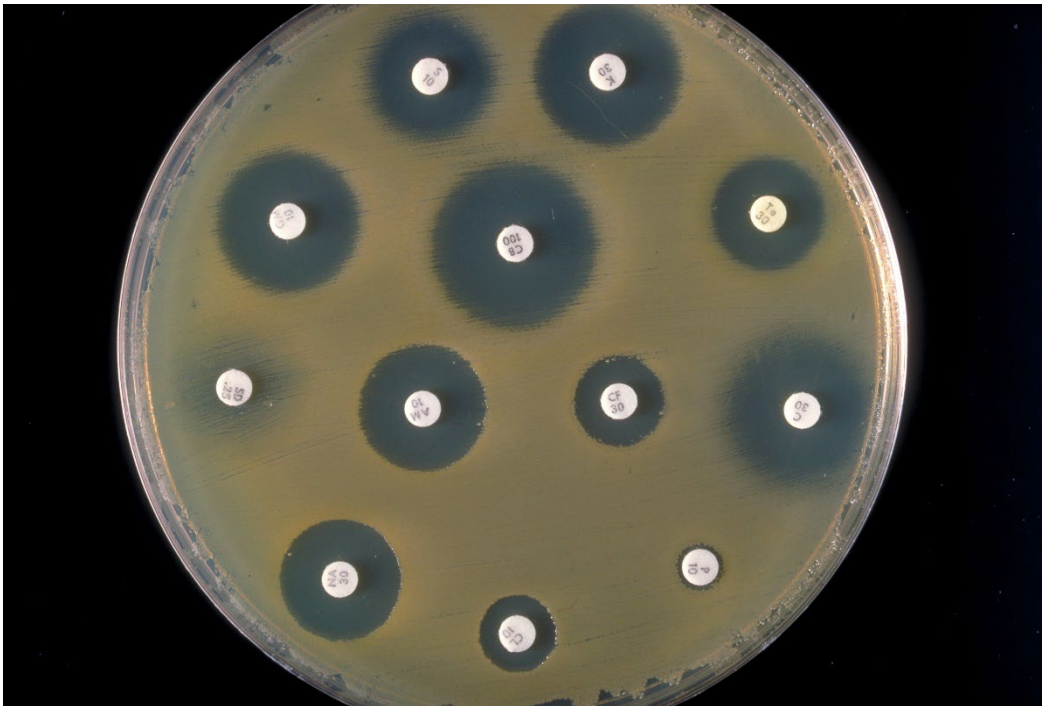




LOS ANGELES COUNTY ACUTE CARE HOSPITAL 2020 MULTI-FACILITY ANTIBIOGRAM



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Introduction

Antimicrobial resistance (AR) is a global public health concern due to high morbidity, mortality, and healthcare costs associated with AR infections. The number of reports of bacteria resistant to antimicrobial agents has grown substantially in the past decade globally, especially isolates resistant to multiple and last-line antimicrobial agents. Facility-level antibiograms provide a summary of the percentage of isolates susceptible to a variety of antimicrobial agents within an individual healthcare facility. The facility antibiogram is an important tool for the development of antimicrobial stewardship policies and protocols for empiric antimicrobial selection. Facility antibiograms are often limited by relatively few organisms tested and restricted geographic sampling.

A multi-facility regional antibiogram addresses many of those limitations by aggregating data from multiple locations for a more robust representative tool. The Los Angeles County Department of Public Health (LAC DPH) produces a multi-facility countywide antibiogram from antibiograms submitted by acute care hospitals in the County. The LAC regional antibiogram allows LAC DPH to track susceptibility data to better understand the problem of AR, and to better target interventions and prevention activities. A LAC DPH Health Officer Order issued by LAC DPH in January 2017 mandated that all acute care hospitals in the county submit their antibiogram to DPH, beginning with data from 2016¹.

In 2020, antibiogram data representing 81 (89%) acute care hospitals were reported and are included in this countywide report. Of the 81 hospitals, 73 are general acute care and 8 are long-term acute care hospitals. Note that some LAC hospitals send out their micro specimens and do not have enough isolates to generate a facility antibiogram. Lastly, although hospitals located in Long Beach and Pasadena, are affiliated with individual DPHs in those jurisdictions, data has been included for more comprehensive regional coverage.

The report contains an overall gram-negative organism antibiogram table, an overall gram-positive organism antibiogram table, and then a separate table for each organism that contains additional data for relevant antibiotics.

The intended use of this document is to provide a bi-annual report of antimicrobial resistance and emerging resistance among acute care hospitals in Los Angeles County. Individual facilities may compare their antibiogram to the regional antibiogram for aberrations. The Los Angeles multi-facility antibiogram may also be used to support empiric therapy selection at the local level when: the individual facility antibiogram has too few isolates (less than 30) of a particular organism; small hospitals and skilled nursing facilities do not encounter a wide variety of organisms; and healthcare facilities outside LA County receive patients from within LA County. Although facility or regional antibiograms can assist healthcare professionals in guiding empiric therapies, clinicians must take host factors into consideration and adjust antibiotic treatment to final microbiology results as soon as they are available².

¹ <http://publichealth.lacounty.gov/acd/docs/CREorder.pdf>

² Halstead DC, Gomez N, McCarter YS. Reality of Developing a Community-Wide Antibiogram. *Journal of Clinical Microbiology*. 2004;42(1):1-6. doi:10.1128/JCM.42.1.1-6.2004.

Methodology Notes³

- Data included in the multi-facility Los Angeles County antibiogram were obtained through Health Officer Order-mandated facility-level antibiograms.
- Facility-level antibiograms that are used to guide empiric therapy of initial infections are generally prepared following CLSI M39 which recommends including data from the first isolate/patient /analysis period. These reports should not include data from subsequent isolates on a patient which may be more resistant than the first isolate. Therefore, % S values are likely overestimated in some cases as they do not reflect results from all isolates encountered.
- Some multifacility organizations elected to combine data from multiple facilities for their antibiogram submission.
- Facility-level antibiograms were compiled for the calendar year January 1 to December 31, 2020.
- Not all facilities reported results for all organism/drug combinations. Refer to the “# of hospitals reporting” value for each combination.
- Susceptibility was defined by local labs in all circumstances. Results are reported as presented by microbiology labs.
- The total number of susceptible isolates was calculated by weighting each facility’s isolate count by its reported susceptibility rate.
- The interquartile ranges (IQR) are presented for each percent susceptibility (%S) value. The IQR is the difference between the third and first quartiles of data.
- Data for both general acute care and long-term acute care hospitals are presented together.
- Organism/drug combinations reported by only one facility are not included.
- Susceptibility results were rounded down to 99% if between 99-100%.

³ Clinical and Laboratory Standards Institute (CLSI). 2022. Analysis and Presentation of Cumulative Antimicrobial Susceptibility Test Data; M39-A5. CLSI, Wayne, PA.

Gram-Negative Organism Antibiogram

Data presented as: Percent Susceptible (# of Isolates Tested)	Penicillins		Cephalosporins				Carbapenems				Aminoglycosides			Quinolones		Other			# of all isolates tested (# of hospitals reporting)
	Ampicillin/ Subactam	Piperacillin/ Tazobactam	Ceftriaxone	Ceftazidime	Cefepime	Cefazolin	Doripenem	Ertapenem	Imipenem	Meropenem	Amikacin	Gentamicin	Tobramycin	Ciprofloxacin	Levofloxacin	Trimethoprim/ Sulfamethoxazole	Nitrofurantoin	Minocycline	
<i>Acinetobacter baumannii</i>	37 2,470	35 1,381	13 2,073	33 2,386	32 2,338	R	51 78	R	43 601	37 2,188	36 1,888	38 2,614	40 2,235	28 2,384	28 2,278	43 2,546	-	59 266	2,733 73
<i>Citrobacter freundii</i>	R	84 3,023	78 2,978	80 2,704	98 3,006	R	100 96	99 2,491	97 687	100 2,793	100 2,614	92 3,073	90 1,428	91 2,726	86 1,400	83 3,057	93 2,341	-	3,063 64
<i>Citrobacter koseri</i>	37 491	98 1,404	97 1,345	96 990	99 1,237	-	100 106	100 790	100 615	100 1,175	100 929	99 1,411	99 1,247	97 1,066	98 1,299	97 1,398	85 1,040	-	1,409 54
<i>Enterobacter cloacae complex</i>	R	79 7,347	74 7,021	78 6,397	93 7,268	R	97 291	95 5,408	96 1,534	99 6,820	99 6,523	97 7,468	95 4,029	95 6,582	94 3,643	89 7,501	33 4,296	-	7,500 71
<i>Escherichia coli</i>	58 163,214	95 189,992	87 186,017	91 171,649	91 172,314	87 156,696	99 7,141	99 151,672	99 32,425	99 175,118	99 170,120	88 189,804	85 72,142	76 175,790	67 66,930	71 190,179	96 172,666	-	190,079 81
<i>Klebsiella aerogenes</i>	R	81 5,291	80 5,291	81 4,352	96 5,047	R	100 192	97 4,156	84 1,004	98 4,954	99 4,856	97 5,342	94 2,329	95 4,793	90 2,269	95 5,346	15 3,719	-	5,362 71
<i>Klebsiella oxytoca</i>	57 4,189	89 4,831	89 4,752	93 4,329	94 4,387	-	100 162	98 3,774	95 1,104	99 4,394	98 4,304	93 4,817	90 2,404	93 4,461	91 2,177	87 4,829	76 3,244	-	4,842 70
<i>Klebsiella pneumoniae</i>	76 30,645	89 35,771	85 34,994	87 31,634	90 31,827	88 26,376	96 1,220	97 26,669	92 7,615	97 32,730	97 31,708	91 35,725	83 17,132	86 31,898	81 15,879	83 35,783	25 28,867	-	35,781 81
<i>Morganella morganii</i>	11 2,267	94 3,792	80 3,660	78 3,547	94 3,602	R	91 65	97 2,893	59* 967	98 3,365	97 3,470	75 3,791	83 2,101	64 3,397	54 2,057	61 3,796	R	-	3,788 70
<i>Proteus mirabilis</i>	78 11,211	97 23,047	90 22,338	94 20,605	93 20,462	88 17,505	96 470	99 16,671	59* 2,360	99 20,126	99 20,484	87 22,983	84 11,376	75 21,026	63 10,912	73 23,030	R	-	23,042 81
<i>Pseudomonas aeruginosa</i>	R	86 25,897	R	84 24,215	85 25,493	R	89 1,265	R	75 6,355	87 23,843	96 16,952	86 26,467	92 16,357	79 23,563	69 14,142	R	R	-	26,279 81
<i>Serratia marcescens</i>	R	89 2,940	86 3,890	91 3,679	92 3,809	R	100 138	97 2,758	80 654	98 3,601	94 3,681	96 4,050	83 2,482	84 3,609	83 2,369	96 3,882	R	-	4,044 69
<i>Stenotrophomonas maltophilia</i>	R	R	R	41 1,586	-	R	R	R	R	R	R	R	R	-	81 2,448	93 2,467	-	99 1,012	2,469 75

R: Intrinsically resistant

-: Not routinely tested, not applicable and/or limited data submitted

*Note: Some isolates are not susceptible to imipenem due to non-carbapenemase mechanisms

Acinetobacter baumannii
(n=2,733 from 73 Hospitals)

	% Susceptible (IQR)	Number of Isolates	Number of Hospitals
Ampicillin-Sulbactam	37% (27-62)	2,470	70
Piperacillin-Tazobactam	35% (20-48)	1,381	61
Ceftriaxone	13 % (4-24)	2,073	54
Ceftazidime	33% (27-52)	2,386	63
Cefepime	32 % (19-55)	2,338	60
Doripenem	51% (33-67)	78	5
Imipenem	43% (33-64)	601	35
Meropenem	37% (24-65)	2,188	57
Amikacin	36% (25-67)	1,888	51
Gentamicin	38% (33-62)	2,614	73
Tobramycin	40% (37-66)	2,235	63
Ciprofloxacin	28% (25-54)	2,384	64
Levofloxacin	28% (25-55)	2,278	63
Trimethoprim/Sulfamethoxazole	43% (42-70)	2,546	73
Minocycline	59% (56-86)	266	16

<i>Citrobacter freundii</i> (n=3,063 from 64 Hospitals)			
	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Piperacillin-Tazobactam	84% (78-90)	3,023	63
Ceftriaxone	78% (72-83)	2,978	61
Ceftazidime	80% (72-84)	2,704	58
Cefepime	98% (96-100)	3,006	61
Doripenem	100% (100-100)	96	5
Ertapenem	99% (100-100)	2,491	42
Imipenem	96% (93-100)	687	27
Meropenem	100% (100-100)	2,793	54
Amikacin	100% (100-100)	2,614	59
Gentamicin	92% (86-100)	3,073	64
Tobramycin	90% (86-100)	1,428	55
Ciprofloxacin	91% (80-96)	2,726	56
Levofloxacin	86% (86-96)	1,400	53
Trimethoprim/Sulfamethoxazole	83% (76-91)	3,057	64
Nitrofurantoin	93% (88-100)	2,341	62

Citrobacter koseri
(n=1,409 from 54 Hospitals)

	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Ampicillin-Sulbactam	37% (67-100)	491	18
Piperacillin-Tazobactam	98% (97-100)	1,404	53
Ceftriaxone	97% (95-100)	1,345	49
Ceftazidime	96% (96-100)	990	46
Cefepime	99% (100-100)	1,237	49
Ertapenem	100% (100-100)	790	32
Doripenem	100% (100-100)	106	4
Imipenem	100% (100-100)	615	24
Meropenem	100% (100-100)	1,175	42
Amikacin	100% (100-100)	929	45
Gentamicin	99% (100-100)	1,411	53
Tobramycin	99% (100-100)	1,247	50
Ciprofloxacin	97% (96-100)	1,066	44
Levofloxacin	98% (100-100)	1,299	49
Trimethoprim/Sulfamethoxazole	97% (97-100)	1,398	54
Nitrofurantoin	85% (80-94)	1,040	51

***Enterobacter cloacae* complex**
(n=7,500 from 71 Hospitals)

	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Piperacillin-Tazobactam	79% (72-82)	7,347	63
Ceftriaxone	74% (65-79)	7,021	64
Ceftazidime	78% (69-80)	6,397	62
Cefepime	93% (89-98)	7,268	67
Ertapenem	95% (86-100)	5,408	43
Doripenem	97% (96-99)	291	5
Imipenem	96% (96-100)	1,534	27
Meropenem	99% (98-100)	6,820	60
Amikacin	99% (100-100)	6,523	66
Gentamicin	97% (96-100)	7,468	70
Tobramycin	95% (94-100)	4,029	60
Ciprofloxacin	95% (90-98)	6,582	61
Levofloxacin	94% (93-100)	3,643	56
Trimethoprim/Sulfamethoxazole	89% (83-92)	7,501	71
Nitrofurantoin	33% (21-41)	4,296	64

Escherichia coli
(n=190,079 from 81 Hospitals)

	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Ampicillin-sulbactam	58% (48-56)	163,214	72
Piperacillin-Tazobactam	95% (93-95)	189,992	81
Ceftriaxone	87% (74-85)	186,017	77
Ceftazidime	91% (75-92)	171,649	60
Cefepime	91% (75-96)	172,314	75
Cefazolin	86% (71-85)	156,696	55
Doripenem	99% (99-100)	7,141	5
Ertapenem	99% (99-100)	151,672	51
Imipenem	99% (99-100)	32,425	39
Meropenem	99% (99-100)	175,118	65
Amikacin	99% (99-100)	170,120	79
Gentamicin	88% (83-89)	189,804	80
Tobramycin	85% (80-88)	72,142	69
Ciprofloxacin	76% (57-72)	175,790	74
Levofloxacin	67% (57-74)	66,930	67
Trimethoprim/Sulfamethoxazole	71% (62-69)	190,179	81
Nitrofurantoin	96% (95-97)	172,666	74

<i>Klebsiella (Enterobacter) aerogenes</i> (n=5,362 from 71 Hospitals)			
	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Piperacillin-Tazobactam	81% (70-85)	5,291	70
Ceftriaxone	80% (65-83)	5,219	67
Ceftazidime	81% (68-83)	4,352	63
Cefepime	96% (94-100)	5,047	66
Doripenem	100% (100-100)	192	5
Ertapenem	97% (96-100)	4,156	44
Imipenem	84% (74-100)	1,004	27
Meropenem	98% (98-100)	4,954	59
Amikacin	99% (100-100)	4,856	65
Gentamicin	97% (95-100)	5,342	70
Tobramycin	94% (95-100)	2,329	59
Ciprofloxacin	95% (92-100)	4,793	61
Levofloxacin	90% (92-100)	2,269	56
Trimethoprim/Sulfamethoxazole	95% (93-100)	5,346	71
Nitrofurantoin	15% (8-27)	3,719	65

Klebsiella oxytoca
(n=4,842 from 70 Hospitals)

	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Ampicillin-Sulbactam	57% (52-71)	4,189	63
Piperacillin-Tazobactam	89% (86-96)	4,831	70
Ceftriaxone	89% (82-94)	4,752	66
Ceftazidime	93% (88-97)	4,329	62
Cefepime	94% (88-100)	4,387	65
Doripenem	100% (100-100)	162	4
Ertapenem	98% (100-100)	3,774	44
Imipenem	95% (98-100)	1,104	26
Meropenem	99% (100-100)	4,394	59
Amikacin	98% (100-100)	4,304	63
Gentamicin	93% (89-98)	4,817	69
Tobramycin	90% (88-97)	2,404	59
Ciprofloxacin	93% (89-100)	4,461	61
Levofloxacin	91% (90-100)	2,177	54
Trimethoprim/Sulfamethoxazole	87% (83-92)	4,829	70
Nitrofurantoin	76% (78-94)	3,244	67

Klebsiella pneumoniae
(n=35,781 from 81 Hospitals)

	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Ampicillin-Sulbactam	76% (63-78)	30,645	73
Piperacillin-Tazobactam	89% (81-91)	35,771	81
Ceftriaxone	85% (73-87)	34,994	77
Ceftazidime	87% (76-87)	31,634	73
Cefepime	90% (77-93)	31,827	75
Cefazolin	88% (73-87)	26,376	46
Doripenem	96% (96-99)	1,220	5
Ertapenem	97% (96-100)	26,669	51
Imipenem	92% (90-98)	7,615	38
Meropenem	97% (90-99)	32,730	71
Amikacin	97% (92-99)	31,708	79
Gentamicin	91% (84-93)	35,725	80
Tobramycin	83% (79-90)	17,132	69
Ciprofloxacin	86% (71-86)	31,898	72
Levofloxacin	81% (71-90)	15,879	66
Trimethoprim/Sulfamethoxazole	83% (76-85)	35,783	81
Nitrofurantoin	25% (25-34)	28,867	80

Morganella morganii
(n=3,788 from 70 Hospitals)

	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Ampicillin-Sulbactam	11% (3-15)	2,267	57
Piperacillin-Tazobactam	94% (93-100)	3,792	70
Ceftriaxone	80% (73-90)	3,660	66
Ceftazidime	78% (69-86)	3,547	63
Cefepime	94% (94-100)	3,602	65
Doripenem	91% (89-98)	65	3
Ertapenem	97% (100-100)	2,893	43
Imipenem	59% (20-92)	967	24
Meropenem	98% (100-100)	3,365	58
Amikacin	97% (99-100)	3,470	65
Gentamicin	75% (70-82)	3,791	69
Tobramycin	83% (85-97)	2,101	59
Ciprofloxacin	64% (40-72)	3,397	61
Levofloxacin	54% (47-75)	2,057	57
Trimethoprim/Sulfamethoxazole	61% (49-68)	3,796	70

Proteus mirabilis
(n=23,042 from 81 Hospitals)

	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Ampicillin-Sulbactam	78% (73-82)	11,211	69
Piperacillin-Tazobactam	97% (97-100)	23,047	81
Ceftriaxone	90% (80-91)	22,338	77
Ceftazidime	94% (85-96)	20,605	67
Cefepime	93% (85-96)	20,462	75
Cefazolin	88% (72-88)	17,505	52
Doripenem	96% (97-100)	470	4
Ertapenem	99% (100-100)	16,671	52
Imipenem	59% (17-93)	2,360	21
Meropenem	99% (99-100)	20,126	67
Amikacin	99% (99-100)	20,484	78
Gentamicin	87% (78-88)	22,983	80
Tobramycin	84% (81-90)	11,376	69
Ciprofloxacin	75% (43-71)	21,026	73
Levofloxacin	63% (54-73)	10,912	66
Trimethoprim/Sulfamethoxazole	73% (58-74)	23,030	81

Pseudomonas aeruginosa
(n=26,279 from 81 Hospitals)

	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Piperacillin-Tazobactam	86% (79-90)	25,897	68
Ceftazidime	84% (73-88)	24,215	75
Cefepime	85% (74-88)	25,493	78
Doripenem	89% (87-92)	1,265	5
Imipenem	75% (62-84)	6,355	41
Meropenem	87% (74-90)	23,843	71
Amikacin	96% (95-99)	16,952	79
Gentamicin	86% (82-92)	26,467	80
Tobramycin	92% (92-97)	16,357	63
Ciprofloxacin	79% (65-83)	23,563	74
Levofloxacin	69% (63-77)	14,142	68

<i>Serratia marcescens</i> (n=4,044 from 69 Hospitals)			
	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Piperacillin-Tazobactam	89% (79-98)	2,940	50
Ceftriaxone	86% (80-95)	3,890	64
Ceftazidime	91% (76-100)	3,679	62
Cefepime	92% (86-100)	3,809	64
Doripenem	100% (100-100)	138	4
Ertapenem	97% (100-100)	2,758	42
Imipenem	80% (88-100)	654	16
Meropenem	98% (97-100)	3,601	56
Amikacin	94% (96-100)	3,681	63
Gentamicin	96% (97-100)	4,050	68
Tobramycin	83% (76-93)	2,482	56
Ciprofloxacin	84% (66-94)	3,609	59
Levofloxacin	83% (75-97)	2,369	58
Trimethoprim/Sulfamethoxazole	96% (94-100)	3,882	61

<i>Stenotrophomonas maltophilia</i> (n=2,469 from 75 Hospitals)			
	% Susceptible (IQR)	Number of Isolates tested	Number of hospitals
Ceftazidime	41% (23-61)	1,586	39
Levofloxacin	81% (78-91)	2,448	73
Trimethoprim/Sulfamethoxazole	93% (89-100)	2,467	75
Minocycline	99% (99-100)	1,012	17

Gram-Positive Organism Antibioqram

Data presented as: Percent Susceptible (# of Isolates Tested)	Penicillins			Cephalosporins		Tetracyclines	Quinolones		Other							# of all isolates tested (# of hospitals reporting)
	Ampicillin	Oxacillin	Penicillin	Ceftriaxone	Ceftaroline	Doxycycline	Ciprofloxacin	Levofloxacin	Clindamycin	Daptomycin	Erythromycin	Linezolid	Nitrofurantoin	Trimethoprim/ Sulfamethoxazole	Vancomycin	
<i>Enterococcus spp.</i>	90 17,867	R	71 4,189	R	R	46 864	57 3,671	71 3,035	R	89 2,193	19 3,040	99 16,405	87 13,404	R	90 18,039	18,553 51
<i>Enterococcus faecalis</i>	99 15,722	R	98 11,373	R	R	27 1,900	69 8,821	73 9,940	R	95 4,211	9 5,828	97 13,492	98 12,116	R	94 17,422	17,307 80
<i>Enterococcus faecium</i>	17 4,120	R	15 3,042	R	R	49 481	11 2,290	15 2,279	R	79 1,540	4 1,520	96 3,963	27 2,657	R	34 4,485	4,453 72
<i>Staphylococcus aureus (all)</i>	2 6,952	63 45,427	10 15,858	-	100 3,044	96 5,830	54 19,544	52 16,734	71 47,730	98 9,054	44 24,209	100 44,968	99 16,073	95 48,560	100 50,031	46,679 71
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	R	0 15,418	R	R	98 857	90 2,360	13 8,839	13 7,959	61 17,738	97 4,070	14 9,926	98 16,334	99 5,076	91 18,372	100 18,480	18,465 68
Methicillin-susceptible <i>Staphylococcus aureus</i> (MSSA)	3 3,849	99 25,794	18 8,768	-	100 2,211	97 4,354	84 10,998	85 8,843	78 28,656	99 4,321	65 12,899	99 26,807	99 7,703	97 29,084	100 29,370	29,545 61
<i>Streptococcus agalactiae</i> (Group B Strep)	84 1,207	-	100 7,521	99 557	100 86	-	-	94 845	49 7,529	100 40	46 614	100 836	-	-	100 7,865	8,290 53
<i>Streptococcus pyogenes</i> (Group A Strep)	100 412	-	99 395	100 245	-	-	-	97 164	84 442	-	87 453	100 151	-	-	100 465	479 32
<i>Streptococcus pneumoniae</i> (non-meningitis)	92 36	-	94 694	96 687	-	94 32	-	95 490	80 478	-	66 581	98 173	-	78 576	99 755	818 48
<i>Streptococcus pneumoniae</i> (meningitis)	-	-	70 404	86 455	-	-	-	-	-	-	61 84	-	-	-	-	492 29

R: Intrinsically resistant

-: Not routinely tested, not applicable and/or limited data submitted

***Enterococcus* spp.**
(n=18,553 from 51 Hospitals)

	% Susceptible (IQR)	Number of isolates tested	Number of hospitals
Ampicillin	90% (74-91)	17,867	50
Penicillin	71% (50-81)	4,189	29
Levofloxacin	71% (50-82)	3,050	29
Doxycycline	46% (38-48)	864	4
Ciprofloxacin	57% (51-79)	3,671	27
Daptomycin	88% (85-98)	2,193	17
Erythromycin	19% (10-42)	3,040	23
Linezolid	99% (97-100)	16,405	45
Nitrofurantoin	87% (71-94)	13,404	42
Vancomycin	90% (56-88)	18,039	51

Enterococcus faecalis
(n=17,307 from 80 Hospitals)

	% Susceptible (IQR)	Number of isolates tested	Number of hospitals
Ampicillin	99% (99-100)	15,722	77
Penicillin	96% (96-99)	11,373	51
Levofloxacin	73% (69-80)	9,940	58
Doxycycline	27% (20-28)	1,900	10
Ciprofloxacin	69% (62-80)	8,821	55
Daptomycin	95% (95-100)	4,211	23
Erythromycin	9% (5-13)	5,828	43
Linezolid	97% (97-100)	13,492	74
Nitrofurantoin	98% (97-100)	12,116	71
Vancomycin	94% (94-98)	17,422	80

Enterococcus faecium
(n=4,453 from 72 Hospitals)

	% Susceptible (IQR)	Number of isolates tested	Number of hospitals
Ampicillin	17% (10-27)	4,120	67
Penicillin	15% (7-27)	3,042	48
Levofloxacin	15% (7-20)	2,279	55
Doxycycline	49% (48-57)	481	10
Ciprofloxacin	11% (5-16)	2,290	52
Daptomycin	79% (39-97)	1,540	22
Erythromycin	4% (0-5)	1,520	37
Linezolid	96% (97-100)	3,936	67
Nitrofurantoin	27% (15-40)	2,657	68
Vancomycin	34% (27-50)	4,485	72

Staphylococcus aureus (ALL) (n=49,679 from 71 Hospitals)			
	% Susceptible (IQR)	Number of isolates tested	Number of hospitals
Oxacillin	63% (46-64)	45,427	61
Penicillin	10% (0-19)	15,858	39
Doxycycline	96% (98-100)	5,830	11
Ceftaroline	100% (100-100)	3,044	5
Ciprofloxacin	54% (41-61)	19,544	44
Clindamycin	71% (61-72)	47,730	70
Daptomycin	98% (100-100)	9,054	27
Erythromycin	44% (38-48)	24,209	54
Levofloxacin	52% (45-66)	16,734	47
Linezolid	100% (100-100)	44,968	62
Nitrofurantoin	99% (99-100)	16,073	57
Trimethoprim/Sulfamethoxazole	95% (93-97)	48,560	70
Vancomycin	100% (100-100)	50,031	71

Methicillin-Resistant *Staphylococcus aureus* (MRSA)
(n=18,465 from 68 Hospitals)

	% Susceptible (IQR)	Number of isolates tested	Number of hospitals
Oxacillin	0%	15,418	53
Levofloxacin	13% (10-16)	7,959	46
Ceftaroline	98% (99-100)	857	5
Ciprofloxacin	13% (10-16)	8,839	45
Clindamycin	61% (48-61)	17,738	67
Daptomycin	97% (99-100)	4,070	27
Doxycycline	90% (86-100)	2,360	12
Erythromycin	14% (12-17)	9,926	55
Linezolid	98% (100-100)	16,464	55
Nitrofurantoin	99% (99-100)	5,076	60
Trimethoprim/Sulfamethoxazole	91% (89-95)	18,372	67
Vancomycin	100% (100-100)	18,480	68

Methicillin-Susceptible *Staphylococcus aureus* (MSSA)
(n=29,545 from 61 Hospitals)

	% Susceptible (IQR)	Number of isolates tested	Number of hospitals
Oxacillin	99% (100-100)	25,794	48
Penicillin	18% (0-27)	8,768	34
Levofloxacin	85% (80-90)	8,843	45
Doxycycline	97% (92-100)	4,354	12
Ceftaroline	100% (100-100)	2,211	5
Ciprofloxacin	84% (81-88)	10,998	40
Clindamycin	78% (72-80)	28,656	61
Daptomycin	99% (99-100)	4,321	17
Erythromycin	65% (61-69)	12,899	51
Linezolid	99% (100-100)	26,807	51
Nitrofurantoin	99% (100-100)	7,703	55
Trimethoprim/Sulfamethoxazole	97% (96-99)	29,084	59
Vancomycin	100% (100-100)	29,370	61

<i>Streptococcus agalactiae</i> (Group B <i>Streptococcus</i>) (n=8,290 from 53 Hospitals)			
	% Susceptible (IQR)	Number of isolates tested	Number of hospitals
Penicillin	100% (100-100)	7,521	38
Ceftriaxone	99% (100-100)	557	26
Ceftaroline	100% (100-100)	86	1
Levofloxacin	94% (92-100)	845	37
Clindamycin	49% (7-51)	7,529	44
Daptomycin	100% (100-100)	40	2
Erythromycin	46% (24-52)	614	29
Linezolid	100% (100-100)	836	28
Vancomycin	100% (100-100)	7,865	53

<i>Streptococcus pyogenes</i> (Group A <i>Streptococcus</i>) (n=479 from 32 Hospitals)			
	% Susceptible (IQR)	Number of isolates tested	Number of hospitals
Ampicillin	100% (100-100)	412	24
Penicillin	99% (100-100)	395	24
Ceftriaxone	100% (100-100)	245	26
Levofloxacin	97% (100-100)	164	24
Clindamycin	84% (86-100)	442	27
Erythromycin	87% (80-100)	453	30
Linezolid	100% (100-100)	151	19
Vancomycin	100% (100-100)	465	32

<i>Streptococcus pneumoniae</i> (n=1,310 from 48 Hospitals)			
	% Susceptible (IQR)	Number of Isolates tested	Number of Hospitals
Ampicillin	92% (89-100)	36	4
Penicillin			
Non-meningitis	94% (96-100)	694	45
Meningitis	70% (44-88)	404	27
Ceftriaxone			
Non-meningitis	96% (100-100)	687	44
Meningitis	86% (75-100)	455	28
Levofloxacin	95% (95-100)	490	36
Doxycycline	94% (93-98)	32	3
Clindamycin	80% (73-100)	478	36
Erythromycin			
Non-meningitis	66% (58-100)	581	46
Meningitis	61% (54-70)	84	8
Linezolid	98% (100-100)	173	22
Trimethoprim/Sulfamethoxazole	78% (68-100)	576	42
Vancomycin	99% (100-100)	755	48