

2017 Alaska State Antibiogram

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2017. These data were aggregated from the antibiograms produced by Alaska hospitals in order to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate “presumptive” antimicrobial therapy for their patients until specific individual laboratory test results are available. They can also be helpful for determining antibiotic stewardship priorities within hospitals and emerging resistance patterns in a broader service area.

- **Methodology:** Individual hospitals prepared their own facility antibiograms, which were shared with the Alaska Section of Epidemiology. Aggregated susceptibility percentages were calculated as the proportion of all tested isolates for the region that were susceptible. Values are only reported when more than one facility provided data for the given species-antibiotic combination. Intrinsic resistance is indicated with an “R”, following the guidance of CLSI document M100-S24.
- **Multi-Drug Resistant Organisms of Note:**
 - Vancomycin-resistant *Staphylococcus aureus* (VRSA): no cases of VRSA have ever been reported in Alaska. VRSA is reportable to the Alaska Section of Epidemiology.
 - Carbapenem-resistant Enterobacteriaceae (CRE): there were 6 cases of CRE reported in Alaska in 2017.
- **Legend:**
 - The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
 - The lower value in each square indicates the number of tested isolates for that bacteria-antibiotic combination.
 - “R” indicates intrinsic resistance to that antibiotic, while “S” indicates definitional susceptibility.
 - “NED” indicates that there was Not Enough Data to report the value: either only one facility reported data for that drug-bug combination or <30 isolates were tested.
- **Limitations:** Individual facilities often use different methods to test for antimicrobial susceptibility, different methods to build their antibiograms, and different antibiotics in their pharmacies. These factors limit interpretation of these data. Additionally, antimicrobial susceptibility testing done in the laboratory does not always predict how effective that drug will be when used to treat a patient. Data are not stratified by infection site, which influences antibiotic choice and effectiveness.
- **Contributing Facilities:** Thanks to all the hospitals in Alaska for participating in this project to the extent of their ability. These statewide data include all the hospitals used in the Regional Antibiograms, plus Fairbanks Memorial Hospital.

For more information and the methods used for the analyses, please see the “Regional Antibiogram Project — Alaska, 2014–2015” Epidemiology *Bulletin*.

Statewide data

Species	Penicillin	Ampicillin	Oxacillin	Ampicillin-sulbactam	Amoxicillin	Cefazolin	Ceftriaxone	Cefotaxime	Ciprofloxacin	Levofloxacin	Moxifloxacin	Daptomycin	Clindamycin	Erythromycin	Vancomycin	Gentamicin	Gent.Syn	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin	Quinupristin-dalfopristin	Rifampin
Total <i>Staphylococcus aureus</i>	9% (1605)	0% (186)	66% (3620)	65% (288)	67% (288)	70% (609)	64% (736)		71% (1276)	74% (1815)	84% (494)	96% (170)	84% (3616)	38% (1811)	99% (3620)	99% (2288)		98% (3620)	99% (2646)	96% (3502)	96% (2929)	99% (170)	94% (1096)
MSSA	10% (920)	0% (150)	S	99% (215)	99% (215)	99% (427)	100% (493)		89% (738)	91% (1070)	94% (349)	97% (130)	87% (2287)	67% (1068)	99% (2290)	99% (1391)		93% (2290)	99% (1807)	97% (2205)	99% (1905)	100% (130)	99% (645)
MRSA	0% (457)	0% (70)	R	0% (70)	0% (70)	NED	0% (277)		34% (379)	41% (586)	64% (179)	99% (74)	78% (1095)	20% (586)	99% (1096)	99% (740)		97% (1096)	99% (796)	96% (1063)	95% (811)	99% (74)	99% (183)
<i>Staphylococcus lugdunensis</i>	NED		88% (40)						95% (40)	98% (40)			78% (40)	78% (40)	100% (40)	100% (40)		NED	NED	100% (40)	100% (40)		
Coag-negative <i>Staphylococcus</i>	18% (348)	0% (115)	49% (822)	48% (122)	48% (122)	35% (37)	48% (341)		76% (488)	81% (665)	63% (142)	NED	62% (700)	37% (542)	99% (823)	21% (2576)		78% (527)	99% (569)	89% (757)	95% (615)	NED	99% (172)
<i>Enterococcus faecalis</i>	98% (129)	99% (299)				R	R	R	91% (218)	96% (266)		NED	R	5% (84)	99% (299)	R	86% (241)	R	99% (205)	40% (253)	96% (251)	R	48% (42)
<i>Enterococcus</i> spp.	98% (422)	99% (422)							NED	93% (369)					99% (422)		84% (265)		50% (422)		97% (369)		
Group B <i>Streptococcus</i>	100% (106)	S											57% (106)	NED	100% (106)				NED				
<i>Streptococcus pneumoniae</i> (all)	93% (68)					95% (59)	100% (59)	100% (59)		100% (237)			80% (149)	83% (141)	100% (237)			87% (144)		96% (53)			
<i>S. pneumoniae</i> - oral	77% (145)																						
<i>S. pneumoniae</i> - non-CSF	97% (133)						98% (185)	99% (133)															
<i>S pneumoniae</i> - meningitis	78% (133)						95% (185)	95% (133)															

Statewide data

Species	Amoxicillin+ clavulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Ticarcillin- calvanulanic acid	Cefazolin	Cefuroxime	Ceftriaxone	Ceftazidime	Cefepime	Cefotaxime	Cefotetan	Cefoxitin	Cephalothin	Aztreonam	Gentamicin	Tobramycin	Amikacin	Ertapenem	Imipenem	Meropenem	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Tetracycline	Nitrofurantoin	
<i>Citrobacter freundii</i>	R	R	R	87% (45)		R	R	82% (45)	82% (45)	100% (45)	NED	R	R		NED	93% (45)	96% (45)	NED	NED	NED	100% (45)	89% (45)	89% (45)	87% (45)	NED	93% (43)	
<i>Enterobacter aerogenes</i>	R	R	R	89% (35)		R	R	86% (35)	NED	NED	NED	R	R		NED	97% (35)	NED	NED	NED	NED	100% (35)	97% (35)	97% (35)	97% (35)	97% (30)	30% (30)	
<i>Enterobacter cloacae</i>	R	R	R	88% (180)		R	R	84% (180)	88% (149)	98% (134)	NED	R	R		85% (106)	89% (180)	99% (153)	100% (106)	98% (62)	97% (62)	100% (133)	99% (180)	96% (180)	93% (180)	95% (39)	47% (161)	
<i>Escherichia coli</i>	87% (3207)	57% (6602)	65% (5059)	97% (6602)	88% (642)	90% (5277)	86% (2250)	97% (6602)	97% (5485)	97% (4977)	98% (829)	100% (642)	96% (2616)	36% (642)	98% (2179)	93% (6602)	95% (5557)	99% (2250)	99% (4136)	99% (3565)	99% (3793)	86% (6602)	86% (6602)	77% (6602)	80% (1760)	97% (5110)	
<i>ESBL E. coli</i>	NED	0% (39)	NED	97% (39)		0% (39)	NED	0% (39)	0% (39)							87% (39)				NED	100% (39)	36% (39)	36% (39)	38% (39)	49% (39)	100% (37)	
<i>Klebsiella oxytoca</i>	100% (2)	NED	64% (58)	97% (58)		66% (58)	93% (56)	98% (58)	98% (56)	98% (58)	NED		NED		95% (56)	97% (58)	97% (58)	100% (56)		NED	100% (56)	98% (58)	98% (58)	93% (58)	NED	88% (58)	
<i>Klebsiella pneumoniae</i>	99% (242)	R	86% (548)	98% (548)	98% (47)	96% (538)	90% (297)	97% (538)	97% (497)	98% (484)	97% (74)	98% (47)	97% (120)	72% (47)	96% (297)	98% (538)	99% (278)	100% (297)	100% (278)	100% (211)	99% (391)	47% (1128)	98% (492)	95% (538)	96% (92)	52% (528)	
<i>Proteus mirabilis</i>	99% (170)	92% (364)	94% (303)	99% (364)	100% (63)	97% (259)	99% (126)	99% (364)	99% (324)	99% (326)	100% (51)	100% (44)	93% (163)	85% (41)	94% (126)	95% (364)	95% (326)	99% (126)	100% (251)	55% (221)	100% (187)	93% (364)	94% (364)	93% (364)	R	R	
<i>Pseudomonas aeruginosa</i>	R	R	R	98% (467)		R	R	R	92% (467)	94% (454)	R	R	R		84% (38)	88% (467)	97% (454)	95% (248)	R	59% (224)	95% (276)	87% (467)	85% (467)	R	R	R	
<i>Serratia marcescens</i>	R	R	R	16% (31)		R	R	100% (31)	100% (31)	100% (31)		R	R		100% (31)	100% (30)	93% (30)	97% (30)	NED	NED	97% (30)	97% (30)	97% (30)	100% (30)	0% (4)	R	

2017 Alaska State Antibigram: Anchorage-Mat-Su Region

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2017. These data were aggregated from the antibiograms produced by Alaska hospitals in order to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate “presumptive” antimicrobial therapy for their patients until specific individual laboratory test results are available. They can also be helpful for determining antibiotic stewardship priorities within hospitals and emerging resistance patterns in a broader service area.

- **Methodology:** Individual hospitals prepared their own facility antibiograms, which were shared with the Alaska Section of Epidemiology. Aggregated susceptibility percentages were calculated as the proportion of all tested isolates for the region that were susceptible. Values are only reported when more than one facility provided data for the given species-antibiotic combination. Intrinsic resistance is indicated with an “R”, following the guidance of CLSI document M100-S24.
- **Multi-Drug Resistant Organisms of Note:**
 - Vancomycin-resistant *Staphylococcus aureus* (VRSA): no cases of VRSA have ever been reported in Alaska. VRSA is reportable to the Alaska Section of Epidemiology.
 - Carbapenem-resistant Enterobacteriaceae (CRE): there were 4 cases of CRE in Anchorage/Mat-Su residents in 2017.
- **Legend:**
 - The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
 - The lower value in each square indicates the number of tested isolates for that bacteria-antibiotic combination.
 - “R” indicates intrinsic resistance to that antibiotic, while “S” indicates definitional susceptibility.
 - “NED” indicates that there was Not Enough Data to report the value: either only one facility reported data for that drug-bug combination or <30 isolates were tested.
- **Limitations:** Individual facilities often use different methods to test for antimicrobial susceptibility, different methods to build their antibiograms, and different antibiotics in their pharmacies. These factors limit interpretation of these data. Additionally, antimicrobial susceptibility testing done in the laboratory does not always predict how effective that drug will be when used to treat a patient. Data are not stratified by infection site, which influences antibiotic choice and effectiveness.
- **Contributing Facilities:** Thanks to the following facilities for providing data in support of this project:
 - Alaska Native Medical Center
 - Alaska Regional Hospital
 - Providence Alaska Medical Center
 - Mat-Su Regional Medical Center
 - JBER DOD/VA Hospital

**Anchorage+
Mat-Su Region**

Species	Penicillin	Ampicillin	Oxacillin	Cefazolin	Ceftriaxone	Cefotaxime	Ciprofloxacin	Levofloxacin	Clindamycin	Erythromycin	Vancomycin	Gentamicin	Gent Syn	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin
Total <i>Staphylococcus aureus</i>	15% (468)	NED	60% (2079)	NED			58% (857)	63% (389)	79% (2079)	34% (389)	99% (2079)	99% (1611)		98% (2079)		95% (1611)	99% (2079)
MSSA	NED	NED	S (210)	99% (210)			85% (454)	NED	82% (454)	NED	100% (454)	99% (999)		98% (454)		96% (999)	100% (454)
MRSA	NED	NED	R	NED			28% (403)	34% (179)	72% (836)	5% (179)	99% (836)	99% (612)		98% (836)	NED	95% (612)	99% (836)
Coag-negative <i>Staphylococcus</i>	4% (123)	NED	59% (275)	67% (70)			74% (159)	76% (125)	62% (275)	40% (125)	100% (275)	86% (241)		69% (275)	NED	89% (193)	100% (227)
<i>Enterococcus faecalis</i>	98% (108)	98% (209)		R	R	R	80% (101)	88% (101)	R	35% (101)	100% (209)	R	NED	R	NED	29% (101)	100% (176)
<i>Enterococcus</i> spp.	98% (212)	99% (212)		R	R	R	NED	93% (212)	R	NED	98% (212)	R	NED	R	NED	NED	95% (212)
<i>Streptococcus pneumoniae</i> (all)								99% (144)	72% (93)	73% (51)	100% (144)						
<i>S. pneumoniae</i> - oral	75% (108)																
<i>S. pneumoniae</i> - non-CSF	98% (144)				98% (129)	99% (144)											
<i>S pneumoniae</i> - meningitis	73% (144)				93% (129)	92% (144)											

Anchorage+ Mat-Su Region																					
Species	Amoxicillin+ clavulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Cefazolin	Cefuroxime	Ceftriaxone	Ceftazidime	Cefepime	Cefotaxime	Aztreonam	Gentamicin	Tobramycin	Amikacin	Imipenem	Meropenem	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Tetracycline	Nitrofurantoin
<i>Citrobacter freundii</i>	R	R	R	84% (45)	R	R	86% (45)	82% (45)	100% (45)	NED	NED	91% (45)	91% (45)	100% (34)		100% (34)	96% (45)	96% (45)	89% (45)	NED	NED
<i>Enterobacter spp.</i>	R	R	R	89% (72)	R	R	92% (102)	94% (102)	99% (72)	NED	77% (72)	99% (102)	98% (54)	100% (54)		100% (17)	96% (102)	97% (102)	94% (102)	NED	62% (78)
<i>Enterobacter cloacae</i>	R	R	R	85% (197)	R	R	81% (197)	84% (151)	98% (197)	81% (106)	83% (151)	98% (197)	98% (197)	100% (151)		100% (197)	97% (197)	98% (197)	95% (197)	94% (106)	47% (106)
<i>Escherichia coli</i>	84% (1448)	55% (2869)	61% (3369)	96% (2447)	89% (3369)	86% (3369)	94% (3369)	95% (2447)	96% (3369)	92% (1448)	95% (2447)	93% (3369)	94% (3369)	100% (1947)	100% (526)	100% (2869)	84% (3369)	84% (3369)	80% (3369)	80% (1448)	97% (3369)
<i>Klebsiella oxytoca</i>	NED		59% (105)	93% (105)	76% (82)	90% (105)	96% (105)	99% (105)	99% (105)	NED	95% (105)	98% (105)	97% (78)	100% (78)		100% (78)	98% (105)	98% (105)	47% (105)	NED	90% (105)
<i>Klebsiella pneumoniae</i>	93% (217)	R	85% (548)	93% (548)	94% (548)	93% (548)	97% (440)	97% (436)	97% (548)	99% (217)	97% (436)	80% (545)	97% (440)	100% (328)	100% (105)	99% (328)	79% (548)	73% (543.5)	90% (548)	83% (217)	52% (548)
<i>Proteus mirabilis</i>	96% (85)	86% (160)	91% (186)	100% (186)	96% (186)	95% (186)	99% (186)	100% (144)	100% (186)	99% (85)	97% (144)	96% (186)	96% (186)	100% (118)		100% (160)	87% (186)	88% (186)	86% (186)	R	R
<i>Pseudomonas aeruginosa</i>	R	R	R	96% (351)			R	90% (351)	95% (290)	R	43% (141)	92% (351)	97% (351)	96% (290)	92% (80)	95% (290)	86% (351)	85% (351)	R	R	R
<i>Serratia marcescens</i>							98% (44)	98% (44)	100% (44)		100% (44)	100% (44)	95% (44)	98% (44)		98% (44)	95% (44)	95% (44)	100% (44)	NED	

2017 Alaska State Antibigram: Gulf Coast Region

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2017. These data were aggregated from the antibiograms produced by Alaska hospitals in order to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate “presumptive” antimicrobial therapy for their patients until specific individual laboratory test results are available. They can also be helpful for determining antibiotic stewardship priorities within hospitals and emerging resistance patterns in a broader service area.

- **Methodology:** Individual hospitals prepared their own facility antibiograms, which were shared with the Alaska Section of Epidemiology. Aggregated susceptibility percentages were calculated as the proportion of all tested isolates for the region that were susceptible. Values are only reported when more than one facility provided data for the given species-antibiotic combination. Intrinsic resistance is indicated with an “R”, following the guidance of CLSI document M100-S24.
- **Multi-Drug Resistant Organisms of Note:**
 - Vancomycin-resistant *Staphylococcus aureus* (VRSA): no cases of VRSA have ever been reported in Alaska. VRSA is reportable to the Alaska Section of Epidemiology.
 - Carbapenem-resistant Enterobacteriaceae (CRE): there was 1 case of CRE in a Gulf Coast resident in 2017.
- **Legend:**
 - The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
 - The lower value in each square indicates the number of tested isolates for that bacteria-antibiotic combination.
 - “R” indicates intrinsic resistance to that antibiotic, while “S” indicates definitional susceptibility.
 - “NED” indicates that there was Not Enough Data to report the value: either only one facility reported data for that drug-bug combination or <30 isolates were tested.
- **Limitations:** Individual facilities often use different methods to test for antimicrobial susceptibility, different methods to build their antibiograms, and different antibiotics in their pharmacies. These factors limit interpretation of these data. Additionally, antimicrobial susceptibility testing done in the laboratory does not always predict how effective that drug will be when used to treat a patient. Data are not stratified by infection site, which influences antibiotic choice and effectiveness.
- **Contributing Facilities:** Thanks to the following facilities for providing data in support of this project:
 - Central Peninsula Hospital
 - South Peninsula Hospital

**Gulf Coast
Region data**

Species	Penicillin	Ampicillin	Oxacillin	Ampicillin-sulbactam	Amoxicillin-clavulanate	Ceftriaxone	Ciprofloxacin	Levofloxacin	Daptomycin	Clindamycin	Erythromycin	Vancomycin	Gentamicin	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin	Rifampin
Total <i>Staphylococcus aureus</i>	7% (405)	NED	74% (358)	69% (150)	69% (150)	64% (255)	58% (405)	61% (405)	NED	88% (405)	47% (405)	99% (405)	NED	99% (405)	99% (405)	96% (405)	99% (405)	99% (405)
MSSA	11% (265)	NED	S	NED	NED	NED	80% (265)	83% (265)	NED	91% (265)	68% (265)	99% (265)	NED	100% (265)	100% (265)	96% (265)	100% (265)	99% (265)
MRSA	0% (140)	NED	R	NED	NED	NED	17% (140)	20% (140)	NED	81% (140)	9% (140)	99% (140)	NED	98% (140)	100% (140)	96% (140)	100% (140)	99% (140)
<i>Staphylococcus epidermidis</i>	8% (131)		46% (131)	NED	NED	NED	64% (131)	65% (131)	NED	58% (131)	34% (131)	100% (131)	NED	50% (131)	100% (131)	90% (131)	100% (131)	100% (131)
<i>Enterococcus faecalis</i>	99% (181)	100% (181)				R	72% (181)	89% (181)	NED	R	NED	100% (181)	R	R	97% (181)	27% (181)	100% (181)	NED
Group B <i>Streptococcus</i>	100% (29)	S								50% (29)	46% (29)	100% (29)			NED	NED		
<i>Streptococcus pneumoniae</i>	33% (18)							NED		NED	NED	NED		NED		NED		

Gulf Coast Region data	Amoxicillin+ clavulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Cefazolin	Cefuroxime	Ceftriaxone	Ceftazidime	Cefepime	Gentamicin	Tobramycin	Amikacin	Imipenem	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Tetracycline	Nitrofurantoin
<i>Escherichia coli</i>	89% (866)	62% (866)	66% (866)	99% (866)	92% (866)	97% (866)	99% (866)	99% (866)	NED	93% (866)	94% (866)	NED	NED	87% (866)	87% (866)	81% (866)	NED	98% (723)
<i>Klebsiella pneumoniae</i>	94% (134)	R	84% (134)	99% (134)	93% (134)	92% (134)	99% (134)	99% (134)	NED	32% (134)	99% (134)	NED	NED	99% (134)	99% (134)	98% (134)	NED	51% (118)
<i>Proteus mirabilis</i>	97% (58)	86% (58)	91% (58)	100% (58)	91% (58)	97% (58)	100% (58)	100% (58)	NED	95% (58)	95% (58)	100% (32)	NED	95% (58)	100% (58)	98% (58)	R	R
<i>Pseudomonas aeruginosa</i>	R	R	R	100% (69)	R	R	R	100% (69)	99% (69)	94% (69)	96% (69)	NED	NED	83% (69)	84% (69)	R	R	R

2017 Alaska State Antibiogram: Northern Region

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2017. These data were aggregated from the antibiograms produced by Alaska hospitals in order to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate “presumptive” antimicrobial therapy for their patients until specific individual laboratory test results are available. They can also be helpful for determining antibiotic stewardship priorities within hospitals and emerging resistance patterns in a broader service area.

- **Methodology:** Individual hospitals prepared their own facility antibiograms, which were shared with the Alaska Section of Epidemiology. Aggregated susceptibility percentages were calculated as the proportion of all tested isolates for the region that were susceptible. Values are only reported when more than one facility provided data for the given species-antibiotic combination. Intrinsic resistance is indicated with an “R”, following the guidance of CLSI document M100-S24.
- **Multi-Drug Resistant Organisms of Note:**
 - Vancomycin-resistant *Staphylococcus aureus* (VRSA): no cases of VRSA have ever been reported in Alaska. VRSA is reportable to the Alaska Section of Epidemiology.
 - Carbapenem-resistant Enterobacteriaceae (CRE): there were no cases of CRE reported in the Northern Region in 2017
- **Legend:**
 - The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
 - The lower value in each square indicates the number of tested isolates for that bacteria-antibiotic combination.
 - “R” indicates intrinsic resistance to that antibiotic, while “S” indicates definitional susceptibility.
 - “NED” indicates that there was Not Enough Data to report the value: either only one facility reported data for that drug-bug combination or <30 isolates were tested.
- **Limitations:** Individual facilities often use different methods to test for antimicrobial susceptibility, different methods to build their antibiograms, and different antibiotics in their pharmacies. These factors limit interpretation of these data. Additionally, antimicrobial susceptibility testing done in the laboratory does not always predict how effective that drug will be when used to treat a patient. Data are not stratified by infection site, which influences antibiotic choice and effectiveness.
- **Contributing Facilities:** Thanks to the following facilities for providing data in support of this project:
 - Maniilaq Health Center
 - Norton Sound Health Center

**Northern
Region data**

Species	Amoxicillin-clavulanic acid	Ampicillin	Ampicillin-sulbactam	Oxacillin	Ciprofloxacin	Levofloxacin	Clindamycin	Erythromycin	Vancomycin	Gentamicin	Gent Syn	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin	Rifampin
Total <i>Staphylococcus aureus</i>			NED	75% (426)	NED	NED	82% (426)	NED	94% (426)	NED		99% (426)	99% (426)	NED	71% (426)	99% (426)
MSSA	NED		NED	S	NED	NED	88% (321)	NED	94% (321)	NED		100% (321)	99% (321)	NED	74% (321)	99% (321)
MRSA	NED	NED	NED	R		NED	67% (109)	NED	95% (109)	NED		98% (109)	100% (109)	NED	63% (109)	99% (109)
Coag negative <i>Staphylococcus</i>		NED	NED	43% (75)	84% (75)	NED	35% (75)	NED	96% (75)	97% (75)		76% (75)	97% (75)	NED	57% (75)	97% (75)
<i>Enterococcus faecalis</i>		97% (31)			90% (31)	94% (31)	R	NED	100% (31)		90% (31)	R	97% (31)	NED	90% (31)	NED

**Northern
Region data**

Species	Amoxicillin+ clavulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Ticarcillin-clavulanic acid	Cefazolin	Ceftriaxone	Ceftazidime	Cefepime	Cefotetan	Gentamicin	Tobramycin	Ertapenem	Imipenem	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Nitrofurantoin
<i>Escherichia coli</i>	86% (735)	53% (735)	60% (735)	98% (735)	88% (365)	91% (735)	97% (735)	97% (735)	97% (735)	NED	94% (735)	96% (735)	100% (735)	100% (735)	86% (735)	86% (735)	77% (735)	96% (735)
<i>Klebsiella pneumoniae</i>	98% (59)	R	93% (59)	100% (69)	NED	98% (59)	100% (59)	98% (59)	100% (59)	NED	98% (59)	97% (59)	100% (59)	100% (59)	98% (59)	97% (59)	98% (59)	63% (59)
<i>Proteus mirabilis</i>	100% (36)	92% (36)	94% (36)	100% (36)	NED	100% (36)	100% (36)	100% (36)	100% (36)	89% (45)	89% (36)	92% (36)	100% (36)	94% (36)	86% (36)	89% (36)	92% (36)	R
<i>Pseudomonas aeruginosa</i>	R	R	R	97% (39)			R	97% (39)	95% (39)	NED	90% (39)	95% (39)		97% (39)	90% (39)	90% (39)	R	R

2017 Alaska State Antibiogram: Southeast Region

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2017. These data were aggregated from the antibiograms produced by Alaska hospitals in order to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate “presumptive” antimicrobial therapy for their patients until specific individual laboratory test results are available. They can also be helpful for determining antibiotic stewardship priorities within hospitals and emerging resistance patterns in a broader service area.

- **Methodology:** Individual hospitals prepared their own facility antibiograms, which were shared with the Alaska Section of Epidemiology. Aggregated susceptibility percentages were calculated as the proportion of all tested isolates for the region that were susceptible. Values are only reported when more than one facility provided data for the given species-antibiotic combination. Intrinsic resistance is indicated with an “R”, following the guidance of CLSI document M100-S24.
- **Multi-Drug Resistant Organisms of Note:**
 - Vancomycin-resistant *Staphylococcus aureus* (VRSA): no cases of VRSA have ever been reported in Alaska. VRSA is reportable to the Alaska Section of Epidemiology.
 - Carbapenem-resistant Enterobacteriaceae (CRE): there was 0 case of CRE reported in a Southeast resident in 2017.
- **Legend:**
 - The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
 - The lower value in each square indicates the number of tested isolates for that bacteria-antibiotic combination.
 - “R” indicates intrinsic resistance to that antibiotic, while “S” indicates definitional susceptibility.
 - “NED” indicates that there was Not Enough Data to report the value: either only one facility reported data for that drug-bug combination or <30 isolates were tested.
- **Limitations:** Individual facilities often use different methods to test for antimicrobial susceptibility, different methods to build their antibiograms, and different antibiotics in their pharmacies. These factors limit interpretation of these data. Additionally, antimicrobial susceptibility testing done in the laboratory does not always predict how effective that drug will be when used to treat a patient. Data are not stratified by infection site, which influences antibiotic choice and effectiveness.
- **Contributing Facilities:** Thanks to the following facilities for providing data in support of this project:
 - Bartlett Regional Hospital
 - Peacehealth Ketchikan Medical Center
 - SEARHC
 - Petersburg Medical Center
 - Sitka Community Hospital
 - Wrangell Medical Center

**Southeast
Region data**

Species	Penicillin	Ampicillin	Oxacillin	Ampicillin-sulbactam	Amoxicillin- k-clavulanate	Ceftriaxone	Ciprofloxacin	Levofloxacin	Daptomycin	Clindamycin	Erythromycin	Vancomycin	Gentamicin	Gent Syn	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin	Quinupristin-dalfopristin	Rifampin	Moxifloxacin
Total <i>Staphylococcus aureus</i>	21% (304)	NED	67% (789)	NED	NED	NED	73% (514)	74% (514)	NED	85% (785)	54% (510)	99% (789)	99% (304)		99% (789)	99% (354)	96% (789)	99% (714)	100% (79)	90% (579)	78% (285)
MSSA	22% (76)		S (76)	97% (76)	100% (76)	100% (76)	89% (226)	90% (226)	99% (76)	89% (418)	72% (224)	100% (421)	96% (90)		98% (421)	100% (270)	97% (421)	99% (358)	100% (76)	100% (270)	93% (210)
MRSA	0% (37)	0% (37)	R (37)	0% (37)	0% (37)	0% (37)	36% (129)	50% (96)	97% (37)	72% (213)	24% (129)	99% (214)	100% (57)		97% (214)	100% (121)	97% (214)	99% (171)	100% (37)	100% (121)	52% (109)
<i>Staphylococcus epidermidis</i>	NED		41% (35)				71% (35)			NED	NED	100% (35)	NED		NED	NED	71% (35)	100% (35)			
<i>Enterococcus faecalis</i>	97% (31)	100% (183)		NED		R	91% (183)	96% (183)	NED	R	5% (61)	99% (183)	R	87% (177)	R	100% (137)	44% (183)	98% (174)	0% (0)	NED	NED
Coagulase-negative <i>Staphylococcus</i>			33% (89)				83% (90)	NED		64% (81)		100% (90)			72% (90)	100% (90)	87% (90)	100% (42)		100% (90)	

**Southeast
Region data**

Species	Amoxicillin+ clavulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Cefazolin	Cefuroxime	Ceftriaxone	Ceftazidime	Cefepime	Cefotaxime	Cefoxitin	Aztreonam	Gentamicin	Tobramycin	Amikacin	Ertapenem	Imipenem	Meropenem	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Tetracycline	Tigecycline	Nitrofurantoin
<i>Escherichia coli</i>	87% (1150)	60% (1683)	69% (1185)	97% (1683)	93% (1683)	94% (187)	95% (1683)	95% (1611)	96% (1103)	98% (187)	95% (533)	95% (187)	95% (1683)	95% (1683)	99% (187)	99% (1683)	99% (1112)	99% (685)	87% (1683)	87% (1683)	76% (1683)	NED	100% (187)	98% (1667)
<i>Enterobacter cloacae</i>					NED		91% (32)	93% (28)	NED				100% (32)						100% (32)	81% (32)	91% (32)			
<i>Klebsiella pneumoniae</i>	98% (126)	R	92% (142)	99% (199)	97% (199)	NED	97% (199)	98% (195)	98% (182)	NED	99% (73)	NED	99% (199)	99% (199)	NED	100% (199)	100% (132)	99% (84)	99% (199)	99% (153)	96% (199)	NED		56% (198)
<i>Proteus mirabilis</i>	97% (69)	87% (83)	93% (60)	100% (83)	94% (83)	NED	98% (83)	98% (81)	98% (83)	NED	NED	NED	94% (83)	94% (83)	NED	100% (83)	91% (53)	100% (30)	93% (83)	93% (83)	86% (83)	R		R
<i>Pseudomonas aeruginosa</i>	R	R	R	99% (100)	NED		R	91% (100)	94% (100)	R		NED	82% (100)	98% (100)	NED	NED	51% (80)	NED	85% (100)	82% (100)	R	R		R

2017 Alaska State Antibigram: Southwest Region

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2017. These data were aggregated from the antibiograms produced by Alaska hospitals in order to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate “presumptive” antimicrobial therapy for their patients until specific individual laboratory test results are available. They can also be helpful for determining antibiotic stewardship priorities within hospitals and emerging resistance patterns in a broader service area.

- **Methodology:** Individual hospitals prepared their own facility antibiograms, which were shared with the Alaska Section of Epidemiology. Aggregated susceptibility percentages were calculated as the proportion of all tested isolates for the region that were susceptible. Values are only reported when more than one facility provided data for the given species-antibiotic combination. Intrinsic resistance is indicated with an “R”, following the guidance of CLSI document M100-S24.
- **Multi-Drug Resistant Organisms of Note:**
 - Vancomycin-resistant *Staphylococcus aureus* (VRSA): no cases of VRSA have ever been reported in Alaska. VRSA is reportable to the Alaska Section of Epidemiology.
 - Carbapenem-resistant Enterobacteriaceae (CRE): there were 0 cases of CRE reported in Southwest residents in 2017.
- **Legend:**
 - The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
 - The lower value in each square indicates the number of tested isolates for that bacteria-antibiotic combination.
 - “R” indicates intrinsic resistance to that antibiotic, while “S” indicates definitional susceptibility.
 - “NED” indicates that there was Not Enough Data to report the value: either only one facility reported data for that drug-bug combination or <30 isolates were tested.
- **Limitations:** Individual facilities often use different methods to test for antimicrobial susceptibility, different methods to build their antibiograms, and different antibiotics in their pharmacies. These factors limit interpretation of these data. Additionally, antimicrobial susceptibility testing done in the laboratory does not always predict how effective that drug will be when used to treat a patient. Data are not stratified by infection site, which influences antibiotic choice and effectiveness.
- **Contributing Facilities:** Thanks to the following facilities for providing data in support of this project:
 - Yukon-Kuskokwim Health Center
 - Bristol Bay Area Health Center

**Southwest
Region data**

Species	Penicillin	Ampicillin	Cefotaxime	Ceftriaxone	Cefuroxime	Oxacillin	Levofloxacin	Clindamycin	Erythromycin	Vancomycin	Trimethoprim-sulfamethoxazole	Tetracycline	Nitrofurantoin
Total <i>Staphylococcus aureus</i>	11% (630)	NED		NED		62% (630)	76% (630)	93% (630)	14% (630)	99% (630)	99% (630)	98% (630)	NED
MSSA	18% (386)	NED				S	92% (386)	91% (386)	62% (386)	99% (386)	99% (386)	99% (386)	19% (64)
MRSA	NED	NED				R	50% (244)	97% (244)	26% (244)	99% (244)	100% (244)	97% (244)	NED
<i>Enterococcus faecalis</i>	98% (52)	100% (52)					98% (52)		NED	100% (52)		23% (52)	96% (46)
<i>Streptococcus pneumoniae</i>	98% (45)		100% (45)	100% (45)	96% (45)		100% (45)	93% (42)	90% (42)	100% (45)	87% (45)	96% (45)	

Southwest Region data												
Species	Amoxicillin+ clavulanic acid	Ampicillin	Piperacillin+Tazobactam	Cefazolin	Ceftriaxone	Gentamicin	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Tetracycline	Nitrofurantoin	Meropenem
<i>Enterobacter cloacae</i>	0% (31)	0% (31)	84% (31)	0% (31)	77% (31)	45% (31)	100% (31)	100% (31)	97% (31)	94% (31)	NED	100% (31)
<i>Escherichia coli</i>	87% (1322)	49% (1322)	97% (1322)	89% (1322)	98% (1322)	89% (1322)	83% (1322)	84% (1322)	73% (1322)	78% (1322)	98% (1287)	99% (1322)
<i>Klebsiella pneumoniae</i>	98% (57)	0% (57)	98% (57)	96% (57)	100% (57)	100% (57)	96% (57)	98% (57)	98% (57)	93% (55)	44% (48)	100% (57)
<i>Proteus mirabilis</i>	100% (65)	98% (65)	95% (65)	100% (65)	100% (65)	100% (65)	100% (65)	100% (65)	98% (65)	0% (65)	0% (65)	100% (65)