Antibiogram of Selected Pathogens, South Dakota 2013

SOUTH DAKOTA DEPARTMENT OF HEALTH

SDSU

South Dakota State University
College of Pharmacy

Antibiotic	Staphylococcus aureus (Including MRSA)	Salmonella spp.	Group A Streptococcus	Group B Streptococcus	Streptococcus pneumoniae	Klebsiella pneumoniae	Enterococcus faecalis	Enterococcus faecium	Pseudomonas aeruginosa	Escherichia coli
	% Susceptible and (n) number of isolates tested									
Ertapenem		100%(18)			99%(83)	100%(760)				100%(4580)
Imipenem		100%(18)				97%(1880)			79%(634)	100%(5094)
Meropenem					90%(200)	100%(1156)			88%(1388)	100%(4545)
Amoxicillin-Clavulanic Acid					99%(83)	98%(152)	100%(187)			90%(829)
Ampicillin/Sulbactam		100%(19)				89%(2086)				67%(13210)
Cefazolin						95%(3572)				90%(17361)
Cefdinir										
Cefepime		100%(18)			98%(42)	95%(3110)			91%(1970)	95%(17759)
Cefotaxime		100%(10)			94%(235)	97%(835)			16%(103)	97%(1735)
Ceftazidime		88%(24)				95%(2607)			91%(1765)	94%(15873)
Ceftriaxone		94%(48)	100%(22)	100%(40)	93%(301)	97%(3457			12%(661)	96%(18023)
Ampicillin		86%(149)	100%(26)	99%(213)			98%(1810)	21%(235)		60%(18290)
Oxacillin	59%(7926)									
Penicillin	4%(5892)		100%(38)	99%(189)	75%(331)		93%(397)			
Piperacillin/Tazobactam		100%(19)				95%(2987)			96%(1742)	95%(15015)
Ciprofloxacin	60%(4567)	99%(126)				96%(3687)	64%(2321)	15%(292)	80%(1989)	82%(18098)
Levofloxacin	60%(3225)	98%(43)	100%(27)	99%(233)	99%(358)	96%(3036)	68%(2298)	15%(287)	76%(1903)	83%(16955)
Ofloxacin	100%(72)				85%(82)					
Chloramphenicol	95%(212)				99%(148)					
Clindamycin	76%(8811)		79%(33)	43%(375)	81%(53)					
Daptomycin	97%(991)						100%(288)			
Erythromycin	42%(9266)		85%(27)	26%(57)	51%(351)		18%(784)	7%(61)		
Tobramycin						95%(2286)			97%(1645)	94%(14674)
Gentamicin	99%(4979)					99%(3627)	68%(22)	93%(14)	90%(2034)	94%(17836)
Linezolid	100%(4361)			100%(149)	100%(239)		100%(1208)	99%(122)		
Nitrofurantoin*	99%(4311)	100%(10)				34%(3073)	99%(2275)	18%(290)		95%(15946)
Rifampin	99%(3886)						69%(158)			
Trimethoprim/ Sulfamethoxazole	98% (8654)	99%(142)			72%(353)	92%(3235)				77%(16484)
Tetracycline	94%(9303)	70%(20)			83%(282)	86%(697)	26%(1081)	37%(104)		81%(1814)
Vancomycin	100%(9402)		100%(44)	100%(314)	100%(425)		99%(2427)	49%(299)		

*Urine isolates only

>5% increase in susceptibility from last year

>5% decrease in susceptibility from last year

June 2014 (CW)

South Dakota Antibiogram of Selected Pathogens, 2013:

Tracking the use and success of antibiotics

South Dakota is making a concerted effort to track antimicrobial resistance patterns throughout the state by collecting microbial data and aggregating it into a state antibiogram. Several antibiotics and organisms have been added this year. Specific areas have been highlighted to contrast large differences in data compared to last year's antibiogram.

Forty- two CLIA certified microbiology laboratories were asked to voluntarily provide aggregate bacterial sensitivity data from January 1, 2013 through December 31, 2013. Twenty-nine of the 42 laboratories provided microbial sensitivity data on one or more of the following organisms that were requested:

- **Staphylococcus aureus**
- **Salmonella spp.**
- **Streptococcus pyogenes (Group A)**
- **Streptococcus agalactiae (Group B)**
- **Streptococcus pneumoniae**
- **Klebsiella pneumonia**
- **Enterococcus faecalis**
- **Enterococcus faecium**
- **Pseudomonas aeruginosa**
- **Escherichia coli**

Data was compiled to create a statewide antibiogram using the methodology described by the Clinical and Laboratory Standards Institute. Sensitivities were collected from laboratories that serve over 2500 beds across South Dakota, representing 88% of all beds from surveyed facilities. Results for intermediate susceptibilities were excluded due to the lack of consistent reporting.

A number of laboratories reported separate categories for methicillin-susceptible and methicillin–resistant Staphylococcus auerus. For the sake of accuracy, methicillin-susceptible and methicillin–resistant staphylococcus auerus were combined into one category because of contaminated data presented by several labs. Changing susceptibility rates from 2012 to 2013 show decreased penicillin susceptibility for *Staphylococcus aureus*, clindamycin for Group A *Streptococcus*, erythromycin for Group B *Streptococcus*, and Ofloxacin for *Streptococcus pneumoniae*.

The cumulative state antibiogram is presented annually to give clinicians, pharmacists, and public health officials data to track antimicrobial susceptibility patterns, raise awareness of antimicrobial resistance and to help aid proper selection of proper antimicrobial selection. These data are for surveillance purposes only and should not be used as the primary basis for determining antimicrobial therapy for individual patients.