



Emerging Infections Program Healthcare-Associated Infections Community Interface Report Invasive *Staphylococcus aureus*, 2022

Last Updated: August 7, 2025

Surveillance Catchment Areas

Methicillin-resistant *Staphylococcus aureus* (MRSA): California (3 county San Francisco Bay area); Connecticut (statewide); Georgia (8 county Atlanta area); Maryland (Baltimore City and County); Minnesota (2 county Minneapolis–Saint Paul area); New York (1 Rochester county); Tennessee (1 Nashville county).

Methicillin-sensitive *Staphylococcus aureus* (MSSA): California (3 county San Francisco Bay area); Connecticut (New Haven County); Georgia (1 Atlanta county); Maryland (Baltimore City and County); Minnesota (2 county Minneapolis–Saint Paul area); New York (1 Rochester county); Tennessee (1 Nashville county).

Population

The MRSA surveillance areas represent 16,111,497 persons. The MSSA surveillance areas represent 10,198,150 persons.

Source: U.S. Census Bureau, Population Division, Vintage 2022 Special Tabulation; U.S. Census Bureau, Population Division, 2021 Special Tabulation was used for the New Haven MSSA population estimate because the 2022 census data for Connecticut do not contain population estimates for New Haven County (estimates are reported for planning regions instead).

Case Definition

Invasive *Staphylococcus aureus* (SA) infection: isolation of SA from a normally sterile site in a resident of the surveillance area in 2022. Cases of infection are classified into one of three epidemiologic classifications.

A case is classified as

- hospital-onset (HO) if the SA culture was obtained on or after the third calendar day of hospitalization, where admission is hospital day 0^a;
- healthcare-associated community-onset (HACO) if the culture was obtained in an outpatient setting or before the third^a calendar day of hospitalization and had one or more of the following:
 1. a history of hospitalization, surgery, dialysis, or residence in a long-term care facility in the previous year, or
 2. the presence of a central vascular catheter (CVC) within 2 days prior to SA culture;
- community-associated (CA) if none of the previously mentioned criteria are met.

Cases were classified as MRSA or MSSA based on results from local clinical microbiology laboratory testing.

^a Compared to annual summaries from 2005–2017, this case definition represents an update in nomenclature from previous years but not a change to the case definition

Methods

Case finding was active, laboratory-based, and population-based. Emerging Infections Program (EIP) personnel routinely contacted microbiology laboratories serving healthcare facilities in their area to identify cases. Laboratories serving the surveillance catchment areas were routinely audited to ensure complete case ascertainment.

A standardized case report form was completed for each incident case through review of medical records. Medical records were reviewed for information on demographic characteristics, clinical syndrome, and outcome of illness.

Convenience samples of MSSA and MRSA isolates were collected and sent to CDC for routine testing, including antimicrobial susceptibility testing using reference broth microdilution and, beginning with 2017 isolates, whole genome sequencing (WGS) to perform staphylococcal cassette chromosome (*SCCmec*) typing, *spa* typing, multilocus sequence typing (MLST), clonal complex assignment, and inferred pulsed-field gel electrophoresis (PFGE) typing. Pulsed field type is inferred from WGS based on phylogenetic relatedness, MLST clonal complex, and molecular characteristics of the isolates¹. Isolates belonging to clonal complex 8 are sub-typed using a single-nucleotide polymorphism (SNP) assay that has been modified for use with WGS data, allowing confirmation of isolates identified as USA300². The use of PFGE for all isolates was discontinued in 2008; up until 2012, PFGE was inferred using a validated algorithm based on the following isolate microbiologic characteristics: *SCCmec* type, presence of Panton-Valentine leukocidin and toxic shock syndrome toxin genes, and antimicrobial susceptibility results³. From 2012–2016, *spa* typing was included in routine laboratory testing and MLST clonal complexes were inferred based on *spa* type, allowing for the identification of PFGE types based on MLST clonal complex and molecular characteristics of the isolates¹, with 2016 isolates identified as USA300 confirmed using a SNP assay². In 2022, MRSA isolates were collected in five sites (California, Georgia, Minnesota, New York, and Tennessee) and MSSA isolates in four (California, Georgia, Minnesota, and New York). Characterization of 2022 isolates is in process as of the date of this report.

Rates of invasive SA infection among all patients were calculated using population estimates for 2022 except to obtain the population estimate for New Haven County for the MSSA surveillance area, for which 2021 population estimates were used.

Rates of invasive SA infection among patients who were undergoing chronic dialysis treatment were calculated using December 31, 2021, point prevalence counts of patients on dialysis from the [United States Renal Data System \(USRDS\)](https://www.niddk.nih.gov/about-niddk/strategic-plans-reports/usrds) (<https://www.niddk.nih.gov/about-niddk/strategic-plans-reports/usrds>). The figures depicting the overall incidence by epidemiologic class and incidence among persons on dialysis, 2009–2022, are restricted to the continuous catchment areas for invasive MRSA and MSSA for comparison of trends over time.

Invasive SA surveillance data undergo regular data cleaning to ensure accuracy and completeness. Patients with complete case report form data as of August 5, 2025, were included in this analysis. Because data can be updated as needed, analyses of datasets generated on a different date may yield slightly different results.

¹ [Inferred Identification of Pulsed Field Types based on MLST clonal complex \(CC\)](https://archive.cdc.gov/#/details?url=https://www.cdc.gov/hai/settings/lab/ccalgorithm.html)

(<https://archive.cdc.gov/#/details?url=https://www.cdc.gov/hai/settings/lab/ccalgorithm.html>)

² [Improved Subtyping of *Staphylococcus aureus* Clonal Complex 8 Strains Based on Whole-Genome](https://msphere.asm.org/content/msph/3/3/e00464-17.full.pdf)

[Phylogenetic Analysis \[PDF - 15 pages\]](https://msphere.asm.org/content/msph/3/3/e00464-17.full.pdf) (<https://msphere.asm.org/content/msph/3/3/e00464-17.full.pdf>)

³ [Use of an Inferred PFGE Algorithm, Emerging Infections Program/Active Bacterial Core \(ABCs\) Surveillance Invasive MRSA Project](https://archive.cdc.gov/#/details?url=https://www.cdc.gov/hai/settings/lab/inferred-pfge-algorithm.html)

(<https://archive.cdc.gov/#/details?url=https://www.cdc.gov/hai/settings/lab/inferred-pfge-algorithm.html>)

Results

Table 1. MSSA (N=4081) and MRSA (N=3148) Cases by Race/Ethnicity, Emerging Infections Program, 2022

Race/Ethnicity ^a	MSSA Rate ^b	MRSA Rate ^b
Hispanic or Latino, any race	27.6	9.8
Not known to be Hispanic or Latino ^c - White	44.3	22.0
Not known to be Hispanic or Latino ^c - Black or African American	49.0	27.1
Not known to be Hispanic or Latino ^c - Asian	21.7	5.0
Not known to be Hispanic or Latino ^c - Another or multiple races ^d	17.7	10.8

^a Cases with unknown race and either non-Hispanic or Latino or unknown ethnicity (152 MSSA and 94 MRSA cases) are excluded from rate calculations in this table

^b Cases per 100,000 population for EIP areas (crude rates)

^c For calculating rates, the numerator includes both cases with non-Hispanic or Latino ethnicity and unknown ethnicity

^d Data for American Indian/Alaska Native and Native Hawaiian/Pacific Islander case-patients were included in the “Another or multiple races” category for privacy

Table 2. MSSA (N=4081) and MRSA (N=3148) Case and Death Rate^a by Epidemiological Classification, Emerging Infections Program, 2022

Class	MSSA Cases No. (Rate ^a)	MSSA Deaths No. (Rate ^a)	MRSA Cases No. (Rate ^a)	MRSA Deaths No. (Rate ^a)
CA	1333 (13.1)	116 (1.1)	707 (4.4)	94 (0.6)
HCA ^b	2725 (26.7)	445 (4.4)	2429 (15.1)	422 (2.6)
HCA-HO	611 (6.0)	170 (1.7)	505 (3.1)	126 (0.8)
HCA-HACO	2114 (20.7)	275 (2.7)	1924 (11.9)	296 (1.8)
Unknown	23 (0.2)	5 (<0.1)	12 (0.1)	1 (<0.1)
Total	4081 (40.0)	566 (5.6)	3148 (19.5)	517 (3.2)

^a Cases and deaths per 100,000 population for EIP areas (crude rates) calculated using 2021 and 2022 U.S. Census Data as described in the methods section

^b HCA: Healthcare-associated invasive SA infection; sum of patients that are classified as either the HO or HACO classes

Table 3. MSSA (N=4081) and MRSA (N=3148) Cases by Race and Ethnicity, Emerging Infections Program, 2022

Race/Ethnicity	MSSA	No. (%)	MRSA	No. (%)
Hispanic or Latino, any race	418	(10.2)	246	(7.8)
Not known to be Hispanic or Latino ^a - White ^b	2130	(52.2)	1682	(53.4)
Not known to be Hispanic or Latino ^a - Black or African American ^c	993	(24.3)	978	(31.1)
Not known to be Hispanic or Latino ^a - Asian ^d	323	(7.9)	93	(3.0)
Not known to be Hispanic or Latino ^a - American Indian/Alaskan Native ^e	32	(0.8)	29	(0.9)
Not known to be Hispanic or Latino ^a - Native Hawaiian/Pacific Islander ^f	24	(0.6)	10	(0.3)
Not known to be Hispanic or Latino ^a - Multiple races ^g	9	(0.2)	16	(0.5)
Not known to be Hispanic or Latino ^{a,h} - Unknown race	152	(3.7)	94	(3.0)

^a Records either indicated ethnicity was non-Hispanic or Latino, or ethnicity was not known

^b 206 MSSA cases and 105 MRSA cases with unknown ethnicity

^c 86 MSSA cases and 62 MRSA cases with unknown ethnicity

^d 61 MSSA cases and 15 MRSA cases with unknown ethnicity

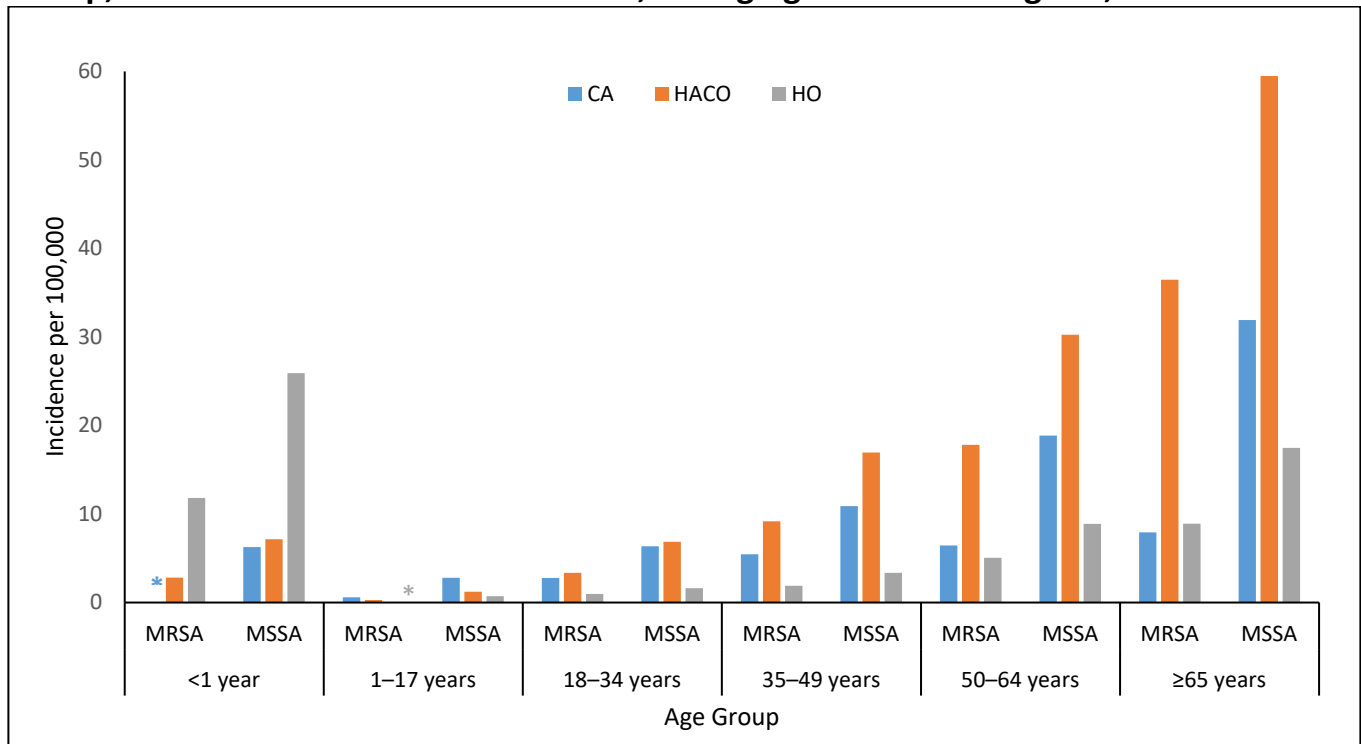
^e 6 MSSA cases and 5 MRSA cases with unknown ethnicity

^f 4 MSSA and 1 MRSA case with unknown ethnicity

^g 1 MSSA and 4 MRSA cases with unknown ethnicity

^h Of cases with unknown race, 62 MSSA and 46 MRSA cases had unknown ethnicity

Figure 1. Incidence^{a,b} of Invasive *Staphylococcus aureus*, by Epidemiologic Class, Age Group, and Methicillin-Resistance Status, Emerging Infections Program, 2022



^a Incidence (no. per 100,000 population per year) calculated using 2022 U.S. Census Data

^b An asterisk represents a case count of <5; rates for these groups have been suppressed

Table 4. Location of Invasive MSSA (N=4081) and MRSA (N=3148) Cases Before Incident Specimen Collection, Emerging Infections Program, 2022

Location of patient before incident specimen collection ^a	MSSA No. (%)	MRSA No. (%)
Private residence	2955 (72.4)	1848 (58.7)
Long-term care facility	303 (7.4)	518 (16.5)
Acute-care hospital (inpatient)	566 (13.9)	485 (15.4)
Long-term acute care hospital	7 (0.2)	13 (0.4)
Homeless	201 (4.9)	238 (7.6)
Other	15 (0.4)	24 (0.8)
Unknown	34 (0.8)	22 (0.7)

^a Represents location of the patient three days before incident specimen collection, where date of initial culture is day 0

Table 5. Location of Invasive MSSA (N=4081) and MRSA (N=3148) Cases at Time of Incident Specimen Collection, Emerging Infections Program, 2022

Location of incident specimen collection	MSSA	No. (%)	MRSA	No. (%)
Outpatient setting or emergency department	2802	(68.7)	2109	(67.0)
Acute care hospital	1236	(30.3)	1002	(31.8)
Long-term care facility	5	(0.1)	7	(0.2)
Long-term acute care hospital	5	(0.1)	12	(0.4)
Other	17	(0.4)	10	(0.3)
Unknown	16	(0.4)	8	(0.3)

Table 6. Selected Clinical Characteristics of Invasive MSSA (N=4058^a) and MRSA (N=3136^a) Cases by Epidemiological Class, Emerging Infections Program, 2022

	MSSA CA (n=1333) No. (%)	MRSA CA (n=707) No. (%)	MSSA HACO (n=2114) No. (%)	MRSA HACO (n=1924) No. (%)	MSSA HO (n=611) No. (%)	MRSA HO (n=505) No. (%)
Charlson comorbidity index						
0	435 (32.6)	248 (35.1)	274 (13.0)	188 (9.8)	118 (19.3)	78 (15.4)
1	399 (29.9)	182 (25.7)	324 (15.3)	317 (16.5)	124 (20.3)	90 (17.8)
≥2	490 (36.8)	271 (38.3)	1506 (71.2)	1410 (73.3)	369 (60.4)	335 (66.3)
Unknown	9 (0.7)	6 (0.8)	10 (0.5)	9 (0.5)	0 (0.0)	2 (0.4)

	MSSA CA (n=1333) No. (%)	MRSA CA (n=707) No. (%)	MSSA HACO (n=2114) No. (%)	MRSA HACO (n=1924) No. (%)	MSSA HO (n=611) No. (%)	MRSA HO (n=505) No. (%)
Underlying condition^b						
Burn or surgical wound	3 (0.2)	3 (0.4)	40 (1.9)	38 (2.0)	4 (0.7)	10 (2.0)
Chronic pulmonary disease	217 (16.3)	130 (18.4)	494 (23.4)	478 (24.8)	162 (26.5)	139 (27.5)
Chronic kidney disease	187 (14.0)	84 (11.9)	886 (41.9)	778 (40.4)	195 (31.9)	165 (32.7)
Chronic liver disease	71 (5.3)	32 (4.5)	162 (7.7)	115 (6.0)	56 (9.2)	41 (8.1)
Congestive heart failure	147 (11.0)	74 (10.5)	540 (25.5)	545 (28.3)	167 (27.3)	150 (29.7)
Decubitus/pressure ulcer	32 (2.4)	25 (3.5)	156 (7.4)	262 (13.6)	23 (3.8)	37 (7.3)
Diabetes mellitus	443 (33.2)	222 (31.4)	898 (42.5)	908 (47.2)	219 (35.8)	232 (45.9)
Hemiplegia	3 (0.2)	3 (0.4)	26 (1.2)	21 (1.1)	2 (0.3)	1 (0.2)
Injection drug use	162 (12.2)	171 (24.2)	129 (6.1)	170 (8.8)	28 (4.6)	23 (4.6)
Obesity or morbid obesity	230 (17.3)	100 (14.1)	409 (19.4)	345 (17.9)	117 (19.1)	102 (20.2)

	MSSA CA (n=1333) No. (%)	MRSA CA (n=707) No. (%)	MSSA HACO (n=2114) No. (%)	MRSA HACO (n=1924) No. (%)	MSSA HO (n=611) No. (%)	MRSA HO (n=505) No. (%)
Underlying condition^b						
Other chronic ulcer or chronic wound	169 (12.7)	122 (17.3)	330 (15.6)	374 (19.4)	68 (11.1)	76 (15.0)
Paraplegia	9 (0.7)	9 (1.3)	31 (1.5)	69 (3.6)	1 (0.2)	6 (1.2)
Pregnancy	3 (0.2)	5 (0.7)	3 (0.1)	2 (0.1)	1 (0.2)	0 (0.0)
Unknown	9 (0.7)	6 (0.8)	10 (0.5)	9 (0.5)	0 (0.0)	2 (0.4)

	MSSA CA (n=1333) No. (%)	MRSA CA (n=707) No. (%)	MSSA HACO (n=2114) No. (%)	MRSA HACO (n=1924) No. (%)	MSSA HO (n=611) No. (%)	MRSA HO (n=505) No. (%)
Syndrome^c						
Bloodstream infection with other syndrome	774 (58.1)	457 (64.6)	1187 (56.1)	1181 (61.4)	287 (47.0)	221 (43.8)
Bloodstream infection with no other syndrome	335 (25.1)	138 (19.5)	673 (31.8)	545 (28.3)	252 (41.2)	180 (35.6)
Pneumonia	135 (10.1)	91 (12.9)	188 (8.9)	230 (12.0)	101 (16.5)	92 (18.2)
Osteomyelitis	210 (15.8)	104 (14.7)	284 (13.4)	317 (16.5)	34 (5.6)	58 (11.5)
Endocarditis	144 (10.8)	87 (12.3)	151 (7.1)	161 (8.4)	36 (5.9)	25 (5.0)
Cellulitis	215 (16.1)	160 (22.6)	229 (10.8)	210 (10.9)	47 (7.7)	49 (9.7)
Septic arthritis	201 (15.1)	98 (13.9)	295 (14.0)	222 (11.5)	42 (6.9)	42 (8.3)
Internal abscess	149 (11.2)	97 (13.7)	147 (7.0)	147 (7.6)	41 (6.7)	44 (8.7)
Surgical wound infection ^d	13 (1.0)	11 (1.6)	131 (6.2)	115 (6.0)	8 (1.3)	11 (2.2)
Decubitus/pressure ulcer infection	9 (0.7)	8 (1.1)	35 (1.7)	81 (4.2)	4 (0.7)	9 (1.8)

Syndrome ^c	MSSA CA (n=1333) No. (%)	MRSA CA (n=707) No. (%)	MSSA HACO (n=2114) No. (%)	MRSA HACO (n=1924) No. (%)	MSSA HO (n=611) No. (%)	MRSA HO (n=505) No. (%)
Skin abscess ^e	74 (5.6)	83 (11.7)	68 (3.2)	85 (4.4)	19 (3.1)	15 (3.0)
Traumatic wound infection	18 (1.4)	17 (2.4)	14 (0.7)	8 (0.4)	7 (1.1)	6 (1.2)
Other wound infection ^f	80 (6.0)	50 (7.1)	136 (6.4)	147 (7.6)	17 (2.8)	25 (5.0)
Unknown	0 (0.0)	1 (0.1)	1 (<0.1)	0 (0.0)	0 (0.0)	3 (0.6)

^a Excludes 23 MSSA and 12 MRSA cases with unknown epidemiological class

^b Some case patients had more than one underlying condition.

^c Some case patients had more than one syndrome

^d Combines deep tissue/organ infection and infection of a surgical wound, post-operatively

^e Category includes skin abscess, necrotizing fasciitis, gangrene

^f Category includes non-traumatic and other chronic wound infections

Table 7. Selected Healthcare Exposures and Risk Factors for Invasive MSSA (N=4081) and MRSA (N=3148), Emerging Infections Program, 2022

Exposures	MSSA No. (%)	MRSA No. (%)
Healthcare facility stay in the year before incident specimen collection – Any ^a	2133 (52.3)	2102 (66.8)
Healthcare facility stay in the year before incident specimen collection – Acute care hospitalization	2042 (50.0)	1985 (63.1)
Healthcare facility stay in the year before incident specimen collection – Long-term care facility residence	538 (13.2)	866 (27.5)
Healthcare facility stay in the year before incident specimen collection – Long-term acute care hospitalization	15 (0.4)	28 (0.9)
Surgery in the year before the date of incident specimen collection	820 (20.1)	889 (28.2)
Chronic dialysis – Any Modality	587 (14.4)	428 (13.6)
Chronic dialysis – Modality - Peritoneal ^b	45 (7.7)	17 (4.0)
Chronic dialysis – Modality - Hemodialysis ^b	544 (92.7)	411 (96.0)
Chronic dialysis – Hemodialysis ^c - AV Fistula/Graft	247 (45.4)	171 (41.6)
Chronic dialysis – Hemodialysis ^c - CVC	298 (54.8)	249 (60.6)
Chronic dialysis – Modality - Unknown	0 (0.0)	1 (0.2)
Central vascular catheter in place at any time in the 2 calendar days before incident specimen collection	656 (16.1)	516 (16.4)
Unknown	23 (0.6)	12 (0.4)

^a Some case patients stayed in more than one type of healthcare facility in the year before incident specimen collection

^b 2 MSSA and 1 MRSA case was reported to receive both peritoneal dialysis and hemodialysis. Percentages calculated out of cases associated with chronic dialysis

^c 3 MSSA and 9 MRSA cases had both AV Fistula/Graft and CVC. Percentages calculated out of cases associated with chronic hemodialysis

Table 8. Number and Incidence Rates of Invasive MSSA (N=4081) and MRSA (N=3148) Infections by Dialysis Status and Epidemiologic Class, Emerging Infections Program, 2022

Epidemiologic Class	MSSA Dialysis Patients No. (Rate ^a)	MRSA Dialysis Patients No. (Rate ^a)	MSSA Non-Dialysis Patients No. (Rate ^b)	MRSA Non-Dialysis Patients No. (Rate ^b)	MSSA Total ^c No. (Rate ^b)	MRSA Total ^c No. (Rate ^b)
CA	NA	NA	1333 (13.1)	707 (4.4)	1333 (13.1)	707 (4.4)
HCA ^d	587 (3141.1)	428 (1491.0)	2132 (20.9)	1995 (12.4)	2725 (26.7)	2429 (15.1)
HCA-HO	69 (369.2)	58 (202.0)	542 (5.3)	447 (2.8)	611 (6.0)	505 (3.1)
HCA-HACO	518 (2771.8)	370 (1288.9)	1590 (15.6)	1548 (9.6)	2114 (20.7)	1924 (11.9)
Overall ^e	587 (3141.1)	428 (1491.0)	3465 (34.0)	2702 (16.8)	4081 (40.0)	3148 (19.5)

^a Incidence (no. per 100,000 dialysis patients per year) for dialysis patients calculated using 2021 USRDS point prevalence data

^b Incidence (no. per 100,000 population per year) calculated using 2021 and 2022 U.S. Census Data as described in the methods

^c The total counts and rates include 6 HACO MSSA, and 6 HACO MRSA cases with unknown dialysis status

^d HCA: Healthcare-associated invasive MRSA infection; sum of patients that are classified as either the HO or HACO classes

^e The overall counts and rates include 23 MSSA and 12 MRSA cases with unknown epidemiological class
 NA: By definition, CA cases cannot have dialysis in the past year

Figure 2. Incidence of Invasive MRSA by Epidemiologic Class, Emerging Infections Program, 2009–2022^a

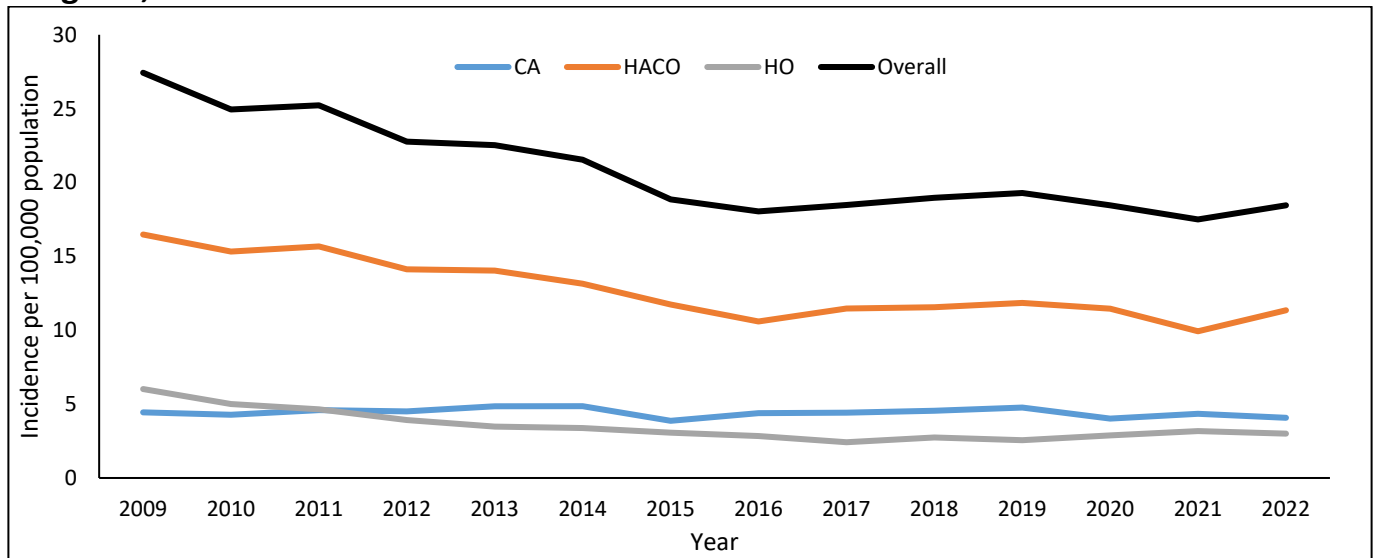
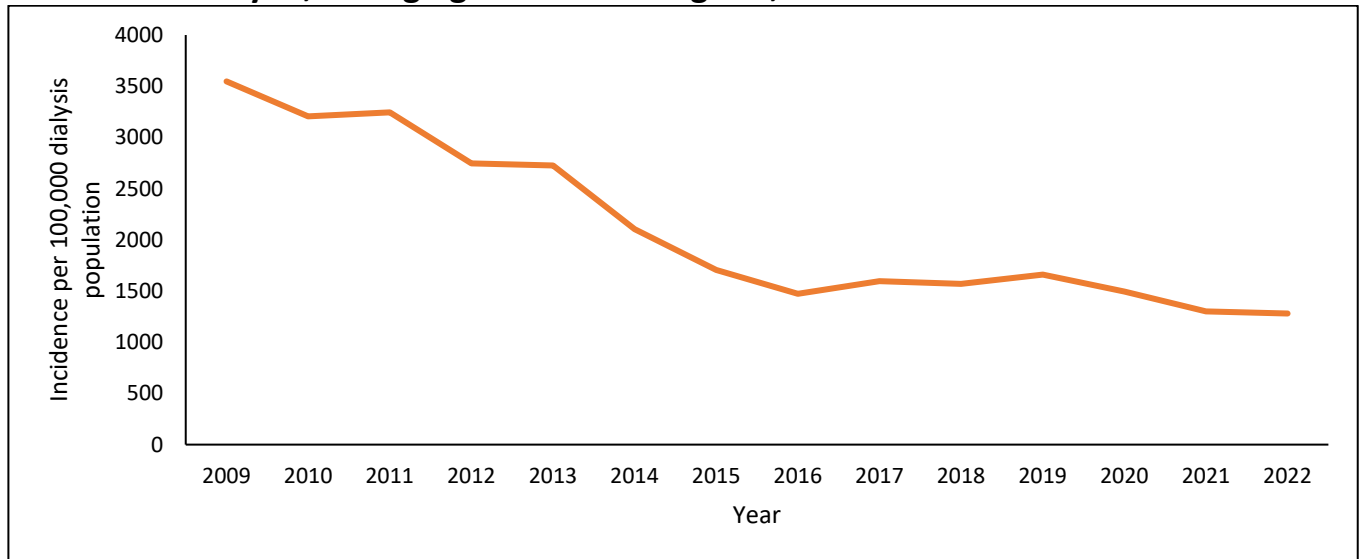


Figure 3. Incidence of Invasive Healthcare-Associated Community-Onset MRSA among Persons on Dialysis, Emerging Infections Program, 2009–2022^a



^a Restricted to the continuous catchment area (California [3 county San Francisco Bay area]; Connecticut [Fairfield, Hartford, and New Haven Counties]; Georgia [8 county Atlanta area]; Minnesota [2 county Minneapolis-Saint Paul area]; New York [1 Rochester county]; and Tennessee [1 Nashville county]) for comparison of trends over time.

Figure 4. Incidence of Invasive MSSA by Epidemiologic Class, Emerging Infections Program, 2017–2022^a

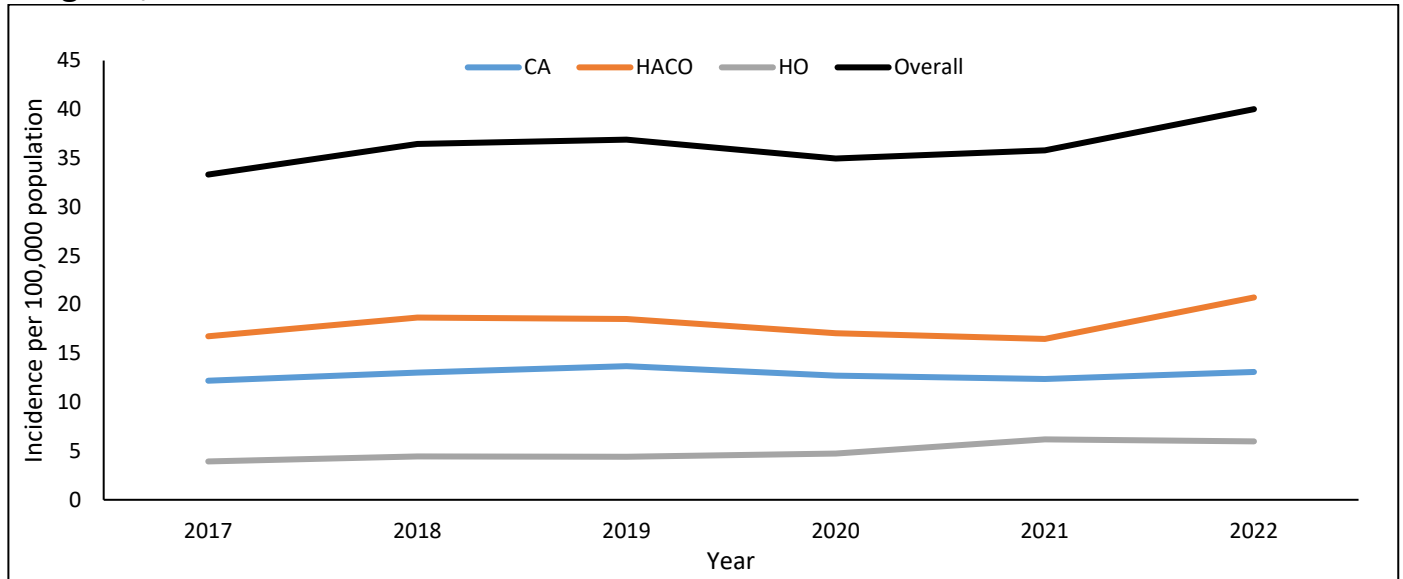
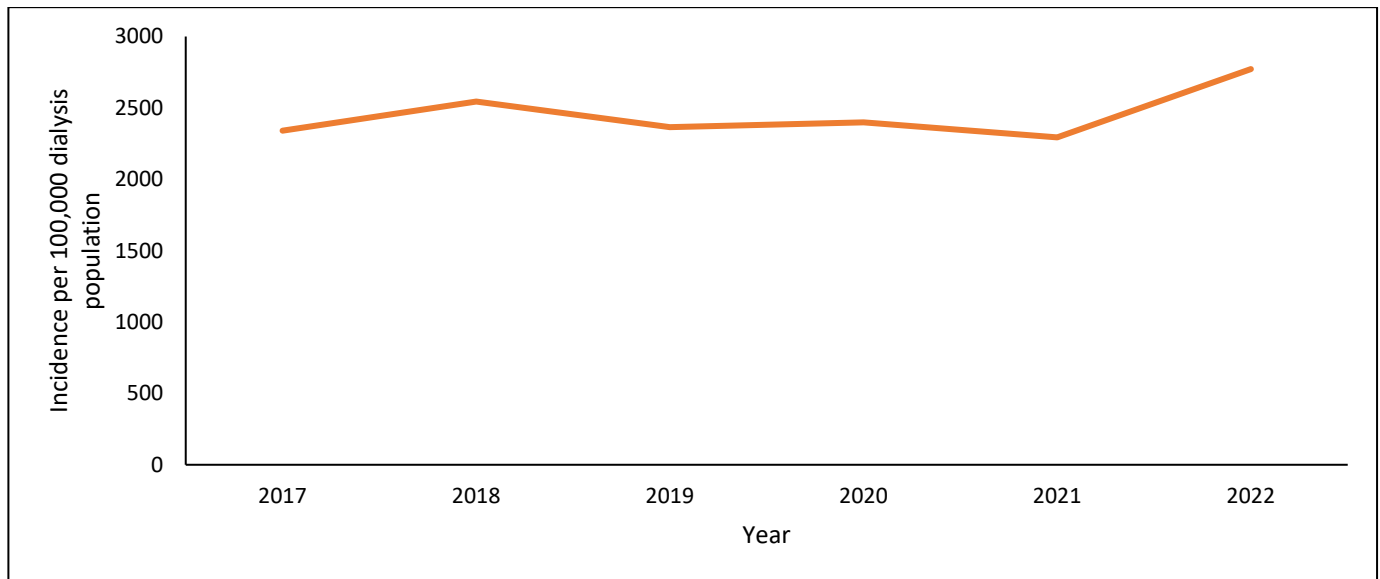


Figure 5. Incidence of Invasive Healthcare-Associated Community-Onset MSSA among Persons on Dialysis, Emerging Infections Program, 2017–2022^a



^a Restricted to the continuous catchment area (California [3 county San Francisco Bay area]; Connecticut [New Haven County]; Georgia [1 Atlanta area county]; Maryland [Baltimore City and County]; Minnesota [2 county Minneapolis–Saint Paul area]; New York [1 Rochester county]; and Tennessee [1 Nashville county]) for comparison of trends over time.

Table 9. Outcomes of Invasive MSSA (N=4058^a) and MRSA (N=3136^a) Cases by Epidemiologic Class, Emerging Infections Program, 2022

	CA MSSA (n=1333) No. (%)	CA MRSA (n=707) No. (%)	HACO MSSA (n=2114) No. (%)	HACO MRSA (n=1924) No. (%)	HO MSSA (n=611) No. (%)	HO MRSA (n=505) No. (%)
Outcomes^b						
Died	116 (8.7)	94 (13.3)	275 (13.0)	296 (15.4)	170 (27.8)	126 (25.0)
Survived	1216 (91.2)	613 (86.7)	1837 (86.9)	1625 (84.5)	439 (71.8)	377 (74.7)
Acute-care hospitalization - survived	1087 (81.5)	556 (78.6)	1750 (82.8)	1557 (80.9)	439 (71.8)	377 (74.7)
Acute-care hospitalization – survived – Discharged to long-term care facility ^c	320 (29.4)	143 (25.7)	602 (34.4)	691 (44.4)	155 (35.3)	151 (40.1)
Acute-care hospitalization - survived – Discharged to long-term acute care hospital ^c	19 (1.7)	9 (1.6)	18 (1.0)	31 (2.0)	13 (3.0)	19 (5.0)
Acute-care hospitalization -survived – Discharged to Other ^{c,d}	734 (67.5)	391 (70.3)	1122 (64.1)	819 (52.6)	267 (60.8)	204 (54.1)
Acute-care hospitalization - survived – discharged to Unknown ^c	14 (1.3)	13 (2.3)	8 (0.5)	16 (1.0)	4 (0.9)	3 (0.8)
Unknown	1 (0.1)	0 (0.0)	2 (0.1)	3 (0.2)	2 (0.3)	2 (0.4)

^a Excludes 23 MSSA and 12 MRSA cases with unknown epidemiological class

^b For patients admitted to a hospital, vital status was assessed at the time of discharge. For patients that were in a long-term care facility, long-term acute care facility, or seen at an outpatient dialysis center, vital status was assessed 30 days after the date of incident culture. For all other patients, vital status was ascertained using medical records from the healthcare facility encounter associated with the incident culture.

^c Percentages calculated out of the number of cases that survived acute-care hospitalization

^d Examples include private residence, correctional facility, homeless shelter, and drug rehabilitation program

Summary

Surveillance data from 2022 represent the eighteenth full year of population-based surveillance for invasive MRSA infections through the Emerging Infections Program, and the seventh for MSSA.

Among racial and ethnic groups, rates of invasive MRSA and MSSA are highest among non-Hispanic Black followed by non-Hispanic White persons. Among age groups, overall incidence of invasive MRSA and MSSA is highest among persons ≥ 65 years old; incidence of HO MRSA and MSSA is highest among infants < 1 year old.

In 2022 compared to 2021, incidence of HO and CA MRSA were similar, but HACO MRSA increased. HO MSSA incidence in 2022 was similar to 2021 and remained higher than 2017-2020 incidence. In 2022 compared to 2021, incidence of CA MSSA increased slightly, but HACO MSSA increased substantially, including among people on dialysis, and was the highest observed during 2017-2022.

Citation

Centers for Disease Control and Prevention. 2025. Emerging Infections Program, Healthcare-Associated Infections – Community Interface Surveillance Report, Invasive *Staphylococcus aureus*, 2022. Available at: <https://www.cdc.gov/hai/eip/pdf/2022-MRSA-Report-508.pdf>

For more information, visit our web sites:

- [Invasive *Staphylococcus aureus* \(MRSA/MSSA\) Infection Tracking](https://www.cdc.gov/healthcare-associated-infections/php/haic-eip/invasive-staphylococcus.html)
(<https://www.cdc.gov/healthcare-associated-infections/php/haic-eip/invasive-staphylococcus.html>)
- [Methicillin-resistant *Staphylococcus aureus* \(MRSA\)](http://www.cdc.gov/mrsa/about/index.html)
(<http://www.cdc.gov/mrsa/about/index.html>)