2024 Alaska State Antibiogram

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2024. These data were aggregated from the antibiograms produced by Alaska hospitals to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate empiric 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 and when at least 30 total isolates are included. Intrinsic resistance is indicated with an "R", following the guidance of CLSI document M100-S24. Tribal health facilities and many smaller hospitals customarily include both inpatient and outpatient isolates, while some hospitals may only include inpatients.
- **Multi-Drug Resistant Organisms of Note:**
  - Vancomycin-resistant *Staphylococcus aureus* (VRSA): no cases of VRSA have ever been reported in Alaska. VRSA stopped being reportable to Section of Epidemiology in 2023.
  - Carbapenem-resistant Enterobacterales (CRE): there were 29 cases of CRE reported in 2024. Two were carbapenemase-producing, which are described in the Region sections.
  - Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA): there were 34 cases of CRPA reported in 2024. None were carbapenemase-producing.
  - Carbapenem-resistant *Acinetobacter baumanii* (CRAB): No cases of CRAB were reported in 2024.
  - *Candida auris:* One case of *C. auris* was identified in an Alaska resident.
- **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*.

Species	Penicillin	Ampicillin	Oxacillin	Ampicillin-sulbactam	Amoxicillin	Cefazolin	Ceftriaxone	Cefotaxime	Ciprofloxacin	Levofloxacin	Moxifloxacin	Daptomycin	Clindamycin	Erythromycin	Gentamicin	Gent Syn	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin	Streptomycin Syn	Rifampin	Tigecycline
Total *Staphylococcus aureus*	**9%** (263)		**52%** (4750)	**61%** (111)	**62%** (111)	**62%** (2239)	NED		**77%** (2985)	**70%** (4906)	**69%** (1765)	**99%** (2192)	**83%** (5077)	**53%** (2473)	**99%** (3908)		**97%** (5184)	**99%** (5003)	**95%** (5069)	**99%** (3185)		**99%** (2364)	
MSSA	**18%** (278)		**S**	**99%** (218)	**100%** (218)		**100%** (118)		**87%** (1649)	**90%** (2673)	**99%** (863)	**100%** (1145)	**87%** (2727)	**70%** (1212)	**99%** (2062)		**98%** (2761)	**99%** (2405)	**95%** (2703)	**100%** (1326)		**93%** (1145)	
MRSA	**0%** (60)		**R**						**25%** (793)	**27%** (1361)	**29%** (573)	**100%** (720)	**77%** (1527)	**18%** (747)	**99%** (1092)		**96%** (1596)	**100%** (1491)	**93%** (1539)	**100%** (794)		**99%** (720)	
Staphylococcus lugdunensis			**84%** (189)			**81%** (110)			**99%** (154)	**100%** (189)			**81%** (187)	**82%** (152)	**100%** (189)		**99%** (189)	**100%** (189)	**97%** (189)	**100%** (140)			
Coag-negative *Staphylococcus* (inc. *S. epidermidis*)	**9%** (302)		**49%** (1314)	**47%** (175)		**44%** (657)	**44%** (405)		**80%** (942)	**84%** (1178)		**99%** (418)	**63%** (925)	**38%** (337)	**94%** (875)		**71%** (942)	**99%** (1266)	**85%** (1295)	**97%** (856)		**99%** (478)	**92%** (136)
Enterococcus faecalis	**99%** (991)	**99%** (1279)				**R**	**R**	**R**	**91%** (1124)	**96%** (1297)	**93%** (215)	**83%** (672)	**R**	**12%** (617)	**R**	**87%** (835)	**R**	**99%** (1257)	**28%** (1252)	**99%** (1199)	**95%** (244)		**100%** (343)
Enterococcus spp. (inc. *E. faecium*)	**88%** (74)	**61%** (38)							**75%** (55)	**70%** (82)						**97%** (29)		**100%** (38)	**45%** (74)	**70%** (64)			
Group B *Streptococcus*	**100%** (118)	**S**					**100%** (45)	**100%** (45)		**98%** (101)			**56%** (107)					**100%** (90)	**34%** (101)				
Streptococcus pneumoniae (all)	**93%** (73)						**100%** (68)			**99%** (185)			**98%** (102)	**88%** (108)			**77%** (141)	**100%** (112)	**93%** (96)				
S. pneumoniae -oral	**92%** (112)																						
S. pneumoniae - non-CSF	**100%** (288)						**100%** (215)	NED															
S pneumoniae - meningitis	**87%** (327)						**99%** (288)																

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

Species	Amoxicillin+ clavulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Cefazolin	Cefuroxime	Ceftriaxone	Ceftazidime	Cefepime	Cefoxitin	Cephalothin	Aztreonam	Gentamicin	Tobramycin	Amikacin	Ertapenem	Imipenem	Meropenem	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Tetracycline	Nitrofurantoin
Acinetobacter baumanii			**100%** (33)	**85%** (33)				**82%** (33)					**100%** (33)	**100%** (33)				**100%** (33)	**100%** (33)	**100%** (33)	**91%** (33)		
Citrobacter freundii	**R**	**R**	**R**	**88%** (120)	**R**	**R**	**83%** (120)	**83%** (120)	**99%** (120)	**R**		**77%** (73)	**92%** (120)	**85%** (120)	**100%** (53)	**100%** (86)	**98%** (86)	**100%** (73)	**94%** (120)	**94%** (100)	**86%** (120)	**77%** (39)	**97%** (115)
Klebsiella aerogenes	**R**	**R**	**R**	**81%** (154)	**R**	**R**	**79%** (165)	**82%** (154)	**98%** (152)	**R**		**79%** (101)	**100%** (165)	**99%** (113)	**100%** (101)			**100%** (140)	**96%** (165)	**96%** (133)	**99%** (154)	**97%** (62)	**38%** (80)
Enterobacter cloacae	**R**	**R**	**R**	**88%** (339)	**R**	**R**	**81%** (325)	**89%** (351)	**96%** (359)	**R**		**78%** (112)	**99%** (371)	**99%** (276)	**100%** (68)	**92%** (288)	**95%** (288)	**99%** (163)	**99%** (361)	**99%** (276)	**96%** (371)	**92%** (160)	**47%** (336)
Escherichia coli	**88%** (5415)	**59%** (10588)	**69%** (9457)	**97%** (9997)	**91%** (8202)	**89%** (1972)	**95%** (10377)	**97%** (9585)	**97%** (9997)	**95%** (4647)	**75%** (1651)	**95%** (4893)	**92%** (10214)	**94%** (8167)	**99%** (3872)	**99%** (6149)	**99%** (5487)	**99%** (4288)	**85%** (10156)	**83%** (8863)	**80%** (10588)	**82%** (4396)	**98%** (10310)
Klebsiella oxytoca	**93%** (155)		**78%** (306)	**94%** (306)	**69%** (101)	**96%** (55)	**96%** (306)	**99%** (306)	**99%** (306)	**87%** (107)		**96%** (208)	**99%** (306)	**98%** (258)	**100%** (156)	**100%** (157)	**98%** (157)	**100%** (257)	**97%** (306)	**99%** (206)	**93%** (306)		**92%** (262)
Klebsiella pneumoniae	**98%** (595)	**R**	**88%** (1202)	**95%** (1322)	**96%** (1038)	**97%** (152)	**96%** (1162)	**97%** (1322)	**96%** (1297)	**98%** (551)		**97%** (675)	**98%** (1322)	**98%** (1083)	**99%** (515)	**100%** (758)	**100%** (672)	**99%** (845)	**95%** (1277)	**92%** (1171)	**93%** (1356)	**87%** (412)	**47%** (1251)
Proteus mirabilis	**97%** (340)	**89%** (716)	**93%** (716)	**99%** (783)	**93%** (591)	**96%** (100)	**97%** (712)	**97%** (714)	**97%** (707)	**93%** (224)		**99%** (309)	**96%** (727)	**96%** (598)	**100%** (294)	**100%** (430)	**62%** (208)	**100%** (467)	**92%** (729)	**92%** (666)	**90%** (723)	**R**	**R**
Pseudomonas aeruginosa	**R**	**R**	**R**	**94%** (880)	**R**	**R**	**R**	**95%** (880)	**91%** (859)	**R**		NED	**89%** (354)	**97%** (721)	**99%** (208)	**R**	**81%** (410)	**95%** (608)	**86%** (846)	**82%** (768)	**R**	**R**	**R**
Serratia marcescens	**R**	**R**	**R**	**100%** (60)	**R**	**R**	**95%** (77)	**97%** (77)	**99%** (77)	**R**		**97%** (77)	**100%** (77)	**86%** (77)				**100%** (76)	**97%** (77)	**97%** (77)	**100%** (77)		**R**

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

2024 Alaska State Antibiogram: **Anchorage-Mat-Su Region**

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2024. These data were aggregated from the antibiograms produced by Alaska hospitals to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate empiric 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 stopped being reportable to Section of Epidemiology in 2023.
  - Carbapenem-resistant Enterobacterales (CRE): there were 12 cases of CRE reported in Anchorage/Mat-Su residents in 2024. Two were carbapenemase-producing, both NDM+ *E. coli.*
  - Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA): there were 20 cases of CRPA reported in Anchorage/Mat-Su residents in 2024. None were carbapenemase-producing.
- **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

Species	Penicillin	Ampicillin	Oxacillin	Ceftriaxone	Cefotaxime	Levofloxacin	Clindamycin	Vancomycin	Gentamicin	Gent Syn	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin
Total *Staphylococcus aureus*			**41%** (2865)			**68%** (2865)	**83%** (2808)	**99%** (2865)	**99%** (2808)		**96%** (2865)	**99%** (2807)	**95%** (2750)	**100%** (1361)
MSSA			**S**			**92%** (1846)	**87%** (1846)	**100%** (1846)	**99%** (1846)		**97%** (1846)	**100%** (1788)	**95%** (1788)	**100%** (865)
MRSA			**R**			**28%** (1123)	**75%** (1066)	**99%** (1123)	**99%** (1066)		**95%** (1123)	**99%** (1123)	**93%** (1066)	**100%** (569)
Coag-negative *Staphylococcus*			**54%** (200)			**86%** (200)	**67%** (200)	**100%** (200)	**94%** (200)		**75%** (200)	**100%** (200)	**89%** (200)	NED
Staphylococcus epidermidis			**45%** (255)			**82%** (255)	NED	**100%** (255)	NED		NED	**100%** (255)		
Enterococcus faecalis	**99%** (310)	**100%** (355)		**R**	**R**	**96%** (355)	**R**	**68%** (355)	**R**	**85%** (310)	**R**	**100%** (355)	**22%** (310)	**99%** (260)
Streptococcus pneumoniae (all)				NED		**99%** (117)		**100%** (117)						
S. pneumoniae - non-CSF	**100%** (202)													
S pneumoniae - meningitis	**90%** (202)			**100%** (202)	**99%** (202)									
Staphylococcus lugdunensis			**82%** (131)			**100%** (131)	**79%** (131)	**100%** (131)	**100%** (131)		**98%** (131)	**100%** (131)	**98%** (131)	

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

Species	Amoxicillin+ clavulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Cefazolin	Ceftriaxone	Ceftazidime	Cefepime	Aztreonam	Gentamicin	Tobramycin	Amikacin	Meropenem	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Nitrofurantoin
Acinetobacter baumanii			**100%** (33)	**85%** (33)			**82%** (33)			**100%** (33)	**100%** (33)		**100%** (33)	**100%** (33)	**100%** (33)	**91%** (33)	
Citrobacter freundii	**R**	**R**	**R**	**77%** (53)	**R**	**75%** (53)	**75%** (53)	**98%** (53)	**77%** (53)	**87%** (53)	**75%** (53)		**100%** (53)	**94%** (53)	**89%** (53)	**87%** (53)	**94%** (48)
Enterobacter cloacae	**R**	**R**	**R**	**79%** (177)	**R**	**72%** (68)	**80%** (177)	**98%** (177)	**79%** (177)	**98%** (177)	**98%** (177)	**100%** (177)	**99%** (177)	**97%** (177)	**94%** (177)	**95%** (177)	**50%** (111)
Escherichia coli	**87%** (2083)	**54%** (4304)	**67%** (3872)	**96%** (4304)	**91%** (4086)	**93%** (4304)	**97%** (4304)	**97%** (4304)		**91%** (4304)	**93%** (3872)	**99%** (3872)		**84%** (3872)	**81%** (4304)	**78%** (4304)	**97%** (4086)
Klebsiella aerogenes				**72%** (101)		**74%** (101)	**79%** (101)	**100%** (101)	**79%** (101)	**100%** (101)	**100%** (101)	**100%** (101)	**100%** (101)	**95%** (101)	**95%** (101)	**100%** (101)	NED
Klebsiella oxytoca			**76%** (156)	**89%** (156)		**93%** (156)	**100%** (156)	**100%** (156)	**94%** (156)	**99%** (156)	**98%** (156)	**100%** (156)	**100%** (156)	**99%** (156)	**99%** (156)	**96%** (156)	**89%** (118)
Klebsiella pneumoniae	**95%** (208)	**R**	**89%** (515)	**93%** (594)	**95%** (511)	**95%** (594)	**96%** (594)	**96%** (594)	**96%** (515)	**97%** (594)	**97%** (515)	**99%** (515)	**100%** (515)	**94%** (515)	**90%** (594)	**92%** (594)	**36%** (511)
Proteus mirabilis	**99%** (139)	**88%** (294)	**92%** (294)	**99%** (348)	**95%** (286)	**98%** (348)	**99%** (348)	**99%** (348)	**88%** (294)	**95%** (348)	**97%** (294)	**100%** (294)	**100%** (294)	**93%** (294)	**93%** (348)	**88%** (294)	**R**
Pseudomonas aeruginosa	**R**	**R**	**R**	**92%** (453)		**R**	**94%** (453)	**90%** (453)		**95%** (117)	**97%** (453)	**99%** (208)	**94%** (419)	**87%** (419)	**82%** (453)	**R**	**R**
Serratia marcesens				NED		**96%** (76)	**99%** (76)	**99%** (76)	**99%** (76)	**100%** (76)	**86%** (76)	**100%** (76)	**100%** (76)	**97%** (76)	**97%** (76)	**100%** (76)	

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

2024 Alaska State Antibiogram: **Gulf Coast Region**

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2024. These data were aggregated from the antibiograms produced by Alaska hospitals to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate empiric 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 stopped being reportable to Section of Epidemiology in 2023.
  - Carbapenem-resistant Enterobacterales (CRE): there were 12 cases of CRE reported in Gulf Coast residents in 2024.
  - Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA): there were 8 cases of CRPA reported in Gulf Coast residents in 2024.
- **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

Species	Penicillin	Ampicillin	Oxacillin	Ciprofloxacin	Levofloxacin	Daptomycin	Clindamycin	Vancomycin	Azithromycin	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin	Rifampin
Total *Staphylococcus aureus*				**49%** (316)	**66%** (316)	**100%** (316)	**83%** (277)	**100%** (316)	**47%** (277)	**99%** (316)	**100%** (316)	**94%** (316)	**100%** (101)	**100%** (316)
MSSA	**18%** (211)		**S**	**64%** (211)	**90%** (211)	NED	**86%** (183)	**100%** (211)		**100%** (211)	**100%** (211)	**93%** (211)	**100%** (90)	**100%** (211)
MRSA			**R**	**18%** (105)	**19%** (105)	**99%** (105)	**77%** (94)	**100%** (105)	**12%** (94)	**98%** (105)	**100%** (105)	**96%** (105)		**99%** (105)
Staphylocccus epidermidis	**12%** (207)		**51%** (207)	**79%** (207)	**80%** (207)	**100%** (207)	**60%** (143)	**100%** (207)	**39%** (143)	**61%** (207)	**100%** (207)	**90%** (207)	**100%** (145)	**99%** (207)
Enterococcus faecalis	**100%** (296)	**100%** (296)		**80%** (296)	**93%** (296)	**100%** (296)	**R**	**97%** (296)		**R**	**100%** (296)	**26%** (296)	**99%** (272)	
Group B *Streptococcus*	**100%** (37)	**100%** (35)			**97%** (37)			**100%** (37)			NED	**46%** (37)		

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

	Amoxicillin+ clavanulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Cefazolin	Ceftriaxone	Ceftazidime	Cefepime	Gentamicin	Tobramycin	Ertapenem	Meropenem	Ciprofloxacin	Trimeth+Sulfa	Nitrofurantoin	Amoxicillin+ clavanulanic acid
Escherichia coli	**92%** (1041)	**68%** (1041)	**72%** (1041)	**98%** (1041)	**95%** (1041)	**99%** (1041)	**99%** (1041)	**100%** (1041)	**95%** (1041)	**97%** (1041)	**100%** (1041)	**100%** (1041)	**89%** (1041)	**87%** (1041)	**99%** (986)	**92%** (1041)
Klebsiella pneumoniae	**99%** (182)	**R**	**88%** (182)	**100%** (182)	**99%** (182)	**99%** (182)	**99%** (182)	**99%** (182)	**99%** (182)	**99%** (182)	**100%** (182)	**100%** (182)	**98%** (182)	**97%** (182)	**73%** (165)	**99%** (182)
Proteus mirabilis	**94%** (77)	**86%** (77)	**88%** (77)	**97%** (77)						**97%** (77)	**99%** (77)	**100%** (77)	**92%** (77)	**87%** (77)	**R**	**94%** (77)
Pseudomonas aeruginosa	**R**	**R**	**R**	**100%** (115)	**R**	**R**	**97%** (115)	**96%** (115)	NED	**97%** (115)		**97%** (115)	**83%** (115)	**R**	**R**	**R**

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

2024 Alaska State Antibiogram: **Southeast Region**

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2024. These data were aggregated from the antibiograms produced by Alaska hospitals to create aggregate regional resistance pattern summaries. These antibiograms can be helpful for health care providers in selecting appropriate empiric 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 stopped being reportable to Section of Epidemiology in 2023.
  - Carbapenem-resistant Enterobacterales (CRE): there were three cases of CRE reported in Southeast residents in 2024. None were carbapenemase-producing.
  - Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA): there were three cases of CRPA reported in Southeast residents in 2024. None were carbapenemase-producing.
- **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
  - SEARHC Mt. Edgecumbe Hospital
  - Wrangell Medical Center
  - Petersburg Medical Center
  - PeaceHealth Ketchikan General Hospital

Species	Penicillin	Ampicillin	Oxacillin	Ciprofloxacin	Levofloxacin	Daptomycin	Clindamycin	Erythromycin	Vancomycin	Gentamicin	Gent Syn	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Strep Syn	Rifampin
Total *Staphylococcus aureus*	**9%** (202)		**74%** (604)	**193%** (244)	**79%** (604)	**100%** (432)	**85%** (718)	**63%** (601)	**99%** (634)	**99%** (604)		**95%** (722)	**99%** (603)	**96%** (722)		**99%** (604)
MSSA			**S**				**79%** (112)					**99%** (112)		**96%** (112)		
MRSA			**R**				**78%** (38)		**100%** (38)			**100%** (38)		**89%** (38)		
Staphylocccus epidermidis (including *S. epidermidis)*	NED		**51%** (136)	**88%** (103)	**88%** (103)		**63%** (136)	**35%** (103)	**100%** (136)	**96%** (103)		**70%** (91)	**99%** (103)	**82%** (136)		**100%** (103)
Enterococcus faecalis	**100%** (77)	**99%** (259)		**97%** (236)	**98%** (237)	**73%** (168)	**R**	**16%** (167)	**99%** (258)	**R**	**90%** (236)	**R**	**99%** (237)	**32%** (237)	**94%** (235)	

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

	Amoxicillin+ clavanulanic acid	Ampicillin	Ampicillin+Sulbactam	Ceftriaxone	Ceftazidime	Cefepime	Gentamicin	Tobramycin	Ertapenem	Imipenem	Meropenem	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Nitrofurantoin
Enterobacter cloacae					**83%** (58)	**97%** (68)	**100%** (68)	**100%** (46)	**91%** (58)	**97%** (58)		**97%** (58)	**95%** (58)	**97%** (68)	**47%** (58)
Escherichia coli	**89%** (399)	**67%** (1908)	**75%** (1583)	**95%** (1908)	**98%** (1490)	**97%** (1902)	**94%** (1908)	**95%** (1490)	**99%** (1904)	**99%** (1583)	**100%** (399)	**86%** (1908)	**82%** (1908)	**81%** (1908)	**98%** (1908)
Klebsiella pneumoniae		**R**	**92%** (185)	**94%** (226)	**96%** (226)	**97%** (226)	**98%** (226)	**98%** (165)	**100%** (226)	**100%** (185)		**92%** (226)	**91%** (226)	**94%** (226)	**48%** (226)
Proteus mirabilis		**86%** (130)	**92%** (130)	**97%** (143)	**98%** (130)	**96%** (142)	**94%** (143)	**92%** (102)	**100%** (143)			**81%** (143)	**83%** (143)	**85%** (137)	**R**
Pseudomonas aeruginosa	**R**	**R**	**R**	**R**	**94%** (89)	**92%** (89)	**92%** (65)	**99%** (89)		**72%** (65)	**96%** (27)	**82%** (89)	**84%** (86)	**R**	**R**

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

2024 Alaska State Antibiogram: **Southwest Region**

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2021. 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 empiric 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 stopped being reportable to Section of Epidemiology in 2023.
  - Carbapenem-resistant Enterobacterales (CRE): there was no cases of CRE reported in a Southwest resident in 2024.
  - Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA): there was no cases of CRPA reported in a Southwest resident in 2024.
- **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 Delta Regional Hospital
  - Kanakanak Hospital

Species	Ampicillin	Oxacillin	Cefazolin	Ceftriaxone	Ciprofloxacin	Levofloxacin	Clindamycin	Erythromycin	Vancomycin	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin
Total *Staphylococcus aureus*		**61%** (625)	**61%** (625)	**61%** (625)	**70%** (625)	**71%** (625)	**87%** (620)	**50%** (74)	**98%** (625)	**99%** (625)	**99%** (621)	**94%** (625)	**100%** (551)
MSSA		**S**	**100%** (386)		**92%** (386)	**93%** (386)	**89%** (382)		**98%** (386)	**99%** (386)		**94%** (386)	**100%** (345)
MRSA		**R**					**85%** (238)		**98%** (239)	**97%** (239)	**98%** (237)	**95%** (239)	**100%** (206)
Coagulase-negative *Staphylococcus*		**43%** (269)	**43%** (269)	**43%** (269)	**87%** (269)	**88%** (269)			**90%** (269)		**92%** (269)	**86%** (269)	**92%** (249)
Enterococcus faecalis	**99%** (49)			**R**	**82%** (49)	**98%** (49)	**R**		**98%** (49)	**R**	**92%** (49)	**31%** (49)	**98%** (48)

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

	Amoxicillin+ clavanulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Cefazolin	Ceftriaxone	Ceftazidime	Cefepime	Gentamicin	Meropenem	Ciprofloxacin	Trimeth+Sulfa	Nitrofurantoin
Enterobacter aerogenes				**100%** (52)		**87%** (52)	**90%** (52)	**95%** (39)	**100%** (52)	**100%** (38)	**98%** (52)	**98%** (52)	**37%** (49)
Enterobacter cloacae				**97%** (73)		**85%** (73)	**92%** (73)	**85%** (61)	**97%** (73)	**100%** (56)	**99%** (73)	**99%** (73)	**37%** (61)
Escherichia coli	**84%** (1197)	**51%** (1197)	**57%** (1197)	**98%** (1197)	**87%** (1197)	**93%** (1197)	**93%** (1197)	**94%** (1197)	**90%** (1197)	**100%** (1197)	**81%** (1197)	**77%** (1197)	**97%** (1197)
Klebsiella pneumoniae	**95%** (99)	**R**	**84%** (99)	**98%** (99)	**94%** (99)	**95%** (99)	**94%** (99)	**74%** (74)	**98%** (99)	**98%** (99)	**94%** (99)	**92%** (99)	**67%** (94)
Proteus mirabilis	**99%** (90)	**96%** (90)	**100%** (90)	**100%** (90)	**97%** (90)	**96%** (90)	**87%** (90)	**86%** (71)	**99%** (90)	**99%** (90)	**98%** (90)	**100%** (90)	**R**
Pseudomonas aeruginosa	**R**	**R**	**R**	**96%** (69)	**R**	**R**	**88%** (69)	**83%** (48)	NED	**96%** (47)	**81%** (69)	**R**	**R**

Legend:

- The top value in each square is the percent of isolates of that species that tested susceptible to that antibiotic.
- The bottom value in parentheses in each square indicates the number of tested isolates for that species-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 species-antibiotic combination or <30 isolates

2024 Alaska State Antibiogram: **Northern Region**

The following tables show the proportion of isolates of various bacterial species that tested susceptible to various antibiotics during 2021. 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 empiric 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 stopped being reportable to Section of Epidemiology in 2023.
  - Carbapenem-resistant Enterobacterales (CRE): there was no cases of CRE reported in a Northern resident in 2024.
  - Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA): there was no cases of CRPA reported in a Northern resident in 2024.
- **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:
  - Norton Sound Regional Hospital
  - Maniilaq Health Center

Species	Penicillin	Ampicillin	Oxacillin	Ceftriaxone	Ciprofloxacin	Levofloxacin	Clindamycin	Erythromycin	Vancomycin	Gentamicin	Gent Syn	Trimethoprim-sulfamethoxazole	Linezolid	Tetracycline	Nitrofurantoin
Total *Staphylococcus aureus*			**70%** (221)		NED	NED	**75%** (219)	NED	**99%** (221)	NED		**100%** (221)	**99%** (221)	**99%** (221)	
Coagulase-negative *Staphylococcus*			**50%** (165)		**67%** (165)		**59%** (151)		**100%** (165)	**96%** (165)		**83%** (161)	**100%** (165)		
Enterococcus faecalis		**99%** (77)		**R**	**97%** (77)	**100%** (77)	**R**		**100%** (77)	**R**	**83%** (77)	**R**	**100%** (77)	**79%** (165)	**97%** (77)
Streptococcus pneumoniae	**85%** (48)			**100%** (48)		NED	NED	NED	**100%** (48)			NED		NED	

Species	Amoxicillin+ clavanulanic acid	Ampicillin	Ampicillin+Sulbactam	Piperacillin+Tazobactam	Cefazolin	Ceftriaxone	Ceftazidime	Cefepime	Gentamicin	Tobramycin	Ertapenem	Imipenem	Ciprofloxacin	Levofloxacin	Trimeth+Sulfa	Nitrofurantoin
Enterobacter cloacae				**92%** (48)		**96%** (48)	**98%** (48)	**98%** (48)	**98%** (48)	**98%** (48)	**96%** (48)	**96%** (48)	**100%** (48)	**100%** (48)	**100%** (48)	**50%** (48)
Escherichia coli		**58%** (532)	**87%** (532)						**92%** (532)	**93%** (532)			**88%** (532)	**86%** (532)	**79%** (532)	**98%** (527)
Klebsiella pneumoniae		**R**	**95%** (61)	**98%** (61)	**95%** (61)	**98%** (61)	**100%** (61)	**98%** (61)	**100%** (61)	**100%** (61)	**100%** (61)	**100%** (61)	**98%** (61)	**98%** (61)	**98%** (61)	**67%** (61)
Proteus mirabilis		**91%** (55)	**98%** (55)	**100%** (55)	**96%** (54)		**95%** (55)	**95%** (55)	**98%** (55)	**98%** (55)	**100%** (55)		**98%** (55)		**95%** (55)	**R**
Pseudomonas aeruginosa	**R**	**R**	**R**	**100%** (64)	**R**	**R**	**100%** (64)	**94%** (64)	**89%** (64)	**98%** (64)		**97%** (64)	**89%** (64)	**86%** (64)	**R**	**R**