

2017 VIRGINIA STATE AND REGIONAL CUMULATIVE ANTIBIOGRAM

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Introduction

Antimicrobial resistance is a global public health concern. Facility-level antibiograms provide a summary of the percentage of isolates susceptible to a variety of antimicrobial agents within a healthcare facility. The facility antibiogram is an important tool for the development of antimicrobial stewardship policies and protocols for empiric antibiotic selection.

Facility antibiograms are often limited by the number of organisms tested and the geographic coverage represented. The Virginia Healthcare-Associated Infections Advisory Group, led by the Virginia Department of Health, Health Quality Innovators, and the Virginia Hospital and Healthcare Association, analyzed data from facility-level antibiograms to develop an understanding of antimicrobial susceptibility and resistance among bacteria recovered from clinical specimens across Virginia.

Methodology

- ❖ The Antimicrobial Resistance Coordinator at the Virginia Department of Health contacted antimicrobial stewardship pharmacists in June 2018.
- ❖ Seventy-six of eighty-five (89%) Virginia hospitals voluntarily submitted facility-level antibiograms for years 2016-2017.

- ❖ Data included in the state and regional cumulative antibiogram were based on compilation of data from submitted antibiograms.
- ❖ Facility-level antibiograms are generally prepared following CLSI M39, which recommends including data from the first isolate/patient/analysis period. These reports do not include data from subsequent isolates on a patient which may be more resistant than the first isolate. Therefore, percent susceptibility data were likely overestimated in some cases.
- ❖ Preparation of facility-level antibiograms using CLSI M39 guidance and the most recent CLSI breakpoint interpretations was not verified. Therefore, percent susceptibility data could be over- or under-estimated in some cases.
- ❖ Not all facilities reported results for all organism/antibiotic combinations.
- ❖ Not all facilities reported results by source, location, and/or practice setting. When indicated, results were compiled as such.
- ❖ CLSI recommends preparing an antibiogram for organism and antibiotic combinations that have greater than or equal to 30 isolates tested. Facility data that reported the percent susceptible for less than thirty isolates were included in the cumulative percent susceptible, facility number, and number of isolates. Those data were excluded from the cumulative percent susceptible range.
- ❖ Not all facilities used a similar period when reporting data. The state and regional antibiograms reflect organism susceptibility tested from 2016-2018. Sixty-seven out of seventy-six (88%) facilities reported isolates tested solely in 2017.

Virginia Regions

Results were compiled by region according to regions defined by the Virginia Healthcare Emergency Management Program.

Figure 1

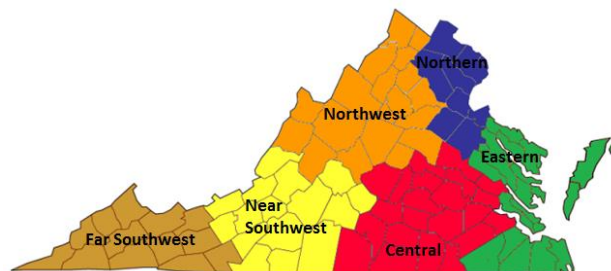


Table 1

Region	Number of hospitals asked to participate	Number of hospitals participating, n (%)
Central	17	16 (94)
Eastern	18	16 (89)
Northern	15	12 (80)
Northwest	9	7 (78)
Far Southwest	11	11 (100)
Near Southwest	15	14 (93)
Total	85	76 (89)

Statewide Cumulative Antibioqram

Figure 2

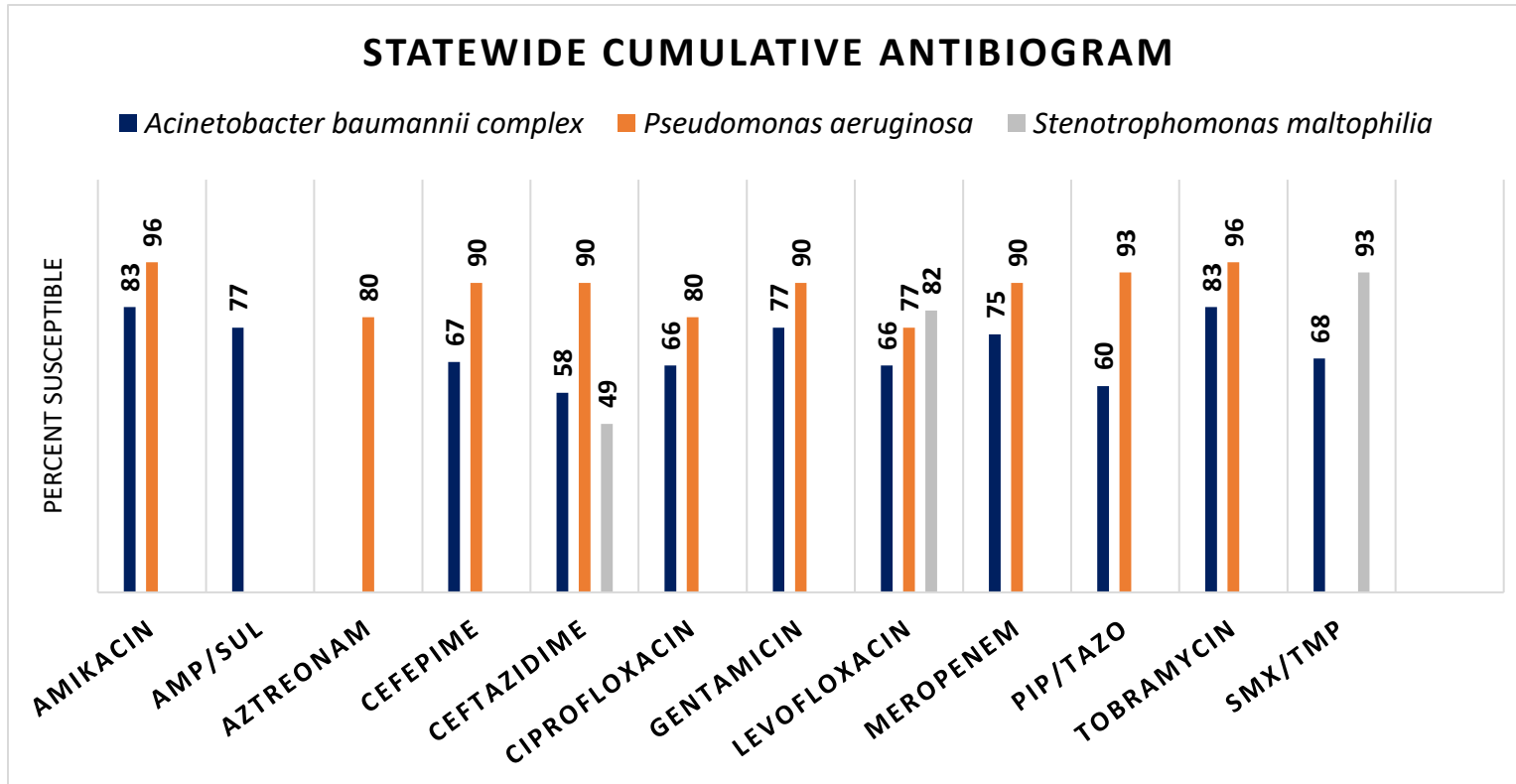


Table 2

Statewide		Amik	Amp/ sul	Azt	Cefep	Ceftaz	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>Acinetobacter baumannii</i> complex	% S	83%	77%		67%	58%	66%	77%	66%	75%	60%	83%	68%
	# Isolates	265	813		455	353	841	1011	878	748	382	799	924
	% S Range*		67-95		65-81	46-75	38-75	58-97	48-72	56-97	48-100	59-100	48-79
	# Facilities	12	34		17	14	32	39	36	32	13	35	32
<i>Pseudomonas aeruginosa</i>	% S	96%		80%	90%	90%	80%	90%	77%	90%	93%	96%	
	# Isolates	6293		3432	10818	4437	10298	11296	9781	9273	11132	9873	
	% S Range*	91-100		66-100	75-100	74-97	45-100	65-100	42-95	78-100	78-100	0-100	
	# Facilities	44		21	62	31	56	64	58	55	63	58	
<i>Stenotrophomonas maltophilia</i>	% S					49%			82%				93%
	# Isolates					240			711				723
	% S Range*					50-59			74-88				78-100
	# Facilities					8			28				30

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 3

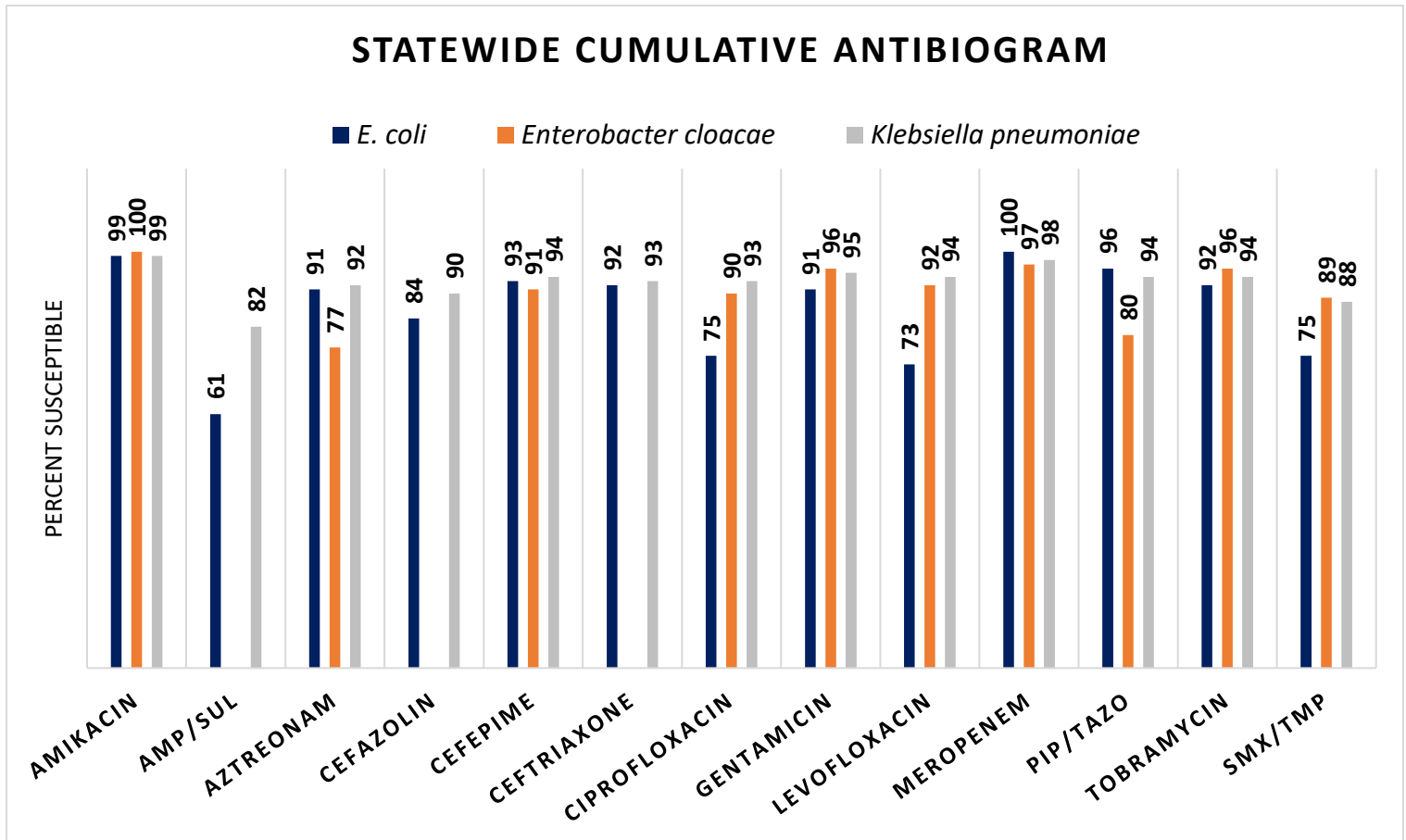


Table 3

Statewide		Amik	Amp/ sul	Azt	Cefaz	Cefep	Ceftr	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>E. coli</i>	% S	99%	61%	91%	84%	93%	92%	75%	91%	73%	100%	96%	92%	75%
	# Isolates	32713	66851	49784	77703	69229	80093	77621	80234	70440	58026	80460	64357	79641
	% S Range*	90-100	22-74	0-100	47-100	0-100	0-100	22-100	33-100	25-94	99-100	13-100	0-100	27-97
	# Facilities	37	60	49	68	62	70	63	70	64	60	71	58	70
<i>Enterobacter cloacae</i>	% S	100%		77%		91%		90%	96%	92%	97%	80%	96%	89%
	# Isolates	1711		2781		3438		3698	3992	3484	3371	3798	2713	3904
	% S Range*	97-100		52-89		66-100		50-100	67-100	32-100	66-100	58-97	84-100	63-100
	# Facilities	32		37		51		47	55	52	45	52	44	54
<i>Klebsiella pneumoniae</i>	% S	99%	82%	92%	90%	94%	93%	93%	95%	94%	98%	94%	94%	88%
	# Isolates	8008	14835	12950	18066	15376	18353	16880	18252	16104	15494	17759	14312	17714
	% S Range*	89-100	0-97	9-100	63-100	80-100	0-100	66-100	81-100	66-100	91-100	85-100	0-100	64-100
	# Facilities	34	59	44	68	60	68	57	67	62	55	68	56	67

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 4

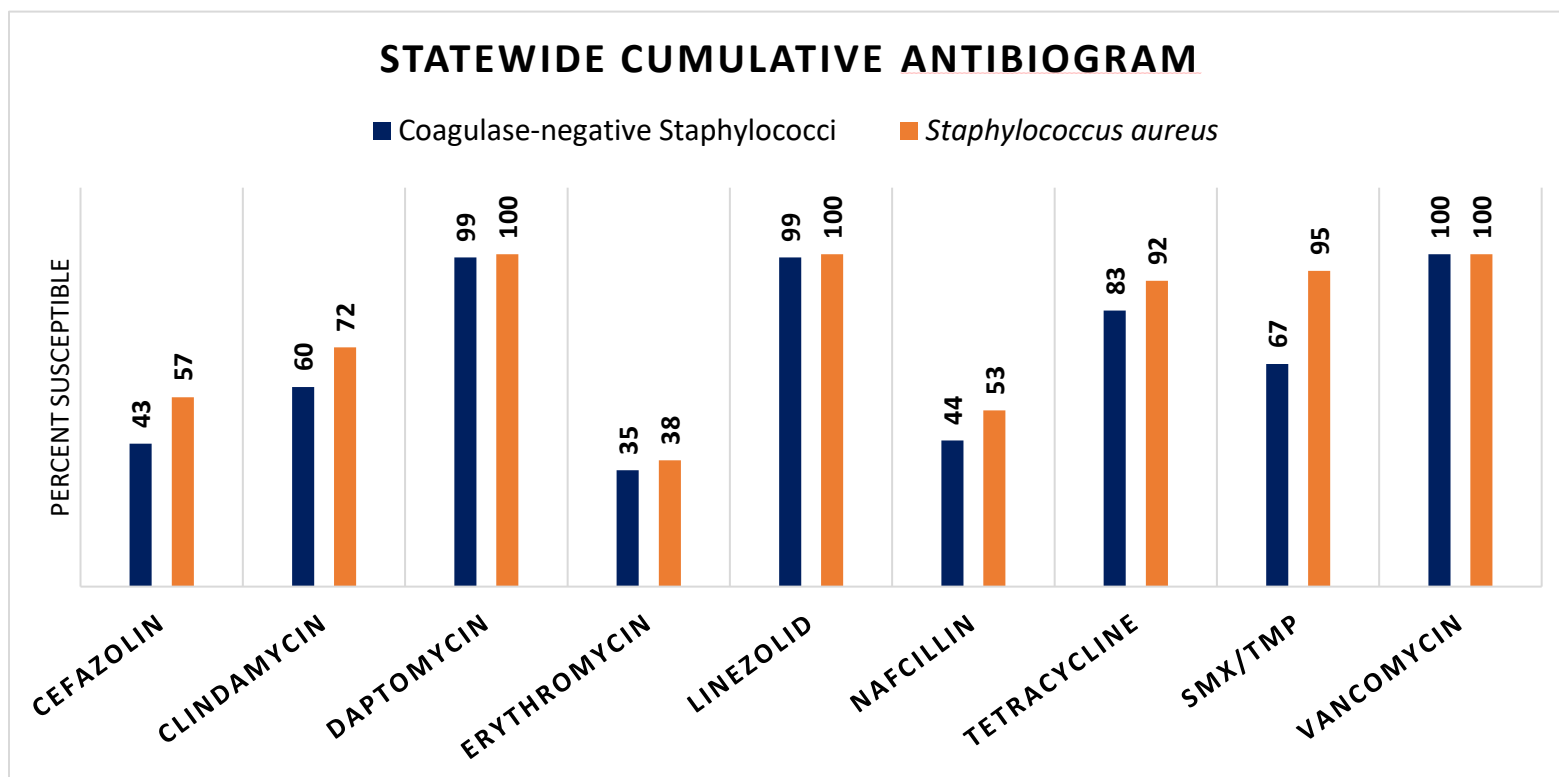


Table 4

Statewide		Cefaz	Clinda	Dapto	Erythr	Linez	Naf	Tetra	SMX/ TMP	Vanc
Coagulase-negative Staphylococci	% S	43%	60%	99%	35%	99%	44%	83%	67%	100%
	# Isolates	5485	8114	1964	6989	7176	9644	9436	7324	9986
	% S Range*	0-94	29-82	98-100	5-79	0-100	0-100	9-100	33-100	75-100
	# Facilities	24	48	13	39	36	53	55	38	58
<i>Staphylococcus aureus</i>	% S	57%	72%	100%	38%	100%	53%	92%	95%	100%
	# Isolates	11339	29048	10336	23568	21777	29975	30206	31951	31846
	% S Range*	0-100	39-95	97-100	7-71	97-100	0-100	0-100	0-100	62-100
	# Facilities	26	64	24	47	49	64	63	64	65

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 5

STATEWIDE CUMULATIVE ANTIBIOGRAM

■ *Enterococcus faecalis* ■ *Enterococcus faecium* ■ *Streptococcus pneumoniae* ■ *Streptococcus agalactiae*

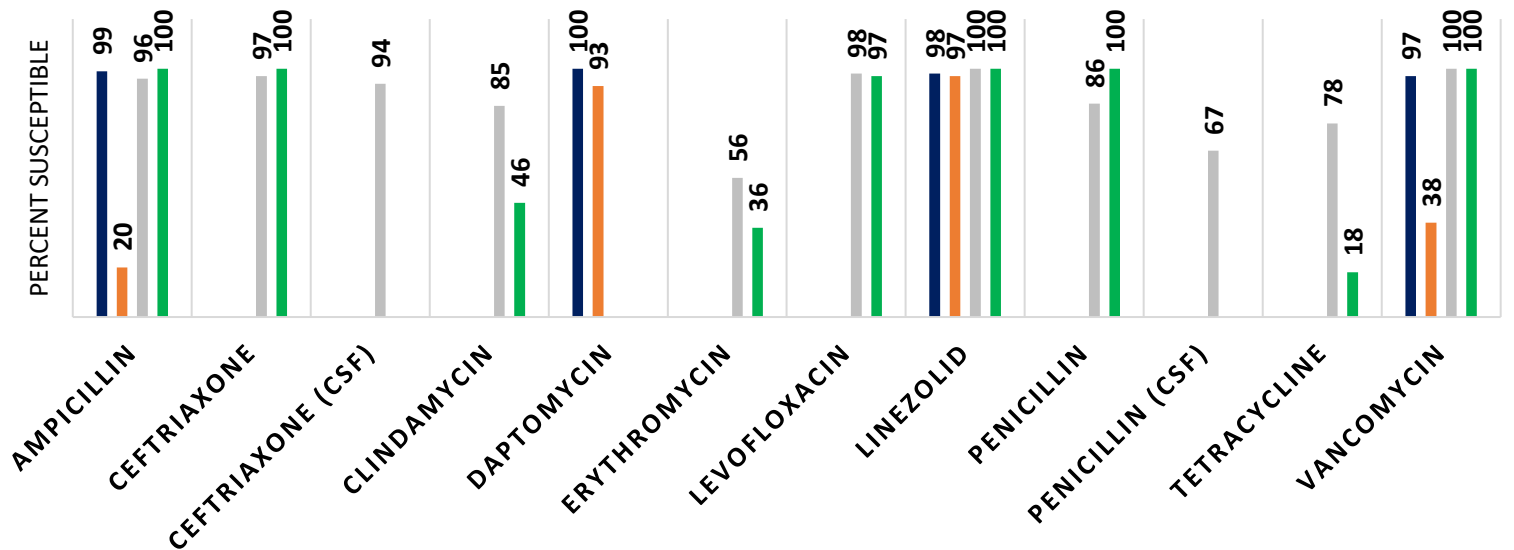


Table 5

Statewide		Amp	Ceftr	Ceftr (CSF)	Clinda	Dapto	Erythr	Levo	Linez	PCN	PCN (CSF)	Tetra	Vanc
<i>Enterococcus faecalis</i>	% S	99%				100%			98%				97%
	# Isolates	12442				2238			10830				12302
	% S Range*	92-100				98-100			77-100				88-100
	# Facilities	58				11			48				59
<i>Enterococcus faecium</i>	% S	20%				93%			97%				38%
	# Isolates	1636				488			1634				1975
	% S Range*	3-100				87-100			90-100				0-99
	# Facilities	42				12			43				47
<i>Streptococcus pneumoniae</i>	% S	96%	97%	94%	85%		56%	98%	100%	86%	67%	78%	100%
	# Isolates	317	1639	785	696		1015	1478	645	1636	784	1198	1580
	% S Range*	96	90-100	86-96	75-86		47-76	94-100	100	6-100	58-66	77-88	100
	# Facilities	3	40	19	14		35	38	8	40	19	33	40
<i>Streptococcus agalactiae</i>	% S	100%	100%		46%		36%	97%	100%	100%		18%	100%
	# Isolates	551	288		563		383	1148	591	1094		252	798
	% S Range*	100	100		15-53		25-43	90-100	100	98-100		13-21	100
	# Facilities	11	6		10		7	15	7	12		5	10

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Statewide Urine Cumulative Antibioqram

Figure 6

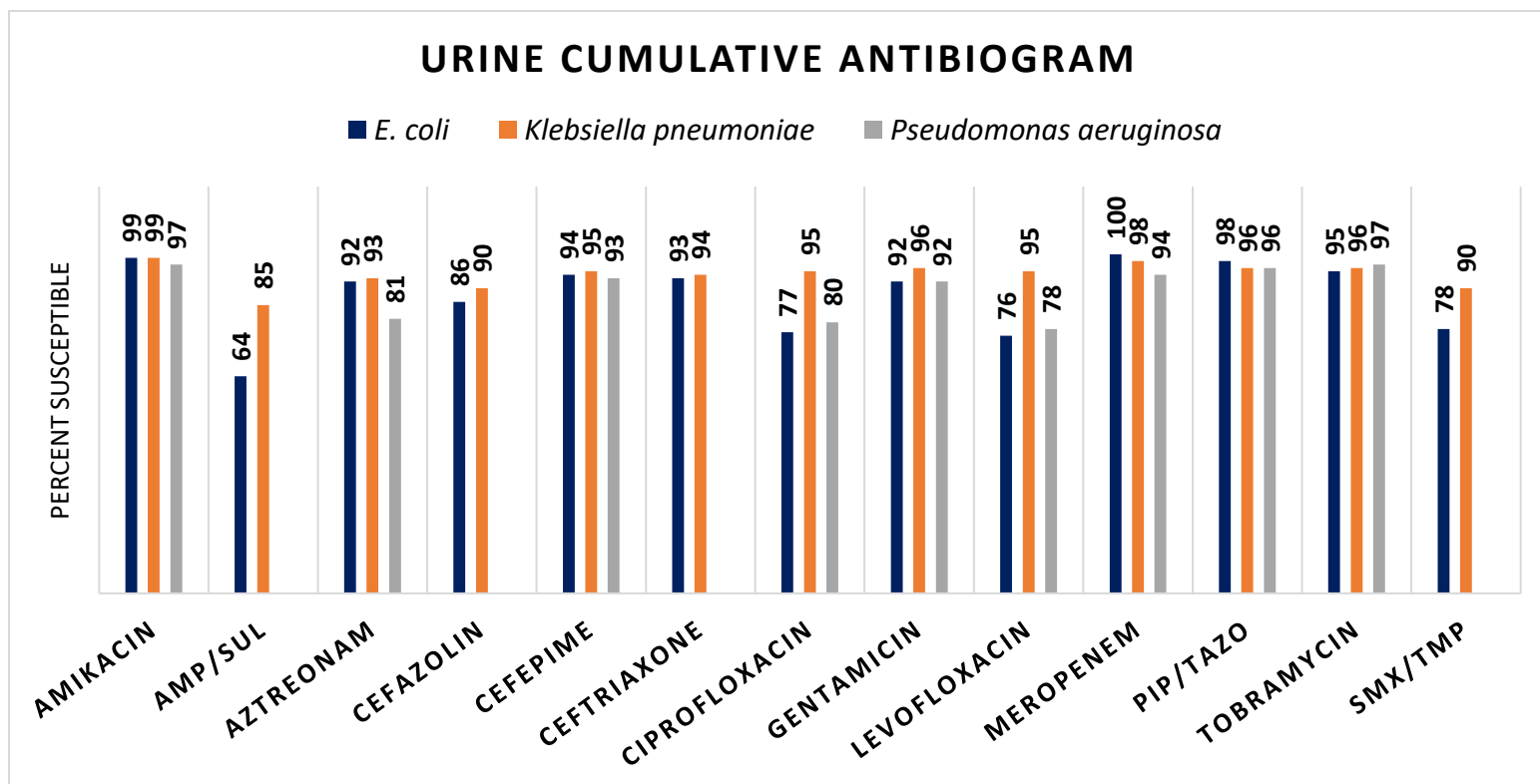


Table 6

Statewide Urine		Amik	Amp/ sul	Azt	Cefaz	Cefep	Ceftr	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>E. coli</i>	% S	99%	64%	92%	86%	94%	93%	77%	92%	76%	100%	98%	95%	78%
	# Isolates	15061	31095	14956	32231	29570	31095	30790	31095	31095	15378	31095	30390	31081
	% S Range*	90-100	38-74	67-97	47-95	85-100	84-99	52-93	85-100	51-94	99-100	91-100	80-100	62-97
	# Facilities	19	30	19	30	28	30	29	30	30	22	22	29	30
<i>Klebsiella pneumoniae</i>	% S	99%	85%	93%	90%	95%	94%	95%	96%	95%	98%	96%	96%	90%
	# Isolates	3423	4710	3307	5043	4386	4615	4471	4753	4753	3378	4625	4579	4753
	% S Range*	96-100	55-97	66-100	63-100	86-100	66-100	81-100	81-100	66-100	91-100	85-100	90-100	64-100
	# Facilities	18	26	15	27	25	26	23	27	27	17	27	26	27
<i>Pseudomonas aeruginosa</i>	% S	97%		81%		93%		80%	92%	78%	94%	96%	97%	
	# Isolates	1145		825		1957		1978	2083	2083	1080	2083	2004	
	% S Range*	92-100		66-88		75-100		64-93	78-99	59-95	79-100	81-100	90-100	
	# Facilities	18		12		23		23	25	25	16	25	24	

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Statewide Outpatient Cumulative Antibioqram

Figure 7

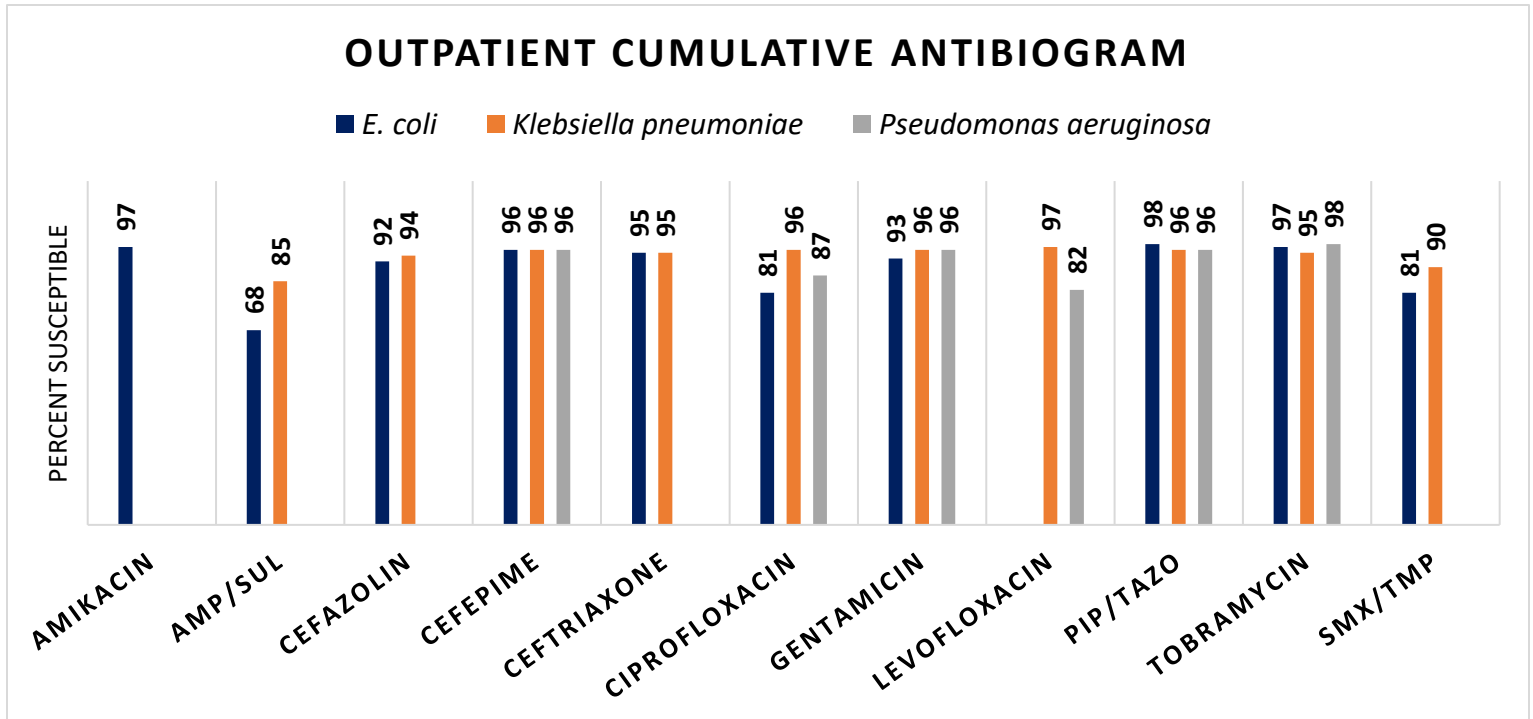


Table 7

Statewide Outpatient		Amik	Amp/ sul	Cefaz	Cefep	Ceftr	Cipro	Gent	Levo	Pip/ tazo	Tobra	SMX/ TMP
<i>E. coli</i>	% S	97%	68%	92%	96%	95%	81%	93%		98%	97%	81%
	# Isolates	2298	15106	15106	15106	15106	15106	15106		15106	15106	15092
	% S Range*	90-100	49-73	84-95	88-100	88-97	70-85	87-95		95-99	89-98	72-97
	# Facilities	6	11	11	11	11	11	11		11	11	11
<i>Klebsiella pneumoniae</i>	% S		85%	94%	96%	95%	96%	96%	97%	96%	95%	90%
	# Isolates		849	878	878	878	878	878	785	878	878	878
	% S Range*		77-90	76-98	80-100	80-99	90-100	86-100	90-100	90-98	84-100	76-95
	# Facilities		10	11	11	11	11	11	10	11	11	11
<i>Pseudomonas aeruginosa</i>	% S				96%		87%	96%	82%	96%	98%	
	# Isolates				1075		1089	1089	987	1089	1075	
	% S Range*				92-97		64-100	90-97	61-88	81-100	97-100	
	# Facilities				10		11	11	10	11	10	

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Regional Cumulative Antibigram: Central

Figure 8

CENTRAL REGION CUMULATIVE ANTIBIOGRAM

■ *Acinetobacter baumannii* complex ■ *Pseudomonas aeruginosa* ■ *Stenotrophomonas maltophilia*

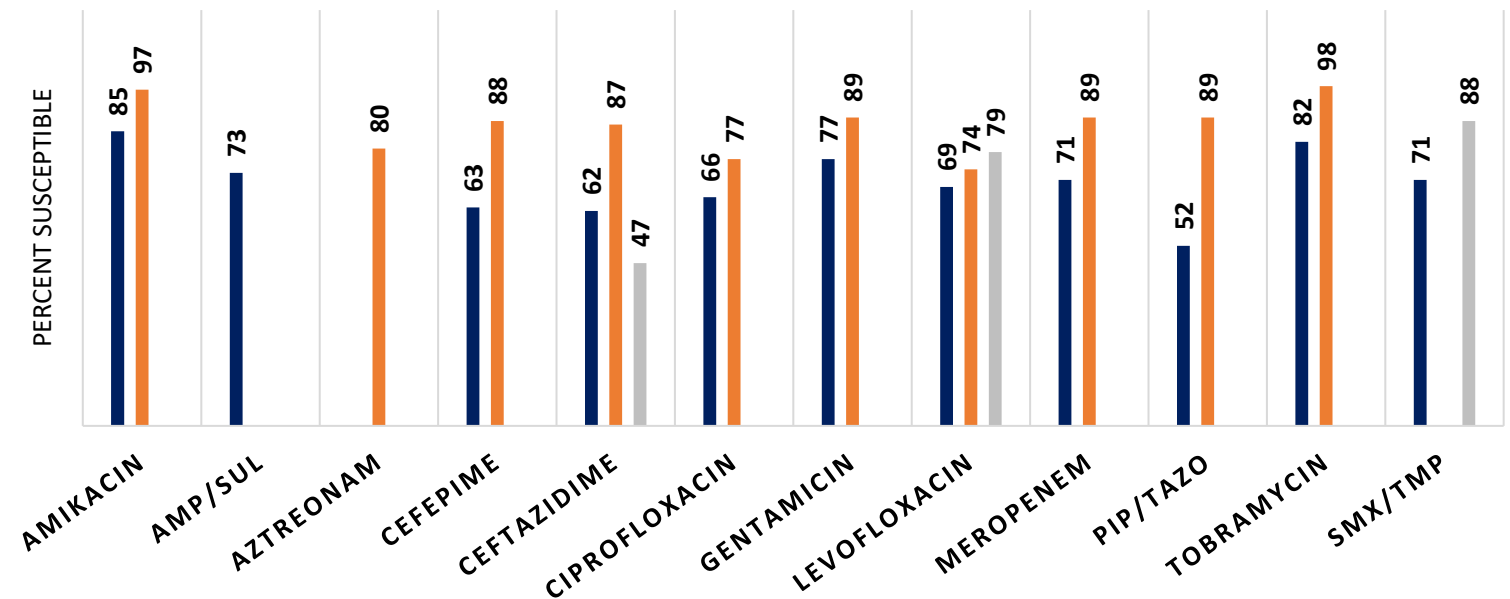


Table 8

Central Region		Amik	Amp/ sul	Azt	Cefep	Ceftaz	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>Acinetobacter baumannii</i> complex	% S	85%	73%		63%	62%	66%	77%	69%	71%	52%	82%	71%
	# Isolates	163	201		332	164	365	365	9261	234	65	212	288
	% S Range*				65-70	69-69	62-67	69-82	66-72				69-71
	# Facilities	5	7		8	5	10	9	10	9	2	8	5
<i>Pseudomonas aeruginosa</i>	% S	97%		80%	88%	87%	77%	89%	74%	89%	89%	98%	
	# Isolates	1451		849	2389	1125	2739	2867	2800	2559	2867	1705	
	% S Range*	94-100		72-88	75-97	82-93	45-92	83-96	42-95	80-100	78-100	95-100	
	# Facilities	10		5	12	10	15	15	14	14	15	12	
<i>Stenotrophomonas maltophilia</i>	% S					47%			79%				88%
	# Isolates					37			146				147
	% S Range*								74-80				78-97
	# Facilities					2			5				6

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Table 9

CENTRAL REGION CUMULATIVE ANTIBIOGRAM

■ *E. coli* ■ *Enterobacter cloacae* ■ *Klebsiella pneumoniae*

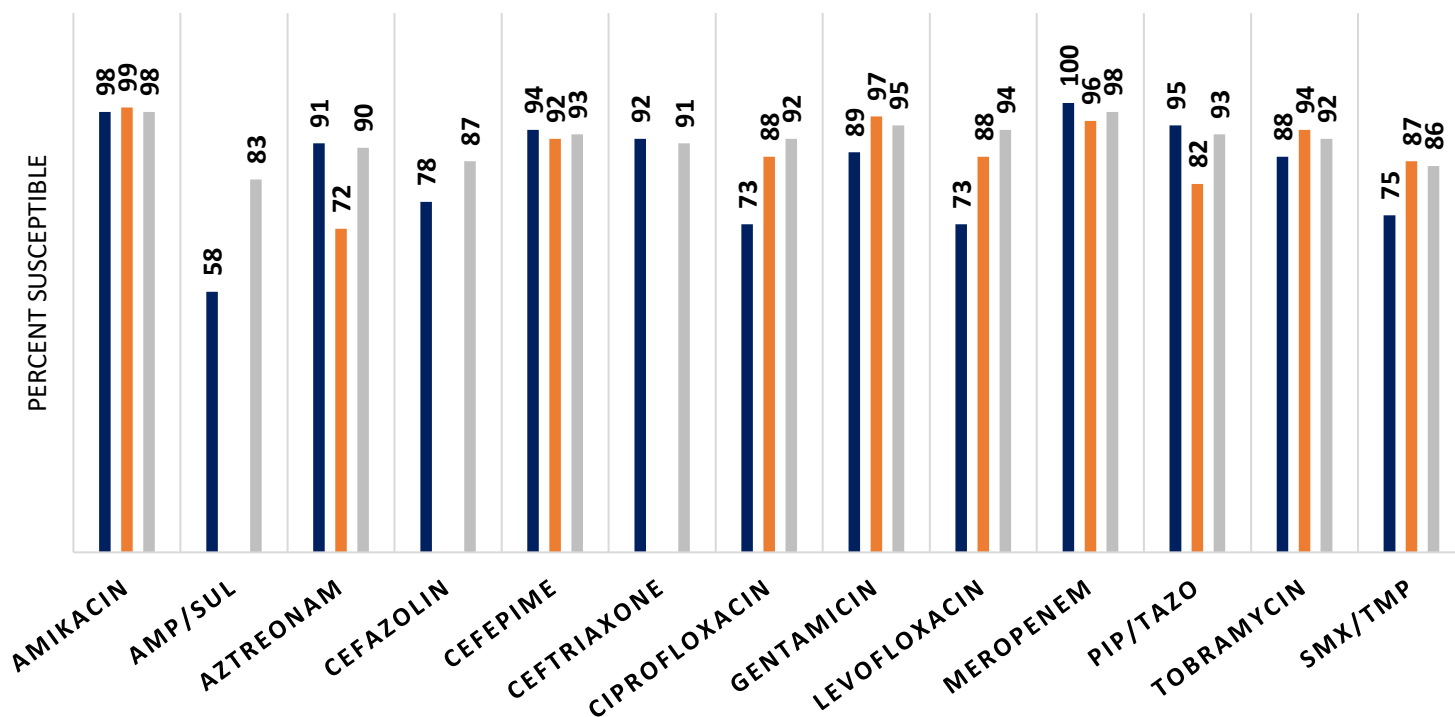


Table 9

Central Region		Amik	Amp/ sul	Azt	Cefaz	Cefep	Ceftr	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>E. coli</i>	% S	98%	58%	91%	78%	94%	92%	73%	89%	73%	100%	95%	88%	75%
	# Isolates	9519	12238	7513	16169	14589	17427	17412	18165	17172	14632	17796	12319	17782
	% S Range*	90-100	38-68	87-97	47-100	89-100	84-97	53-93	33-100	51-94	99-100	13-100	0-96	68-97
	# Facilities	10	12	6	5	11	14	14	15	14	14	15	13	15
<i>Enterobacter cloacae</i>	% S	99%		72%		92%		88%	97%	88%	96%	82%	94%	87%
	# Isolates	474		387		778		905	939	939	939	939	556	939
	% S Range*	97-100		52-88		82-97		76-97	94-100	32-97	66-100	66-100	88-100	76-100
	# Facilities	9		5		10		11	12	12	12	12	10	12
<i>Klebsiella pneumoniae</i>	% S	98%	83%	90%	87%	93%	91%	92%	95%	94%	98%	93%	92%	86%
	# Isolates	2756	3449	2117	4677	4250	5271	5086	5271	5153	4507	5271	3483	5271
	% S Range*	96-100	77-89	80-97	76-100	81-100	0-98	75-100	81-98	89-100	97-100	88-98	0-98	73-95
	# Facilities	10	12	6	15	11	15	14	15	14	14	15	13	15

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 10

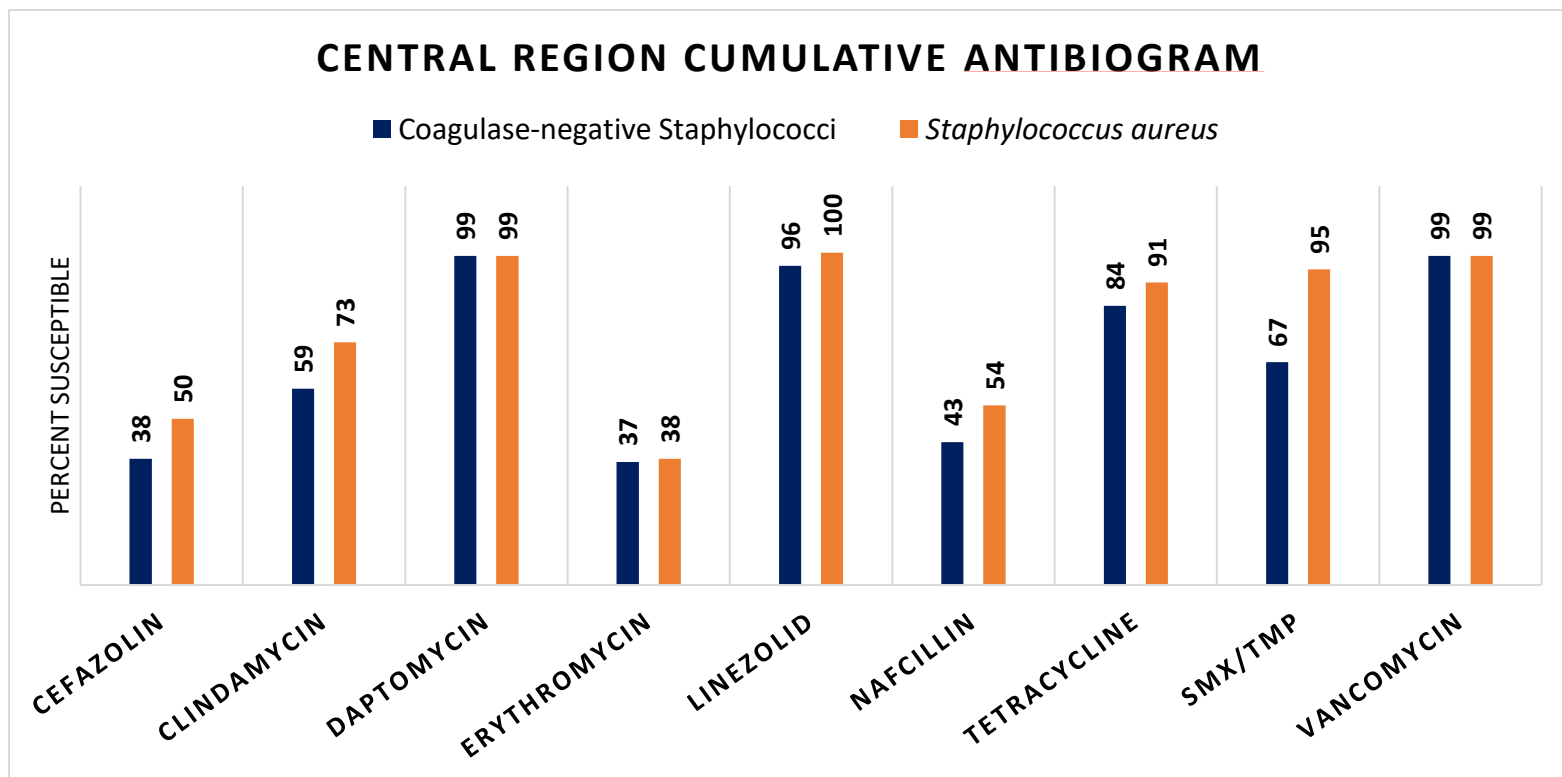


Table 10

Central Region		Cefaz	Clinda	Dapto	Erythr	Linez	Naf	Tetra	SMX/ TMP	Vanc
Coagulase - negative Staphylococci	% S	38%	59%	99%	37%	96%	43%	84%	67%	99%
	# Isolates	906	1405	1329	1742	1744	2256	1731	1801	2281
	% S Range*	0-48	38-82	98-100	27-79	0-100	0-100	76-98	50-100	75-100
	# Facilities	4	7	5	10	11	11	11	12	14
<i>Staphylococcus aureus</i>	% S	50%	73%	99%	38%	100%	54%	91%	95%	99%
	# Isolates	2767	5646	2945	6124	5013	7488	7437	7976	7976
	% S Range*	0-100	51-95	97-100	8-70	100	0-100	0-100	0-100	62-100
	# Facilities	6	14	5	12	13	14	14	15	15

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 11

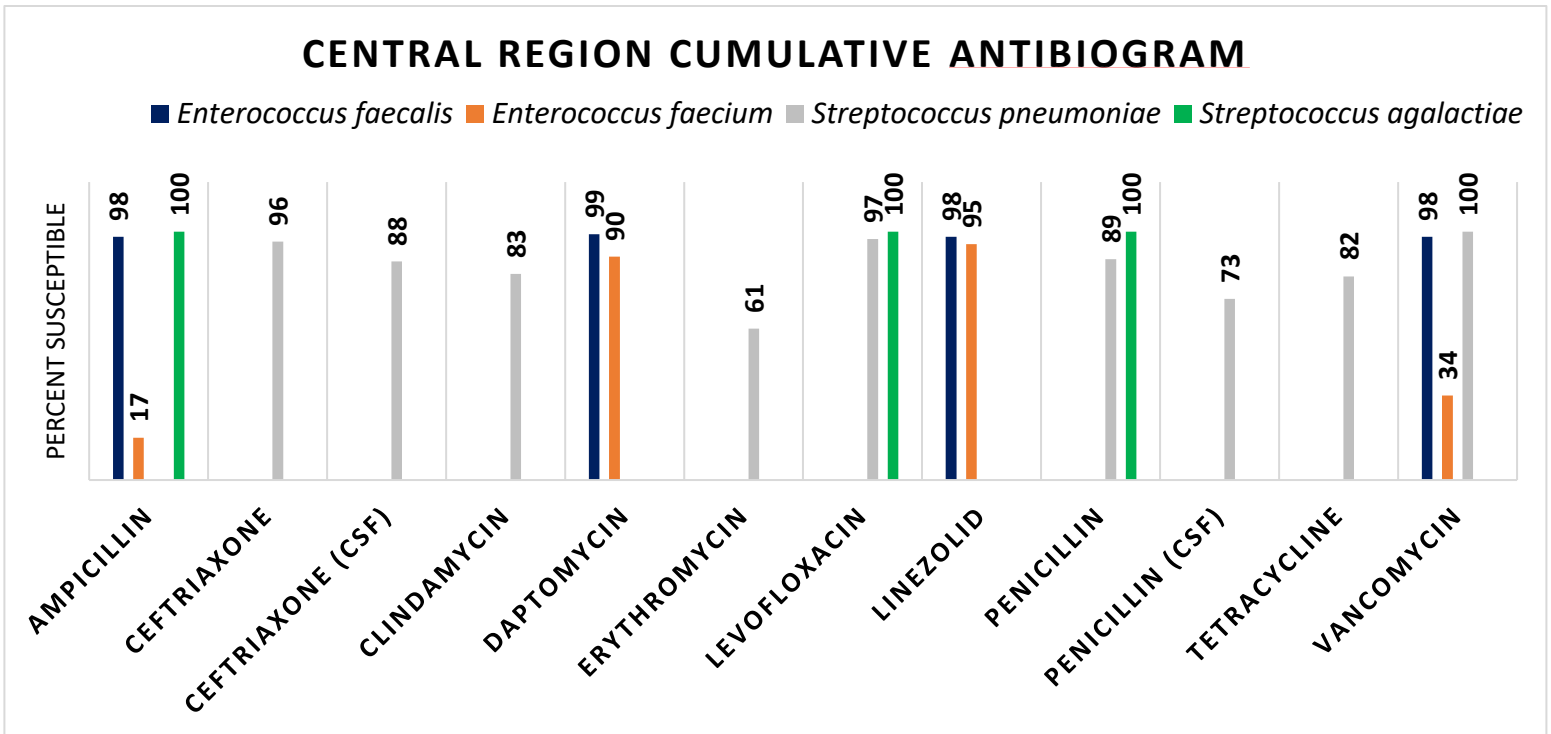


Table 11

Central Region		Amp	Ceftr	Ceftr (CSF)	Clinda	Dapto	Erythr	Levo	Linez	PCN	PCN (CSF)	Tetra	Vanc
<i>Enterococcus faecalis</i>	% S	98%				99%			98%				98%
	# Isolates	2380				1673			3050				3793
	% S Range*	92-100				98-100			91-100				88-100
	# Facilities	13				5			13				14
<i>Enterococcus faecium</i>	% S	17%				90%			95%				34%
	# Isolates	454				303			473				678
	% S Range*	3-26				87-93			90-98				0-48
	# Facilities	11				5			11				12
<i>Streptococcus pneumoniae</i>	% S		96%	88%	83%		61%	97%		89%	73%	82%	100%
	# Isolates		426	64	35		293	303		426	64	293	350
	% S Range*		90-100				54-63	96-100		67-100		79-82	100
	# Facilities		9	4	2		6	6		9	4	6	8
<i>Streptococcus agalactiae</i>	% S	100%						100%		100%			
	# Isolates	72						72		72			
	% S Range*												
	# Facilities	1						1		1			

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Regional Cumulative Antibigram: Eastern

Figure 12

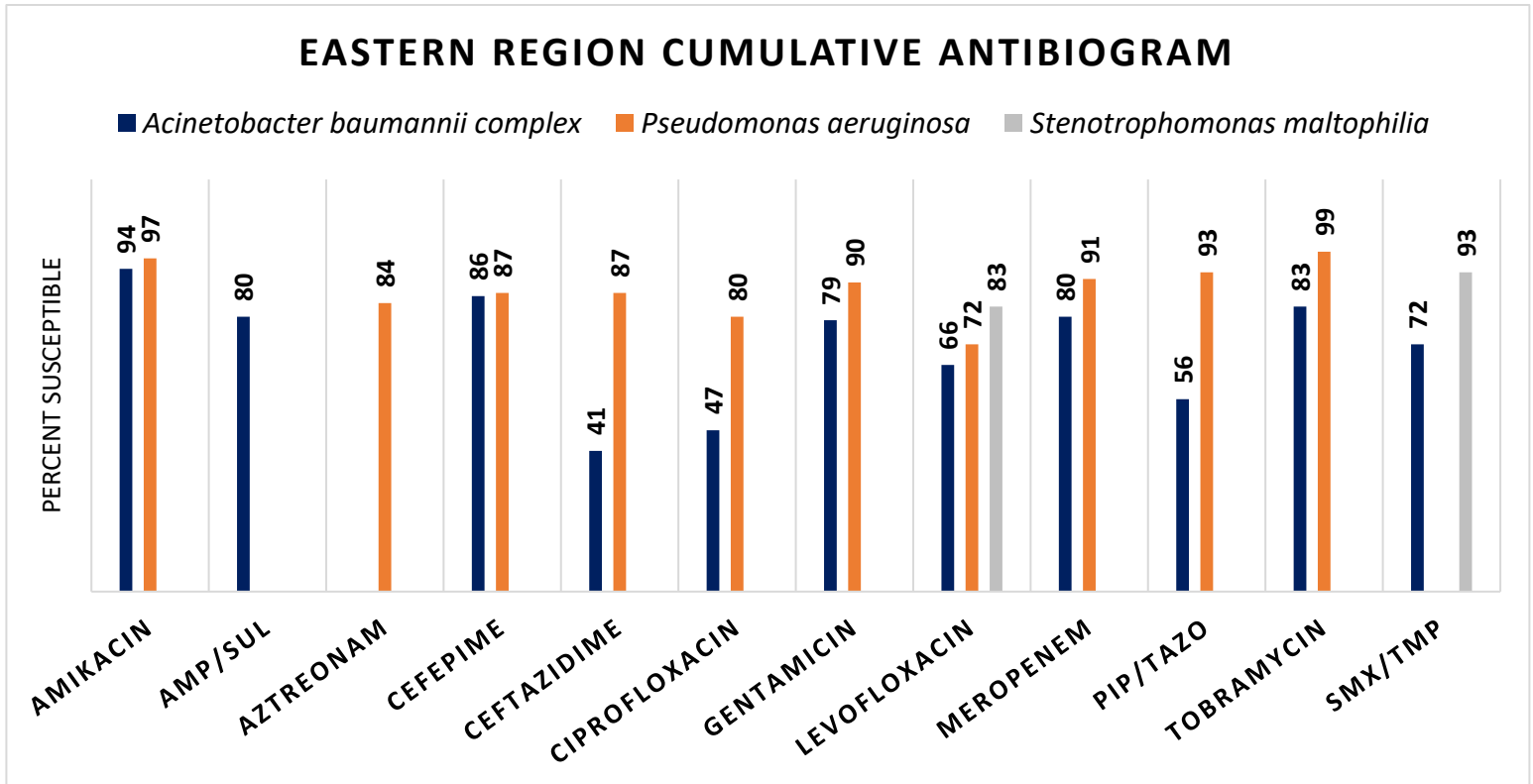


Table 12

Eastern Region		Amik	Amp/ sul	Azt	Cefep	Ceftaz	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>Acinetobacter baumannii</i> complex	% S	94%	80%		86%	41%	47%	79%	66%	80%	56%	83%	72%
	# Isolates	64	268		64	64	242	269	269	242	27	269	269
	% S Range*		67-89				38-72	58-92	36-78	58-97		59-100	63-75
	# Facilities	4	14		4	4	11	14	14	11	3	14	14
<i>Pseudomonas aeruginosa</i>	% S	97%		84%	87%	87%	80%	90%	72%	91%	93%	99%	
	# Isolates	2154		583	2154	282	1910	2154	282	1937	2154	2154	
	% S Range*	93-100		79-87	78-100	82-89	65-90	82-99	53-88	77-100	87-100	95-100	
	# Facilities	15		5	15	4	12	15	14	13	11	15	
<i>Stenotrophomonas maltophilia</i>	% S								83%				93%
	# Isolates								257				205
	% S Range*								76-88				85-100
	# Facilities								11				10

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 13

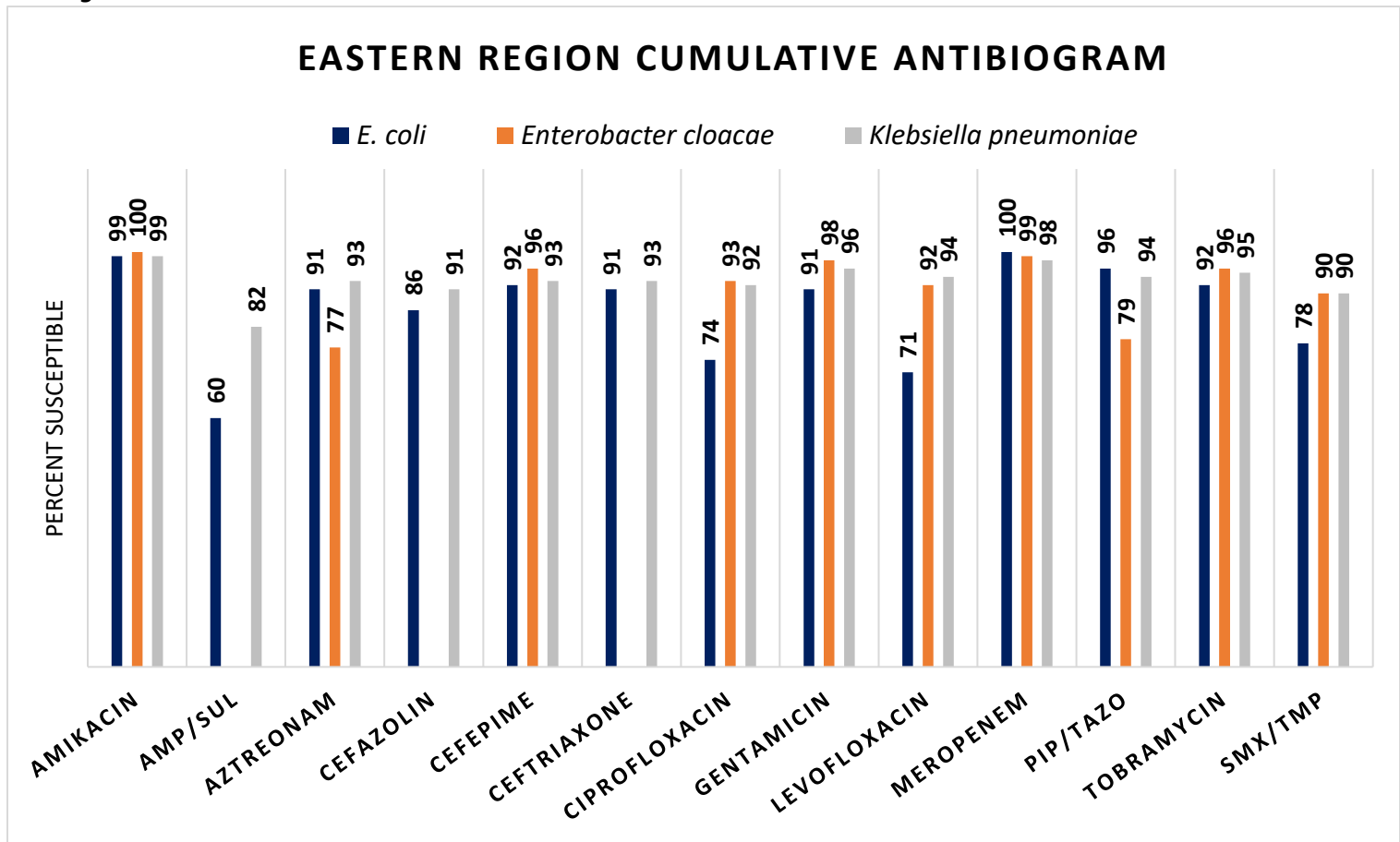


Table 13

Eastern Region		Amik	Amp/ sul	Azt	Cefaz	Cefep	Ceftr	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>E. coli</i>	% S	99%	60%	91%	86%	92%	91%	74%	91%	71%	100%	96%	92%	78%
	# Isolates	12067	12595	12153	11200	12595	12595	12067	12595	12595	12153	12595	12595	12595
	% S Range*	97-100	45-71	77-100	74-100	82-100	77-100	64-83	85-96	62-82	99-100	92-100	85-98	67-84
	# Facilities	12	15	13	13	15	15	12	15	15	13	15	15	15
<i>Enterobacter cloacae</i>	% S	100%		77%		96%		93%	98%	92%	99%	79%	96%	90%
	# Isolates	748		796		861		783	861	861	783	861	861	861
	% S Range*	97-100		65-87		92-100		85-97	92-100	80-97	97-100	67-92	89-100	42-99
	# Facilities	11		13		15		12	15	15	12	15	15	15
<i>Klebsiella pneumoniae</i>	% S	99%	82%	93%	91%	93%	93%	92%	96%	94%	98%	94%	95%	90%
	# Isolates	3498	3696	3498	3726	3726	3588	3498	3543	3726	3528	3726	3726	3726
	% S Range*	97-100	70-95	87-100	85-100	87-100	87-100	80-98	83-100	86-100	93-100	87-100	83-100	80-96
	# Facilities	12	15	12	15	15	15	12	14	15	13	15	15	15

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 14

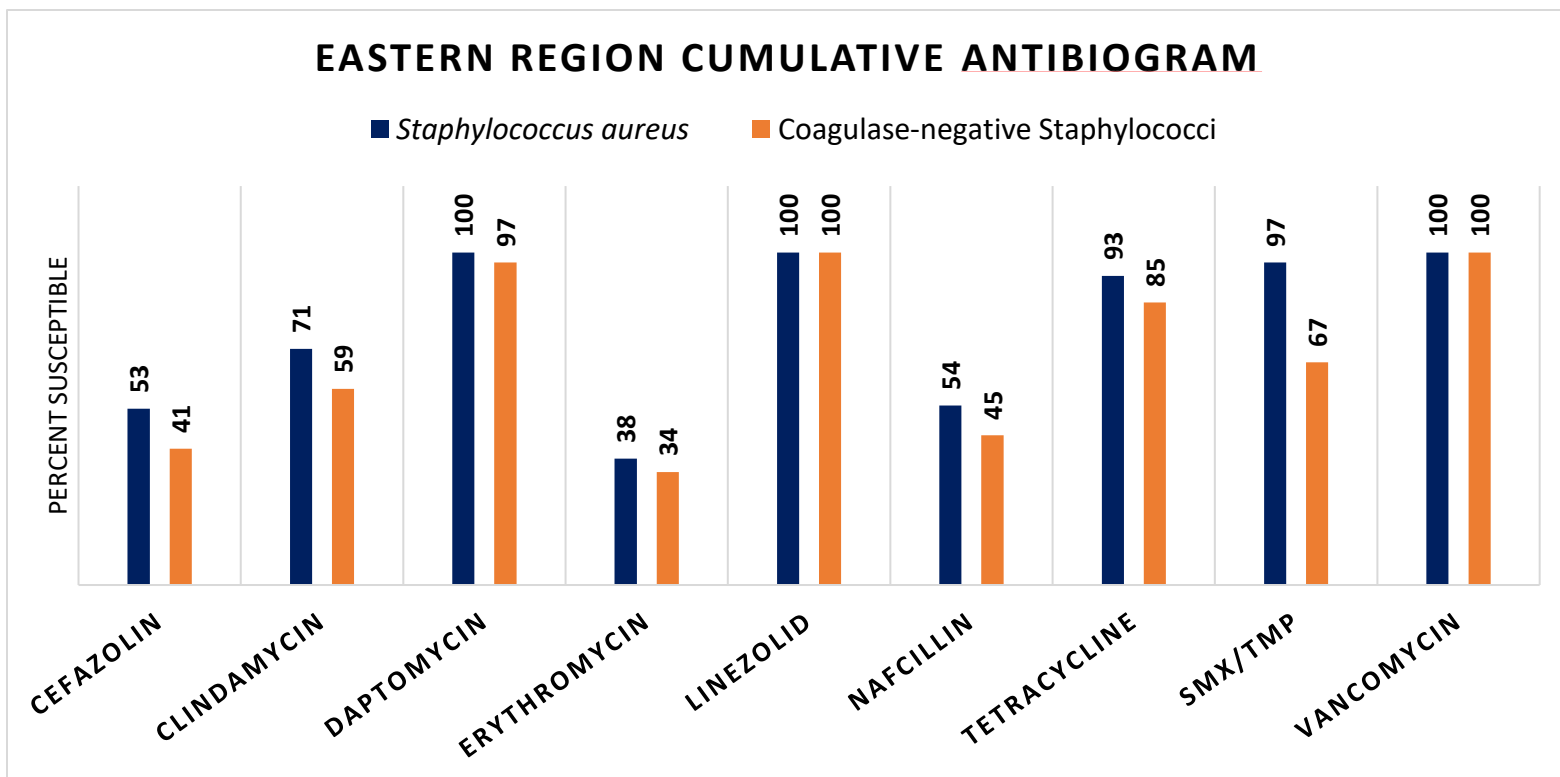


Table 14

Eastern Region		Cefaz	Clinda	Dapto	Erythr	Linez	Naf	Tetra	SMX/ TMP	Vanc
<i>Staphylococcus aureus</i>	% S	53%	71%	100%	38%	100%	54%	93%	97%	100%
	# Isolates	3995	6340	3217	3203	6108	6899	6899	6899	6899
	% S Range*	46-63	61-87	98-100	7-71	100	0-100	89-98	91-100	100
	# Facilities	11	15	8	8	12	15	15	15	15
Coagulase-negative staphylococci	% S	41%	59%	97%	34%	100%	45%	85%	67%	100%
	# Isolates	1485	2478	38	851	1222	2764	2764	1437	2764
	% S Range*	21-52	47-67		23-40	100	21-64	74-91	42-90	100
	# Facilities	10	15	1	8	5	15	15	8	15

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 15

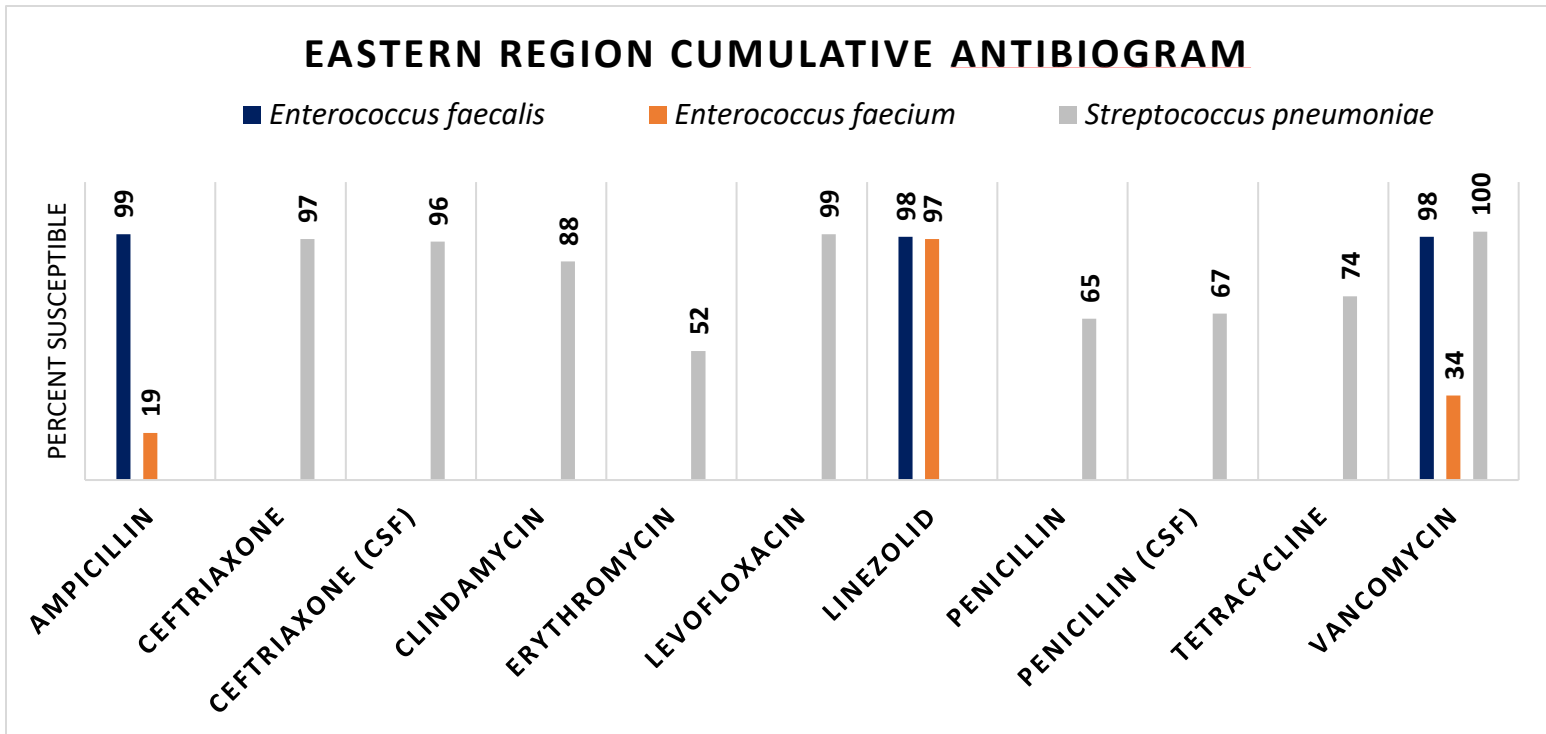


Table 15

Eastern Region		Amp	Ceftr	Ceftr (CSF)	Clinda	Erythr	Levo	Linez	PCN	PCN (CSF)	Tetra	Vanc
<i>Enterococcus faecalis</i>	% S	99%						98%				98%
	# Isolates	3312						2975				3312
	% S Range*	96-100						96-100				91-100
	# Facilities	15						12				15
<i>Enterococcus faecium</i>	% S	19%						97%				34%
	# Isolates	477						476				476
	% S Range*	9-26						93-100				17-43
	# Facilities	15						15				15
<i>Streptococcus pneumoniae</i>	% S		97%	96%	88%	52%	99%		65%	67%	74%	100%
	# Isolates		229	145	37	229	229		229	145	229	229
	% S Range*											
	# Facilities		13	7	3	13	13		13	7	13	13

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Regional Cumulative Antibigram: Far Southwest

Figure 16

FAR SOUTHWEST REGION CUMULATIVE ANTIBIOGRAM

■ *Acinetobacter baumannii* complex ■ *Pseudomonas aeruginosa* ■ *Stenotrophomonas maltophilia*

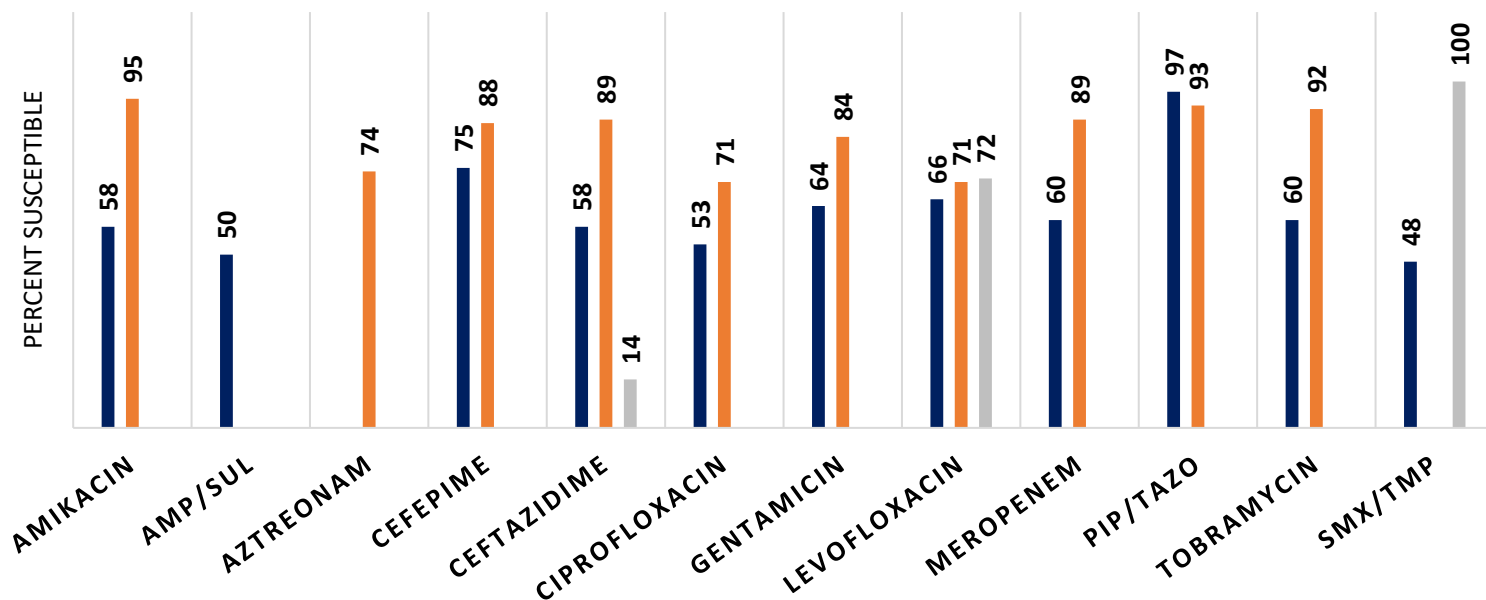


Table 16

Far Southwest Region		Amik	Amp/sul	Azt	Cefep	Ceftaz	Cipro	Gent	Levo	Mero	Pip/tazo	Tobra	SMX/TMP
<i>Acinetobacter baumannii</i> complex	% S	58%	50%		75%	58%	53%	64%	66%	60%	97%	60%	48%
	# Isolates	38	38		39	38	38	69	69	10	33	10	69
	% S Range*												
	# Facilities	3	3		2	3	3	4	4	2	2	2	4
<i>Pseudomonas aeruginosa</i>	% S	95%		74%	88%	89%	71%	84%	71%	89%	93%	92%	
	# Isolates	490		311	621	247	432	702	673	380	592	380	
	% S Range*	91-100		66-78	77-96	74-96	63-82	78-91	57-81	79-94	82-99	88-96	
	# Facilities	6		3	7	4	6	8	7	4	6	4	
<i>Stenotrophomonas maltophilia</i>	% S					14%			72%				100%
	# Isolates					14			18				18
	% S Range*												
	# Facilities					2			3				3

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 17

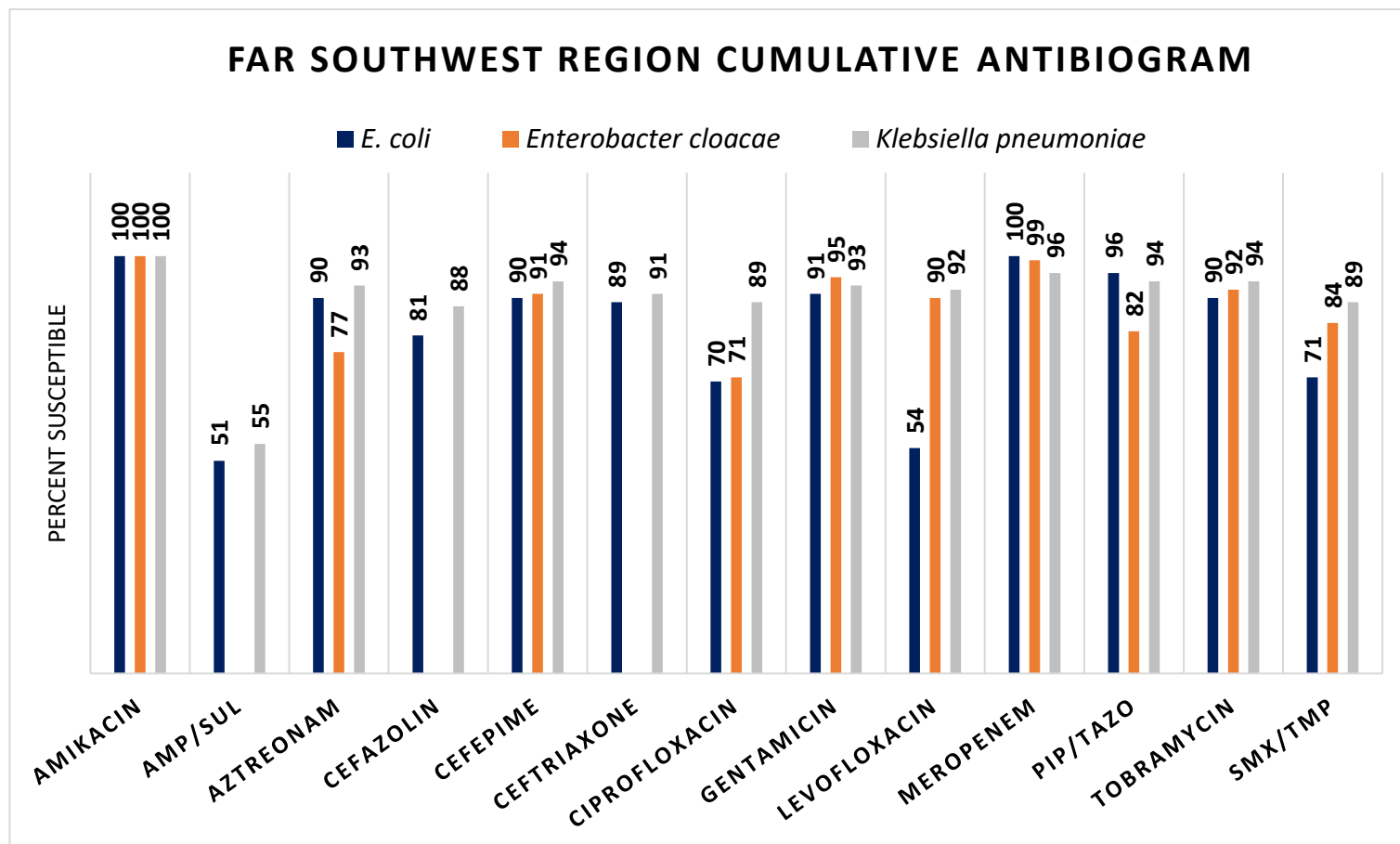


Table 17

Far Southwest Region		Amik	Amp/ sul	Azt	Cefaz	Cefep	Ceftr	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>E. coli</i>	% S	100%	51%	90%	81%	90%	89%	70%	91%	54%	100%	96%	90%	71%
	# Isolates	4257	4435	5362	5692	5202	5692	5457	5692	5962	2893	5692	2893	5692
	% S Range*	95-100	42-60	67-99	55-86	76-100	69-98	25-100	79-94	25-67	99-100	91-100	82-98	47-77
	# Facilities	7	7	7	9	8	9	8	9	9	6	9	6	6
<i>Enterobacter cloacae</i>	% S	100%		77%		91%		71%	95%	90%	99%	82%	92%	84%
	# Isolates	153		276		252		258	285	285	120	244	120	285
	% S Range*			73-89		68-97		50-85	98	85-100		90		90-93
	# Facilities	5		6		6		6	7	7	4	6	4	7
<i>Klebsiella pneumoniae</i>	% S	100%	55%	93%	88%	94%	91%	89%	93%	92%	96%	94%	94%	89%
	# Isolates	569	811	981	1003	903	926	684	1003	4116	469	1003	469	1003
	% S Range*	100	0-87	66-100	66-99	86-100	64-99	66-96	81-99	99-99	91-100	85-100	90-97	64-96
	# Facilities	5	6	6	7	6	6	5	7	7	4	7	4	7

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 18

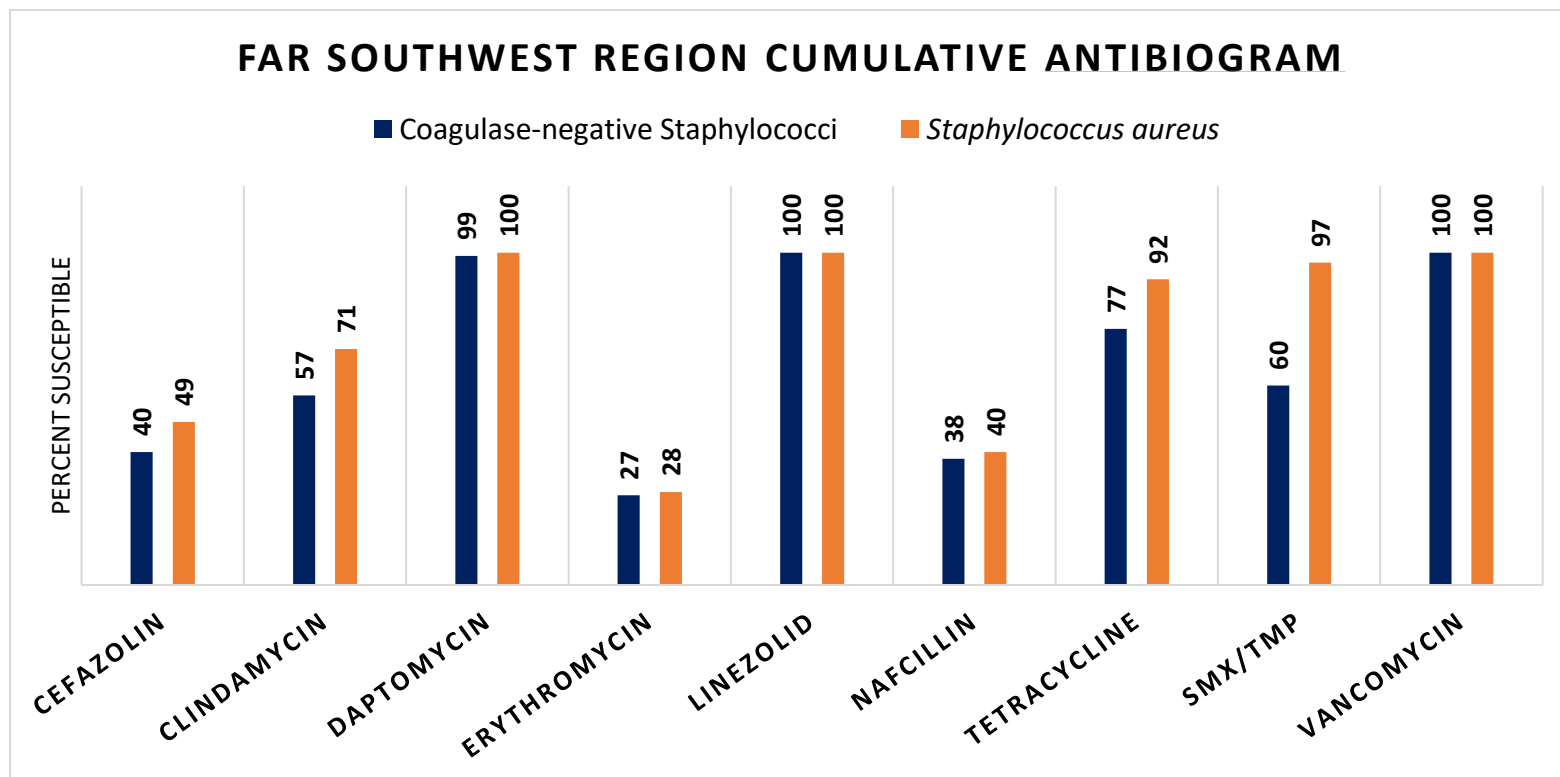


Table 18

Far Southwest Region		Cefaz	Clinda	Dapto	Erythr	Linez	Naf	Tetra	SMX/ TMP	Vanc
Coagulase-negative Staphylococci	% S	40%	57%	99%	27%	100%	38%	77%	60%	100%
	# Isolates	415	796	258	1032	878	858	878	696	878
	% S Range*	27-94	29-78	99-100	5-72	91-100	21-94	56-100	33-97	100
	# Facilities	3	8	2	7	8	7	8	5	8
<i>Staphylococcus aureus</i>	% S	49%	71%	100%	28%	100%	40%	92%	97%	100%
	# Isolates	522	2535	1335	2611	2981	2392	2584	2584	2981
	% S Range*	43-100	56-81	97-100	9-59	99-100	0-100	88-100	91-100	100
	# Facilities	2	8	3	7	8	8	8	8	8

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 19

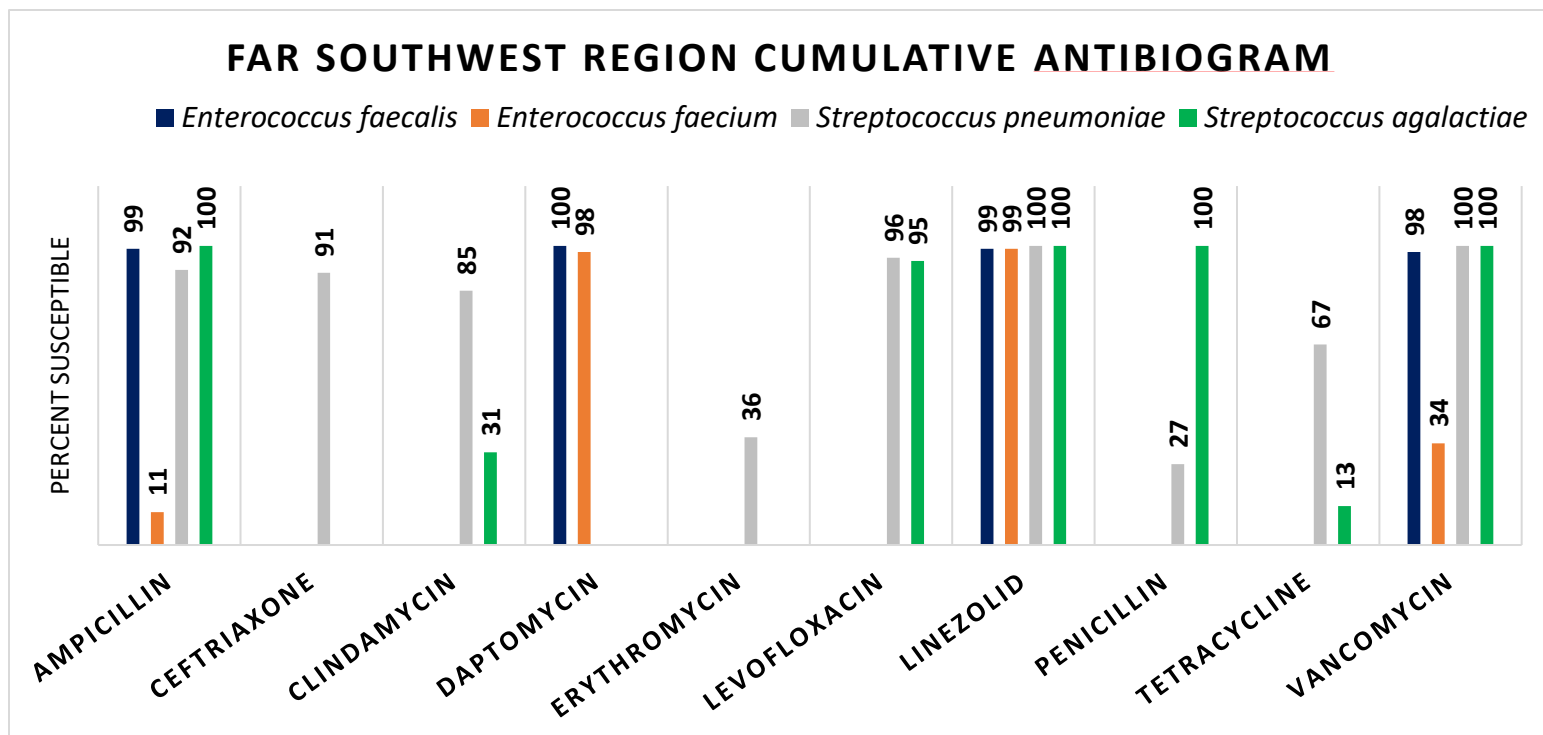


Table 19

Far Southwest Region		Amp	Ceftr	Clinda	Dapto	Erythr	Levo	Linez	PCN	Tetra	Vanc
<i>Enterococcus faecalis</i>	% S	99%			100%			99%			98%
	# Isolates	595			408			845			845
	% S Range*	97-100			100			98-100			91-100
	# Facilities	6			3			7			7
<i>Enterococcus faecium</i>	% S	11%			98%			99%			34%
	# Isolates	64			84			103			101
	% S Range*										
	# Facilities	2			3			5			4
<i>Streptococcus pneumoniae</i>	% S	92%	91%	85%		36%	96%	100%	27%	67%	100%
	# Isolates	13	48	22		69	69	47	69	69	69
	% S Range*										
	# Facilities	1	2	2		4	4	2	4	4	4
<i>Streptococcus agalactiae</i>	% S	100%		31%			95%	100%	100%	13%	100%
	# Isolates	174		157			300	196	283	70	157
	% S Range*	100		18-51			93-97	100	100		100
	# Facilities	3		2			4	2	3	1	2

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Regional Cumulative Antibigram: Near Southwest

Table 20

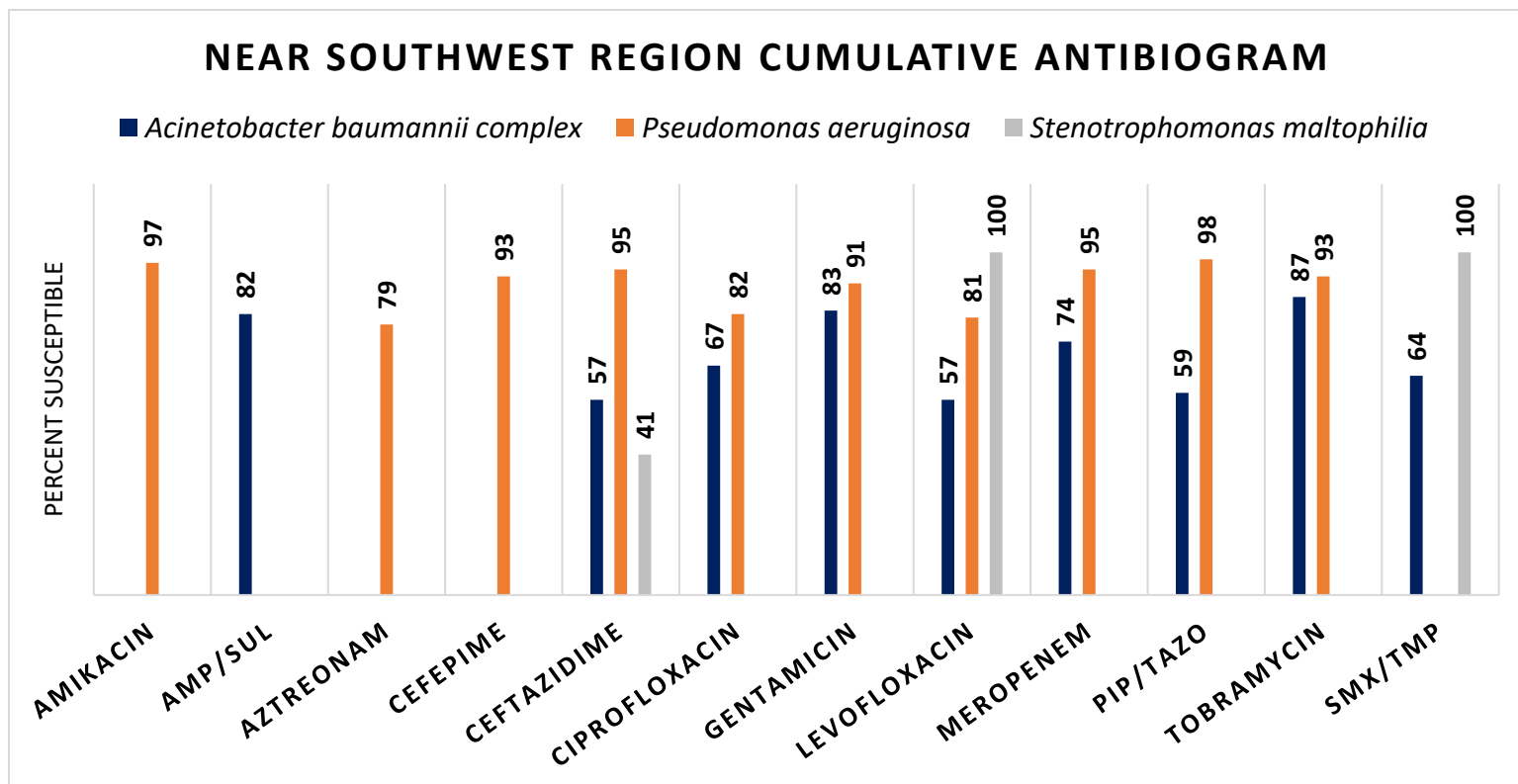


Table 20

Near Southwest Region		Amik	Amp/ sul	Azt	Cefep	Ceftaz	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>Acinetobacter baumannii</i> complex	% S		82%			57%	67%	83%	57%	74%	59%	87%	64%
	# Isolates		239			122	151	239	134	193	227	239	239
	% S Range*		80-95			46-75	67-75	69-97	48-72	56-91	48-74	73-98	55-79
	# Facilities		5			2	3	5	3	4	4	5	5
<i>Pseudomonas aeruginosa</i>	% S	97%		79%	93%	95%	82%	91%	81%	95%	98%	93%	
	# Isolates	426		233	2483	1249	2245	2422	1454	1721	2518	2518	
	% S Range*	92-100		69-84	81-97	86-97	60-91	65-100	59-90	74-100	89-100	0-100	
	# Facilities	4		2	11	6	8	10	8	9	11	11	
<i>Stenotrophomonas maltophilia</i>	% S					41%			100%				100%
	# Isolates					17			17				17
	% S Range*												
	# Facilities					1			1				1

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 21

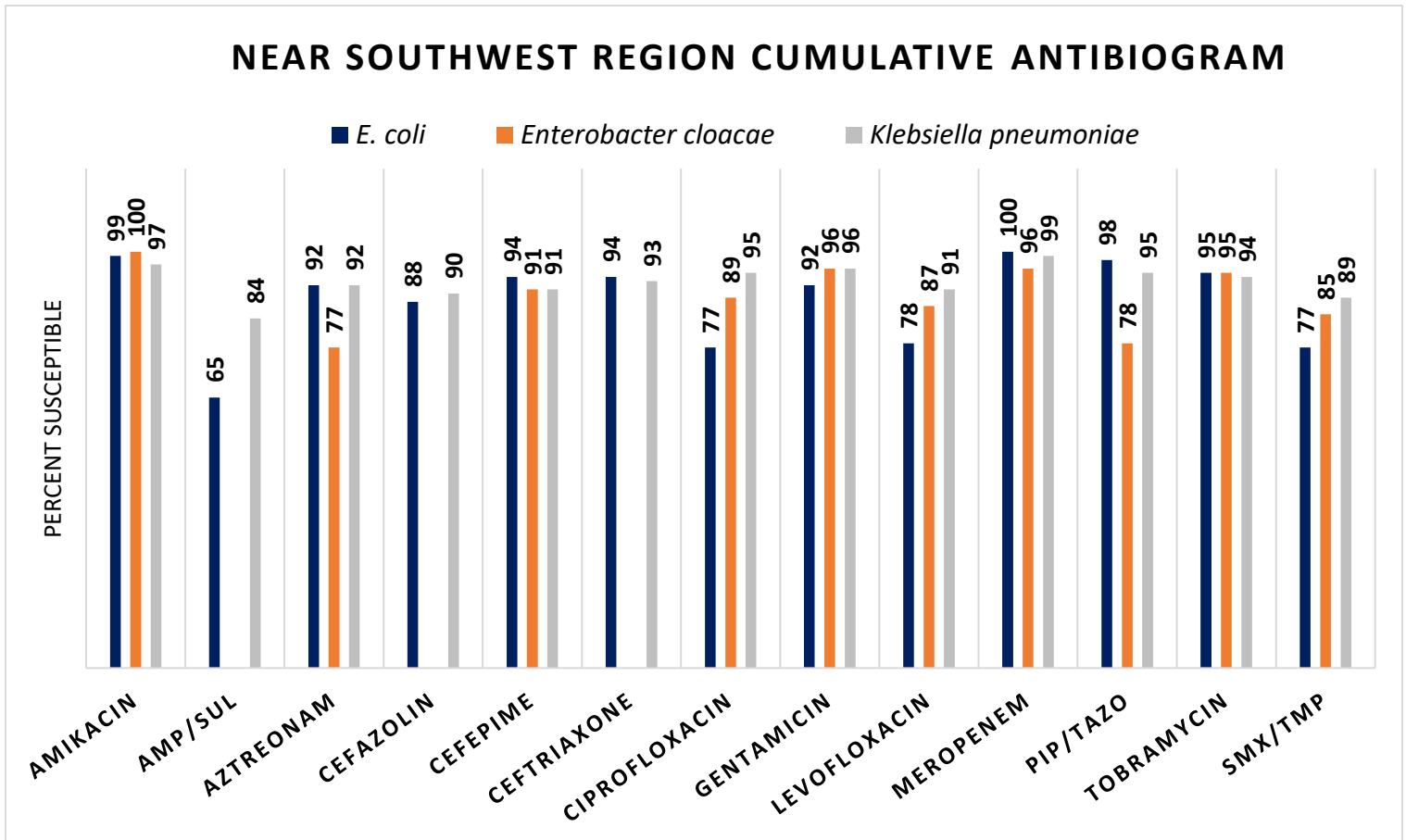


Table 21

Near Southwest Region		Amik	Amp/ sul	Azt	Cefaz	Cefep	Ceftr	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>E. coli</i>	% S	99%	65%	92%	88%	94%	94%	77%	92%	78%	100%	98%	95%	77%
	# Isolates	3297	24574	11913	25710	17039	24574	23387	23977	17039	13155	24574	23761	23761
	% S Range*	96-100	34-74	75-97	52-94	56-100	72-99	43-81	80-98	54-81	99-100	81-99	77-100	63-80
	# Facilities	4	14	10	14	10	13	12	13	10	12	14	13	13
<i>Enterobacter cloacae</i>	% S	100%		77%		91%		89%	96%	87%	96%	78%	95%	85%
	# Isolates	125		395		181		442	462	181	454	449	454	454
	% S Range*	100		58-82		82-97		68-92	87-97	71-92	94-100	58-94	84-100	63-87
	# Facilities	3		3		5		4	5	5	5	5	5	5
<i>Klebsiella pneumoniae</i>	% S	97%	84%	92%	90%	91%	93%	95%	96%	91%	99%	95%	94%	89%
	# Isolates	610	3931	3294	4221	1860	3931	3274	3798	1860	3597	3931	3759	3759
	% S Range*	89-100	66-97	80-97	69-96	80-100	80-99	91-97	86-100	70-100	95-100	72-100	84-100	76-100
	# Facilities	3	14	8	14	10	14	10	13	10	10	14	13	13

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 22

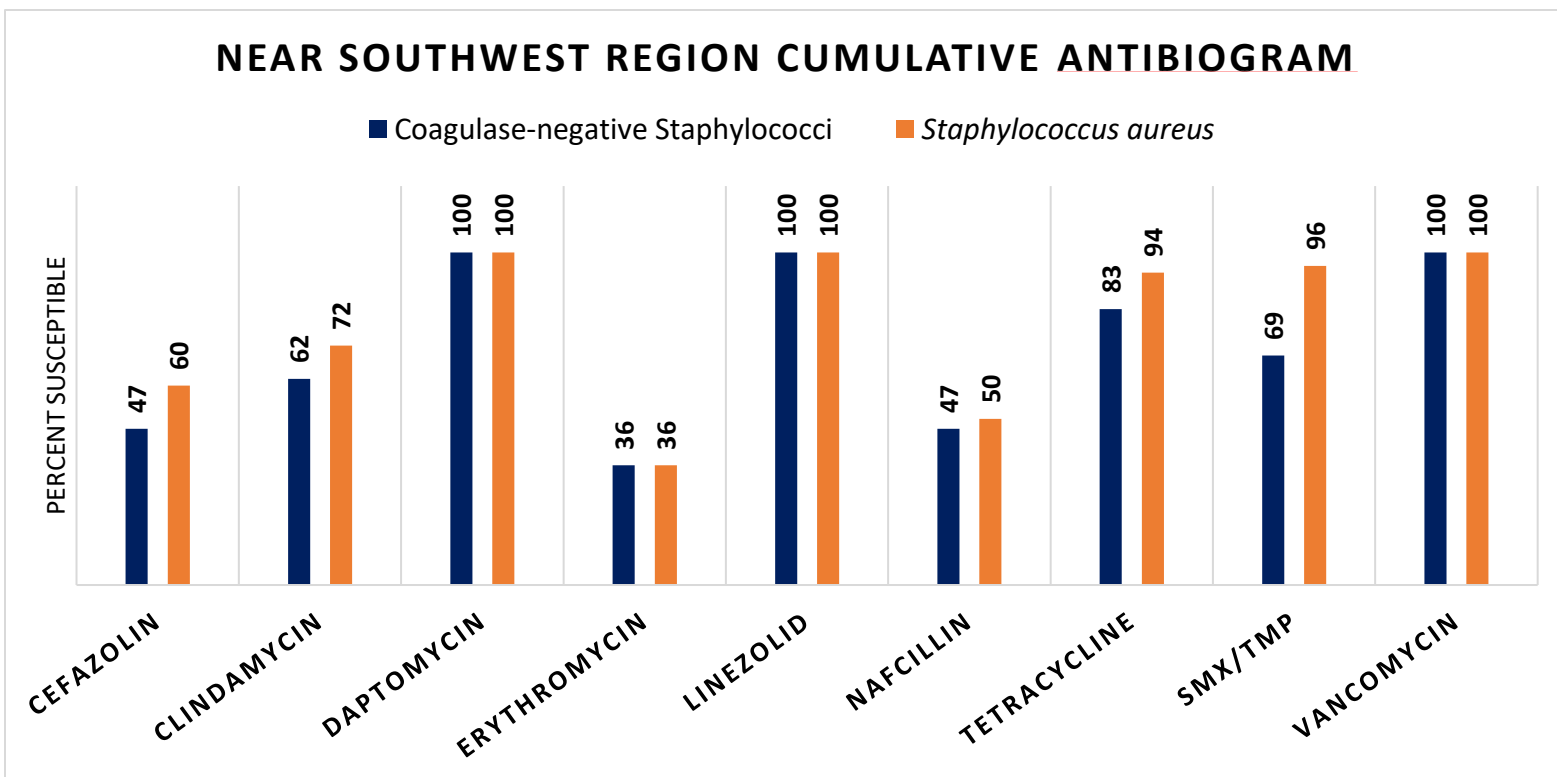


Table 22

Near Southwest Region		Cefaz	Clinda	Dapto	Erythr	Linez	Naf	Tetra	SMX/ TMP	Vanc
Coagulase-negative Staphylococci	% S	47%	62%	100%	36%	100%	47%	83%	69%	100%
	# Isolates	2283	2843	47	2843	2805	2860	2907	2737	2907
	% S Range*	20-61	50-73		26-48	99-100	20-62	72-91	54-81	98-100
	# Facilities	3	7	1	7	5	6	7	5	7
<i>Staphylococcus aureus</i>	%S	60%	72%	100%	36%	100%	50%	94%	96%	100%
	# Isolates	2941	7829	916	7692	4295	7706	7829	7455	7829
	% S Range*	0-100	39-86	100	8-67	97-100	0-100	85-100	84-100	96-100
	# Facilities	3	11	3	11	6	11	11	10	11

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 23

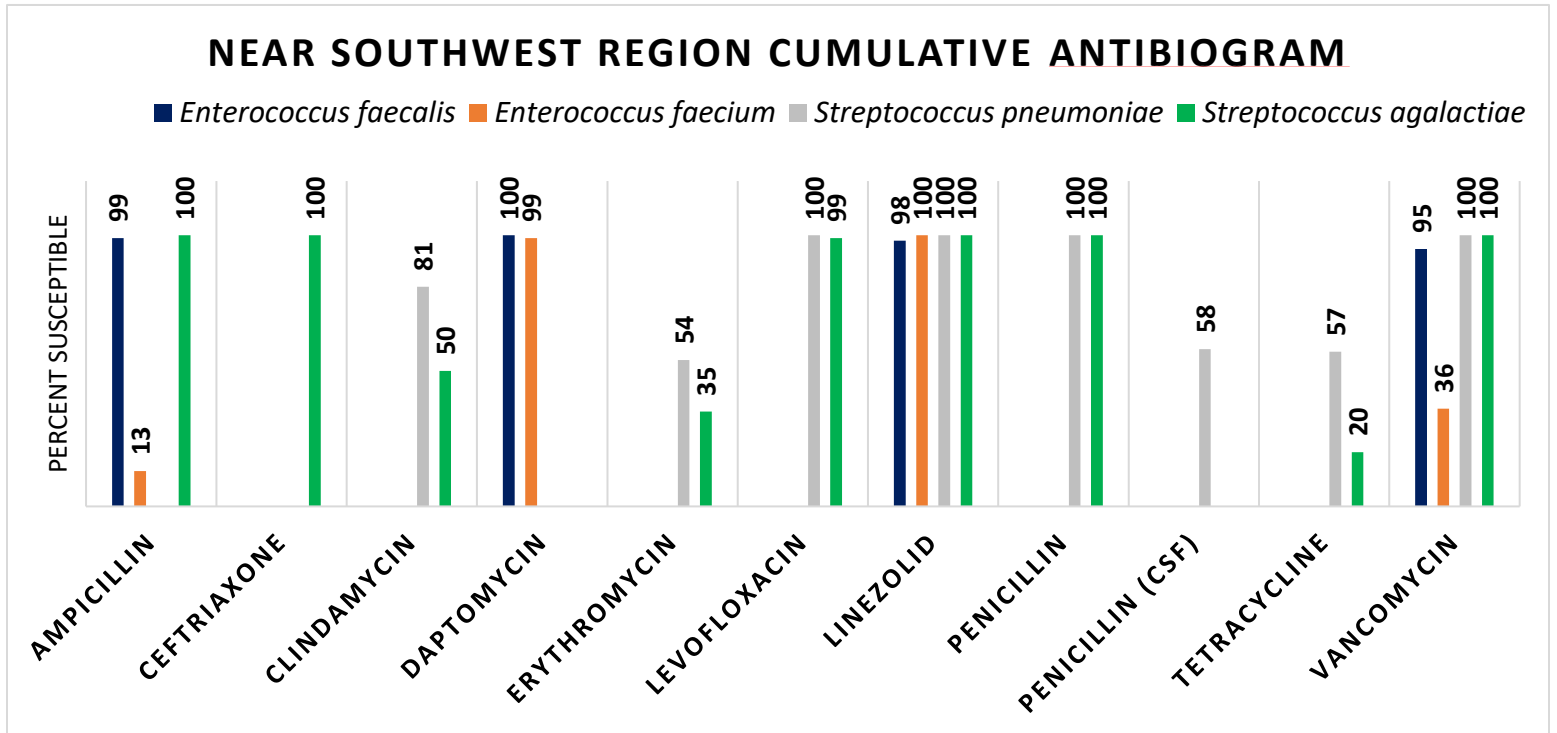


Table 23

Near Southwest Region		Amp	Ceftr	Clinda	Dapto	Erythr	Levo	Linez	PCN	PCN (CSF)	Tetra	Vanc
<i>Enterococcus faecalis</i>	% S	99%			100%			98%				95%
	# Isolates	2750			95			2556				1396
	% S Range*	95-100						77-100				91-100
	# Facilities	8			1			6				7
<i>Enterococcus faecium</i>	% S	13%			99%			100%				36%
	# Isolates	315			85			315				315
	% S Range*	5-17			100			100				26-44
	# Facilities	4			2			4				4
<i>Streptococcus pneumoniae</i>	% S		97%	81%		54%	100%	100%	100%	58%	57%	100%
	# Isolates		232	128		232	232	142	218	90	14	232
	% S Range*		93-99	75-85		47-59	99-100	100	100			100
	# Facilities		4	2		4	4	3	3	1	1	4
<i>Streptococcus agalactiae</i>	% S	100%	100%	50%		35%	99%	100%	100%		20%	100%
	# Isolates	223	48	149		122	397	323	329		142	255
	% S Range*	100	100	47-53		30-43	97-100	100	98-100		20-21	100
	# Facilities	4	1	3		2	5	4	4		2	3

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Regional Cumulative AntibioGram: Northern

Figure 24

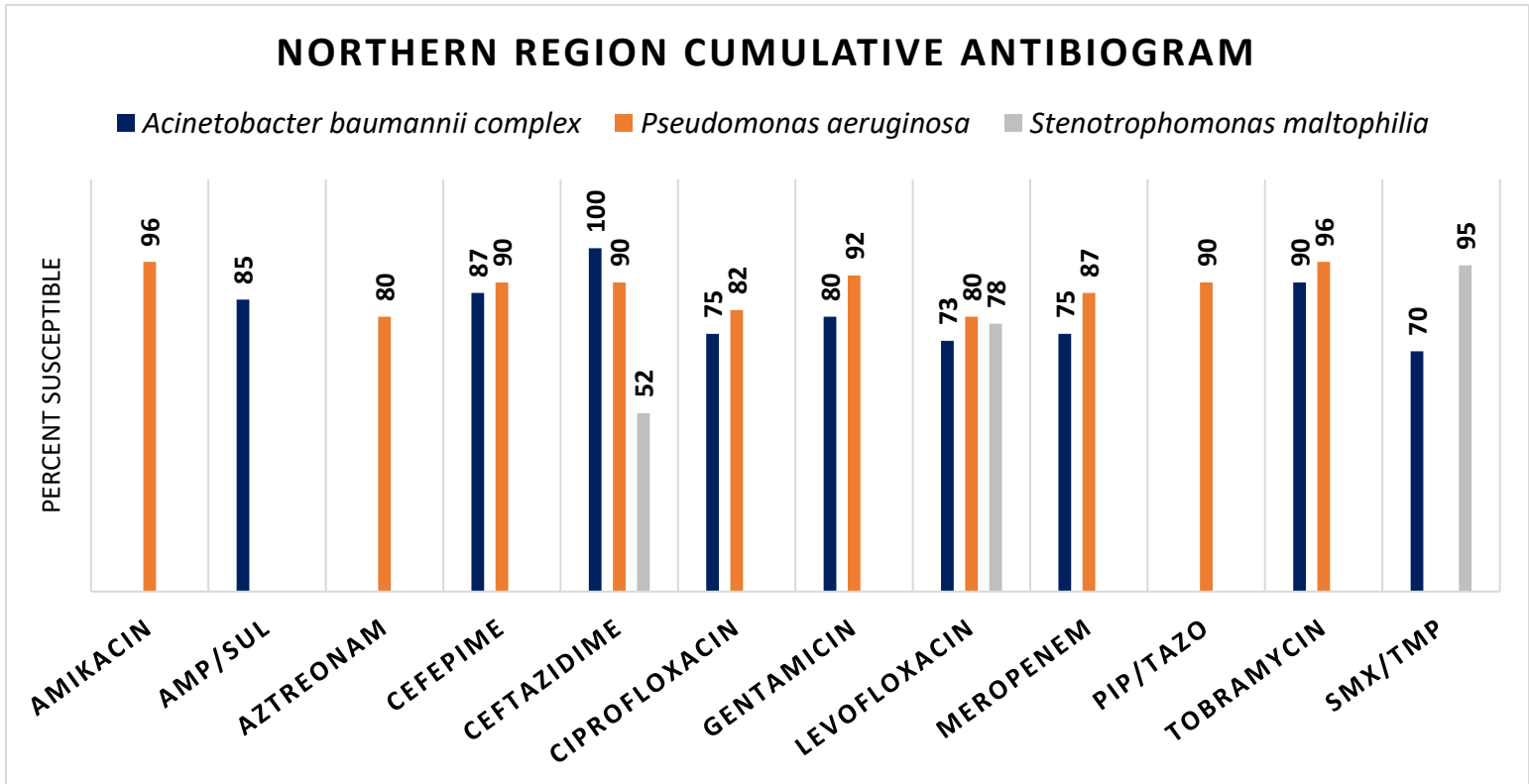


Table 24

Northern Region		Amik	Amp/ sul	Azt	Cefep	Ceftaz	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>Acinetobacter baumannii</i> complex	% S		85%		87%	100%	75%	80%	73%	75%		90%	70%
	# Isolates		38		8	8	16	40	40	40		40	30
	% S Range*												
	# Facilities		3		2	2	3	4	4	4		4	2
<i>Pseudomonas aeruginosa</i>	% S	96%		80%	90%	90%	82%	92%	80%	87%	90%	96%	
	# Isolates	1446		1456	2018	1534	1821	2000	2018	2018	1860	2012	
	% S Range*	92-99		68-100	86-98	85-95	79-88	81-97	76-85	74-99	81-100	93-100	
	# Facilities	8		6	11	7	10	10	11	11	10	11	
<i>Stenotrophomonas maltophilia</i>	% S					52%			78%				95%
	# Isolates					170			212				233
	% S Range*					50-59			76-84				95-97
	# Facilities					2			5				6

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 25

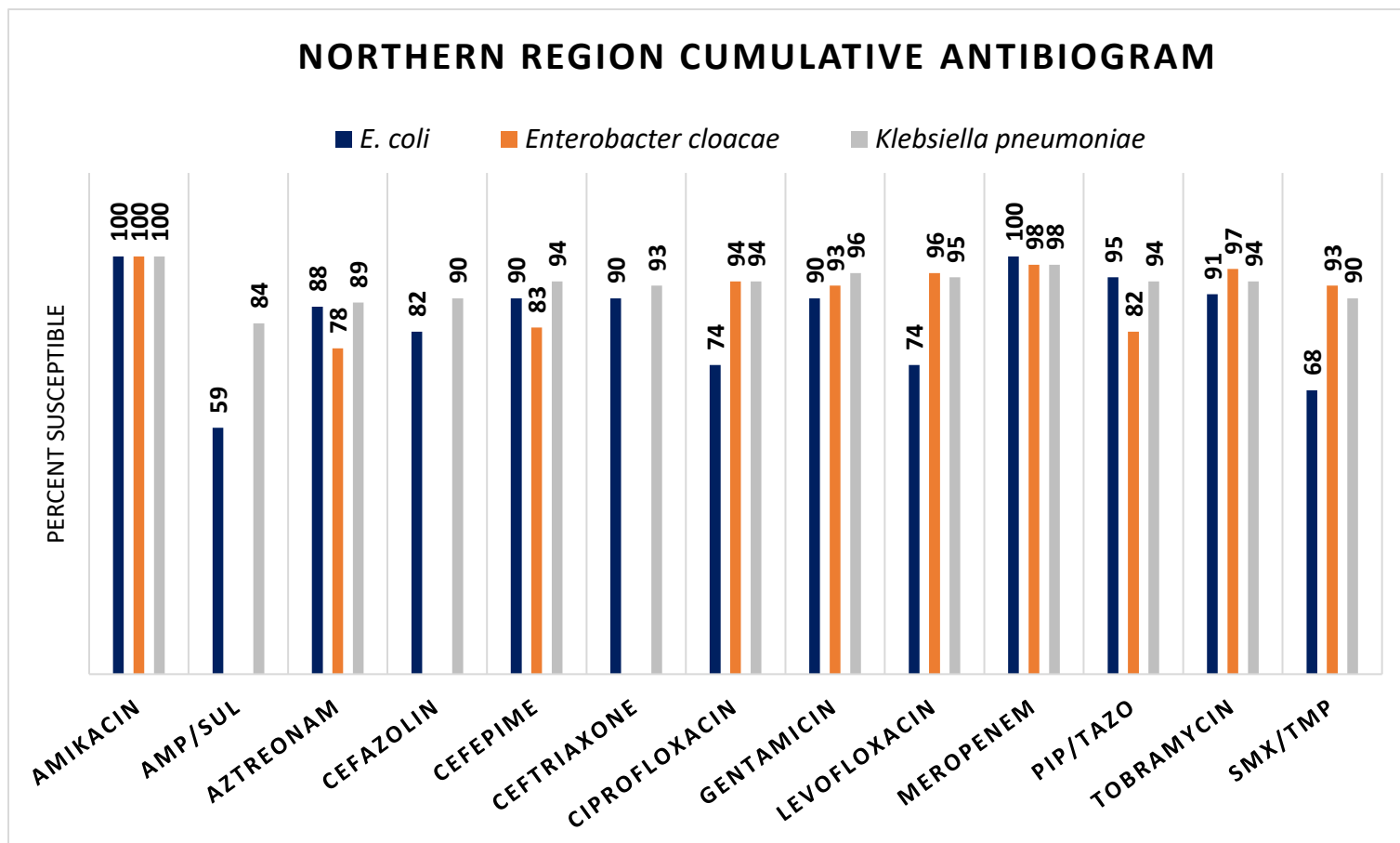


Table 25

Northern Region		Amik	Amp/ sul	Azt	Cefaz	Cefep	Ceftr	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>E. coli</i>	% S	100%	59%	88%	82%	90%	90%	74%	90%	74%	100%	95%	91%	68%
	# Isolates	1641	4660	8916	10592	11383	11384	10957	11465	11465	9613	11461	4660	11465
	% S Range*	99-100	22-65	9-99	60-92	82-100	81-99	22-80	58-95	25-81	99-100	88-99	46-96	27-77
	# Facilities	2	5	9	10	11	9	10	11	11	10	11	5	11
<i>Enterobacter cloacae</i>	% S	100%		78%		83%		94%	93%	96%	98%	82%	97%	93%
	# Isolates	78		778		895		838	1008	895	794	833	268	895
	% S Range*	100		67-87		66-100		92-100	67-100	94-100	89-100	73-94	97-98	91-98
	# Facilities	2		7		9		8	11	9	8	8	5	9
<i>Klebsiella pneumoniae</i>	% S	100%	84%	89%	90%	94%	93%	94%	96%	95%	98%	94%	94%	90%
	# Isolates	370	1168	2303	2661	2858	2858	2635	2858	2858	2434	2858	1168	2858
	% S Range*	100	71-90	9-99	82-98	89-99	84-99	89-98	92-100	88-100	95-100	92-98	90-100	72-98
	# Facilities	2	5	99	10	11	11	10	11	11	10	11	5	11

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 26

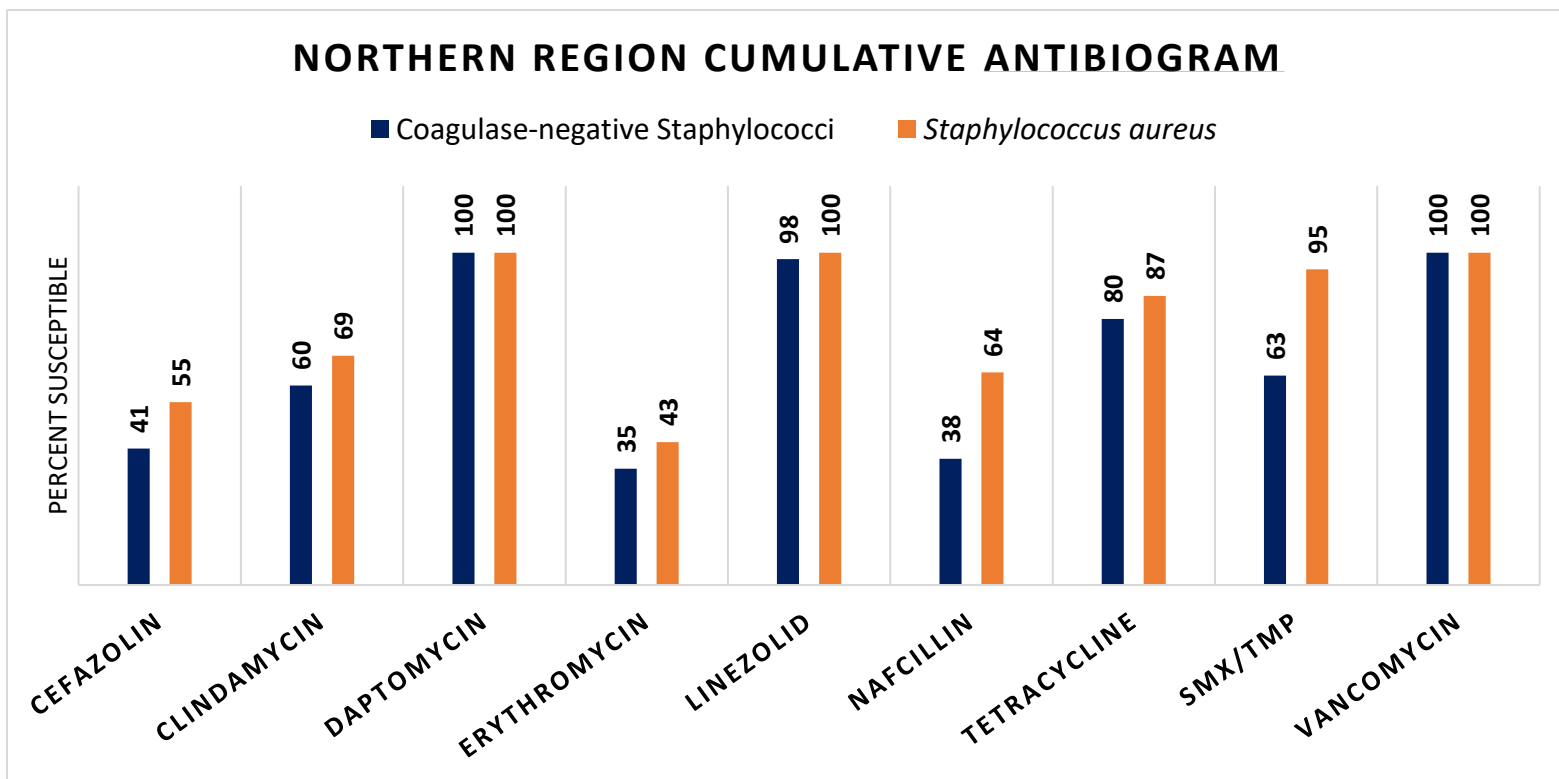


Table 26

Northern Region		Cefaz	Clinda	Dapto	Erythr	Linez	Naf	Tetra	SMX/ TMP	Vanc
Coagulase-negative Staphylococci	% S	41%	60%	100%	35%	98%	38%	80%	63%	100%
	# Isolates	135	527	292	205	364	646	642	316	642
	% S Range*	41	51-81	100	22-41	95-100	24-50	9-91	52-75	100
	# Facilities	1	7	4	4	6	9	9	5	9
<i>Staphylococcus aureus</i>	% S	55%	69%	100%	43%	100%	64%	87%	95%	100%
	# Isolates	333	3560	1923	1637	2624	3233	3575	3575	3575
	% S Range*	55	45-87	100	9-71	100	0-100	77-98	90-100	100
	# Facilities	1	10	5	5	7	10	10	10	10

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 27

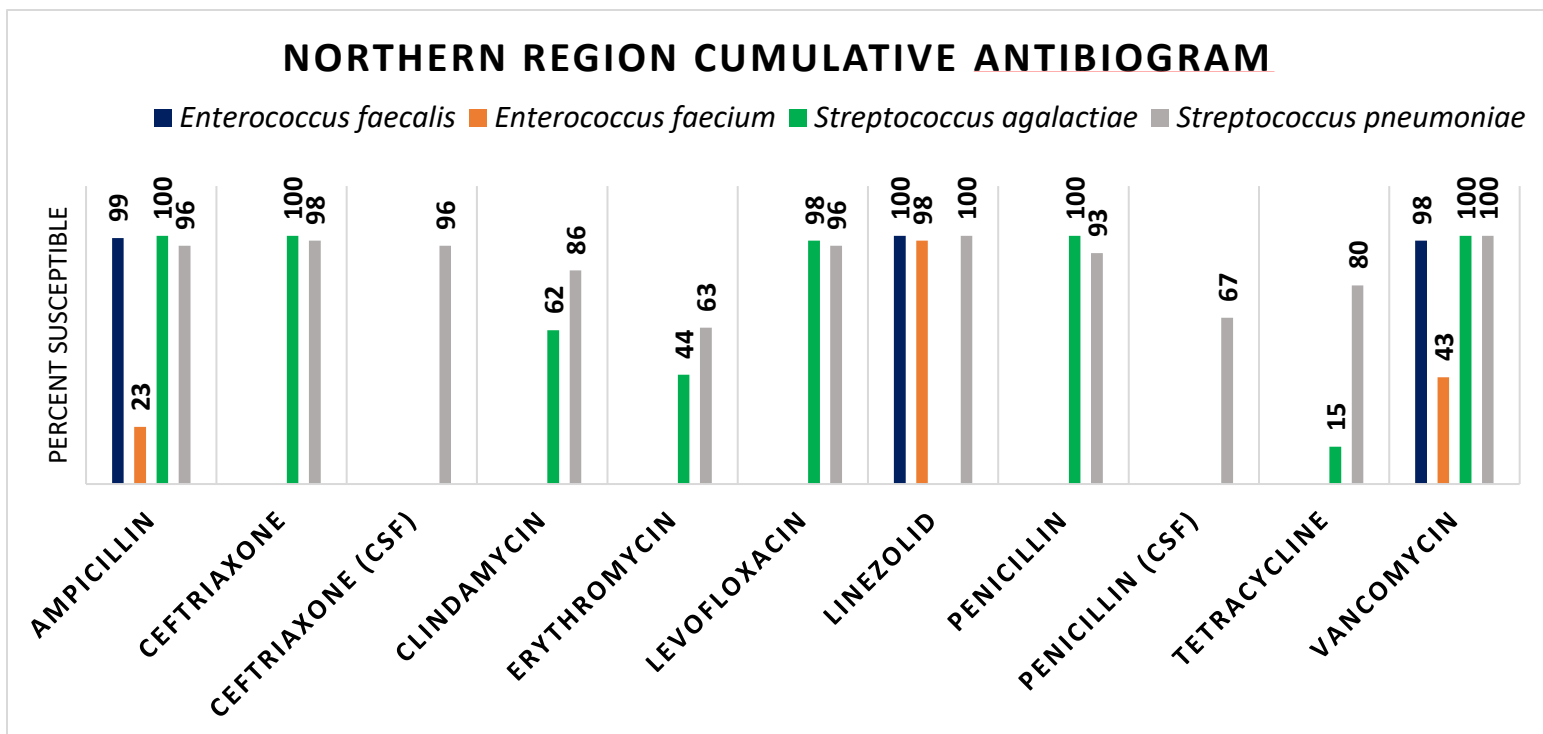


Table 27

Northern Region		Amp	Ceftr	Ceftr (CSF)	Clinda	Erythr	Levo	Linez	PCN	PCN (CSF)	Tetra	Vanc
<i>Enterococcus faecalis</i>	% S	99%						100%				98%
	# Isolates	1649						683				1650
	% S Range*	97-100						100				94-100
	# Facilities	10						6				10
<i>Enterococcus faecium</i>	% S	23%						98%				43%
	# Isolates	202						131				202
	% S Range*	17-25						98-100				29-52
	# Facilities	6						4				6
<i>Streptococcus pneumoniae</i>	% S	96%	98%	96%	86%	63%	96%	100%	93%	67%	80%	100%
	# Isolates	304	547	479	470	91	547	456	533	479	493	547
	% S Range*		97-98	96			94-96	100	79-95		80	100
	# Facilities	2	7	5	4	4	7	3	6	5	6	7
<i>Streptococcus agalactiae</i>	% S	100%	100%		62%	44%	98%		100%		15%	100%
	# Isolates	82	66		81	85	85		37		40	85
	% S Range*	100	100									100
	# Facilities	3	2		3	3	3		2		2	3

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Regional Cumulative Antibigram: Northwest

Figure 28

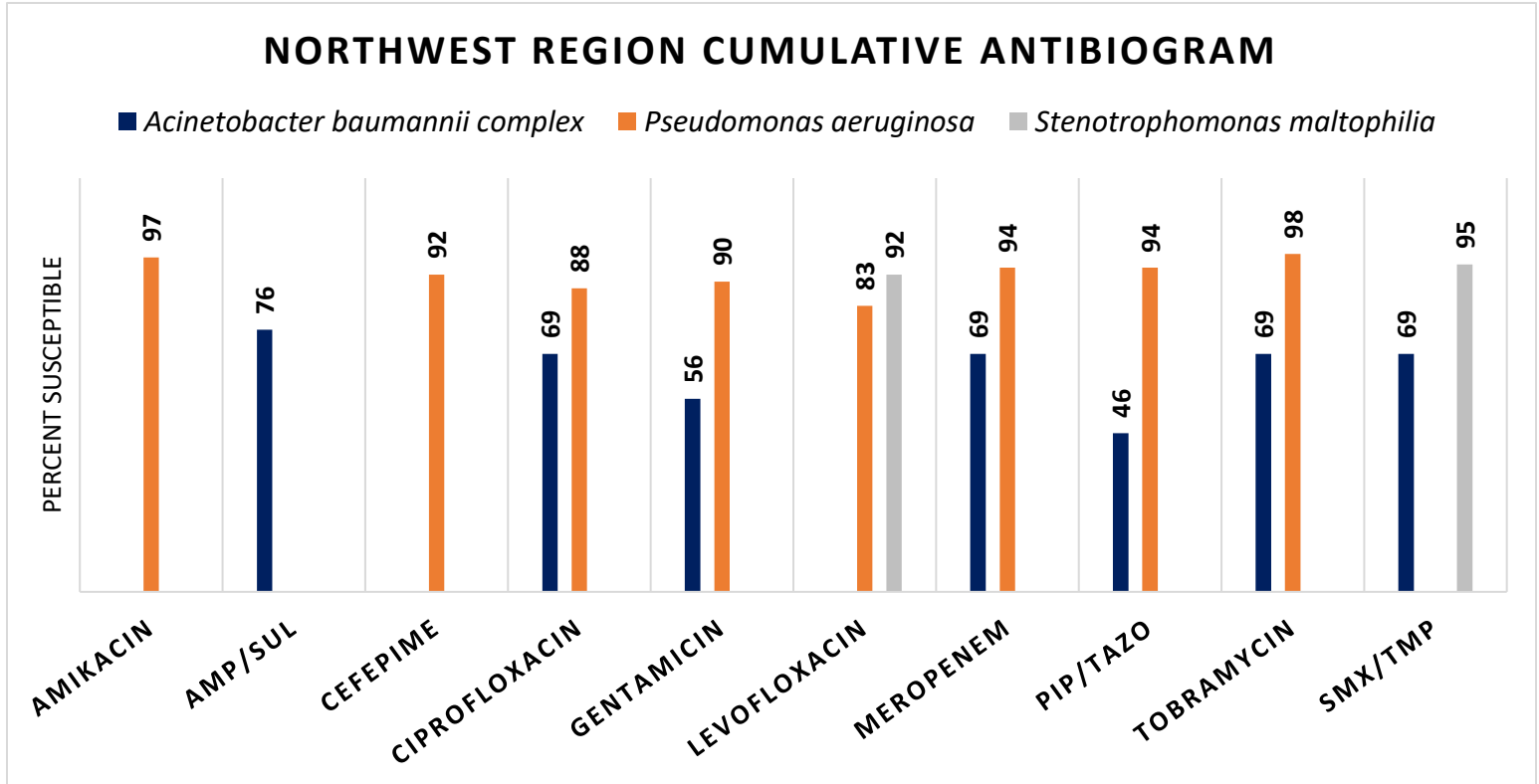


Table 28

Northwest Region		Amik	Amp/ sul	Cefep	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>Acinetobacter baumannii</i> complex	% S		76%		69%	56%		69%	46%	69%	69%
	# Isolates		29		29	29		29	28	29	29
	% S Range*										
	# Facilities		2		2	2		2	1	2	2
<i>Pseudomonas aeruginosa</i>	% S	97%		92%	88%	90%	83%	94%	94%	98%	
	# Isolates	326		1153	1151	1151	781	658	1141	1104	
	% S Range*			81-98	75-100	84-93	74-87	81-97	81-100	96-100	
	# Facilities	1		6	6	6	4	4	6	5	
<i>Stenotrophomonas maltophilia</i>	% S						92%				95%
	# Isolates						61				103
	% S Range*										
	# Facilities						3				4

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 29

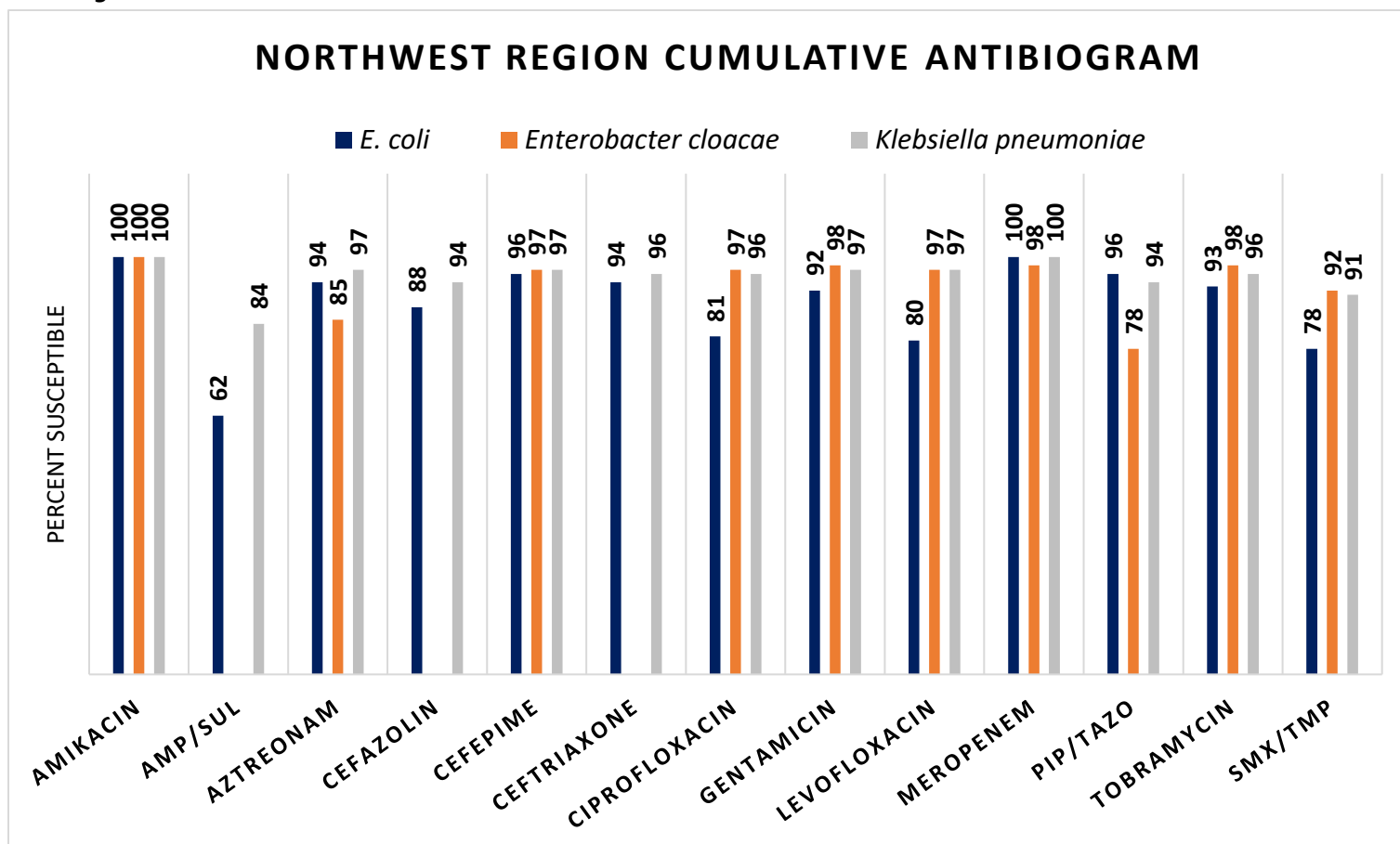


Table 29

Northwest Region		Amik	Amp/ sul	Azt	Cefaz	Cefep	Ceftr	Cipro	Gent	Levo	Mero	Pip/ tazo	Tobra	SMX/ TMP
<i>E. coli</i>	% S	100%	62%	94%	88%	96%	94%	81%	92%	80%	100%	96%	93%	78%
	# Isolates	1662	8349	3927	8340	8340	8340	8341	8340	6477	5580	8342	8129	8346
	% S Range*	100	52-69	92-95	66-94	91-100	84-97	73-93	91-95	75-84	100	92-100	90-99	69-82
	# Facilities	2	7	4	7	7	6	7	7	5	5	7	6	7
<i>Enterobacter cloacae</i>	% S	100%		85%		97%		97%	98%	97%	98%	78%	98%	92%
	# Isolates	133		149		471		472	437	323	281	472	454	470
	% S Range*	100				90-100		90-100	97-100	94-100	97-99	67-87	97-100	87-96
	# Facilities	2		3		6		6	5	4	4	6	5	6
<i>Klebsiella pneumoniae</i>	% S	100%	84%	97%	94%	97%	96%	96%	97%	97%	100%	94%	96%	91%
	# Isolates	205	1780	756	1778	1779	1779	1703	1779	1504	959	970	1707	1097
	% S Range*	100	75-89	96-97	77-98	93-100	92-99	92-98	93-100	92-100	100	92-97	92-98	86-97
	# Facilities	2	7	3	7	7	7	6	7	5	4	6	6	6

*Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 30

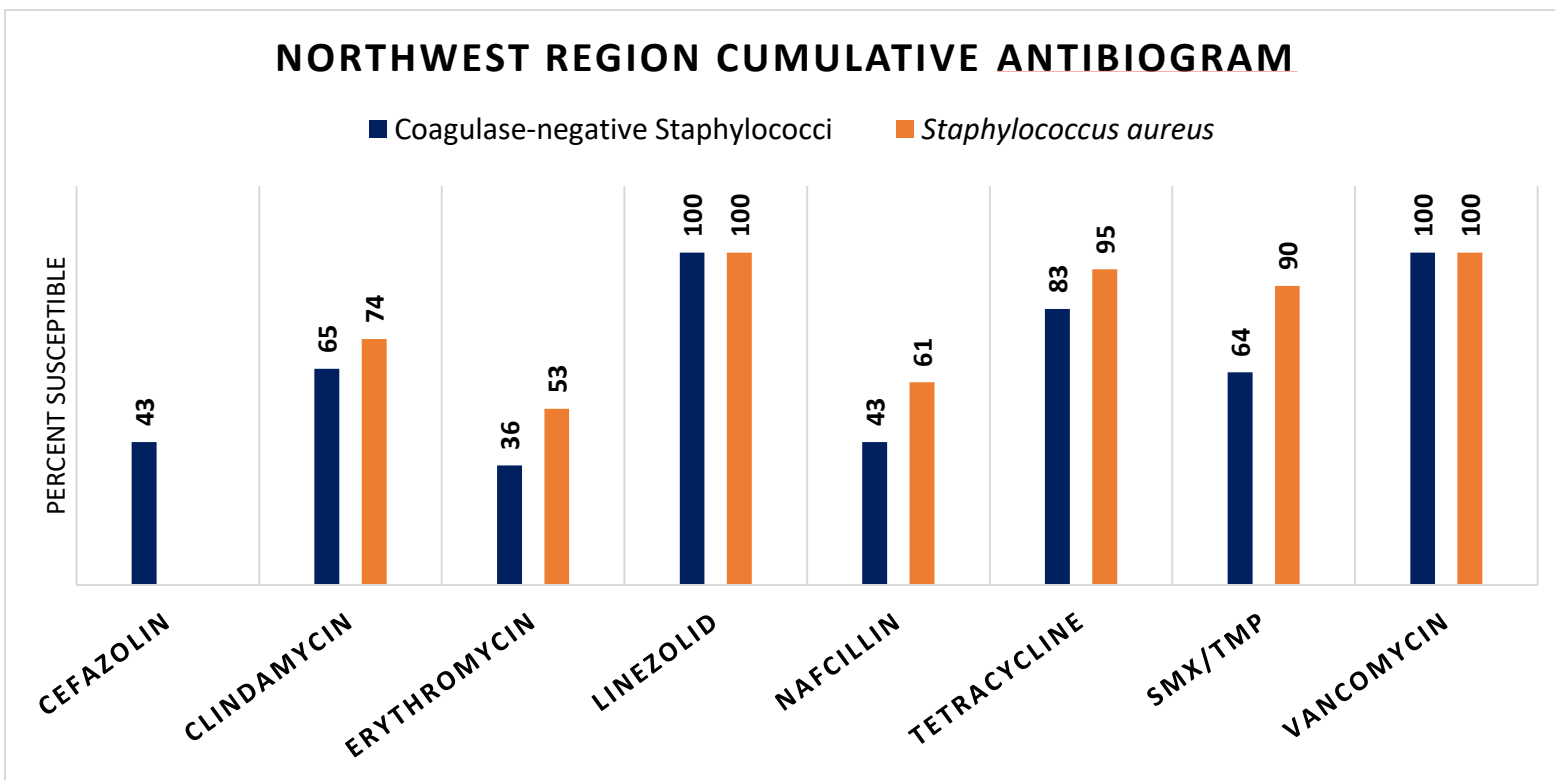


Table 30

Northwest Region		Cefaz	Clinda	Erythr	Linez	Naf	Tetra	SMX/ TMP	Vanc
Coagulase- negative Staphylococci	%S	43%	65%	36%	100%	43%	83%	64%	100%
	# Isolates	261	365	316	163	263	514	337	514
	%S Range*	26-42	57-69	13-42		26-42	65-89	48-66	100
	# Facilities	3	4	3	1	3	5	3	5
<i>Staphylococcus aureus</i>	%S		74%	53%	100%	61%	95%	90%	100%
	# Isolates		3138	2301	756	2257	1882	3462	2586
	%S Range*		62-86	17-67	100	0-100	90-100	0-100	100
	# Facilities		6	4	3	6	5	6	6

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

Figure 31

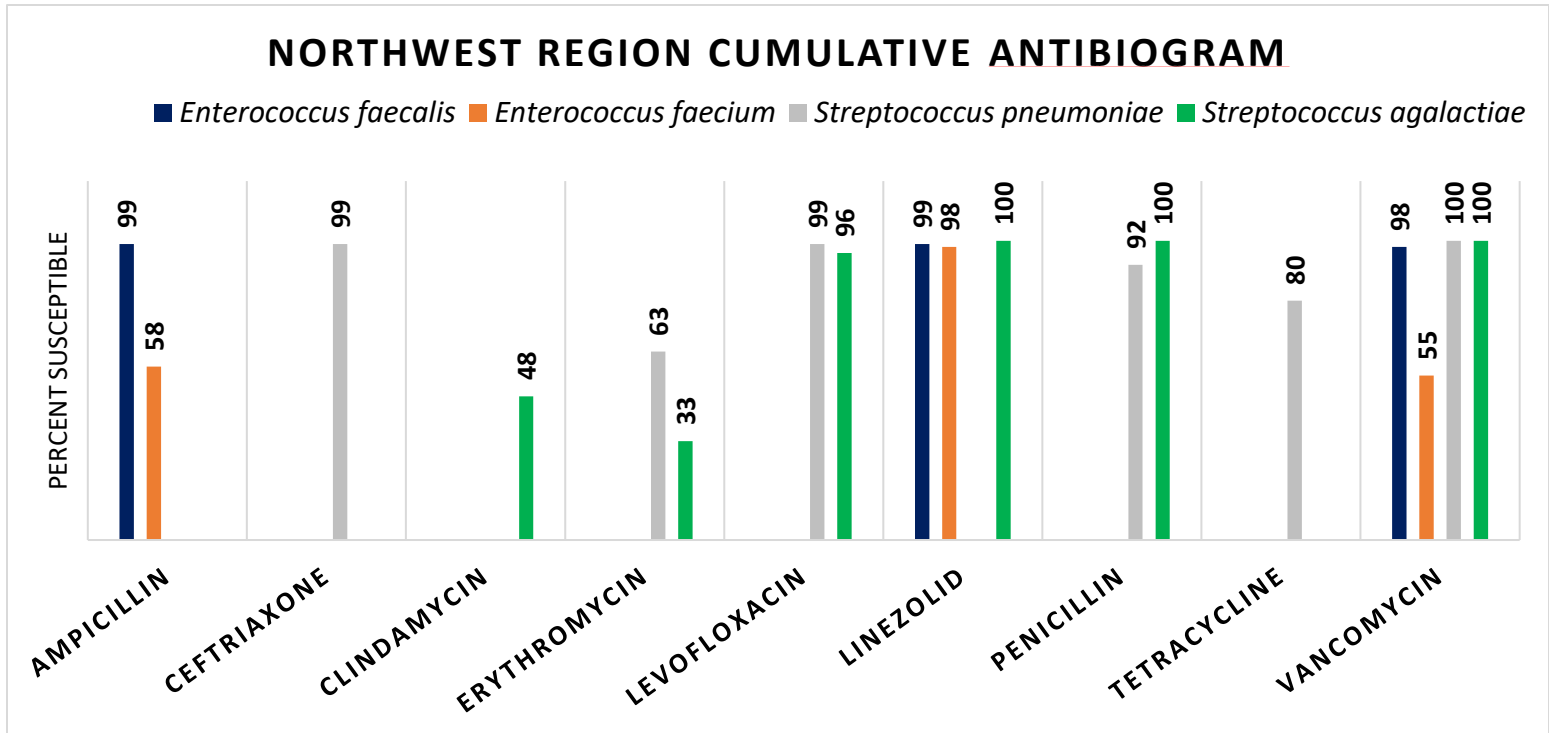


Table 31

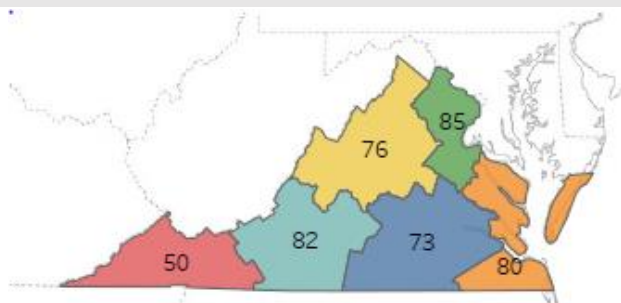
Northwest Region		Amp	Ceftr	Clinda	Erythr	Levo	Linez	PCN	Tetra	Vanc
<i>Enterococcus faecalis</i>	%S	99%					99%			98%
	# Isolates	1306					721			1306
	% S Range*	93-100					97-100			96-100
	# Facilities	6					4			6
<i>Enterococcus faecium</i>	%S	58%					98%			55%
	# Isolates	124					136			203
	% S Range*	16-100								32-99
	# Facilities	4					4			6
<i>Streptococcus pneumoniae</i>	% S		99%		63%	99%		92%	80%	100%
	# Isolates		157		101	98		161	100	153
	% S Range*		100			100		68-100	77-88	100
	# Facilities		5		4	4		5	3	4
<i>Streptococcus agalactiae</i>	% S			48%	33%	96%	100%	100%		100%
	# Isolates			176	176	294	72	373		301
	% S Range*			37-52	25-34	90-100		100		100
	# Facilities			2	2	2	1	2		2

* Percent susceptible range was only calculated for facilities reporting ≥ 30 isolates

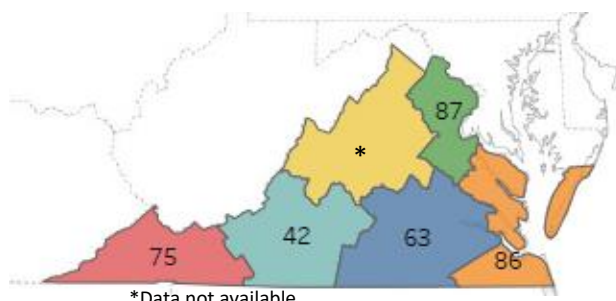
Regional Comparison Maps

Cumulative Percentage of Antibiotics Susceptible: *Acinetobacter baumannii* complex

Ampicillin/sulbactam



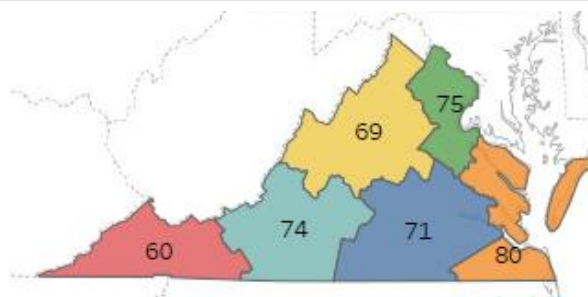
Cefepime



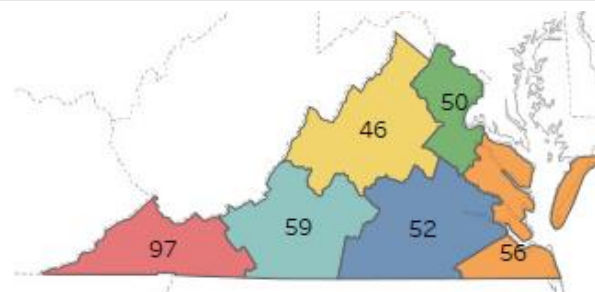
Levofloxacin



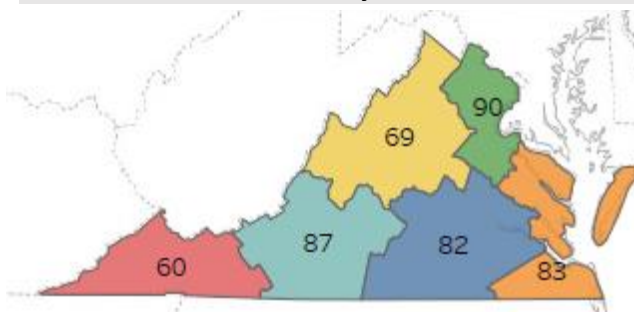
Meropenem



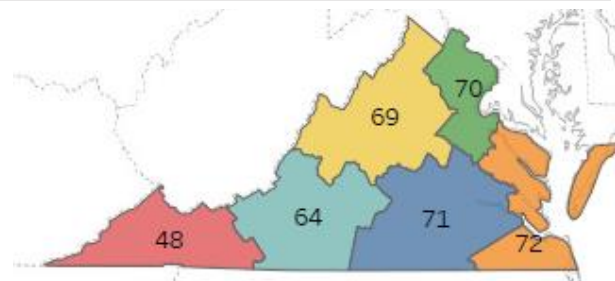
Piperacillin/tazobactam



Tobramycin

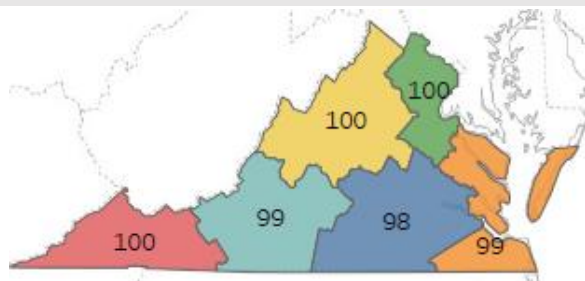


Trimethoprim/sulfamethoxazole

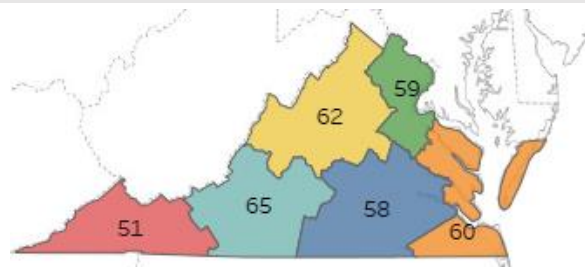


Cumulative Percentage of Antibiotics Susceptible: *E.coli*

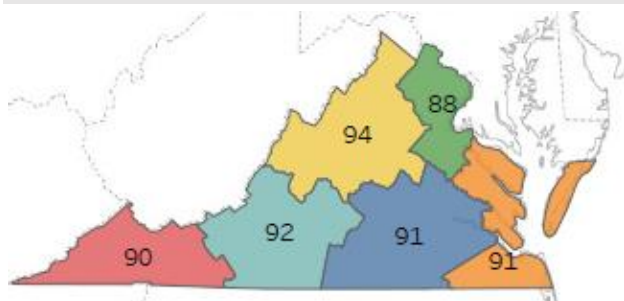
Amikacin



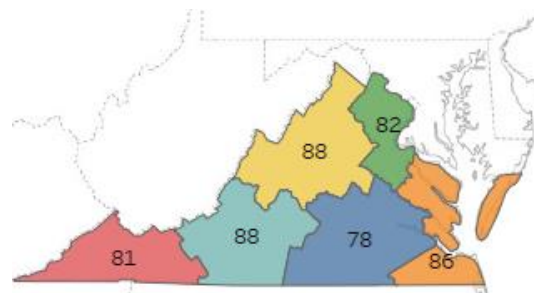
Ampicillin/sulbactam



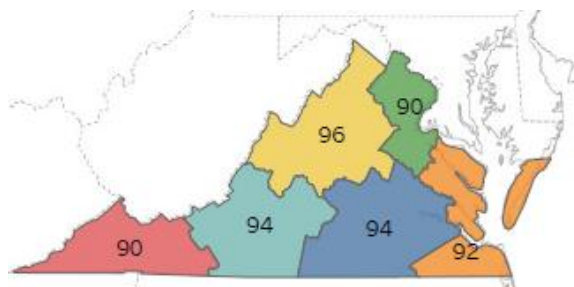
Aztreonam



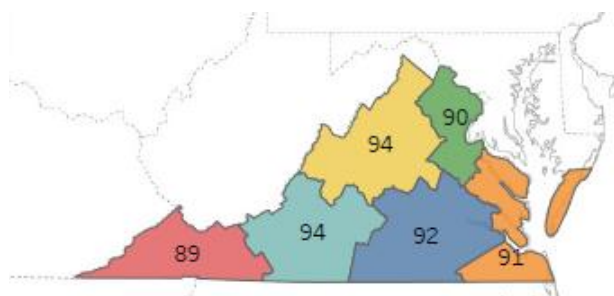
Cefazolin



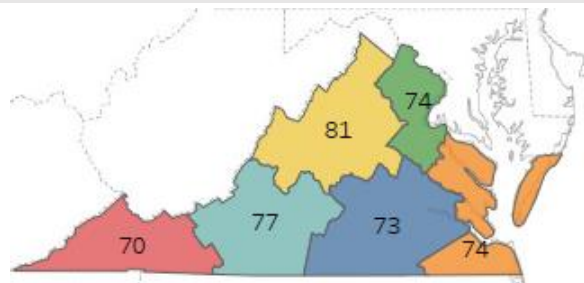
Cefepime



Ceftriaxone

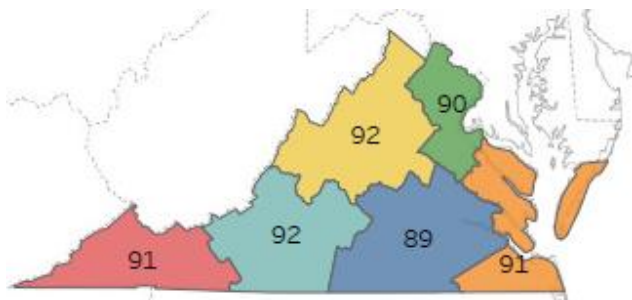


Ciprofloxacin

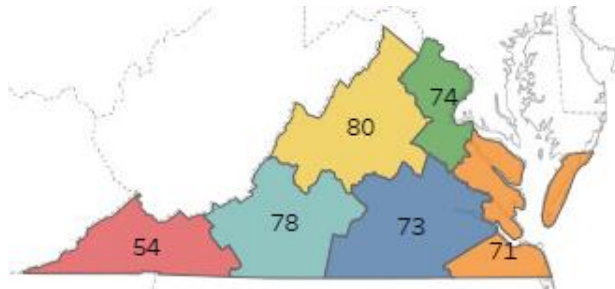


Cumulative Percentage of Antibiotics Susceptible: *E.coli* (cont)

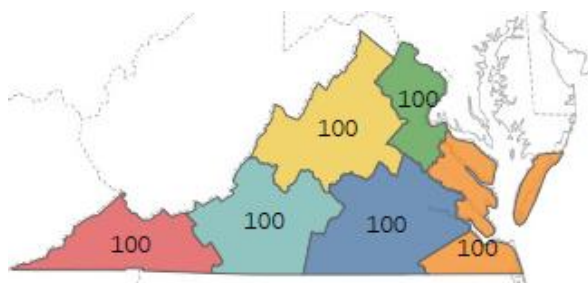
Gentamicin



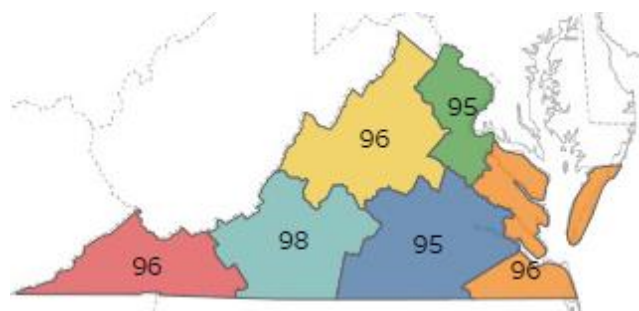
Levofloxacin



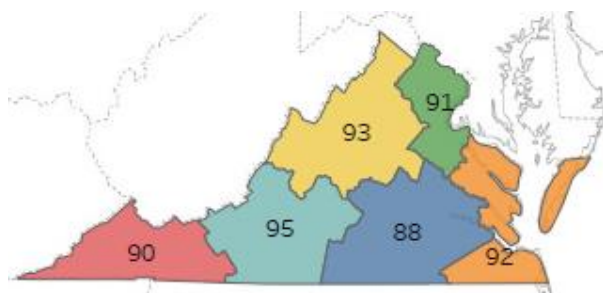
Meropenem



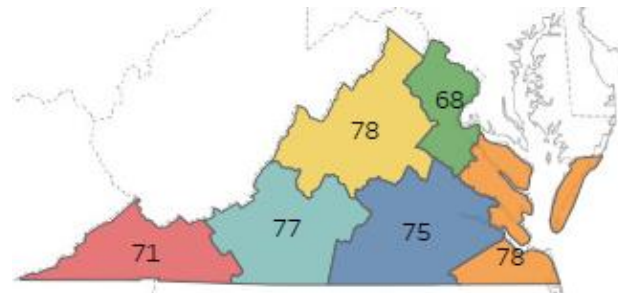
Piperacillin/tazobactam



Tobramycin

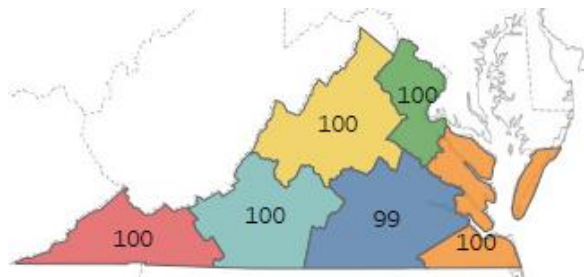


Trimethoprim/sulfamethoxazole



Cumulative Percentage of Antibiotics Susceptible: *Enterobacter cloacae*

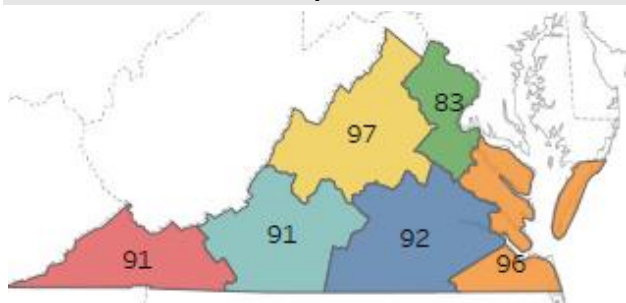
Amikacin



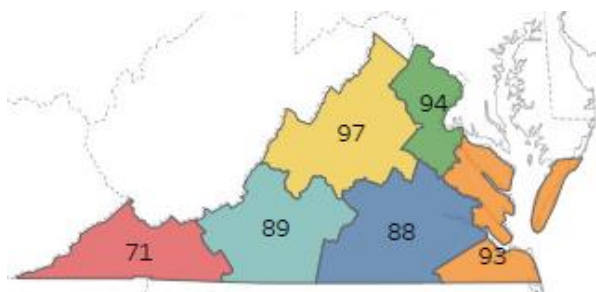
Aztreonam



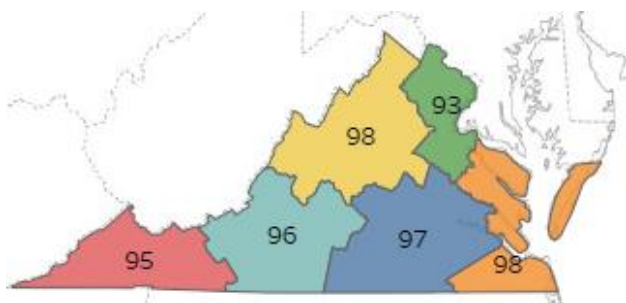
Cefepime



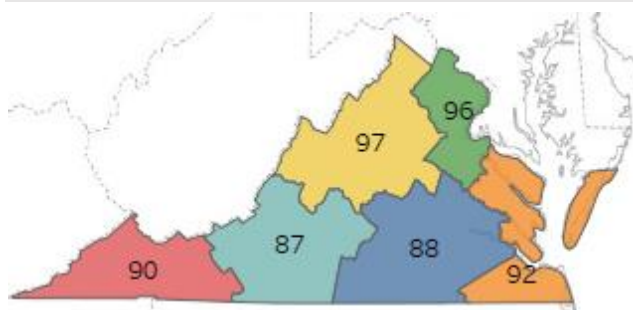
Ciprofloxacin



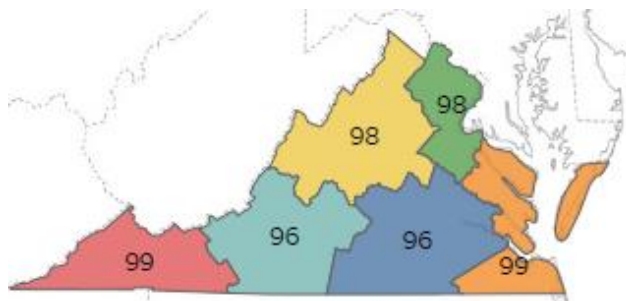
Gentamicin



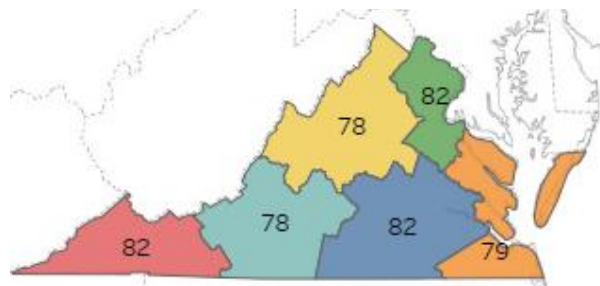
Levofloxacin



Meropenem

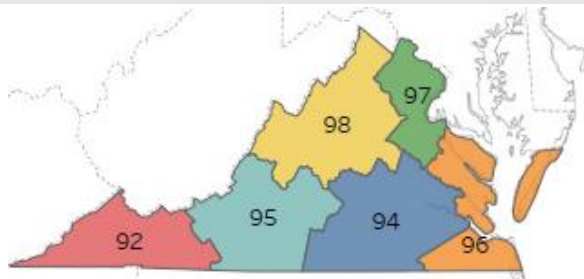


Piperacillin/tazobactam

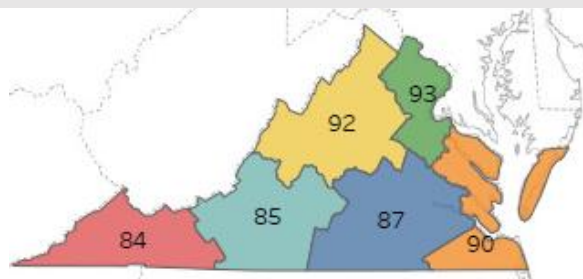


Cumulative Percentage of Antibiotics Susceptible: *Enterobacter cloacae*
(cont.)

Tobramycin

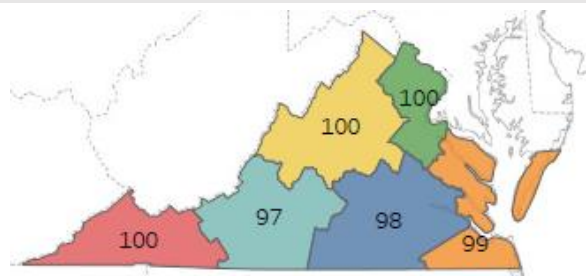


Trimethoprim/sulfamethoxazole

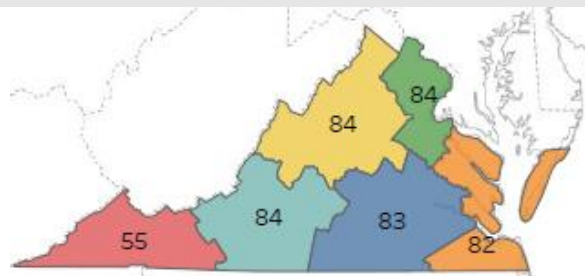


Cumulative Percentage of Antibiotics Susceptible: *Klebsiella pneumoniae*

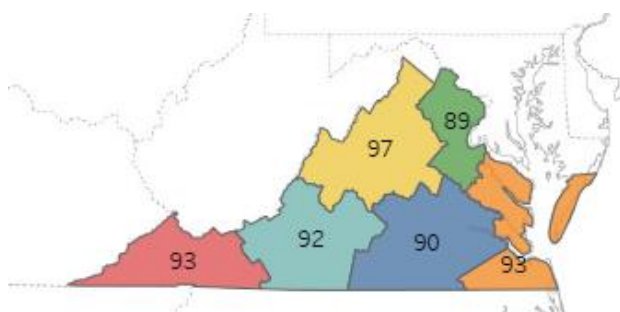
Amikacin



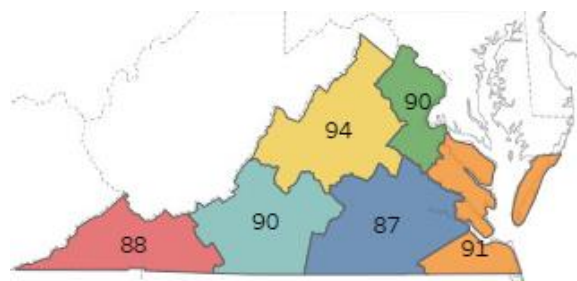
Ampicillin/sulbactam



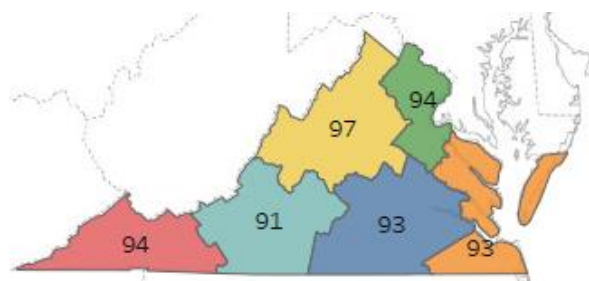
Aztreonam



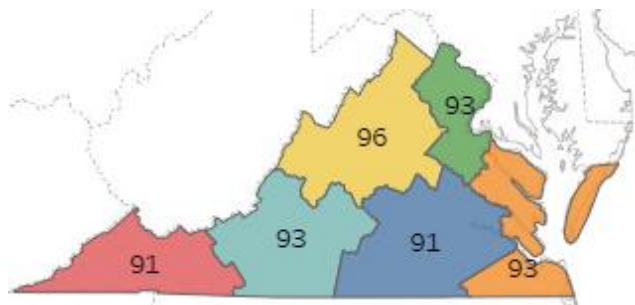
Cefazolin



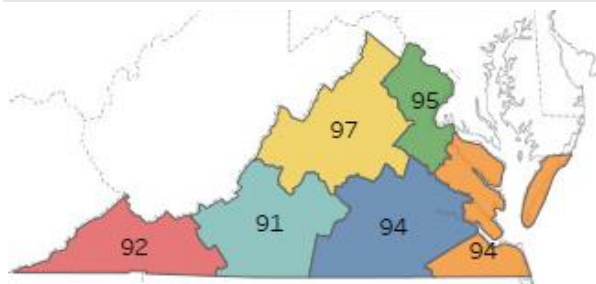
Cefepime



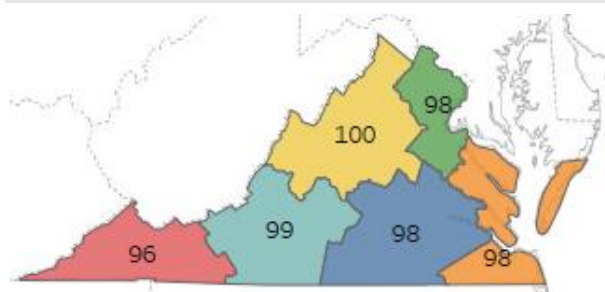
Ceftriaxone



Levofloxacin

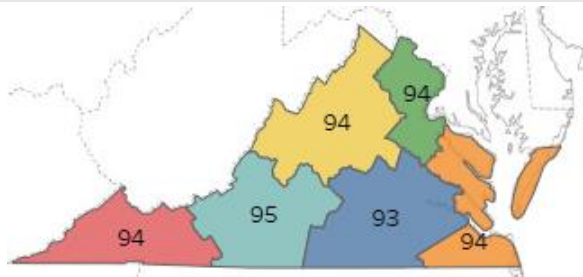


Meropenem

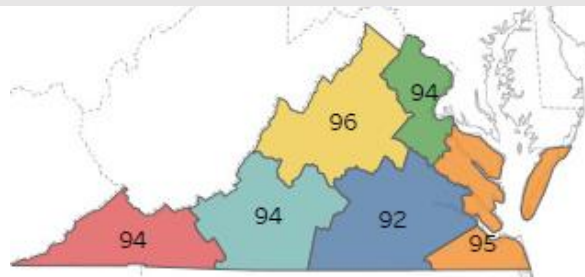


Cumulative Percentage of Antibiotics Susceptible: *Klebsiella pneumoniae* (cont.)

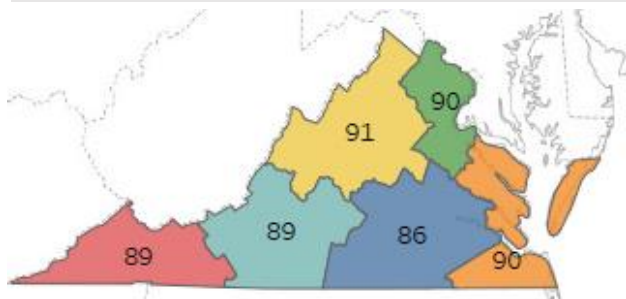
Piperacillin/tazobactam



Tobramycin

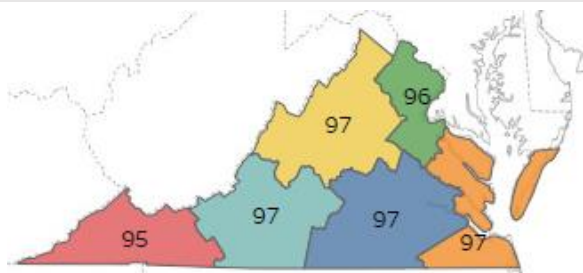


Trimethoprim/sulfamethoxazole

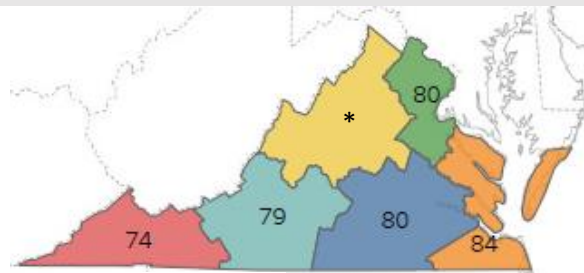


Cumulative Percentage of Antibiotics Susceptible: *Pseudomonas aeruginosa*

Amikacin

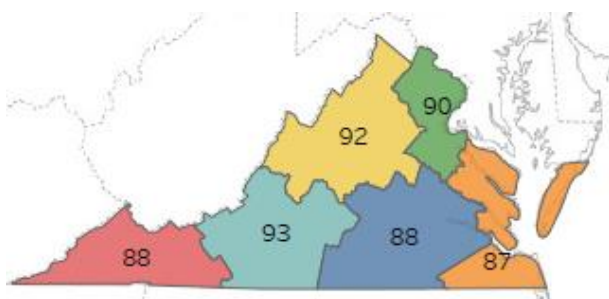


Aztreonam

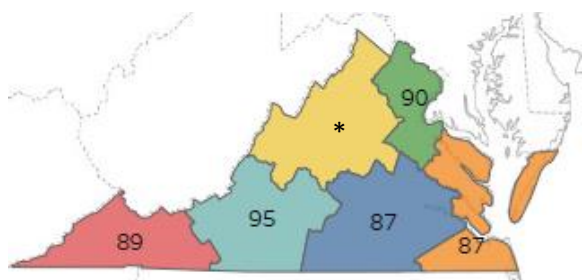


*No data available

Cefepime

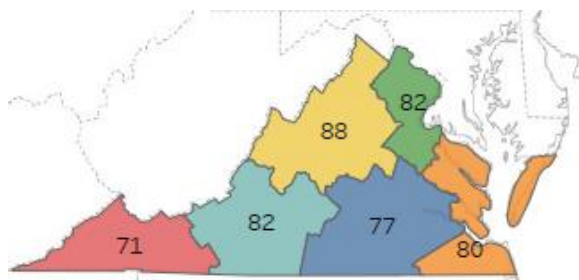


Ceftazidime

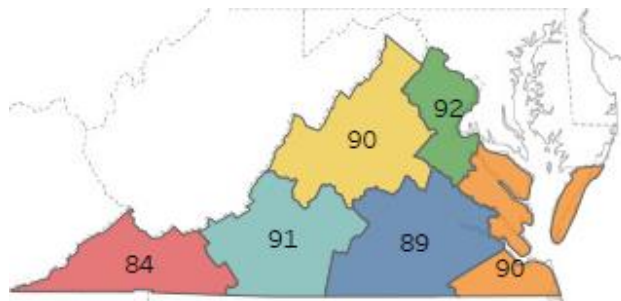


*No data available

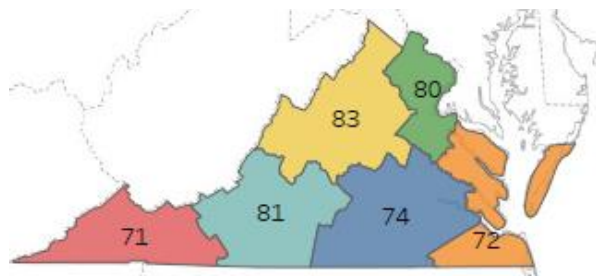
Ciprofloxacin



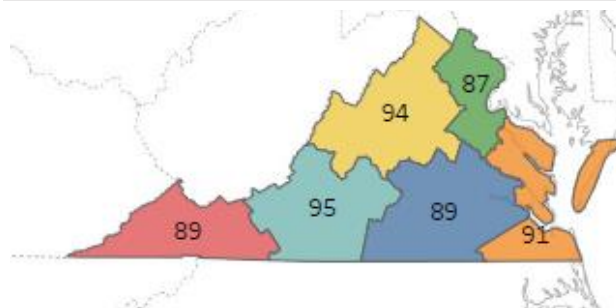
Gentamicin



Levofloxacin

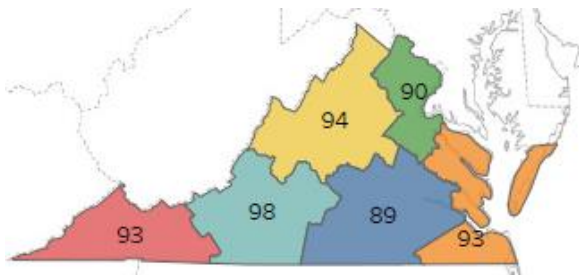


Meropenem

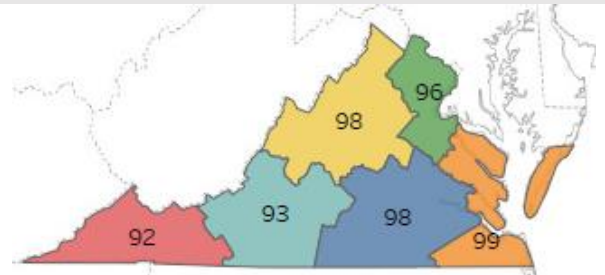


Cumulative Percentage of Antibiotics Susceptible: *Pseudomonas aeruginosa* (cont.)

Piperacillin/tazobactam

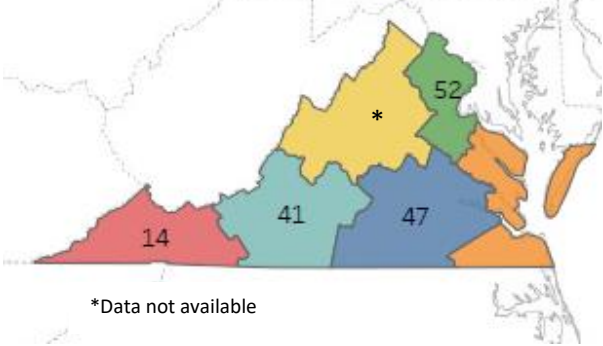


Tobramycin

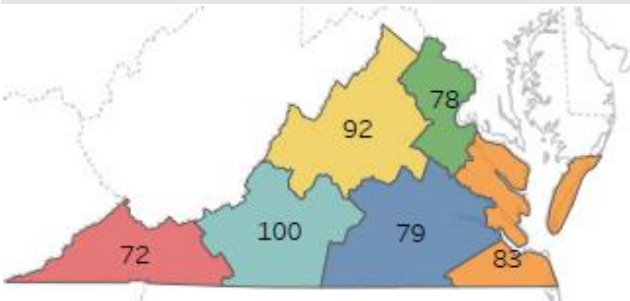


Cumulative Percentage of Antibiotics Susceptible: *Stenotrophomonas maltophilia*

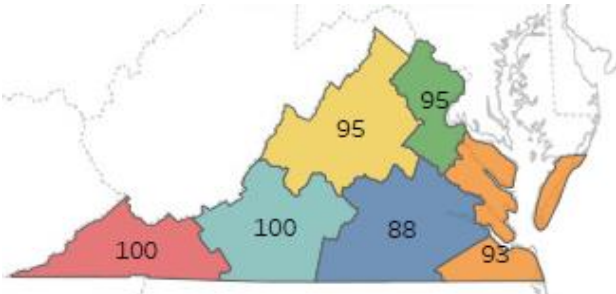
Ceftazidime



Levofloxacin

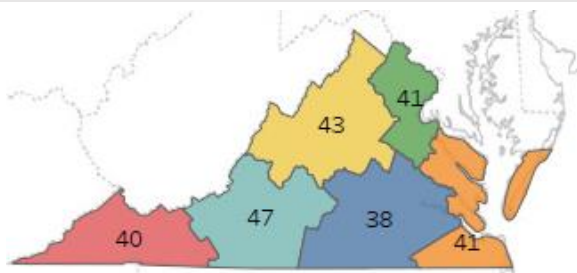


Trimethoprim/sulfamethoxazole

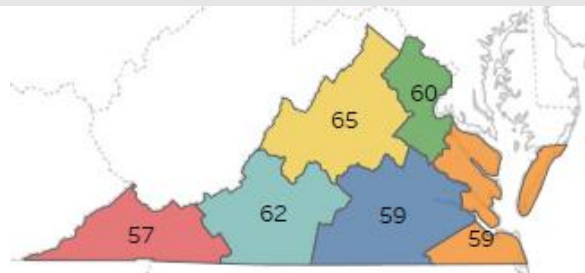


Cumulative Percentage of Antibiotics Susceptible: Coagulase-negative Staphylococci

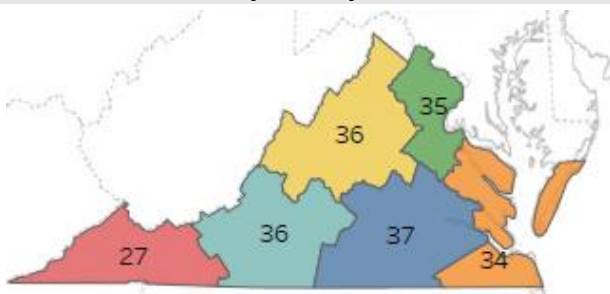
Cefazolin



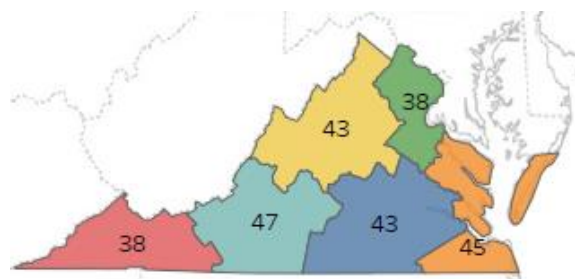
Clindamycin



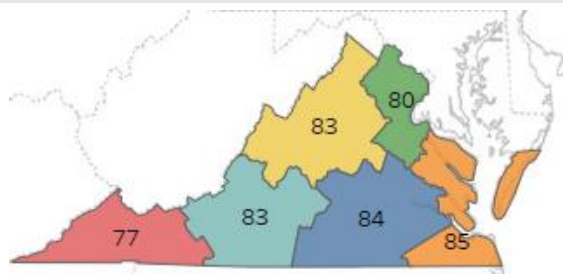
Erythromycin



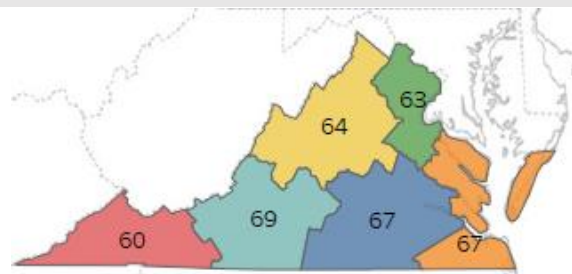
Nafcillin



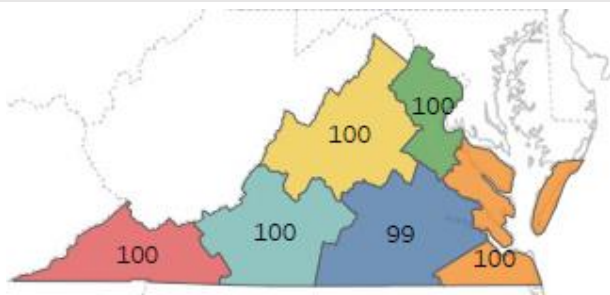
Tetracycline



Trimethoprim/sulfamethoxazole

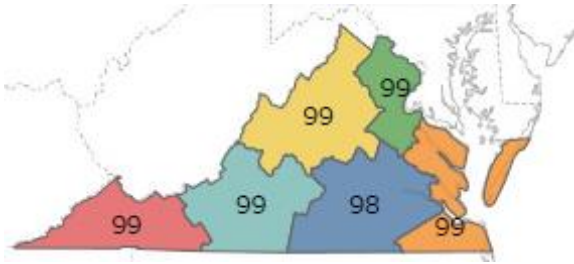


Vancomycin

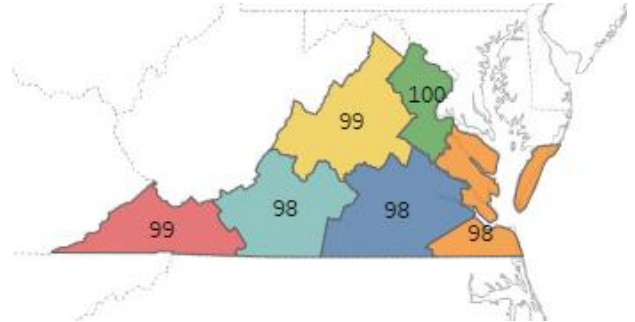


Cumulative Percentage of Antibiotics Susceptible: *Enterococcus faecalis*

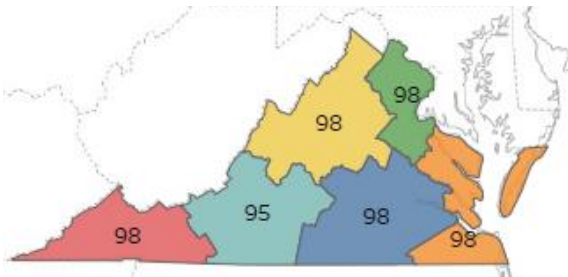
Ampicillin



Linezolid

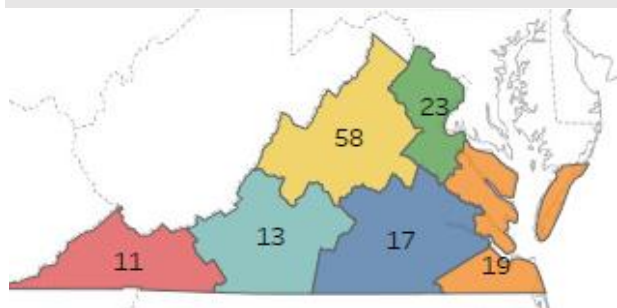


Vancomycin

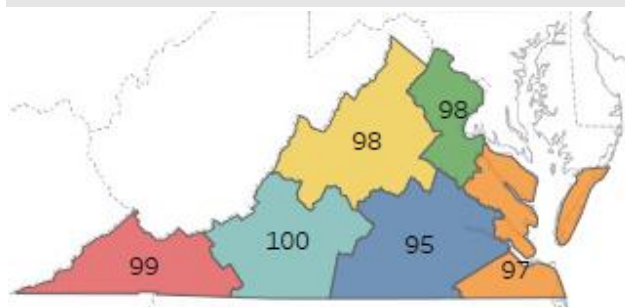


Cumulative Percentage of Antibiotics Susceptible: *Enterococcus faecium*

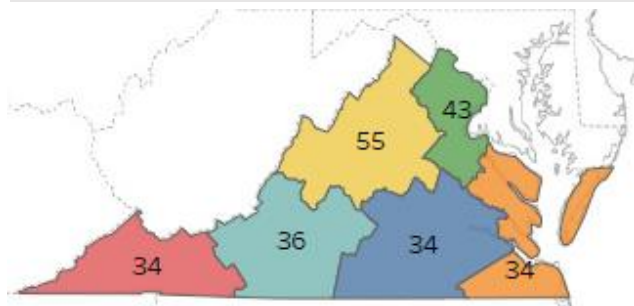
Ampicillin



Linezolid

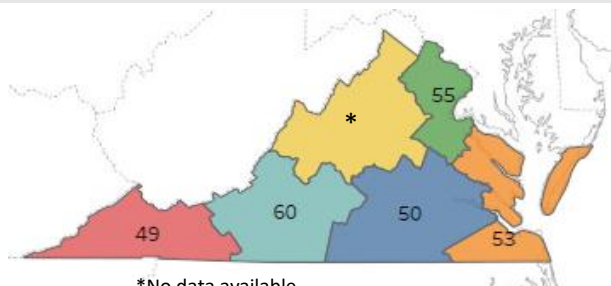


Vancomycin

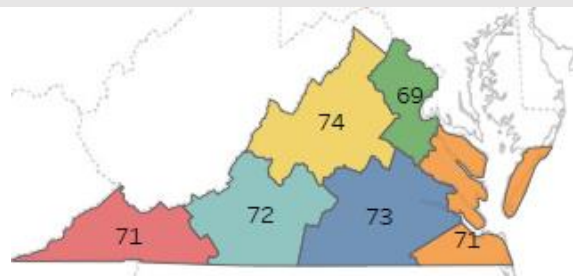


Cumulative Percentage of Antibiotics Susceptible: *Staphylococcus aureus*

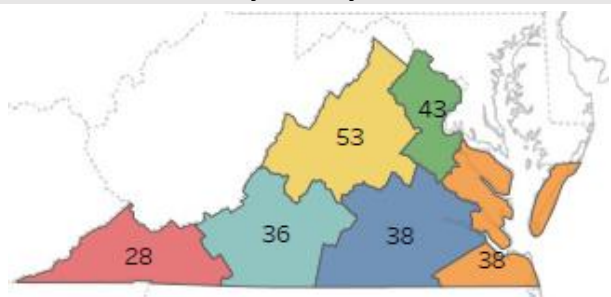
Cefazolin



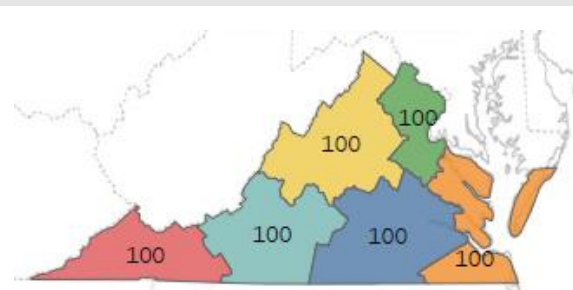
Clindamycin



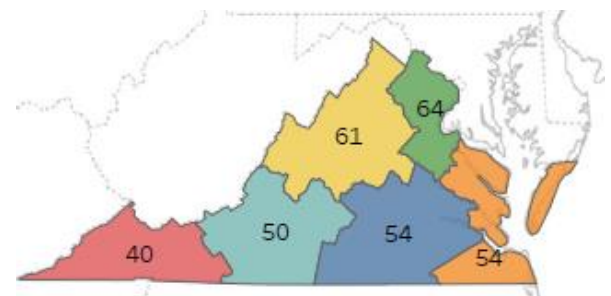
Erythromycin



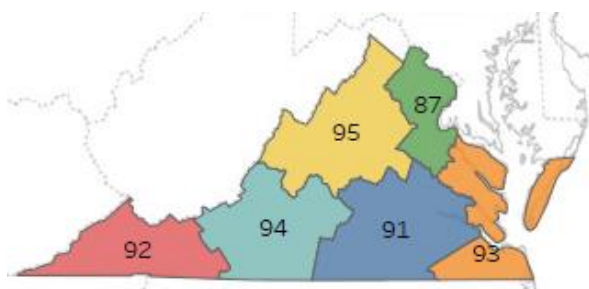
Linezolid



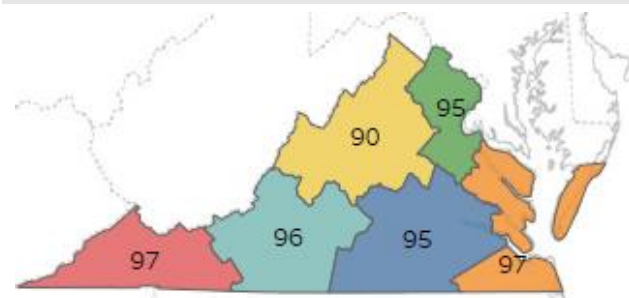
Nafcillin



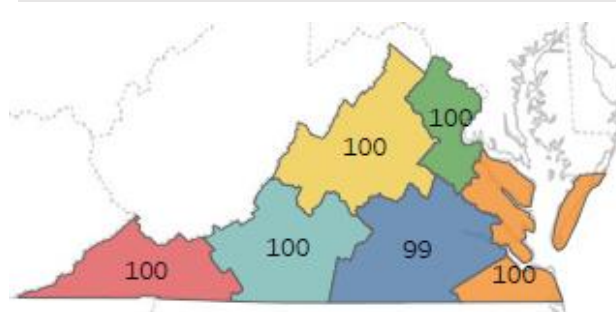
Tetracycline



Trimethoprim/sulfamethoxazole

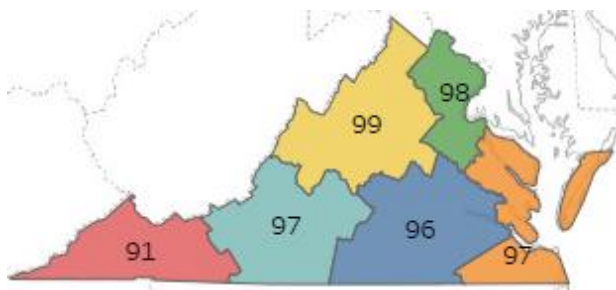


Vancomycin

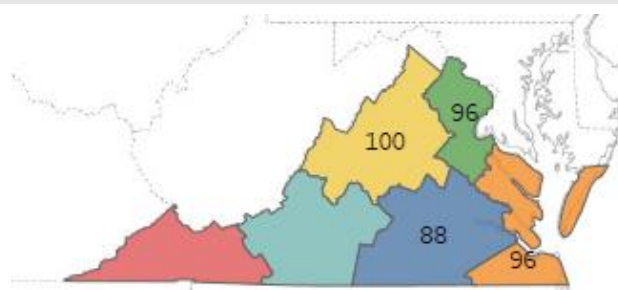


Cumulative Percentage of Antibiotics Susceptible: *Streptococcus pneumoniae*

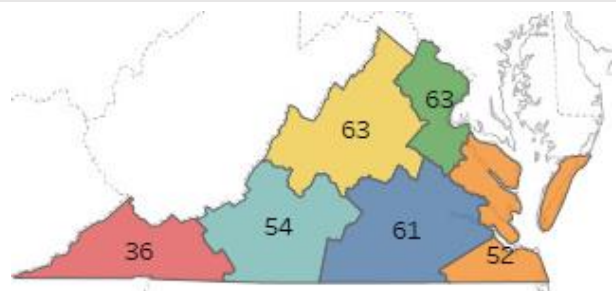
Ceftriaxone



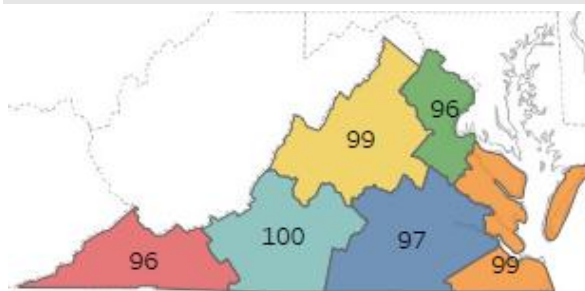
Ceftriaxone (CSF)



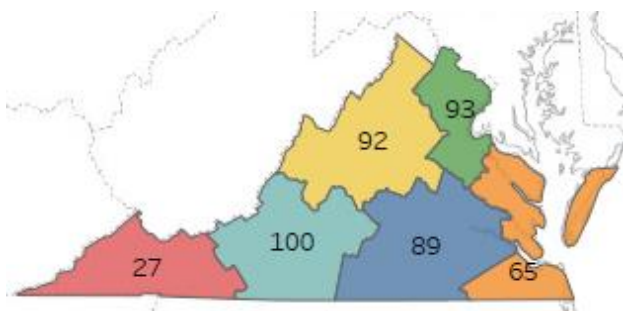
Erythromycin



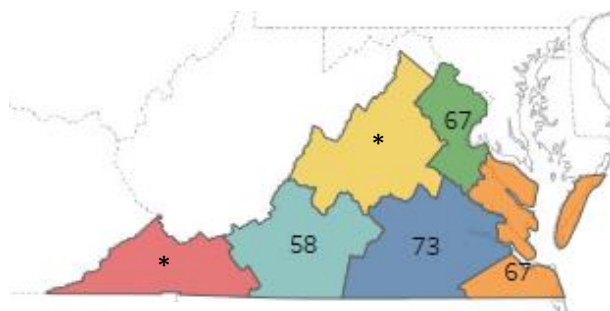
Levofloxacin



Penicillin

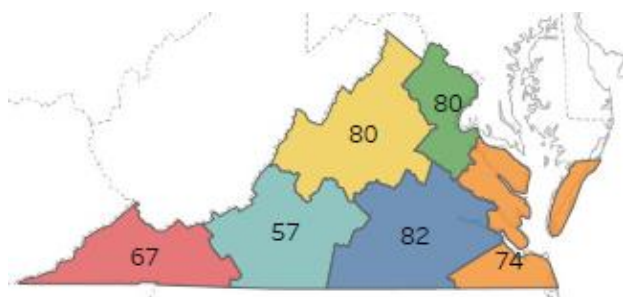


Penicillin (CSF)

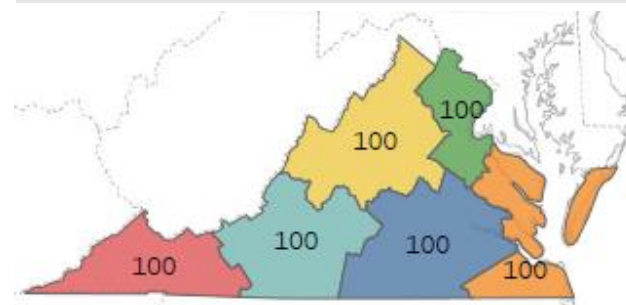


*No data available

Tetracycline



Vancomycin



Frequently Asked Questions

1. *How do I use an antibiogram?*

An antibiogram is used when selecting empiric antibiotic therapy in addition to infection specific factors and patient specific factors (e.g., allergies, history of multidrug-resistant organisms, etc.). It provides data on local susceptibility of certain organisms, giving the provider an idea of which antibiotic should be susceptible. Resistance varies geographically, so a local antibiogram should be used when making treatment guidelines for a facility. When patient specific cultures and susceptibilities become available, antibiotics should be streamlined appropriately.

2. *How should a facility prepare an antibiogram?*

Facilities should prepare an antibiogram according to the guidance found in the Clinical Laboratory Standards Institute M39 document. The current recommendations are to analyze and present data at least annually, include only species with at least 30 isolates tested, include diagnostic, not surveillance, isolates, include results only for drugs that are routinely tested, and include the first isolate per patient in the period analyzed, irrespective of the body site from which the specimen was obtained or the antimicrobial susceptibility pattern.

3. *How should I use the regional antibiogram if my facility already has an antibiogram?*

The regional antibiogram can be another piece of information to inform empiric treatment decisions. The regional antibiogram is meant to supplement the facility antibiogram, not replace it. The regional antibiogram may include data that the facility does not report.

4. *How should I use the regional antibiogram if my facility does not have an antibiogram?*

You can use the regional antibiogram to help inform empiric antibiotic therapy and guide treatment recommendations. Data presented in the regional antibiogram were submitted from acute care hospitals across Virginia. Other infection-specific and patient-specific factors (e.g. source of infection, allergies, history of multidrug-resistant organisms, etc.) should be used in conjunction with an antibiogram to develop the best treatment plan.

5. *Why are only certain antibiotic and organism combinations represented?*

The data represent the most clinically useful combinations as well as those combinations where multiple facilities reported data. Other data may be useful, however we were limited by what each facility reported. In the future, we will release an interactive dashboard that will have more data available.

6. *Who should I contact if I have questions about the state and regional antibiogram?*

Please contact Shaina Bernard, the Antimicrobial Resistance Coordinator at the Virginia Department of Health. She can be reached by email at: hai@vdh.virginia.gov.

Antibiotic Abbreviations

Amik = Amikacin

Amp/sul = Ampicillin/sulbactam

Azt = Aztreonam

Cefaz = Cefazolin

Cefep = Cefepime

Ceftaz = Ceftazidime

Ceftr = Ceftiaxone

Cipro = Ciprofloxacin

Clinda = Clindamycin

Dapto = Daptomycin

Erythr = Erythromycin

Gent = Gentamicin

Levo = Levofloxacin

Linez = Linezolid

Mero = Meropenem

Naf = Nafcillin

Pip/tazo = Piperacillin/tazobactam

SMX/TMP = Sulfamethoxazole/trimethoprim

Tetra = Tetracycline

Tobra = Tobramycin

Vanc = Vancomycin