2021 National ar
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Introduction: Welcome to the 2021 National and State HAI Progress Report using the 2015 baseline a
are used to describe different HAI types by comparing the number of observed infections
This report is created by CDC staff with the National Healthcare Safety Network (NHSN).

This workbook includes national and state-specific SIR data for inpatient rehabilitation fac

Scope of report:

HAI Type	IR
	National
Central line-associated bloodstream infections (CLABSI) by locations	þ
Catheter-associated urinary tract infections (CAUTI) by locations	þ
Hospital-onset *Clostridioides difficile* (CDI) by facility-wide reporting	þ
Hospital-onset methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia by facility-wide reporting	þ

ıd State HAI Progress Report

t Rehabilitation Facilities

nd risk adjustment calculations. Standardized infection ratios (SIRs)
to the number of predicted infections. This year's report will compare 2021 SIRs to those from the prior year.

cilities (IRFs).

RF
State
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þ

2021 Annual National and State HAI Progress Report
Inpatient Rehabilitation Facilities: Full series of tables for all national and state-specific data

Additional Resources
SIR Guide
Technical Appendix
HAI Progress Report Home Page

NOTE: Tables contain data from Inpatient Rehabilitation Facilities (IRFs); as such, they exclude dat

tion Facilities (IRFs):

A bacteremia between 2020 and 2021 from IRFs

ative binomial regression models from IRFs

regression models from IRFs

a from Long-term Acute Care Hospitals (LTACHs), Critical Access Hospitals (CAHs), and Acute Care Hospitals (AC

CHs).

HAI Type	Reporting Facilities	
	No. of Inpatient Rehabilitation Facilities Reporting[1]	Total Patient Days
CLABSI, all[4]	731	4,842,006
CAUTI, all[4]	1,152	9,478,320

1. The number of reporting facilities included in the SIR calculation. Includes Inpatient Rehabilitat
2. Percent of facilities with at least one predicted infection that had an SIR significantly greater tha
3. Facility-specific percentiles are only calculated if at least 20 facilities had ≥1.0 predicted HAI in
4. Data from all IRF locations (or facilities). Risk factors used in the calculation of the number of

Table 1a. National standardized infe
Central line-associated b

s	Standardized Infection Ratio Data					
Total Device Days	Observed Events	Predicted Events	SIR	Lower 95% Confidence Interval	Upper 95% Confidence Interval	No. Facilities with ≥1 Predicted Infection
402,282	143	204.918	0.698	0.590	0.820	32
712,347	1,316	1,211.150	1.087	1.029	1.146	437

ion (IRF) units within the acute care setting.
an or less than the nominal value of the national SIR for the given HAI type. This is only calculated if at least 10 fac
2021. If a facility's predicted number of HAIs was <1.0, a facility-specific SIR was neither calculated nor included ir
predicted CLABSI and CAUTI are listed in Appendix A.

ection ratios (SIRs) and facility-specific summary SIRs using HAI data reported to NHSN during 2021: loodstream infections (CLABSIs) and catheter-associated urinary tract infections (CAUTIs)

Facility SIRs Compared to National SIR							
No. Facilities with SIR Significantly > National SIR		No. Facilities with SIR Significantly < National SIR					
N	%[2]	N		5%	10%	15%	20%
1	3%	0	0%	0.000	0.000	0.000	0.000
31	7%	15	3%	0.000	0.000	0.000	0.000

ilities had ≥ 1.0 predicted HAI in 2021.
the distribution of facility-specific SIRs.

Percentile Distribution of Facility-specific SIRs[3]

					Median				
25%	**30%**	**35%**	**40%**	**45%**	**50%**	**55%**	**60%**	**65%**	**70%**
0.000	0.000	0.000	0.385	0.680	0.700	0.732	0.806	0.888	0.936
0.000	0.018	0.430	0.595	0.712	0.820	0.913	1.063	1.236	1.440

75%	80%	85%	90%	95%
0.991	1.347	1.587	1.735	1.887
1.628	1.815	2.106	2.527	3.033

HAI and Patient Population	Reporting Facilities	Total Admissions
Laboratory-identified *C. difficile*	1,149	537,287
Laboratory-identified MRSA bacteremia	905	523,676

1. The number of reporting facilities included in the SIR calculation. Includes Inpatient Rehabilitation (I
2. Hospital-onset events are defined as those that were identified in an inpatient location on the 4th da
3. Calculated from a negative binomial regression model. Risk factors used in the calculation of the nu
4. Percent of facilities with at least one predicted event that had an SIR significantly greater than or les
5. Percentile distribution of facility-specific SIRs. This is only calculated if at least 20 facilities had ≥1.0

Table 1b. National standardized infect
Laboratory-identified *Clostridioi*

s	Standardized Infection Ratio Data					
Total Patient Days	Observed Hospital-onset Events[2]	Predicted Hospital-onset Events[3]	SIR	Lower 95% Confidence Interval	Upper 95% Confidence Interval	No. Facilities with ≥1 Predicted Event
7,045,843	1,503	2,959.041	0.508	0.483	0.534	561
6,724,837	104	127.846	0.813	0.668	0.982	0

RF) units within the acute care setting. LabID reporting is performed at facility wide for freestanding IRFs. For IRF-u
y (or later) after admission to the facility.
umber of predicted events are listed in Appendix B.
s than the nominal value of the national SIR for the given HAI type. This is only calculated if at least 10 facilities ha
) predicted HAI in 2021. If a facility's predicted number of events was <1.0, a facility-specific SIR was neither calcul

ion ratios (SIRs) and facility-specific summary SIRs using HAI data reported to NHSN during 2021:
***des difficile* (*C. difficile*) and methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia**

Facility SIRs Compared to National SIR							
No. Facilities with SIR Significantly > National SIR		No. Facilities with SIR Significantly < National SIR					
N	%[4]	N		5%	10%	15%	20%
37	7%	20	4%	0.000	0.000	0.000	0.000
.	.	.	.	.	.	.	.

nits located within acute care hospitals, LabID reporting is performed at unit level.

ıd ≥ 1.0 predicted HAI in 2021.
ated nor included in the distribution of facility-specific SIRs.

Percentile Distribution of Facility-specific SIRs[5]

					Median				
25%	**30%**	**35%**	**40%**	**45%**	**50%**	**55%**	**60%**	**65%**	**70%**
0.000	0.000	0.000	0.136	0.227	0.315	0.413	0.469	0.542	0.619
.	.	.	.	.	.	.	.	.	.

75%	80%	85%	90%	95%
0.706	0.824	0.928	1.085	1.656
.	.	.	.	.

Table 2. State-specific standardized infection rat
NHSN Inpatient Rehabilitation
Central line-associated bloodstream

State	State NHSN Mandate[2]	Any Validation[3]	No. of IRFs Reporting[4]	No. of Infections			95% CI
				Observed	Predicted	SIR	Lower
Alabama	No	No	7	4	2.970	1.347	0.428
Alaska	No	No	1	.	.	.	.
Arizona			9	0	1.550	0.000	.
Arkansas			14	3	3.229	0.929	0.236
California			72	10	18.282	0.547	0.278
Colorado	Yes	No	18	1	4.449	0.225	0.011
Connecticut	No	No	5	1	0.657	.	.
D.C.	Yes	No	2	.	.	.	.
Delaware			3	.	.	.	.
Florida	No	Yes	28	7	11.549	0.606	0.265
Georgia			19	3	5.587	0.537	0.137
Guam			0	.	.	.	.
Hawaii	No	No	0	.	.	.	.
Idaho	No	No	3	.	.	.	.
Illinois	No	No	32	2	12.044	0.166	0.028
Indiana	No	No	29	5	9.489	0.527	0.193
Iowa	No	No	12	1	2.629	0.380	0.019
Kansas			9	5	3.890	1.285	0.471
Kentucky			9	2	3.041	0.658	0.110
Louisiana			24	2	4.787	0.418	0.070
Maine	Yes	No	4	.	.	.	.
Maryland	No	No	3	.	.	.	.
Massachusetts	No	No	7	1	2.174	0.460	0.023
Michigan	No	No	21	6	6.100	0.984	0.399
Minnesota	No	No	5	2	1.723	1.161	0.195
Mississippi	Yes	No	8	1	1.564	0.639	0.032
Missouri	No	No	16	1	3.255	0.307	0.015
Montana	No	No	3	.	.	.	.
Nebraska	No	No	7	3	0.731	.	.
Nevada			11	6	3.346	1.793	0.727
New Hampshire	No	No	2	.	.	.	.
New Jersey	No	No	6	2	1.742	1.148	0.192
New Mexico			3	.	.	.	.
New York			39	11	9.694	1.135	0.597
North Carolina	No	No	13	5	7.667	0.652	0.239
North Dakota	No	No	2	.	.	.	.
Ohio	No	No	27	7	7.884	0.888	0.388
Oklahoma			15	0	2.621	0.000	.
Oregon	No	No	6	1	0.741	.	.
Pennsylvania			67	20	25.686	0.779	0.489
Puerto Rico	No	No	2	.	.	.	.
Rhode Island	No	No	3	.	.	.	.

South Carolina	Yes	Yes	25	5	6.234	0.802	0.294
South Dakota	No	No	3	.	.	.	.
Tennessee	Yes	No	18	1	3.604	0.277	0.014
Texas			70	11	18.653	0.590	0.310
Utah	Yes	No	5	1	0.961	.	.
Vermont			2	.	.	.	.
Virgin Islands			0	.	.	.	.
Virginia	No	No	12	3	3.796	0.790	0.201
Washington	Yes	No	12	2	2.043	0.979	0.164
West Virginia	No	No	2	.	.	.	.
Wisconsin	No	Yes	16	6	3.339	1.797	0.728
Wyoming			0	.	.	.	.
All US			**731**	**143**	**204.918**	**0.698**	**0.590**

1. Includes data reported from all locations (i.e., adult and pediatric rehabilitation wards) within free-standing IRFs.
2. Yes indicates the presence of a state mandate to report facility-wide CLABSI data to NHSN at the beginning of 2
   No indicates that a state mandate did not exist during 2021.
3. Yes indicates that the state health department reported the completion of all of the following validation activities:
   assessment of missing or implausible values on at least six months of 2021 NHSN data prior to June 1, 2022, a
   Yes indicates that the state also conducted an audit of facility medical or laboratory records prior to June 1, 202
   varies by state). Information on validation efforts was requested from all states, regardless of the presence of a
   reporting of a given HAI to the state health department have performed validation on NHSN data that is voluntar
4. The number of IRFs that reported 2021 CLABSI data and are included in the SIR calculation. SIRs and accomp
   from at least one location in 2021.
5. Percent of facilities with ≥1.0 predicted CLABSI that had an SIR significantly greater or less than the nominal va
   ≥ 1.0 predicted CLABSI in 2021.
6. Facility-specific key percentiles were only calculated if at least 20 facilities had ≥1.0 predicted CLABSI in 2021.
   nor included in the distribution of facility-specific SIRs.

ios (SIRs) and facility-specific SIR summary measures,
Facilities (IRFs) reporting during 2021

infections (CLABSIs) in IRFs, all locations[1]

for SIR		Facility-specific SIRs			Facility-specific SIRs at Key Percen			
Upper	No. of facs with at least 1 predicted CLABSI	% of facs with SIR sig higher than national SIR[5]	% of facs with SIR sig lower than national SIR[5]	10%	25%	Median (50%)	75%
3.249	1	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	0	.	.	.	.	.	.
2.529	0	.	.	.	.	.	.
0.975	3	.	.	.	.	.	.
1.109	0	.	.	.	.	.	.
.	0	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.199	3	.	.	.	.	.	.
1.461	0	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
0.549	3	.	.	.	.	.	.
1.168	1	.	.	.	.	.	.
1.876	0	.	.	.	.	.	.
2.849	2	.	.	.	.	.	.
2.173	1	.	.	.	.	.	.
1.380	0	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
2.269	0	.	.	.	.	.	.
2.046	1	.	.	.	.	.	.
3.835	0	.	.	.	.	.	.
3.153	0	.	.	.	.	.	.
1.515	0	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	0	.	.	.	.	.	.
3.730	1	.	.	.	.	.	.
.	.	.	.	.	.	.	.
3.793	0	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.972	1	.	.	.	.	.	.
1.445	3	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.756	1	.	.	.	.	.	.
1.143	1	.	.	.	.	.	.
.	0	.	.	.	.	.	.
1.181	7	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.

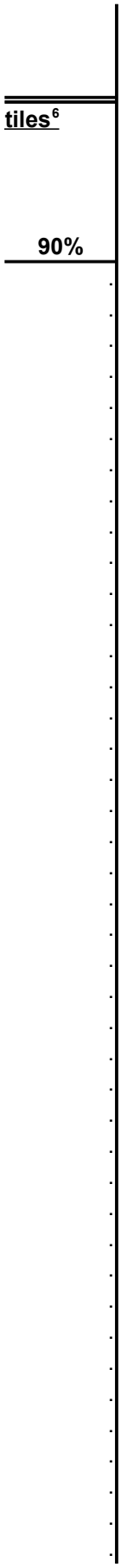
1.778	0	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.368	0	.	.	.	.	.	.
1.025	3	.	.	.	.	.	.
.	0	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
2.151	0	.	.	.	.	.	.
3.234	0	.	.	.	.	.	.
.	.	.	.	.	.	.	.
3.737	0	.	.	.	.	.	.
.	.	.	.	.	.	.	.
0.820	**32**	**3%**	**0%**	**0.000**	**0.000**	**0.700**	**0.991**

Also includes data from CMS-certified IRF units within a hospital.
2021. M indicates midyear implementation of a mandate.

: state health department had access to 2021 NHSN data, state health department performed an
nd state health department contacted identified facilities.
2 to confirm proper case ascertainment (although intensity of auditing activities
legislative mandate for the particular HAI type. Some states without mandatory
ily shared with them by facilities in their jurisdiction.
panying statistics are only calculated for states in which at least 5 IRFs reported CLABSI data

lue of the 2021 national IRF CLABSI SIR of 0.698. This is only calculated if at least 10 facilities had

If a facility's predicted number of CLABSI was <1.0, a facility-specific SIR was neither calculated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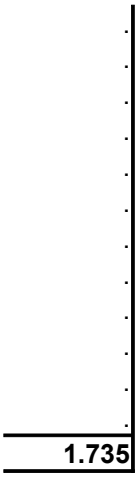

1.735

Table 3. State-specific standardized infection rat
NHSN Inpatient Rehabilitation
Catheter-associated urinary tract

State				No. of Events			95% CI
				Observed	Predicted	SIR	Lower
Alabama	No	No	18	23	30.631	0.751	0.488
Alaska	No	No	2	.	.	.	.
Arizona			21	34	28.275	1.202	0.846
Arkansas			27	22	20.836	1.056	0.679
California			74	59	71.040	0.831	0.638
Colorado	Yes	No	19	18	17.413	1.034	0.632
Connecticut	Yes	No	7	2	4.228	0.473	0.079
D.C.	No	No	2	.	.	.	.
Delaware			4	.	.	.	.
Florida	No	Yes	59	77	79.450	0.969	0.770
Georgia			31	31	27.284	1.136	0.786
Guam			0	.	.	.	.
Hawaii	No	No	1	.	.	.	.
Idaho	No	No	6	9	5.765	1.561	0.761
Illinois	No	No	41	65	41.973	1.549	1.205
Indiana	No	No	38	22	32.492	0.677	0.435
Iowa	No	No	18	20	11.365	1.760	1.105
Kansas			20	17	16.191	1.050	0.632
Kentucky			15	7	22.747	0.308	0.135
Louisiana			54	42	32.522	1.291	0.943
Maine	Yes	No	5	3	3.531	0.850	0.216
Maryland	No	No	4	.	.	.	.
Massachusetts	No	No	12	24	26.788	0.896	0.587
Michigan	No	No	39	43	37.057	1.160	0.850
Minnesota	No	No	10	10	11.864	0.843	0.428
Mississippi	Yes	No	11	7	7.367	0.950	0.416
Missouri	No	No	31	41	30.380	1.350	0.981
Montana	No	No	4	.	.	.	.
Nebraska	No	No	10	13	8.255	1.575	0.876
Nevada			14	26	16.286	1.596	1.065
New Hampshire	No	No	7	3	4.203	0.714	0.182
New Jersey	No	No	18	45	36.947	1.218	0.899
New Mexico			9	8	9.503	0.842	0.391
New York			45	46	45.013	1.022	0.757
North Carolina	Yes	No	24	30	28.506	1.052	0.723
North Dakota	No	No	4	.	.	.	.
Ohio	No	No	50	80	54.059	1.480	1.181
Oklahoma			23	21	17.854	1.176	0.748
Oregon	Yes	No	8	8	5.579	1.434	0.666
Pennsylvania			68	102	87.551	1.165	0.955
Puerto Rico	No	No	5	2	3.385	0.591	0.099
Rhode Island	No	No	4	.	.	.	.

South Carolina	No	No	26	24	18.341	1.309	0.858
South Dakota	No	No	4	.	.	.	.
Tennessee	Yes	Yes	30	20	24.773	0.807	0.507
Texas			149	213	184.383	1.155	1.008
Utah	Yes	No	11	8	7.628	1.049	0.487
Vermont			2	.	.	.	.
Virgin Islands			0	.	.	.	.
Virginia	Yes	No	26	29	24.546	1.181	0.806
Washington	Yes	No	14	16	24.149	0.663	0.392
West Virginia	Yes	No	8	3	9.235	0.325	0.083
Wisconsin	No	Yes	18	21	13.691	1.534	0.975
Wyoming			2	.	.	.	.
All US			**1,152**	**1,316**	**1,211.150**	**1.087**	**1.029**

1. Includes data reported from all locations (i.e., adult and pediatric rehabilitation wards) within free-standing IRFs.
2. Yes indicates the presence of a state mandate to report facility-wide CAUTI data to NHSN at the beginning of 2(No indicates that a state mandate did not exist during 2021.
3. Yes indicates that the state health department reported the completion of all of the following validation activities: assessment of missing or implausible values on at least six months of 2021 NHSN data prior to June 1, 2022, a Yes indicates that the state also conducted an audit of facility medical or laboratory records prior to June 1, 202 varies by state). Information on validation efforts was requested from all states, regardless of the presence of a reporting of a given HAI to the state health department have performed validation on NHSN data that is voluntar
4. The number of IRFs that reported 2021 CAUTI data and are included in the SIR calculation. SIRs and accompa from at least one location in 2021.
5. Percent of facilities with ≥1.0 predicted CAUTI that had an SIR significantly greater or less than the nominal valu ≥ 1.0 predicted CAUTI in 2021.
6. Facility-specific key percentiles were only calculated if at least 20 facilities had ≥1.0 predicted CAUTI in 2021. If nor included in the distribution of facility-specific SIRs.

ios (SIRs) and facility-specific SIR summary measures,
Facilities (IRFs) reporting during 2021

infections (CAUTIs) in IRFs, all locations[1]

for SIR		Facility-specific SIRs					
Upper	No. of facs with at least 1 predicted CAUTI			10%	25%		75%
1.109	12	0%	8%	.	.	.	.
.	.	.	.	.	.	.	.
1.661	12	17%	0%	.	.	.	.
1.572	6	.	.	.	.	.	.
1.064	25	8%	8%	0.000	0.000	0.536	0.966
1.602	11	0%	0%	.	.	.	.
1.563	1	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.205	33	9%	3%	0.000	0.000	0.620	1.411
1.593	11	9%	0%	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
2.865	2	.	.	.	.	.	.
1.961	13	8%	0%	.	.	.	.
1.008	11	9%	0%	.	.	.	.
2.670	2	.	.	.	.	.	.
1.647	7	.	.	.	.	.	.
0.609	7	.	.	.	.	.	.
1.729	10	10%	0%	.	.	.	.
2.312	1	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.313	7	.	.	.	.	.	.
1.549	13	8%	8%	.	.	.	.
1.502	5	.	.	.	.	.	.
1.880	3	.	.	.	.	.	.
1.813	8	.	.	.	.	.	.
.	.	.	.	.	.	.	.
2.625	1	.	.	.	.	.	.
2.306	7	.	.	.	.	.	.
1.943	1	.	.	.	.	.	.
1.615	14	0%	0%	.	.	.	.
1.599	3	.	.	.	.	.	.
1.351	15	0%	0%	.	.	.	.
1.483	9	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.832	24	17%	4%	0.000	0.000	1.014	1.971
1.767	6	.	.	.	.	.	.
2.723	2	.	.	.	.	.	.
1.408	32	6%	3%	0.000	0.000	0.872	1.622
1.952	1	.	.	.	.	.	.
.	.	.	.	.	.	.	.

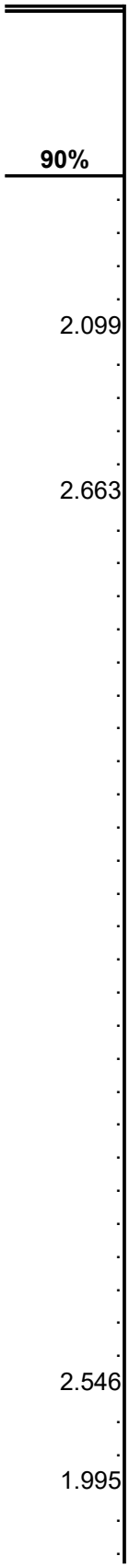
1.917	6	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.225	10	0%	0%	.	.	.	.
1.318	72	7%	3%	0.000	0.329	0.891	1.712
1.992	2	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.675	7	.	.	.	.	.	.
1.053	7	.	.	.	.	.	.
0.884	4	.	.	.	.	.	.
2.305	3	.	.	.	.	.	.
.	.	.	.	.	.	.	.
1.146	**437**	**7%**	**3%**	**0.000**	**0.000**	**0.820**	**1.628**

Also includes data from CMS-certified IRF units within a hospital.
021. M indicates midyear implementation of a mandate.

: state health department had access to 2021 NHSN data, state health department performed an
nd state health department contacted identified facilities.
2 to confirm proper case ascertainment (although intensity of auditing activities
legislative mandate for the particular HAI type. Some states without mandatory
ily shared with them by facilities in their jurisdiction.
anying statistics are only calculated for states in which at least 5 IRFs reported CAUTI data

ue of the 2021 national IRF CAUTI SIR of 1.087. This is only calculated if at least 10 facilities had

: a facility's predicted number of CAUTI was <1.0, a facility-specific SIR was neither calculated


90%
2.099
2.663
2.546
1.995

2.216

2.527

Table 4. State-specific standardized infection rat
NHSN Inpatient Rehabilitation
Laboratory-identified healthcare facility-

State				No. of Events			95% CI
				Observed	Predicted	SIR	Lower
Alabama	No	No	18	32	76.646	0.418	0.290
Alaska	No	No	2	.	.	.	.
Arizona			21	71	84.372	0.842	0.662
Arkansas			27	32	69.734	0.459	0.319
California			74	59	133.197	0.443	0.340
Colorado	Yes	No	19	14	45.591	0.307	0.175
Connecticut	Yes	No	7	3	9.153	0.328	0.083
D.C.	Yes	No	2	.	.	.	.
Delaware			4	.	.	.	.
Florida	No	Yes	58	114	229.175	0.497	0.412
Georgia			31	14	54.400	0.257	0.146
Guam			0	.	.	.	.
Hawaii	No	No	1	.	.	.	.
Idaho	No	No	6	2	12.825	0.156	0.026
Illinois	Yes	Yes	39	48	117.671	0.408	0.304
Indiana	Yes	No	37	41	74.655	0.549	0.399
Iowa	No	No	18	8	15.833	0.505	0.235
Kansas			20	15	44.201	0.339	0.197
Kentucky			15	37	60.807	0.608	0.435
Louisiana			53	29	65.945	0.440	0.300
Maine	Yes	No	5	6	10.179	0.589	0.239
Maryland	No	No	4	.	.	.	.
Massachusetts	No	No	12	59	79.737	0.740	0.568
Michigan	No	No	39	28	65.019	0.431	0.292
Minnesota	No	No	10	9	10.368	0.868	0.423
Mississippi	Yes	No	11	3	20.171	0.149	0.038
Missouri	No	No	31	46	77.119	0.596	0.442
Montana	No	No	4	.	.	.	.
Nebraska			10	8	19.056	0.420	0.195
Nevada			14	57	49.079	1.161	0.888
New Hampshire	No	No	7	12	20.737	0.579	0.314
New Jersey	No	No	18	80	110.594	0.723	0.577
New Mexico			8	8	25.402	0.315	0.146
New York			46	45	68.110	0.661	0.488
North Carolina	Yes	No	24	16	62.452	0.256	0.152
North Dakota	No	No	4	.	.	.	.
Ohio	No	No	49	74	127.763	0.579	0.458
Oklahoma			23	17	41.116	0.413	0.249
Oregon	Yes	No	8	0	5.915	0.000	.
Pennsylvania			67	129	200.915	0.642	0.538
Puerto Rico	Yes	No	6	2	12.044	0.166	0.028
Rhode Island	No	No	4	.	.	.	.

South Carolina	Yes	Yes	26	15	73.733	0.203	0.118
South Dakota	No	No	4	.	.	.	.
Tennessee	Yes	Yes	30	24	83.105	0.289	0.189
Texas			151	243	454.300	0.535	0.471
Utah	Yes	No	11	4	13.602	0.294	0.093
Vermont			2	.	.	.	.
Virgin Islands			0	.	.	.	.
Virginia	Yes	No	26	35	78.007	0.449	0.317
Washington	Yes	Yes	14	7	20.693	0.338	0.148
West Virginia	Yes	No	8	16	30.242	0.529	0.313
Wisconsin	No	Yes	18	13	20.281	0.641	0.357
Wyoming			3	.	.	.	.
All US			**1,149**	**1,503**	**2,959.041**	**0.508**	**0.483**

1. Includes data reported from all locations (i.e., adult and pediatric rehabilitation wards) within free-standing IRFs. Healthcare facility-onset is defined as event detected on the 4th day (or later) after admission to a free-standing Alternatively, this measure includes events detected on the 4th day (or later) after transfer to an IRF unit within a
2. Yes indicates the presence of a state mandate to report facility-wide CDI data to NHSN at the beginning of 2021 No indicates that a state mandate did not exist during 2021.
3. Yes indicates that the state health department reported the completion of all of the following validation activities: assessment of missing or implausible values on at least six months of 2021 NHSN data prior to June 1, 2022, a Yes indicates that the state also conducted an audit of facility medical or laboratory records prior to June 1, 202 varies by state). Information on validation efforts was requested from all states, regardless of the presence of a reporting of a given HAI to the state health department have performed validation on NHSN data that is voluntar
4. The number of IRFs that reported 2021 CDI data and are included in the SIR calculation. SIRs and accompany data in 2021.
5. Percent of facilities with ≥1.0 predicted CDI that had an SIR significantly greater or less than the nominal value ≥ 1.0 predicted CDI in 2021.
6. Facility-specific key percentiles were only calculated if at least 20 facilities had ≥1.0 predicted CDI in 2021. If a was neither calculated nor included in the distribution of facility-specific SIRs.

ios (SIRs) and facility-specific SIR summary measures,
Facilities (IRFs) reporting during 2021

onset *Clostridioides difficile* (CDI), facility-wide[1]

for SIR		Facility-specific SIRs					
Upper	No. of facs with at least 1 predicted CDI			10%	25%		75%
0.582	12	0%	0%	.	.	.	.
.	.	.	.	.	.	.	.
1.055	14	29%	0%	.	.	.	.
0.640	11	9%	0%	.	.	.	.
0.567	29	3%	0%	0.000	0.000	0.000	0.307
0.503	11	0%	0%	.	.	.	.
0.892	2	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
0.595	42	5%	0%	0.000	0.000	0.315	0.597
0.422	12	0%	8%	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
0.515	4	.	.	.	.	.	.
0.536	19	0%	5%	.	.	.	.
0.738	13	8%	0%	.	.	.	.
0.959	5	.	.	.	.	.	.
0.547	8	.	.	.	.	.	.
0.830	7	.	.	.	.	.	.
0.623	21	5%	0%	0.000	0.000	0.000	0.969
1.226	2	.	.	.	.	.	.
.	.	.	.	.	.	.	.
0.948	7	.	.	.	.	.	.
0.614	14	7%	7%	.	.	.	.
1.593	5	.	.	.	.	.	.
0.405	4	.	.	.	.	.	.
0.789	12	8%	0%	.	.	.	.
.	.	.	.	.	.	.	.
0.797	3	.	.	.	.	.	.
1.494	8	.	.	.	.	.	.
0.984	5	.	.	.	.	.	.
0.896	14	14%	0%	.	.	.	.
0.598	4	.	.	.	.	.	.
0.876	20	5%	0%	0.000	0.000	0.416	1.033
0.407	15	0%	7%	.	.	.	.
.	.	.	.	.	.	.	.
0.723	22	9%	5%	0.000	0.000	0.318	0.750
0.649	7	.	.	.	.	.	.
0.506	2	.	.	.	.	.	.
0.760	34	18%	6%	0.000	0.000	0.418	0.862
0.549	3	.	.	.	.	.	.
.	.	.	.	.	.	.	.

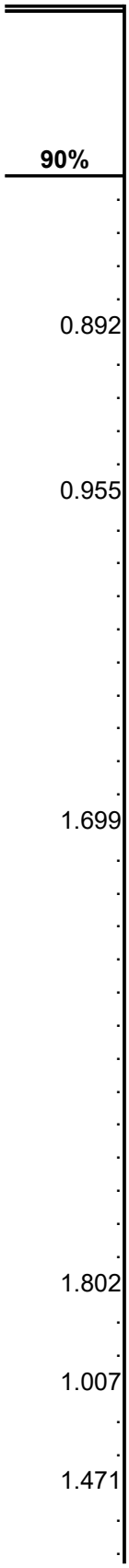
0.328	15	0%	13%	.	.	.	.
.	.	.	.	.	.	.	.
0.423	14	0%	7%	.	.	.	.
0.605	91	8%	4%	0.000	0.000	0.220	0.801
0.709	4	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
0.617	15	0%	7%	.	.	.	.
0.669	4	.	.	.	.	.	.
0.841	5	.	.	.	.	.	.
1.069	6	.	.	.	.	.	.
.	.	.	.	.	.	.	.
0.534	**561**	**7%**	**4%**	**0.000**	**0.000**	**0.315**	**0.706**

Also includes data from CMS-certified IRF units within a hospital.
inpatient rehabilitation facility.
hospital.
. M indicates midyear implementation of a mandate.

state health department had access to 2021 NHSN data, state health department performed an
nd state health department contacted identified facilities.
2 to confirm proper case ascertainment (although intensity of auditing activities
legislative mandate for the particular HAI type. Some states without mandatory
ily shared with them by facilities in their jurisdiction.
ing statistics are only calculated for states in which at least 5 IRFs reported CDI

of the 2021 national IRF CDI SIR of 0.508. This is only calculated if at least 10 facilities had

facility's predicted number of CDI was <1.0, a facility-specific SIR


90%
0.892
0.955
1.699
1.802
1.007
1.471

1.250

1.085

Table 5. State-specific standardized infection ratios (SIRs) and facility-specific S
NHSN Inpatient Rehabilitation Facilities (IRFs) reporting durin
Laboratory-identified healthcare facility-onset methicillin-resistant *Staphylococcus aureu*

State				No. of Events			95% CI for SIR		Fa
				Observed	Predicted	SIR	Lower	Upper	No. of facs with at least 1 predicted MRSA
Alabama	No	No	11	2	1.397	1.432	0.240	4.730	0
Alaska	No	No	1	.	.	.	.	.	.
Arizona			10	1	1.477	0.677	0.034	3.339	0
Arkansas			22	5	2.527	1.979	0.725	4.386	0
California			71	4	10.500	0.381	0.121	0.919	0
Colorado	No	No	14	2	2.740	0.730	0.122	2.412	0
Connecticut	Yes	No	6	1	0.618	.	.	.	0
D.C.	Yes	No	2	.	.	.	.	.	.
Delaware			2	.	.	.	.	.	.
Florida	No	Yes	33	5	7.047	0.710	0.260	1.573	0
Georgia			26	5	3.389	1.475	0.541	3.270	0
Guam			0	.	.	.	.	.	.
Hawaii	No	No	0	.	.	.	.	.	.
Idaho	No	No	4	.	.	.	.	.	.
Illinois	Yes	Yes	35	3	5.438	0.552	0.140	1.501	0
Indiana	Yes	No	30	4	3.368	1.188	0.377	2.865	0
Iowa	No	No	15	3	1.238	2.423	0.616	6.595	0
Kansas			15	2	1.192	1.678	0.281	5.543	0
Kentucky			13	2	2.829	0.707	0.119	2.336	0
Louisiana			41	3	3.567	0.841	0.214	2.289	0
Maine	Yes	No	5	0	0.726	.	.	.	.
Maryland	No	No	4	.	.	.	.	.	.
Massachusetts	No	No	6	0	1.229	0.000	.	2.438	0
Michigan	No	No	38	5	5.479	0.913	0.334	2.023	0
Minnesota	No	No	11	0	1.239	0.000	.	2.418	0
Mississippi	No	No	10	3	1.130	2.655	0.675	7.225	0
Missouri	No	No	24	1	2.556	0.391	0.020	1.930	0
Montana	No	No	2	.	.	.	.	.	.
Nebraska	No	No	8	0	0.565	.	.	.	0

Nevada			11	2	2.008	0.996	0.167	3.291	0
New Hampshire	No	No	6	0	0.938	.	.	.	0
New Jersey	No	No	12	1	3.511	0.285	0.014	1.405	0
New Mexico			6	0	0.952	.	.	.	0
New York			45	1	6.798	0.147	0.007	0.725	0
North Carolina	No	No	22	11	4.093	2.688	1.413	4.671	0
North Dakota	No	No	2	.	.	.	.	.	.
Ohio	No	No	34	4	3.887	1.029	0.327	2.482	0
Oklahoma			17	1	1.400	0.714	0.036	3.523	0
Oregon	Yes	No	6	0	0.619	.	.	.	0
Pennsylvania			66	11	11.668	0.943	0.496	1.639	0
Puerto Rico	No	No	5	0	0.631	.	.	.	.
Rhode Island	No	No	3	.	.	.	.	.	.
South Carolina	Yes	Yes	24	5	3.865	1.294	0.474	2.867	0
South Dakota	No	No	3	.	.	.	.	.	.
Tennessee	Yes	Yes	29	4	4.712	0.849	0.270	2.048	0
Texas			91	6	11.399	0.526	0.213	1.095	0
Utah	Yes	No	8	0	0.873	.	.	.	0
Vermont			2	.	.	.	.	.	.
Virgin Islands			0	.	.	.	.	.	.
Virginia	No	No	19	2	2.877	0.695	0.117	2.297	0
Washington	No	No	10	2	0.915	.	.	.	0
West Virginia	Yes	No	7	0	1.540	0.000	.	1.945	0
Wisconsin	No	Yes	17	1	1.455	0.687	0.034	3.390	0
Wyoming			1	.	.	.	.	.	.
All US			**905**	**104**	**127.846**	**0.813**	**0.668**	**0.982**	**0**

1. Includes data reported from all locations (i.e., adult and pediatric rehabilitation wards) within free-standing IRFs. Also includes data from CMS-ce
   Healthcare facility-onset is defined as event detected on the 4th day (or later) after admission to a free-standing inpatient rehabilitation facility.
   Alternatively, this measure includes events detected on the 4th day (or later) after transfer to an IRF unit within a hospital.
2. Yes indicates the presence of a state mandate to report facility-wide MRSA bacteremia data to NHSN at the beginning of 2021. M indicates mid
   No indicates that a state mandate did not exist during 2021.
3. Yes indicates that the state health department reported the completion of all of the following validation activities: state health department had acc
   assessment of missing or implausible values on at least six months of 2021 NHSN data prior to June 1, 2022, and state health department conta
   Yes indicates that the state also conducted an audit of facility medical or laboratory records prior to June 1, 2022 to confirm proper case ascertai
   varies by state). Information on validation efforts was requested from all states, regardless of the presence of a legislative mandate for the partic
   reporting of a given HAI to the state health department have performed validation on NHSN data that is voluntarily shared with them by facilities i

4. The number of IRFs that reported 2021 MRSA bacteremia data and are included in the SIR calculation. SIRs and accompanying statistics are o
   bacteremia data from at least one location in 2021.
5. Percent of facilities with ≥1.0 predicted MRSA bacteremia that had an SIR significantly greater or less than the nominal value of the 2021 nationa
   ≥ 1.0 predicted MRSA bacteremia in 2021.
6. Facility-specific key percentiles were only calculated if at least 20 facilities had ≥1.0 predicted MRSA bacteremia in 2021. If a facility's predicted
   was neither calculated nor included in the distribution of facility-specific SIRs.

SIR summary measures,

g 2021

***s* (MRSA) bacteremia, facility-wide[1]**

cility-specific SIRs

		10%	25%		75%	90%
.	.	.	.	.	.	.
.	.	.	.	.	.	.
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.	**.**	**.**	**.**	**.**	**.**	**.**

ertified IRF units within a hospital.

year implementation of a mandate.

cess to 2021 NHSN data, state health department performed an
cted identified facilities.
nment (although intensity of auditing activities
cular HAI type. Some states without mandatory
n their jurisdiction.

nly calculated for states in which at least 5 IRFs reported MRSA

al IRF MRSA SIR of 0.813. This is only calculated if at least 10 facilities had

number of MRSA bacteremia was <1.0, a facility-specific SIR

Table 6. Changes in national standardized infection
Central line-associated bloodstream infections (CLABSIs

HAI Type[1]	2020 SIR	2021 SIR
CLABSI, all locations	0.545	0.698
CAUTI, all locations	0.986	1.087
Laboratory-identified MRSA bacteremia	0.859	0.813
Laboratory-identified *C. difficile* infections	0.524	0.508

* Statistically significant, p < 0.0500

1. Includes data reported from all locations (i.e., adult and pediatric rehabilitation wards) within free-st
LabID reporting is performed at facility-wide for freestanding IRFs. For IRF-units located within acute c

ratios (SIRs) using HAI data reported from all NHSN Inpatient Rehabilitation Facilities reporting during s), catheter-associated urinary tract infections (CAUTIs), methicillin-resistant *Staphylococcus aureus* (M and *Clostridioides difficile* infections, 2020 compared to 2021

Percent Change	Direction of Change, Based on Statistical Significance	p-value
28%	No change	0.0526
10%	Increase	0.0171
5%	No change	0.6936
3%	No change	0.3948

tanding IRFs. Also includes data from CMS-certified IRF units within a hospital.
care hospitals, LabID reporting is performed at unit level.

2021 by HAI:
MRSA) bacteremia,

Table 7. Changes in state-specific standardized infection ratios (SIRs) between 2020 and 2021 from NHSN Inpatient Rehabilitation Facilities

7a. Central line-associated bloodstream infections (CLABSI), all locations[1]

	All Inpatient Rehabilitation Facilities Reporting to NHSN				
State[2]	2020 SIR	2021 SIR	Percent Change[3]	Direction of Change, Based on Statistical Significance	p-value
Alabama	1.026	1.347	31%	No change	0.7419
Alaska	.	.	.	.	.
Arizona	0.679	0.000	.	.	.
Arkansas	1.406	0.929	34%	No change	0.6089
California	0.318	0.547	72%	No change	0.3024
Colorado	0.399	0.225	44%	No change	0.6938
Connecticut	.	.	.	.	.
D.C.	.	.	.	.	.
Delaware	.	.	.	.	.
Florida	0.251	0.606	141%	No change	0.2077
Georgia	0.656	0.537	18%	No change	0.8122
Guam	.	.	.	.	.
Hawaii	.	.	.	.	.
Idaho	.	.	.	.	.
Illinois	0.465	0.166	64%	No change	0.2292
Indiana	0.674	0.527	22%	No change	0.6967
Iowa	0.537	0.380	29%	No change	0.8295
Kansas	0.878	1.285	46%	No change	0.6901
Kentucky	0.000	0.658	>>100%	.	Inestimable
Louisiana	0.518	0.418	19%	No change	0.8394
Maine	.	.	.	.	.
Maryland	.	.	.	.	.
Massachusetts	0.000	0.460	>>100%	.	Inestimable
Michigan	0.784	0.984	26%	No change	0.7446
Minnesota	0.756	1.161	54%	No change	0.7794
Mississippi	0.616	0.639	4%	No change	0.9812
Missouri	0.282	0.307	9%	No change	0.9564
Montana	.	.	.	.	.
Nebraska	0.000	.	.	.	.
Nevada	0.204	1.793	779%	Increase	0.0220
New Hampshire	.	.	.	.	.
New Jersey	0.784	1.148	46%	No change	0.8072
New Mexico	.	.	.	.	.
New York	0.503	1.135	126%	No change	0.1615
North Carolina	0.676	0.652	4%	No change	0.9597
North Dakota	.	.	.	.	.
Ohio	0.920	0.888	3%	No change	0.9451
Oklahoma	0.000	0.000	0%	.	Inestimable
Oregon	.	.	.	.	.
Pennsylvania	0.804	0.779	3%	No change	0.9187
Puerto Rico	.	.	.	.	.
Rhode Island	.	.	.	.	.

South Carolina	0.193	0.802	316%	No change	0.1861
South Dakota	.	.	.	.	.
Tennessee	0.000	0.277	>>100%	.	Inestimable
Texas	0.914	0.590	35%	No change	0.2823
Utah	.	.	.	.	.
Vermont	.	.	.	.	.
Virgin Islands	.	.	.	.	.
Virginia	0.248	0.790	219%	No change	0.3452
Washington	0.630	0.979	55%	No change	0.7716
West Virginia	.	.	.	.	.
Wisconsin	0.308	1.797	483%	No change	0.0760
Wyoming	.	.	.	.	.
All US	**0.545**	**0.698**	**28%**	**No change**	**0.0526**

* Statistically significant, p < 0.0500

1. Includes data reported from all locations (i.e., adult and pediatric rehabilitation wards) within free-standing IF

2. Percent change and supporting statistics are not calculated for states if the 2020 or 2021 SIRs is not calcula

3. For states with >>100% value in the percent change field, the p-value cannot be estimated due to sparse d

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

RFs. Also includes data from CMS-certified IRF units within a hospital.
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ata reported within the facility type.

Table 7. Changes in state-specific standardized infection ratios (SIRs) between 2020 and 2021 from NHSN Inpatient Rehabilitation Facilities

7b. Catheter-associated urinary tract infections (CAUTI), all locations[1]

	All Inpatient Rehabilitation Facilities Reporting to NHSN				
	2020 SIR	2021 SIR		Direction of Change, Based on Statistical Significance	p-value
Alabama	0.904	0.751	17%	No change	0.5248
Alaska	.	.	.	.	.
Arizona	1.045	1.202	15%	No change	0.5773
Arkansas	0.855	1.056	24%	No change	0.5185
California	0.666	0.831	25%	No change	0.2645
Colorado	0.792	1.034	31%	No change	0.4824
Connecticut	1.728	0.473	73%	No change	0.1231
D.C.	.	.	.	.	.
Delaware	.	.	.	.	.
Florida	0.923	0.969	5%	No change	0.7705
Georgia	0.857	1.136	33%	No change	0.3140
Guam	.	.	.	.	.
Hawaii	.	.	.	.	.
Idaho	1.244	1.561	25%	No change	0.7045
Illinois	1.305	1.549	19%	No change	0.3491
Indiana	1.182	0.677	43%	Decrease	0.0371
Iowa	1.485	1.760	19%	No change	0.6260
Kansas	1.532	1.050	31%	No change	0.2557
Kentucky	0.538	0.308	43%	No change	0.2644
Louisiana	0.982	1.291	31%	No change	0.2530
Maine	0.232	0.850	266%	No change	0.2838
Maryland	.	.	.	.	.
Massachusetts	1.041	0.896	14%	No change	0.6009
Michigan	1.386	1.160	16%	No change	0.4268
Minnesota	1.647	0.843	49%	No change	0.0923
Mississippi	0.816	0.950	16%	No change	0.7926
Missouri	1.112	1.350	21%	No change	0.4138
Montana	.	.	.	.	.
Nebraska	1.239	1.575	27%	No change	0.5656
Nevada	0.478	1.596	234%	Increase	0.0014
New Hampshire	0.470	0.714	52%	No change	0.6249
New Jersey	0.949	1.218	28%	No change	0.2736
New Mexico	0.000	0.842	>>100%	.	Inestimable
New York	1.202	1.022	15%	No change	0.4548
North Carolina	1.205	1.052	13%	No change	0.6068
North Dakota	.	.	.	.	.
Ohio	0.701	1.480	111%	Increase	0.0001
Oklahoma	1.010	1.176	16%	No change	0.6536
Oregon	2.090	1.434	31%	No change	0.4596
Pennsylvania	1.192	1.165	2%	No change	0.8721
Puerto Rico	0.328	0.591	80%	No change	0.6848
Rhode Island	.	.	.	.	.

South Carolina	1.196	1.309	9%	No change	0.7669
South Dakota	.	.	.	.	.
Tennessee	0.930	0.807	13%	No change	0.6440
Texas	0.940	1.155	23%	Increase	0.0478
Utah	1.305	1.049	20%	No change	0.6605
Vermont	.	.	.	.	.
Virgin Islands	.	.	.	.	.
Virginia	1.000	1.181	18%	No change	0.5445
Washington	0.738	0.663	10%	No change	0.7564
West Virginia	1.021	0.325	68%	No change	0.0858
Wisconsin	1.407	1.534	9%	No change	0.7966
Wyoming	.	.	.	.	.
All US	**0.986**	**1.087**	**10%**	**Increase**	**0.0171**

* Statistically significant, p < 0.0500

1. Includes data reported from all locations (i.e., adult and pediatric rehabilitation wards) within free-standing IR

2. Percent change and supporting statistics are not calculated for states if the 2020 or 2021 SIRs is not calculat

3. For states with >>100% value in the percent change field, the p-value cannot be estimated due to sparse da
The p-value is indicated as inestimable when the numerator and/or denominator of percent change = 0.

RFs. Also includes data from CMS-certified IRF units within a hospital.
ed
ta reported within the facility type.

Table 7. Changes in state-specific standardized infection ratios (SIRs) between 2020 and 2021 from NHSN Inpatient Rehabilitation Facilities

7c. Laboratory-identified *Clostridioides difficile* infection (CDI),[1]

	All Inpatient Rehabilitation Facilities Reporting to NHSN				
	2020 SIR	2021 SIR		Direction of Change, Based on Statistical Significance	p-value
Alabama	0.457	0.418	9%	No change	0.7196
Alaska	.	.	.	.	.
Arizona	0.622	0.842	35%	No change	0.1144
Arkansas	0.394	0.459	16%	No change	0.5773
California	0.474	0.443	7%	No change	0.7097
Colorado	0.118	0.307	160%	No change	0.0591
Connecticut	0.157	0.328	109%	No change	0.5777
D.C.	.	.	.	.	.
Delaware	.	.	.	.	.
Florida	0.630	0.497	21%	No change	0.0699
Georgia	0.444	0.257	42%	No change	0.1073
Guam	.	.	.	.	.
Hawaii	.	.	.	.	.
Idaho	0.557	0.156	72%	No change	0.1145
Illinois	0.473	0.408	14%	No change	0.4605
Indiana	0.599	0.549	8%	No change	0.6966
Iowa	0.502	0.505	1%	No change	1.0000
Kansas	0.339	0.339	0%	No change	1.0000
Kentucky	0.643	0.608	5%	No change	0.8079
Louisiana	0.305	0.440	44%	No change	0.2332
Maine	0.390	0.589	51%	No change	0.5079
Maryland	.	.	.	.	.
Massachusetts	0.880	0.740	16%	No change	0.3347
Michigan	0.345	0.431	25%	No change	0.4685
Minnesota	1.009	0.868	14%	No change	0.7494
Mississippi	0.149	0.149	0%	No change	0.9998
Missouri	0.649	0.596	8%	No change	0.6917
Montana	.	.	.	.	.
Nebraska	0.453	0.420	7%	No change	0.8809
Nevada	0.779	1.161	49%	No change	0.0508
New Hampshire	0.212	0.579	173%	No change	0.0550
New Jersey	0.816	0.723	11%	No change	0.4412
New Mexico	0.437	0.315	28%	No change	0.5096
New York	0.213	0.661	210%	Increase	0.0001
North Carolina	0.306	0.256	16%	No change	0.6038
North Dakota	.	.	.	.	.
Ohio	0.575	0.579	1%	No change	0.9690
Oklahoma	0.438	0.413	6%	No change	0.8677
Oregon	0.602	0.000	.	.	.
Pennsylvania	0.651	0.642	1%	No change	0.9134
Puerto Rico	0.190	0.166	13%	No change	0.9005
Rhode Island	1.058	.	.	.	.

South Carolina	0.308	0.203	34%	No change	0.2297
South Dakota	.	.	.	.	.
Tennessee	0.471	0.289	39%	No change	0.0592
Texas	0.532	0.535	1%	No change	0.9462
Utah	0.418	0.294	30%	No change	0.6163
Vermont	.	.	.	.	.
Virgin Islands	.	.	.	.	.
Virginia	0.614	0.449	27%	No change	0.1733
Washington	0.190	0.338	78%	No change	0.3737
West Virginia	0.426	0.529	24%	No change	0.5501
Wisconsin	0.562	0.641	14%	No change	0.7460
Wyoming	.	.	.	.	.
All US	**0.524**	**0.508**	**3%**	**No change**	**0.3948**

* Statistically significant, p < 0.0500

1. Includes data reported from all locations (i.e., adult and pediatric rehabilitation wards) within free-standing IR

2. Percent change and supporting statistics are not calculated for states if the 2020 or 2021 SIRs is not calculate

3. For states with >>100% value in the percent change field, the p-value cannot be estimated due to sparse dat
The p-value is indicated as inestimable when the numerator and/or denominator of percent change = 0.

Fs. Also includes data from CMS-certified IRF units within a hospital.
ed
:a reported within the facility type.

Table 7. Changes in state-specific standardized infection ratios (SIRs) between 2020 and 2021 from NHSN Inpatient Rehabilitation Facilities

7d. Laboratory-identified methicillin-resistant *Staphylococcus aureus* (MRSA) bacteremia[1]

	All Inpatient Rehabilitation Facilities Reporting to NHSN				
	2020 SIR	2021 SIR		Direction of Change, Based on Statistical Significance	p-value
Alabama	1.208	1.432	19%	No change	0.8731
Alaska	.	.	.	.	.
Arizona	0.888	0.677	24%	No change	0.8742
Arkansas	0.850	1.979	133%	No change	0.3316
California	0.492	0.381	23%	No change	0.7188
Colorado	0.705	0.730	4%	No change	0.9742
Connecticut	.	.	.	.	.
D.C.	.	.	.	.	.
Delaware	.	.	.	.	.
Florida	1.162	0.710	39%	No change	0.3900
Georgia	0.620	1.475	138%	No change	0.3181
Guam	.	.	.	.	.
Hawaii	.	.	.	.	.
Idaho	.	.	.	.	.
Illinois	1.470	0.552	62%	No change	0.1578
Indiana	0.855	1.188	39%	No change	0.6877
Iowa	0.000	2.423	>>100%	.	Inestimable
Kansas	0.000	1.678	>>100%	.	Inestimable
Kentucky	0.000	0.707	>>100%	.	Inestimable
Louisiana	0.889	0.841	5%	No change	0.9482
Maine	.	.	.	.	.
Maryland	.	.	.	.	.
Massachusetts	0.000	0.000	0%	.	Inestimable
Michigan	2.113	0.913	57%	No change	0.1259
Minnesota	0.000	0.000	0%	.	Inestimable
Mississippi	2.879	2.655	8%	No change	0.9241
Missouri	0.389	0.391	1%	No change	0.9967
Montana	.	.	.	.	.
Nebraska	.	.	.	.	.
Nevada	0.000	0.996	>>100%	.	Inestimable
New Hampshire	.	.	.	.	.
New Jersey	0.979	0.285	71%	No change	0.3105
New Mexico	.	.	.	.	.
New York	0.716	0.147	79%	No change	0.1508
North Carolina	0.676	2.688	298%	Increase	0.0244
North Dakota	.	.	.	.	.
Ohio	0.903	1.029	14%	No change	0.8803
Oklahoma	1.203	0.714	41%	No change	0.7243
Oregon	.	.	.	.	.
Pennsylvania	0.933	0.943	1%	No change	0.9817
Puerto Rico	.	.	.	.	.
Rhode Island	.	.	.	.	.

South Carolina	0.268	1.294	383%	No change	0.1347
South Dakota	.	.	.	.	.
Tennessee	0.859	0.849	1%	No change	0.9869
Texas	1.047	0.526	50%	No change	0.1633
Utah	.	.	.	.	.
Vermont	.	.	.	.	.
Virgin Islands	.	.	.	.	.
Virginia	1.236	0.695	44%	No change	0.5394
Washington	1.727	.	.	.	.
West Virginia	0.000	0.000	0%	.	Inestimable
Wisconsin	1.257	0.687	45%	No change	0.6760
Wyoming	.	.	.	.	.
All US	**0.859**	**0.813**	**5%**	**No change**	**0.6936**

* Statistically significant, p < 0.0500

1. Includes data reported from all locations (i.e., adult and pediatric rehabilitation wards) within free-standing

2. Percent change and supporting statistics are not calculated for states if the 2020 or 2021 SIRs is not calcul

3. For states with >>100% value in the percent change field, the p-value cannot be estimated due to sparse d

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

IRFs. Also includes data from CMS-certified IRF units within a hospital.
lated
data reported within the facility type.

Appendix A. Factors used in NHSN risk adjustment of the device-associated HAIs (CLABSI, CAUTI) negative binomial regression models[1] from Inpatient Rehabilitation Facilities

HAI Type	Validated Parameters for Risk Model
CLABSI	Intercept*
CAUTI	Intercept Setting‡ Proportion of Admissions- Traumatic and Non-Traumatic Spinal Cord Dysfunction combined** Proportion of Admissions- Stroke**

1. SIR Guide: https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf

***** None of the variables investigated were statistically significantly associated with CLABSI in IRFs. Free-standing IRFs and CMS-certified IRF units within a hospital will have the predicted number of events calculated using the 2021 national IRF CLABSI pooled mean (i.e., intercept-only model).

** Proportion of annual admissions with primary diagnoses are taken from the Annual IRF Survey and

‡IRF Setting is taken from the Annual IRF Survey and NHSN enrollment/location mapping data.

Appendix B. Factors used
regression models[1] from

HAI Type
CDI
MRSA bacteremia

* None of the variables inve
units within a hospital will

d in NHSN risk adjustment of the CDI and MRSA Bacteremia negative binomial
Inpatient Rehabilitation Facilities

Validated Parameters for Risk Model	
Intercept	CDI Test
Type	Type of IRF (free-
standing or unit)	
Community Onset CDI events	
Percentage of Admissions- Orthopedic Conditions	
Percentage of Admissions- Stroke	
Percentage of Admissions- Traumatic and Non-Traumatic Spinal Cord Dysfunction	
Intercept*	

estigated were statistically significantly associated with hospital-onset MRSA bacteremia in IRFs. Free-standing
have the predicted number of events calculated using the 2021 national IRF MRSA bacteremia incidence rate (i

IRFs and CMS-certified IRF
.e., intercept-only model).

Additional Resources

SIR Guide: https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf

Technical Appendix (2021 Report): http://www.cdc.gov/hai/progress-report/index.html
Explains the methodology used to produce the HAI Report.

HAI Progress Report Home Page: http://www.cdc.gov/hai/progress-report/index.html
The complete HAI Report, including Executive Summary and previous reports, can be found at the above wel

ɔsite.