5917	215	47	22%	152	71%	0.3827
0.7334	111	51	46%	51	46%	0.4375
.
0.7857	17	5	29%	11	65%	.
0.9063	18	11	61%	4	22%	.
0.7857	137	71	52%	52	38%	0.4825
0.8217	91	53	58%	30	33%	0.4523
1.0170	41	32	78%	6	15%	0.6937
0.8007	65	27	42%	26	40%	0.1123
0.8267	72	44	61%	25	35%	0.5559
1.0262	108	76	70%	22	20%	0.5528
0.7222	19	7	37%	8	42%	.
0.7554	49	23	47%	23	47%	0.4293
0.7323	69	24	35%	37	54%	0.4188
0.7562	103	45	44%	44	43%	0.4699
0.8551	51	29	57%	17	33%	0.5788
1.0613	62	45	73%	14	23%	0.3997
0.7882	79	40	51%	36	46%	0.4241
0.8641	15	9	60%	4	27%	.
0.7777	26	14	54%	12	46%	0.3973
0.7052	29	9	31%	18	62%	0.2450
0.8055	13	4	31%	8	62%	.
0.6534	73	12	16%	51	70%	0.3947
0.8956	32	21	66%	9	28%	0.4876
0.7923	176	78	44%	79	45%	0.4064
0.7387	101	41	41%	49	49%	0.4432
0.8907	10	5	50%	4	40%	.
0.8594	145	91	63%	38	26%	0.5392
1.0064	82	60	73%	19	23%	0.4065
0.7652	37	18	49%	17	46%	0.5614
0.7853	191	80	42%	96	50%	0.2656
1.1321	12	11	92%	1	8%	.
0.7453	11	5	45%	6	55%	.
0.6962	64	24	38%	37	58%	0.3981

1.0129	23	16	70%	7	30%	0.2540
0.7988	101	48	48%	39	39%	0.4549
0.7598	356	173	49%	151	42%	0.4609
0.7642	37	17	46%	15	41%	0.4713
0.9550	7	.	.	.	.	.
.
0.6649	85	33	39%	45	53%	0.4439
0.8254	60	34	57%	18	30%	0.5763
0.9638	32	19	59%	8	25%	0.6034
0.8249	77	36	47%	26	34%	0.4644
1.1994	13	6	46%	4	31%	.
0.7808	3,779	1,861	49%	1,553	41%	0.4440

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 2020. 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%
0.6805	0.9356	1.2408	1.4720
.	.	.	.
0.5573	0.7705	0.9798	1.1919
0.8024	1.0095	1.3178	1.7873
0.6941	0.8706	1.1317	1.4183
0.6537	0.7736	0.9714	1.3043
0.5761	0.6771	0.9197	1.0403
.	.	.	.
.	.	.	.
0.4700	0.6136	0.7899	0.9850
0.5598	0.7544	0.9992	1.3095
.	.	.	.
.	.	.	.
.	.	.	.
0.6371	0.8167	1.1390	1.3841
0.6305	0.8695	1.1056	1.3515
0.8705	1.0255	1.3928	1.6034
0.5274	0.7573	1.1916	1.8793
0.6792	0.9831	1.4136	1.7688
0.7912	1.1921	1.5179	2.3807
.	.	.	.
0.6215	0.7607	0.9207	1.2280
0.5660	0.7024	0.8654	0.9931
0.6182	0.7758	0.9931	1.2045
0.6160	0.8532	1.1130	1.2994
0.7795	1.0842	1.4130	1.6222
0.5870	0.8041	1.0341	1.5348
.	.	.	.
0.5978	0.8370	1.0865	1.4819
0.5047	0.6306	0.8757	1.4468
.	.	.	.
0.4995	0.6348	0.7675	0.9499
0.6455	1.0948	1.2875	2.1033
0.5864	0.7854	1.0044	1.3058
0.5776	0.7540	0.9454	1.2321
.	.	.	.
0.7379	0.9000	1.1137	1.4113
0.7382	1.0619	1.3607	1.6800
0.6161	0.8108	1.1306	1.2471
0.5218	0.7313	1.0535	1.3563
.	.	.	.
.	.	.	.
0.5239	0.6624	1.0244	1.5066

0.5135	1.1058	1.3399	1.6181
0.6326	0.8458	1.1707	1.6540
0.6105	0.8092	1.1964	1.7118
0.5835	0.7746	1.1000	1.3075
.	.	.	.
.	.	.	.
0.5411	0.7171	1.0299	1.3463
0.7250	0.8509	1.1150	1.4340
0.7253	0.9657	1.1903	1.4839
0.6960	0.7980	1.0672	1.4143
.	.	.	.
0.6119	0.8097	1.1089	1.4512

on and inclusion criteria. Refer to the technical appendix for details.
 icted device days in 2020.
 ;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	42	89,817	71,530.9481	1.2556	1.2474	
Alaska	4	.	.	.	.	.
Arizona	28	59,419	48,656.1047	1.2212	1.2114	
Arkansas	23	34,991	35,663.6869	0.9811	0.9709	
California	190	483,832	360,185.4234	1.3433	1.3395	
Colorado	42	76,101	71,131.8235	1.0699	1.0623	
Connecticut	15	32,428	25,260.0699	1.2838	1.2698	
D.C.	4	.	.	.	.	.
Delaware	3	.	.	.	.	.
Florida	127	313,387	314,250.1788	0.9973	0.9938	
Georgia	72	232,349	195,949.5987	1.1858	1.1810	
Guam	2	.	.	.	.	.
Hawaii	6	6,278	4,392.3288	1.4293	1.3942	
Idaho	8	12,723	12,086.3944	1.0527	1.0345	
Illinois	67	103,512	100,298.3803	1.0320	1.0257	
Indiana	58	92,241	85,509.5643	1.0787	1.0718	
Iowa	14	11,748	10,267.4484	1.1442	1.1236	
Kansas	30	33,312	41,105.5164	0.8104	0.8017	
Kentucky	44	61,173	60,328.7385	1.0140	1.0060	
Louisiana	43	64,160	60,591.9194	1.0589	1.0507	
Maine	13	12,908	14,450.1197	0.8933	0.8780	
Maryland	19	46,606	34,943.2792	1.3338	1.3217	
Massachusetts	25	46,041	38,036.2163	1.2105	1.1994	
Michigan	62	131,681	111,765.5286	1.1782	1.1719	
Minnesota	11	20,938	16,055.7513	1.3041	1.2865	
Mississippi	27	51,515	39,276.8383	1.3116	1.3003	
Missouri	40	107,067	100,656.9644	1.0637	1.0573	
Montana	6	10,148	7,796.4588	1.3016	1.2764	
Nebraska	10	23,486	22,604.8731	1.0390	1.0258	
Nevada	19	99,059	90,052.7460	1.1000	1.0932	
New Hampshire	9	10,102	8,788.9732	1.1494	1.1272	
New Jersey	50	99,644	80,989.8765	1.2303	1.2227	
New Mexico	18	19,075	13,697.6418	1.3926	1.3729	
New York	121	266,260	221,339.5167	1.2029	1.1984	
North Carolina	41	67,357	59,442.6119	1.1331	1.1246	
North Dakota	2	.	.	.	.	.
Ohio	76	151,142	148,587.3262	1.0172	1.0121	
Oklahoma	33	42,129	31,245.7224	1.3483	1.3354	
Oregon	20	19,812	22,736.7210	0.8714	0.8593	
Pennsylvania	136	340,222	317,441.3825	1.0718	1.0681	
Puerto Rico	8	13,299	14,911.4654	0.8919	0.8768	
Rhode Island	9	18,920	17,496.9751	1.0813	1.0660	
South Carolina	54	114,229	106,418.7022	1.0734	1.0672	

South Dakota	6	6,336	7,041.3422	0.8998	0.8779
Tennessee	48	98,990	100,523.6556	0.9847	0.9786
Texas	152	365,564	318,791.5249	1.1467	1.1430
Utah	10	12,914	14,524.7465	0.8891	0.8739
Vermont	1	.	.	.	.
Virgin Islands	1	.	.	.	.
Virginia	61	127,241	125,542.1700	1.0135	1.0080
Washington	20	31,968	31,115.8140	1.0274	1.0162
West Virginia	14	24,028	26,388.6831	0.9105	0.8991
Wisconsin	35	36,902	30,010.5708	1.2296	1.2172
Wyoming	6	2,424	1,817.2994	1.3338	1.2815
All US	1,985	4,159,448	3,700,770.8043	1.1239	1.1229

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 0.9.
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 and wards (and other non-critical care locations). This excludes NICUs. Data continue to be updated as more facilities report.

by SURs using device days data reported to NHSN during 2020 for acute care hospitals (ACHs), by device days (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	10%	
			Significantly > National SUR	Significantly < National SUR			
		N	N				
1.2638	42	21	50%	20	48%	0.2183	
.	
1.2311	27	11	41%	11	41%	0.1370	
0.9914	23	8	35%	12	52%	0.4712	
1.3471	188	118	63%	48	26%	0.7746	
1.0775	42	17	40%	23	55%	0.4146	
1.2978	15	11	73%	3	20%	.	
.	
.	
1.0008	127	41	32%	77	61%	0.4867	
1.1906	72	43	60%	26	36%	0.3903	
.	
1.4650	6	.	.	.	.	.
1.0711	8	.	.	.	.	.
1.0383	67	25	37%	37	55%	0.3117	
1.0857	58	23	40%	28	48%	0.6282	
1.1651	14	5	36%	7	50%	.	
0.8192	30	4	13%	21	70%	0.2428	
1.0221	44	15	34%	26	59%	0.2422	
1.0671	43	11	26%	21	49%	0.0000	
0.9088	13	3	23%	8	62%	.	
1.3459	19	9	47%	5	26%	.	
1.2216	25	9	36%	13	52%	0.5195	
1.1846	62	26	42%	29	47%	0.4164	
1.3218	11	4	36%	7	64%	.	
1.3230	27	17	63%	8	30%	0.8521	
1.0700	40	12	30%	22	55%	0.1919	
1.3271	6	.	.	.	.	.
1.0523	10	3	30%	5	50%	.	
1.1069	19	9	47%	8	42%	.	
1.1720	9	.	.	.	.	.
1.2380	50	27	54%	18	36%	0.4715	
1.4125	18	6	33%	11	61%	.	
1.2076	121	63	52%	46	38%	0.3888	
1.1417	41	17	41%	23	56%	0.4781	
.	
1.0223	74	16	22%	47	64%	0.2434	
1.3612	33	15	45%	7	21%	0.6327	
0.8835	20	5	25%	11	55%	0.3084	
1.0753	136	49	36%	74	54%	0.2908	
0.9071	8	.	.	.	.	.
1.0968	9	.	.	.	.	.
1.0796	54	24	44%	25	46%	0.4585	

0.9222	6	.	.	.	.	.
0.9909	48	10	21%	35	73%	0.3972
1.1505	149	74	50%	64	43%	0.1794
0.9045	10	1	10%	8	80%	.
.
.
1.0191	61	15	25%	36	59%	0.4196
1.0387	20	7	35%	12	60%	0.3520
0.9221	14	2	14%	12	86%	.
1.2422	35	15	43%	15	43%	0.4122
1.3878	6	.	.	.	.	.
1.1250	1,977	824	42%	941	48%	0.3828

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 device days in 2020. If a facility's predicted number of device days was <1.0 , a facility-specific SUR was not calculated. Facilities reported in this table are reported from acute care hospitals.

levi ce type and patient population:

Median			
25%	50%	75%	90%
0.5673	1.1378	1.6885	2.0691
.	.	.	.
0.8691	1.1340	1.2966	1.7453
0.6469	0.9750	1.3303	1.6410
1.0436	1.4099	1.9791	2.6266
0.5245	0.9852	1.4762	1.6660
.	.	.	.
.	.	.	.
.	.	.	.
0.7129	0.9875	1.2766	1.6535
0.8706	1.3531	1.6914	2.1619
.	.	.	.
.	.	.	.
.	.	.	.
0.6567	1.0139	1.4053	1.8784
0.8506	1.0732	1.4747	2.4780
.	.	.	.
0.4445	0.8067	1.1043	1.6062
0.6054	0.8859	1.4426	1.9736
0.6772	1.0400	1.2281	1.6544
.	.	.	.
.	.	.	.
.	.	.	.
0.7249	1.0084	1.2940	1.7062
0.7780	1.0265	1.4076	1.6215
.	.	.	.
1.0295	1.2800	1.7035	1.9459
0.8315	1.0146	1.2144	1.5210
.	.	.	.
.	.	.	.
.	.	.	.
0.9360	1.3077	1.6880	1.9361
.	.	.	.
0.8845	1.1875	1.4912	1.8331
0.6259	0.9788	1.3966	1.7474
.	.	.	.
0.7054	0.9326	1.1502	1.5220
0.9350	1.2222	1.5209	2.3810
0.5858	0.8503	1.1967	1.6267
0.7109	0.9979	1.2977	1.5947
.	.	.	.
.	.	.	.
0.8477	1.1275	1.3874	1.8679

0.6020	0.8679	1.0977	1.8790
0.7862	1.1597	1.4471	1.9989
0.6341	0.9220	1.1881	1.5509
0.6045	0.9906	1.4192	2.0646
0.7322	1.1202	1.4346	1.9752
0.7512	1.0824	1.4432	1.9139

clusion and inclusion criteria. Refer to the technical appendix for details.
 predicted device days in 2020.
 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), CI

State	No. of Facilities	No. of Device days			95% CI
		Observed	Predicted	SUR	Lower
Alabama	41	89,142	68,518.3148	1.3010	1.2925
Alaska	3	.	.	.	.
Arizona	25	59,051	48,497.0530	1.2176	1.2078
Arkansas	23	34,742	33,899.8181	1.0248	1.0141
California	185	448,512	337,924.2719	1.3273	1.3233
Colorado	42	75,363	70,219.4231	1.0733	1.0656
Connecticut	15	31,678	23,966.8738	1.3217	1.3072
D.C.	4	.	.	.	.
Delaware	3	.	.	.	.
Florida	126	306,807	306,172.0484	1.0021	0.9985
Georgia	70	226,411	190,876.4035	1.1862	1.1813
Guam	2	.	.	.	.
Hawaii	6	6,267	4,272.9252	1.4667	1.4307
Idaho	8	12,723	12,086.3944	1.0527	1.0345
Illinois	67	98,233	95,380.7787	1.0299	1.0235
Indiana	57	88,949	83,034.6059	1.0712	1.0642
Iowa	14	11,748	10,267.4484	1.1442	1.1236
Kansas	29	33,046	40,084.7694	0.8244	0.8155
Kentucky	43	60,922	60,245.6070	1.0112	1.0032
Louisiana	38	61,334	57,278.7441	1.0708	1.0623
Maine	12	12,905	14,425.9118	0.8946	0.8792
Maryland	19	41,135	33,032.2194	1.2453	1.2333
Massachusetts	23	43,784	35,471.1660	1.2344	1.2228
Michigan	60	127,961	108,865.7929	1.1754	1.1690
Minnesota	10	20,305	15,368.9418	1.3212	1.3031
Mississippi	25	50,542	38,611.8945	1.3090	1.2976
Missouri	40	104,582	96,491.7983	1.0838	1.0773
Montana	6	10,148	7,788.5837	1.3029	1.2777
Nebraska	10	22,587	22,173.3149	1.0187	1.0055
Nevada	19	87,834	76,579.4409	1.1470	1.1394
New Hampshire	9	10,102	8,788.9732	1.1494	1.1272
New Jersey	50	91,052	73,889.9573	1.2323	1.2243
New Mexico	18	18,495	13,312.9681	1.3892	1.3693
New York	118	228,059	199,635.8617	1.1424	1.1377
North Carolina	40	64,057	55,324.8320	1.1578	1.1489
North Dakota	2	.	.	.	.
Ohio	70	142,061	132,710.3112	1.0705	1.0649
Oklahoma	30	39,870	31,079.0113	1.2829	1.2703
Oregon	19	18,678	20,330.1500	0.9187	0.9056
Pennsylvania	131	324,908	290,910.3195	1.1169	1.1130
Puerto Rico	8	9,827	9,742.3330	1.0087	0.9889
Rhode Island	9	17,415	15,902.2415	1.0951	1.0790

South Carolina	53	112,091	99,442.1330	1.1272	1.1206
South Dakota	6	5,449	6,642.0821	0.8204	0.7988
Tennessee	48	91,716	94,317.4498	0.9724	0.9661
Texas	141	356,682	307,997.1196	1.1581	1.1543
Utah	10	12,914	14,524.7465	0.8891	0.8739
Vermont	1	.	.	.	.
Virgin Islands	1	.	.	.	.
Virginia	61	122,092	116,992.7904	1.0436	1.0377
Washington	18	31,631	30,792.4666	1.0272	1.0159
West Virginia	14	23,925	22,858.2760	1.0467	1.0335
Wisconsin	35	36,359	28,939.7058	1.2564	1.2435
Wyoming	6	2,424	1,817.2994	1.3338	1.2815
All US	1,923	3,957,295	3,494,676.6607	1.1324	1.1312

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 2020 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			
1.3096	41	20	49%	17	41%	0.3990	
.	
1.2275	24	9	38%	10	42%	0.7581	
1.0357	23	7	30%	12	52%	0.4712	
1.3311	184	120	65%	44	24%	0.8155	
1.0809	42	17	40%	23	55%	0.4146	
1.3363	15	11	73%	3	20%	.	
.	
.	
1.0056	126	41	33%	77	61%	0.4947	
1.1911	70	42	60%	25	36%	0.4572	
.	
1.5033	6	.	.	.	.	.
1.0711	8	.	.	.	.	.
1.0364	67	26	39%	36	54%	0.3117	
1.0783	57	23	40%	27	47%	0.6282	
1.1651	14	4	29%	7	50%	.	
0.8333	29	5	17%	19	66%	0.2752	
1.0193	43	14	33%	26	60%	0.2422	
1.0793	38	11	29%	18	47%	0.6535	
0.9101	12	3	25%	7	58%	.	
1.2574	19	9	47%	6	32%	.	
1.2459	23	7	30%	11	48%	0.5914	
1.1818	60	23	38%	27	45%	0.4263	
1.3395	10	4	40%	6	60%	.	
1.3204	25	17	68%	5	20%	0.9620	
1.0905	40	10	25%	19	48%	0.1919	
1.3285	6	.	.	.	.	.
1.0320	10	3	30%	6	60%	.	
1.1546	19	10	53%	8	42%	.	
1.1720	9	.	.	.	.	.
1.2403	50	29	58%	18	36%	0.4825	
1.4094	18	6	33%	10	56%	.	
1.1471	118	58	49%	45	38%	0.3888	
1.1668	40	17	43%	22	55%	0.4772	
.	
1.0761	70	16	23%	45	64%	0.3303	
1.2955	30	14	47%	6	20%	0.6506	
0.9320	19	4	21%	10	53%	.	
1.1207	131	46	35%	66	50%	0.4483	
1.0288	8	.	.	.	.	.
1.1115	9	.	.	.	.	.

1.1338	53	27	51%	20	38%	0.5178
0.8424	6	.	.	.	.	.
0.9787	47	9	19%	35	74%	0.4158
1.1619	140	73	52%	59	42%	0.4743
0.9045	10	1	10%	8	80%	.
.
.
1.0494	61	15	25%	33	54%	0.4196
1.0386	18	6	33%	11	61%	.
1.0600	14	3	21%	11	79%	.
1.2693	35	15	43%	15	43%	0.4122
1.3878	6	.	.	.	.	.
1.1335	1,919	807	42%	884	46%	0.4339

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 2020. 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.

evice type and patient population:

Median			
25%	50%	75%	90%
0.6624	1.2007	1.7603	2.0691
.	.	.	.
0.9063	1.1563	1.3463	1.7453
0.6469	0.9685	1.3979	1.6410
1.0545	1.3897	1.8715	2.3714
0.5245	0.9852	1.4929	1.7041
.	.	.	.
.	.	.	.
0.7509	0.9937	1.3027	1.6535
0.9038	1.3195	1.7074	2.0573
.	.	.	.
.	.	.	.
0.6873	1.0117	1.4116	1.8784
0.8506	1.0769	1.4747	2.4780
.	.	.	.
0.4541	0.8755	1.1053	1.6476
0.5946	0.8819	1.4322	1.8319
0.9021	1.0683	1.2508	2.1135
.	.	.	.
.	.	.	.
0.7249	1.1151	1.2513	1.5918
0.7491	1.0963	1.4172	1.6939
.	.	.	.
1.1019	1.3481	1.7035	1.9459
0.8493	1.0891	1.3139	1.5210
.	.	.	.
.	.	.	.
0.9640	1.3124	1.6867	1.9172
.	.	.	.
0.8868	1.1860	1.3945	1.8355
0.6119	0.9591	1.4133	1.7993
.	.	.	.
0.7684	0.9914	1.1571	1.5812
1.0583	1.2253	1.5209	2.5024
.	.	.	.
0.7490	1.0591	1.3479	1.6679
.	.	.	.
.	.	.	.

0.9161	1.1831	1.3887	1.9415
.	.	.	.
0.6090	0.8464	1.0814	1.8790
0.8651	1.1896	1.4546	1.9673
.	.	.	.
.	.	.	.
0.7124	0.9632	1.2011	1.5613
.	.	.	.
.	.	.	.
0.7322	1.1202	1.4384	1.9752
.	.	.	.
0.7900	1.1118	1.4437	1.8981

usion and inclusion criteria. Refer to the technical appendix for details.
 predicted device days in 2020.
 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	9	675	3,012.6333	0.2241	0.2076
Alaska	1	.	.	.	.
Arizona	5	368	159.0517	2.3137	2.0862
Arkansas	5	249	1,763.8688	0.1412	0.1244
California	57	35,320	22,261.1514	1.5866	1.5701
Colorado	6	738	912.4004	0.8089	0.7521
Connecticut	4	.	.	.	.
D.C	1	.	.	.	.
Delaware	1	.	.	.	.
Florida	22	6,580	8,078.1304	0.8145	0.7950
Georgia	21	5,938	5,073.1952	1.1705	1.1410
Guam	1	.	.	.	.
Hawaii	1	.	.	.	.
Idaho	0	.	.	.	.
Illinois	14	5,279	4,917.6016	1.0735	1.0448
Indiana	10	3,292	2,474.9585	1.3301	1.2853
Iowa	0	.	.	.	.
Kansas	5	266	1,020.7470	0.2606	0.2307
Kentucky	6	251	83.1315	3.0193	2.6627
Louisiana	12	2,826	3,313.1753	0.8530	0.8219
Maine	2	.	.	.	.
Maryland	6	5,471	1,911.0598	2.8628	2.7877
Massachusetts	7	2,257	2,565.0503	0.8799	0.8442
Michigan	11	3,720	2,899.7357	1.2829	1.2422
Minnesota	6	633	687	1	1
Mississippi	5	973	665	1	1
Missouri	10	2,485	4,165.1661	0.5966	0.5735
Montana	1	.	.	.	.
Nebraska	2	.	.	.	.
Nevada	11	11,225	13,473.3052	0.8331	0.8178
New Hampshire	0	.	.	.	.
New Jersey	15	8,592	7,099.9193	1.2102	1.1848
New Mexico	3	.	.	.	.
New York	49	38,201	21,703.6550	1.7601	1.7426
North Carolina	6	3,300	4,117.7800	0.8014	0.7744
North Dakota	0	.	.	.	.
Ohio	32	9,081	15,877.0150	0.5720	0.5603
Oklahoma	7	2,259	167	14	13
Oregon	3	.	.	.	.
Pennsylvania	57	15,314	26,531.0630	0.5772	0.5681
Puerto Rico	6	3,472	5,169.1325	0.6717	0.6496
Rhode Island	1	.	.	.	.

South Carolina	14	2,138	6,976.5692	0.3065	0.2937
South Dakota	3	.	.	.	.
Tennessee	12	7,274	6,206.2058	1.1721	1.1454
Texas	37	8,882	10,794.4053	0.8228	0.8059
Utah	0	.	.	.	.
Vermont	0	.	.	.	.
Virgin Islands	0	.	.	.	.
Virginia	15	5,149	8,549.3797	0.6023	0.5860
Washington	3	.	.	.	.
West Virginia	3	.	.	.	.
Wisconsin	3	.	.	.	.
Wyoming	0	.	.	.	.
All US	511	202,153	206,094.1436	0.9809	0.9766

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 national average.
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).

r SURs using device days data reported to NHSN during 2020 for acute care hospitals (ACHs), by de
 (VDs), wards⁴

for SUR	Facility-specific SURs					10%
	No. Facilities with ≥1 Predicted Device Days	No. Facilities with SUR Significantly > National SUR N	No. Facilities with SUR Significantly < National SUR N			
0.2414	9	.	.	.	.	.
.
2.5594	4	.	.	.	.	.
0.1595	5	.	.	.	.	.
1.6033	55	27	49%	21	38%	0.0000
0.8688	6	.	.	.	.	.
.
.
0.8344	22	6	27%	15	68%	0.0000
1.2005	20	7	35%	10	50%	0.0000
.
.
1.1028	14	4	29%	7	50%	.
1.3762	10	3	30%	6	60%	.
.
0.2934	5	.	.	.	.	.
3.4107	6	.	.	.	.	.
0.8848	12	2	17%	10	83%	.
.
2.9394	6	.	.	.	.	.
0.9168	7	.	.	.	.	.
1.3246	11	4	36%	6	55%	.
1	6	.	.	.	.	.
2	5	.	.	.	.	.
0.6204	10	2	20%	7	70%	.
.
.
0.8486	11	3	27%	8	73%	.
.
1.2359	15	8	53%	7	47%	.
.
1.7778	49	28	57%	18	37%	0.0790
0.8291	6	.	.	.	.	.
.
0.5838	30	4	13%	23	77%	0.0000
14	7	.	.	.	.	.
.
0.5864	54	12	22%	37	69%	0.0000
0.6943	6	.	.	.	.	.
.

0.3197	14	3	21%	11	79%	.
.
1.1992	12	6	50%	5	42%	.
0.8401	35	12	34%	21	60%	0.0000
.
.
0.6189	15	2	13%	12	80%	.
.
.
.
.
0.9852	499	166	33%	294	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 2020. 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 a

service type and patient population:

Median			
25%	50%	75%	90%
.	.	.	.
.	.	.	.
.	.	.	.
0.1807	1.0411	4.0968	17.3937
.	.	.	.
.	.	.	.
.	.	.	.
0.0000	0.2601	1.3716	3.2844
0.0127	0.5522	4.0546	15.7809
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.
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.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.
0.5476	1.5154	2.8582	6.0786
.	.	.	.
0.0052	0.3629	0.8530	2.0138
.	.	.	.
0.0000	0.3469	1.1032	2.5760
.	.	.	.
.	.	.	.

Table 5. Changes in national standardized utilization ratios (SURs) using HAI data reported from all NHSN acute care hospitals reporting during 2020 by HAI and patient population: Central line days (CLDs), urinary catheter days (UCDs), and ventilator days (VDs), 2020 compared to 2019

	2019 SUR	2020 SUR	Percent Change	Direction of Change, Based on Statistical Significance	p-value
CLDs, all locations¹	0.8753	0.9038	3%	Increase	0.0000
ICU ²	0.9105	0.9814	8%	Increase	0.0000
Ward ³	0.8584	0.8649	1%	Increase	0.0000
NICU ⁴	0.8684	0.8638	-1%	Decrease	0.0000
UCDs, all locations⁵	0.7873	0.8352	6%	Increase	0.0000
	0.8665	0.9224	6%	Increase	0.0000
	0.7421	0.7804	5%	Increase	0.0000
VDs, all⁵	0.9187	1.1239	22%	Increase	0.0000
ICUs ²	0.9251	1.1324	22%	Increase	0.0000
Wards ³	0.8131	0.9809	21%	Increase	0.0000

* Statistically significant, $p < 0.0500$. Statistical significance based on two-tailed p -value < 0.05 , reflected in the relative percent change in magnitude

1. Data from all ICUs, wards (and other non-critical care locations), and NICUs. This excludes LTAC locations (or facilities) and IRF locations (or fa

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 transplai

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

5. Data from all ICUs and wards (and other non-critical care locations). This excludes NICUs, LTAC locations (or facilities) and IRF locations (or fa

3.
ilities).

nt]. This excludes LTAC locations [or facilities] and IRF locations [or facilities]).

ilities).

Table 6. Changes in state-specific standardized utilization ratios (SURs) between 2019 and 2020 from NHSN Acute Care Hospitals
6a. Central line days (CLDs), all locations¹

State ²	All Acute Care Hospitals Reporting to NHSN				
	2019 SUR	2020 SUR	Percent Change ³	Direction of Change, Based on Statistical Significance	p-value
Alabama	0.8055	0.8363	4%	Increase	0.0000
Alaska	1.0261	1.0948	7%	Increase	0.0000
Arizona	0.9444	0.9919	5%	Increase	0.0000
Arkansas	0.8888	0.8833	-1%	Decrease	0.0300
California	0.9367	0.9637	3%	Increase	0.0000
Colorado	0.9553	0.9989	5%	Increase	0.0000
Connecticut	0.8360	0.8462	1%	Increase	0.0000
D.C.	0.8078	0.8190	1%	Increase	0.0036
Delaware	0.8344	0.8833	6%	Increase	0.0000
Florida	0.8267	0.8260	0%	No change	0.4163
Georgia	0.8637	0.8924	3%	Increase	0.0000
Guam	.	.	.	.	.
Hawaii	1.1204	1.1420	2%	Increase	0.0000
Idaho	0.9255	0.9535	3%	Increase	0.0000
Illinois	0.8248	0.8647	5%	Increase	0.0000
Indiana	0.9657	0.9947	3%	Increase	0.0000
Iowa	0.9437	0.9823	4%	Increase	0.0000
Kansas	0.9477	0.9172	-3%	Decrease	0.0000
Kentucky	0.8832	0.9199	4%	Increase	0.0000
Louisiana	0.9260	0.9189	-1%	Decrease	0.0009
Maine	0.8656	0.9507	10%	Increase	0.0000
Maryland	0.8596	0.8580	0%	No change	0.4123
Massachusetts	0.8719	0.9149	5%	Increase	0.0000
Michigan	0.7455	0.8008	7%	Increase	0.0000
Minnesota	1.0474	1.0501	0%	No change	0.2788
Mississippi	0.8356	0.9103	9%	Increase	0.0000
Missouri	0.9400	0.9333	-1%	Decrease	0.0000
Montana	0.6711	0.6727	0%	No change	0.7365
Nebraska	0.9716	1.0290	6%	Increase	0.0000
Nevada	0.9114	0.9282	2%	Increase	0.0000
New Hampshire	0.8770	0.8744	0%	No change	0.5571
New Jersey	0.7856	0.7664	-2%	Decrease	0.0000
New Mexico	0.8985	0.9597	7%	Increase	0.0000
New York	0.7404	0.7987	8%	Increase	0.0000
North Carolina	0.8975	0.9245	3%	Increase	0.0000
North Dakota	1.0248	0.9878	-4%	Decrease	0.0000
Ohio	0.8836	0.9111	3%	Increase	0.0000
Oklahoma	1.1788	1.2472	6%	Increase	0.0000
Oregon	0.8225	0.8545	4%	Increase	0.0000
Pennsylvania	0.8253	0.8453	2%	Increase	0.0000
Puerto Rico	0.7338	0.7472	2%	Increase	0.0007
Rhode Island	0.8646	0.9165	6%	Increase	0.0000
South Carolina	0.7598	0.7950	5%	Increase	0.0000
South Dakota	0.9350	0.9244	-1%	Decrease	0.0418
Tennessee	0.9066	0.9089	0%	No change	0.1346
Texas	0.9164	0.9456	3%	Increase	0.0000
Utah	0.8435	0.8430	0%	No change	0.8740
Vermont	0.7816	0.8933	14%	Increase	0.0000
Virgin Islands	.	.	.	.	.
Virginia	0.8414	0.8526	1%	Increase	0.0000
Washington	1.0565	1.0330	-2%	Decrease	0.0000
West Virginia	1.0070	0.9849	-2%	Decrease	0.0000
Wisconsin	0.9895	1.0031	1%	Increase	0.0000
Wyoming	0.8712	1.1359	30%	Increase	0.0000
All US	0.8753	0.9038	3%	Increase	0.0000

* Statistically significant, p < 0.0500. Statistical significance based on two-tailed p-value < 0.05, reflected in the relative percent change in magnitude.

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

2. States without SUR either in 2019 and/or 2020 and therefore subsequent data not calculated

3. For states with <100% or >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 denominator of percent change (2019 SUR) = 0.

Table 6. Changes in state-specific standardized utilization ratios (SURs) between 2019 and 2020 from NHSN Acute Care Hospitals
6b. Urinary catheter days (UCDs), all locations¹

	All Acute Care Hospitals Reporting to NHSN				
	2019 SUR	2020 SUR	Direction of Change, Based on Statistical Significance		p-value
Alabama	0.8582	0.9532	11%	Increase	0.0000
Alaska	0.7580	0.7979	5%	Increase	0.0000
Arizona	0.8175	0.8668	6%	Increase	0.0000
Arkansas	0.9238	0.9960	8%	Increase	0.0000
California	0.8530	0.8885	4%	Increase	0.0000
Colorado	0.8274	0.8517	3%	Increase	0.0000
Connecticut	0.7216	0.7372	2%	Increase	0.0000
D.C	0.5082	0.5098	0%	No change	0.6147
Delaware	0.6901	0.7455	8%	Increase	0.0000
Florida	0.6803	0.6845	1%	Increase	0.0000
Georgia	0.7368	0.8030	9%	Increase	0.0000
Guam	.	.	.	.	.
Hawaii	0.7962	0.8477	6%	Increase	0.0000
Idaho	0.9707	0.9569	-1%	Decrease	0.0036
Illinois	0.7378	0.8045	9%	Increase	0.0000
Indiana	0.8010	0.8582	7%	Increase	0.0000
Iowa	0.9552	1.0384	9%	Increase	0.0000
Kansas	0.7584	0.8058	6%	Increase	0.0000
Kentucky	0.8106	0.8808	9%	Increase	0.0000
Louisiana	0.9711	1.0002	3%	Increase	0.0000
Maine	0.6737	0.7539	12%	Increase	0.0000
Maryland	0.7305	0.7794	7%	Increase	0.0000
Massachusetts	0.7787	0.8449	9%	Increase	0.0000
Michigan	0.7746	0.8357	8%	Increase	0.0000
Minnesota	0.8532	0.9101	7%	Increase	0.0000
Mississippi	1.0193	1.0695	5%	Increase	0.0000
Missouri	0.8100	0.8421	4%	Increase	0.0000
Montana	0.8303	0.8891	7%	Increase	0.0000
Nebraska	0.6939	0.8023	16%	Increase	0.0000
Nevada	0.7435	0.7943	7%	Increase	0.0000
New Hampshire	0.8140	0.8691	7%	Increase	0.0000
New Jersey	0.6559	0.7089	8%	Increase	0.0000
New Mexico	0.8930	0.9549	7%	Increase	0.0000
New York	0.7389	0.8334	13%	Increase	0.0000
North Carolina	0.7911	0.8027	1%	Increase	0.0000
North Dakota	0.9629	0.9384	-3%	Decrease	0.0000
Ohio	0.8478	0.8935	5%	Increase	0.0000
Oklahoma	0.9619	1.0346	8%	Increase	0.0000
Oregon	0.7711	0.7877	2%	Increase	0.0000
Pennsylvania	0.7842	0.8459	8%	Increase	0.0000
Puerto Rico	1.0567	1.0988	4%	Increase	0.0000
Rhode Island	0.7250	0.8094	12%	Increase	0.0000
South Carolina	0.7057	0.7622	8%	Increase	0.0000
South Dakota	0.9156	0.9577	5%	Increase	0.0000
Tennessee	0.7884	0.8262	5%	Increase	0.0000
Texas	0.7734	0.8220	6%	Increase	0.0000
Utah	0.8000	0.8038	0%	No change	0.2501
Vermont	0.9487	0.9438	-1%	No change	0.5079
Virgin Islands	.	.	.	.	.
Virginia	0.6995	0.7238	3%	Increase	0.0000
Washington	0.8146	0.8546	5%	Increase	0.0000
West Virginia	0.9645	0.9899	3%	Increase	0.0000
Wisconsin	0.8195	0.8488	4%	Increase	0.0000
Wyoming	0.9957	1.0324	4%	Increase	0.0001
All US	0.7873	0.8352	6%	Increase	0.0000

* Statistically significant, p < 0.0500. Statistical significance based on two-tailed p-value < 0.05, reflected in the relative percent change in magnitude.

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

2. States without SUR either in 2019 and/or 2020 and therefore subsequent data not calculated

3. For states with <100% or >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 denominator of percent change (2019 SUR) = 0.

Table 6. Changes in state-specific standardized utilization ratios (SURs) between 2019 and 2020 from NHSN Acute Care Hospitals
6c. Ventilator days (VDs), all locations¹

	All Acute Care Hospitals Reporting to NHSN				
	2019 SUR	2020 SUR	Direction of Change, Based on Statistical Significance		p-value
Alabama	0.9413	1.2556	33%	Increase	0.0000
Alaska	.	.	.	.	.
Arizona	0.9702	1.2212	26%	Increase	0.0000
Arkansas	0.8357	0.9811	17%	Increase	0.0000
California	1.1061	1.3433	21%	Increase	0.0000
Colorado	0.8409	1.0699	27%	Increase	0.0000
Connecticut	1.1844	1.2838	8%	Increase	0.0000
D.C.	.	.	.	.	.
Delaware	.	.	.	.	.
Florida	0.8444	0.9973	18%	Increase	0.0000
Georgia	0.9273	1.1858	28%	Increase	0.0000
Guam	.	.	.	.	.
Hawaii	1.3641	1.4293	5%	Increase	0.0083
Idaho	0.8857	1.0527	19%	Increase	0.0000
Illinois	0.7544	1.0320	37%	Increase	0.0000
Indiana	0.8488	1.0787	27%	Increase	0.0000
Iowa	0.8337	1.1442	37%	Increase	0.0000
Kansas	0.5811	0.8104	39%	Increase	0.0000
Kentucky	0.7984	1.0140	27%	Increase	0.0000
Louisiana	0.8136	1.0589	30%	Increase	0.0000
Maine	0.7667	0.8933	17%	Increase	0.0000
Maryland	1.1782	1.3338	13%	Increase	0.0000
Massachusetts	1.0032	1.2105	21%	Increase	0.0000
Michigan	1.0078	1.1782	17%	Increase	0.0000
Minnesota	1.1240	1.3041	16%	Increase	0.0000
Mississippi	0.9177	1.3116	43%	Increase	0.0000
Missouri	0.9206	1.0637	16%	Increase	0.0000
Montana	1.0830	1.3016	20%	Increase	0.0000
Nebraska	0.7707	1.0390	35%	Increase	0.0000
Nevada	0.9084	1.1000	21%	Increase	0.0000
New Hampshire	1.1308	1.1494	2%	No change	0.2472
New Jersey	1.0463	1.2303	18%	Increase	0.0000
New Mexico	0.9992	1.3926	39%	Increase	0.0000
New York	1.1178	1.2029	8%	Increase	0.0000
North Carolina	0.9267	1.1331	22%	Increase	0.0000
North Dakota	.	.	.	.	.
Ohio	0.8551	1.0172	19%	Increase	0.0000
Oklahoma	0.9063	1.3483	49%	Increase	0.0000
Oregon	0.7220	0.8714	21%	Increase	0.0000
Pennsylvania	0.8828	1.0718	21%	Increase	0.0000
Puerto Rico	0.9479	0.8919	-6%	Decrease	0.0000
Rhode Island	0.9144	1.0813	18%	Increase	0.0000
South Carolina	0.8489	1.0734	26%	Increase	0.0000
South Dakota	0.7440	0.8998	21%	Increase	0.0000
Tennessee	0.7838	0.9847	26%	Increase	0.0000
Texas	0.8574	1.1467	34%	Increase	0.0000
Utah	0.7043	0.8891	26%	Increase	0.0000
Vermont	.	.	.	.	.
Virgin Islands	.	.	.	.	.
Virginia	0.8040	1.0135	26%	Increase	0.0000
Washington	0.8027	1.0274	28%	Increase	0.0000
West Virginia	0.7780	0.9105	17%	Increase	0.0000
Wisconsin	0.8155	1.2296	51%	Increase	0.0000
Wyoming	0.9953	1.3338	34%	Increase	0.0000
All US	0.9187	1.1239	22%	Increase	0.0000

* Statistically significant, p < 0.0500. Statistical significance based on two-tailed p-value < 0.05, reflected in the relative percent change in magnitude.

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

2. States without SUR either in 2019 and/or 2020 and therefore subsequent data not calculated.

3. For states with <100% or >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 denominator of percent change (2019 SUR) = 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.