

Brian Sandoval
Governor



Cody Phinney
Administrator
Division of Health Care Financing and
Policy

Nevada Medicaid Antibiotic Policy

Antimicrobial Stewardship



James M. Wilson V., MD FAAP

Director, Nevada Medical Intelligence Center

Beth Slamowitz, PharmD

Social Service Pharmacy/DME Program Chief

Holly M. Long

Social Services Program Specialist III

Victoria L. LeGarde, MPH

Social Services Program Specialist II



Agenda





Antimicrobial Stewardship Background

James M. Wilson V., MD FAAP

Director, Nevada Medical Intelligence Center



Antimicrobial Resistance: Context of Concern For Nevada¹

- In the US, antibiotic resistant bacteria infects 2 million people, causes 23,000 deaths and costs our healthcare system \$20.4 billion annually.
- Cost:
 - Direct cost to US healthcare system ~ \$20.4B in 2017
 - Indirect cost US households ~ \$35.7B in 2017
 - US average cost per facility of \$372k
 - Increased per patient cost \$10-\$40k per infection
- Morbidity and mortality
 - Longer length of stay
 - 2-4x mortality (with carbapenem, MDR/XDR/PDR resistance)





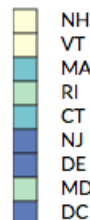
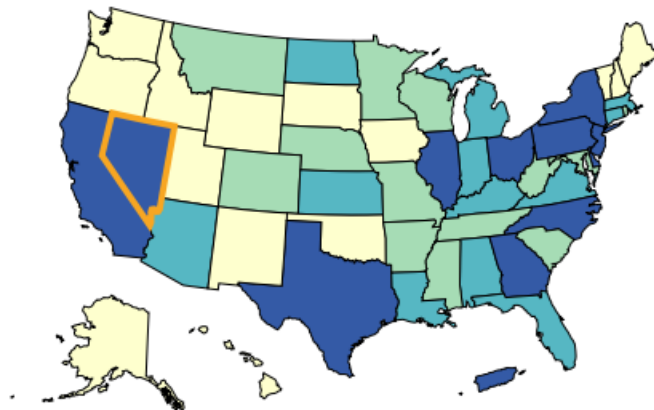
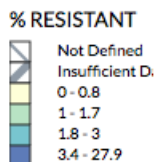
Antibiotic Resistance in Nevada²

Nevada is the leading state in the nation for CREs*.

Carbapenem-Resistant *Enterobacteriaceae* spp. | CLABSI, CAUTI, SSI | Combined Years (2011-2014)

Table

Download



NEVADA

11.7%

108 NUMBER RESISTANT ⓘ

923 NUMBER TESTED ⓘ

NATIONAL % RESISTANCE

3.5%

2826 NUMBER RESISTANT ⓘ

80276 NUMBER TESTED ⓘ

* Excluding Puerto Rico.

Learn more about [other healthcare-associated infections in Nevada](#)

- Fluoroquinolones and extended spectrum cephalosporins are associated with increased risk of carbapenem-resistant infections in the hospital setting.
- Carbapenem resistance often is associated with resistant to multiple other classes of antibiotics.



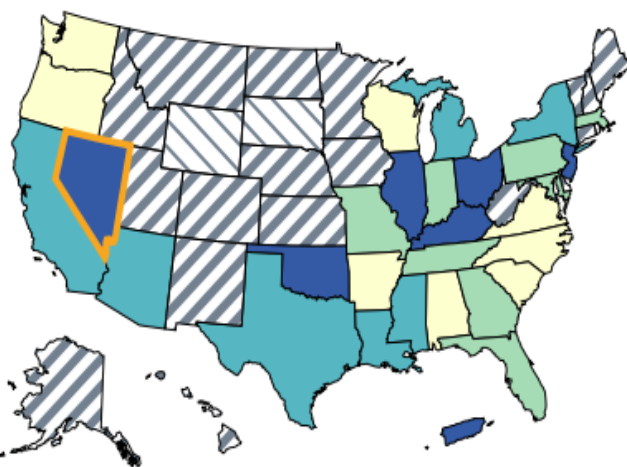
Antibiotic Resistance in Nevada²

Nevada is the leading state in the nation for MDR Acinetobacter*.

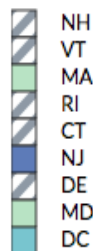
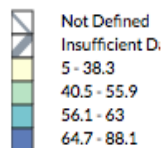
MDR *Acinetobacter* spp. | CLABSI, CAUTI, SSI | Combined Years (2011-2014)

Table

Download



% RESISTANT



* Excluding Puerto Rico.

NEVADA

84.5%

87 NUMBER RESISTANT ⓘ

103 NUMBER TESTED ⓘ

NATIONAL % RESISTANCE

54.8%

2011 NUMBER RESISTANT ⓘ

3668 NUMBER TESTED ⓘ

[Learn more about other healthcare-associated infections in Nevada](#)



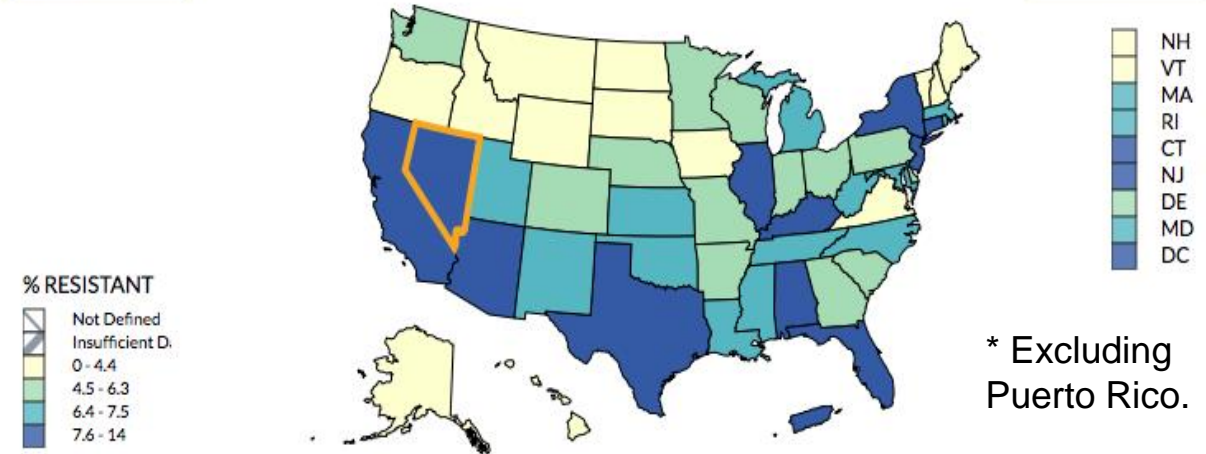
Antibiotic Resistance in Nevada²

Nevada is the leading state in the nation for MDR E. coli*.

MDR E.coli | CLABSI, CAUTI, SSI | Combined Years (2011-2014)

Table

Download



* Excluding Puerto Rico.

NEVADA

14%

78 NUMBER RESISTANT ⓘ

556 NUMBER TESTED ⓘ

NATIONAL % RESISTANCE

7.5%

4298 NUMBER RESISTANT ⓘ

57288 NUMBER TESTED ⓘ

[Learn more about other healthcare-associated infections in Nevada](#)



Antibiotic Use= More Resistance

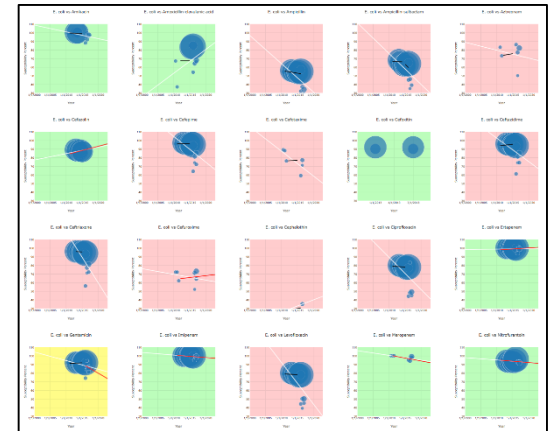
E. coli- Pediatric Inpatient



E. coli- Adult Inpatient



E. coli- Adult Long Term Acute Care



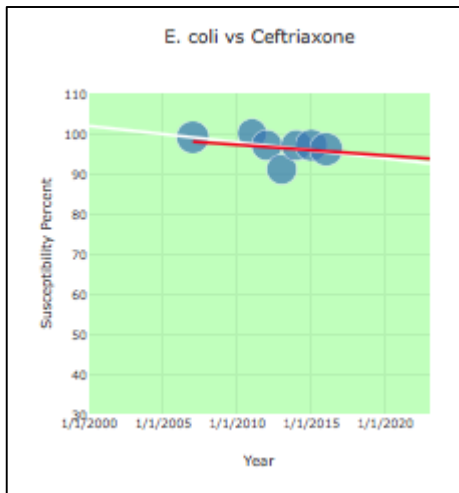
- The older you are, and the more you are exposed to antibiotics, the worse the resistance.
- Each of these boxes is an antibiotic- the yellow and red colors indicate we have lost the ability to prescribe this antibiotic.



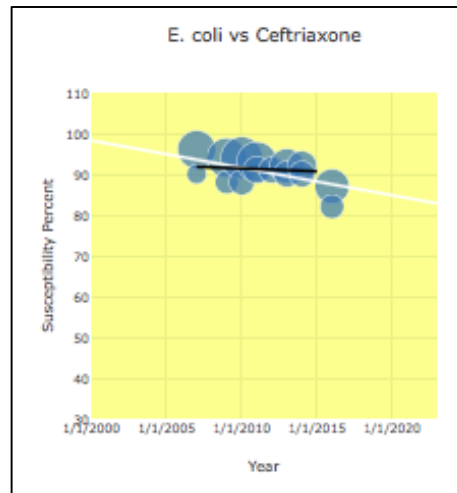
The More Exposure to Antibiotics Over a Lifetime, the Worse the Resistance

Example: 3rd generation cephalosporins

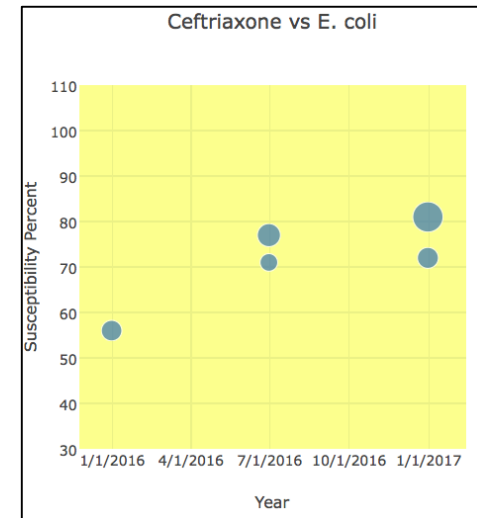
E. coli- Pediatric Inpatient



E. coli- Adult Inpatient



E. coli- Adult Long Term Acute Care



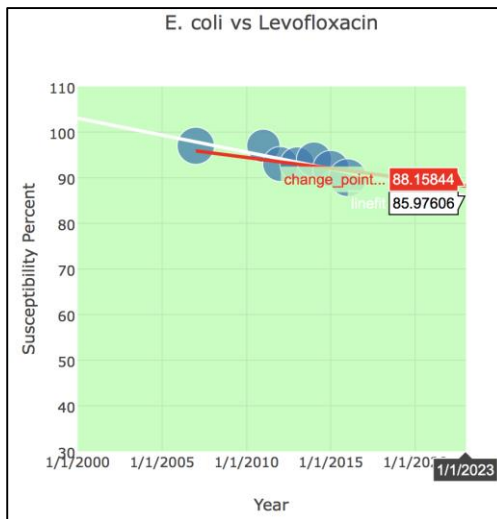
- Nevada ranks 3rd for *E. coli* resistant to extended spectrum cephalosporins
- 1st for *Klebsiella* resistant to extended spectrum cephalosporins



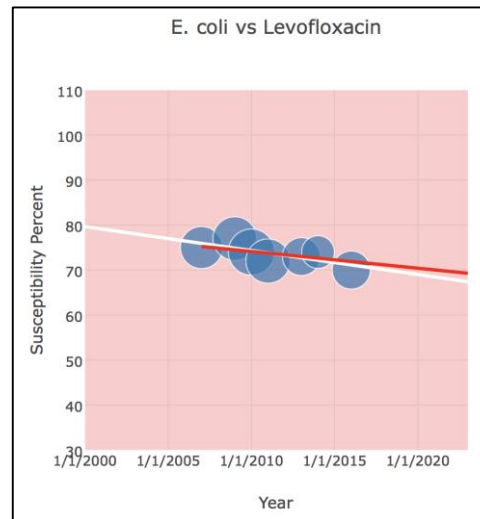
The More Exposure to Antibiotics Over a Lifetime, the Worse the Resistance

Example: Fluoroquinolones

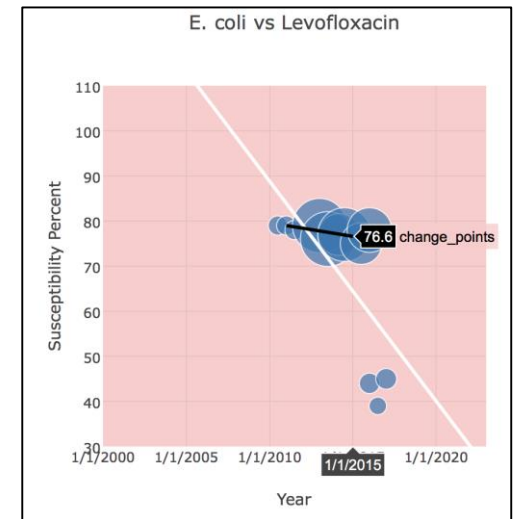
E. coli- Pediatric Inpatient



E. coli- Adult Inpatient



E. coli- Adult Long Term Acute Care

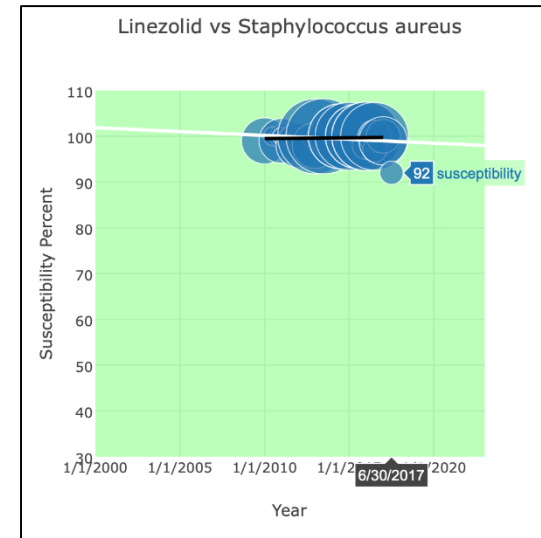
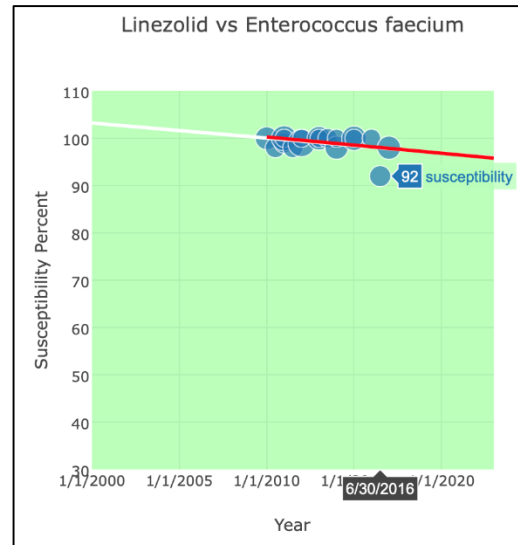
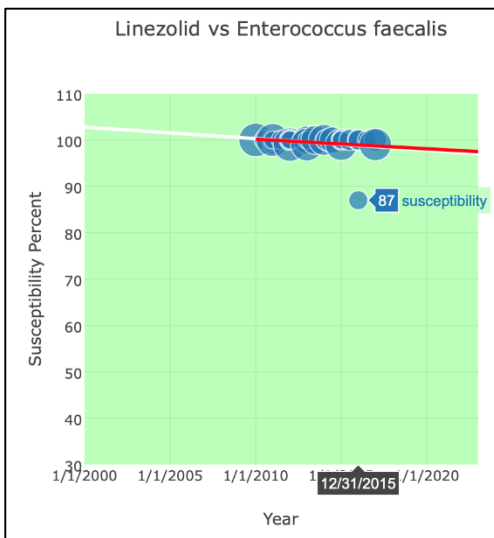


- Nevada ranks 3rd for fluoroquinolone resistance in MRSA.



The More Exposure to Antibiotics Over a Lifetime, the Worse the Resistance

Example: Oxazolidinones



- Nevada ranks #1 and #2 for vancomycin resistant *Enterococcus faecalis* and *faecium*, respectively
- Linezolid is one of our last options for these patients



What Can We Do?⁴

Antimicrobial Stewardship

refers to coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy and route of administration.



Commitment

Demonstrate dedication to and accountability for optimizing antibiotic prescribing and patient safety.



Action for policy and practice

Implement at least one policy or practice to improve antibiotic prescribing, assess whether it is working, and modify as needed.



Tracking and reporting

Monitor antibiotic prescribing practices and offer regular feedback to clinicians, or have clinicians assess their own antibiotic prescribing practices themselves.



Education and expertise

Provide educational resources to clinicians and patients on antibiotic prescribing, and ensure access to needed expertise on optimizing antibiotic prescribing.



The Opportunity

- Currently, we are overusing antibiotics and seeing serious levels of resistance. There is concern we may lose the ability to use these antibiotics when we truly need them.
- Appropriate prescribing of antibiotics help protect their availability for use in seriously ill patients.
- Our overall goal is that together, we can preserve our ability to save lives with antibiotics and begin to turn the tide of antibiotic resistance for Medicaid recipients.





Nevada Medicaid Antibiotic Policy

Holly M. Long
Social Services Program Specialist III

Beth Slamowitz, PharmD
Social Service Pharmacy/DME Program Chief



Nevada Medicaid Antibiotic Policy

In 2019, Nevada Medicaid will require prior authorization for the following (outpatient antibiotic classes):

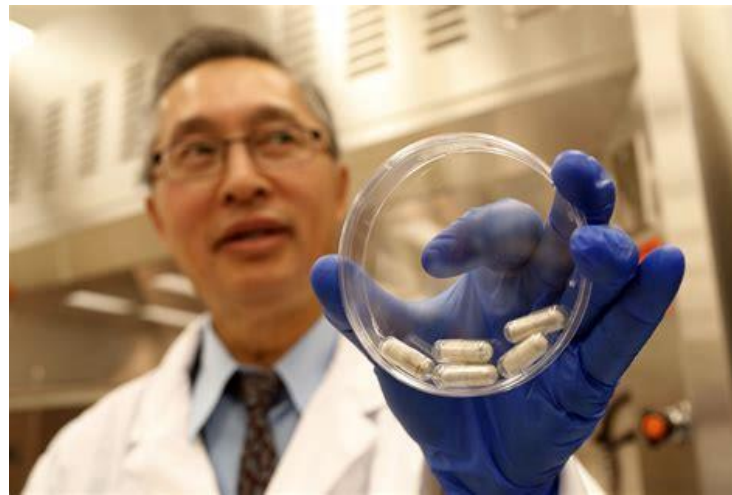
- 3rd generation cephalosporins – cefixime, cefdinir, cefpodoxime, ceftibuten and cefditoren
- Fluoroquinolones – ciprofloxacin, levofloxacin, delafloxacin, moxifloxacin, and ofloxacin
- Oxazolidinones – tedizolid and linezolid





Exception Criteria

- If prescribed by an infectious disease specialist or by an emergency department provider
- Ceftriaxone prescribed as first line treatment for gonorrhea, pelvic inflammatory disease, epididymo-orchitis and as an alternative to benzylpenicillin to treat meningitis for those with severe penicillin allergy
- If Cefixime is prescribed for gonococcal infection where Ceftriaxone is unavailable
- If the recipient resides in acute care, long-term acute care (LTAC), or a skilled nursing facility (SNF)





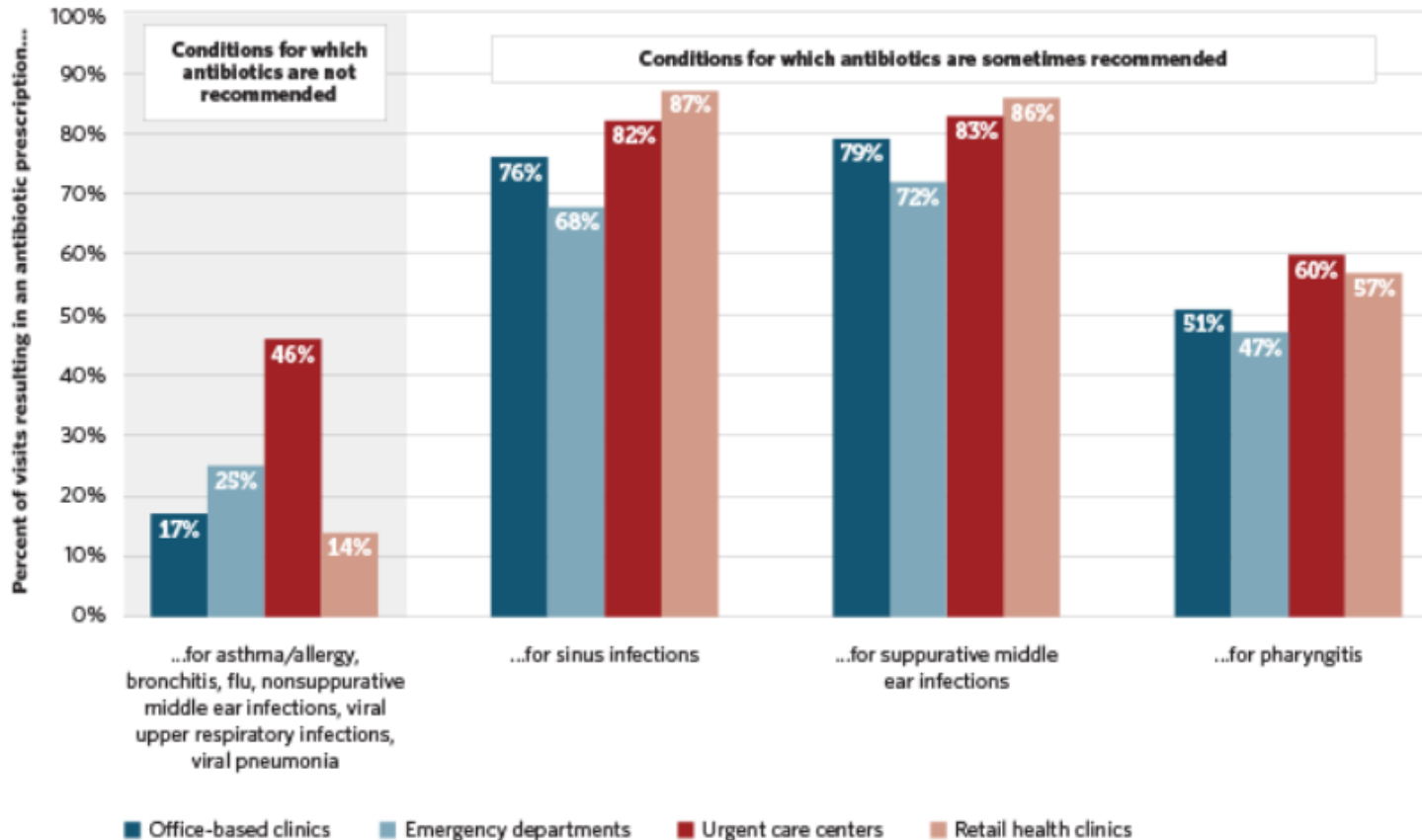
Why Outpatient Settings?⁵

- US National Action Plan for Combating Antibiotic Resistant Bacteria goal: reduce inappropriate antibiotic use in the outpatient setting by 50% by 2020.
- Estimates show 1 adverse drug event resulting in an emergency department visit occurs for every 1,000 outpatient antibiotic prescriptions.
- In 2015, 838 antibiotic prescriptions per 1,000 population were dispensed from US community pharmacies.
- CDC's Core Elements of Outpatient Antibiotic Stewardship include
 - Commitment, Action for Policy and Practice, Tracking and Reporting and Education.



Antibiotic Prescribing in Outpatient Settings ^{6,7}

Opportunity to Improve Antibiotic Prescribing Across Outpatient Settings





Why These Antibiotic Classes⁵

- Reductions in fluoroquinolones and cephalosporins, are more likely to prevent *C difficile* infection.
 - A 10% decrease in outpatient prescription rates could result in a 17% decrease in *C difficile* infection rates.
- Fluoroquinolones are commonly used inappropriately in outpatient settings.
- 2016, FDA revised Black Box Warnings on fluoroquinolones because they can have disabling and permanent side effects.
 - Recommended that fluoroquinolones be avoided in acute sinusitis, acute bronchitis and uncomplicated UTIs.
- Oxazolidinones - need to keep a close watch to see if there is any erosion in this class.
 - Reduce the development of drug-resistant bacteria and effectiveness of antibacterial drugs.



How This Plan Was Initiated



A Proclamation by the Governor

WHEREAS, antibiotics are an important weapon against infectious bacterial diseases that can harm people of all ages and walks of life; and

WHEREAS, inappropriate use of antibiotics for viral infections and antibiotic overuse in the treatment of bacterial infections and colonization has led to an increase in multiple drug-resistant organisms; and

WHEREAS, antibiotic resistance has become a global threat to the health of all people, and infections with antibiotic resistant bacteria dramatically increase the cost and complexity of treating infections which previously were easily treated; and

WHEREAS, the U.S. Centers for Disease Control and Prevention, partnering with the European Union Antibiotic Awareness Day, the Nevada Division of Public and Behavioral Health, and the Nevada Antimicrobial Stewardship Program, are devoting resources to enhance public and healthcare professional awareness regarding the appropriate use of antibiotics; and

WHEREAS, the Nevada Antimicrobial Stewardship Program, in partnership with physician organizations, consumer groups, health plans, state and local public health organizations and pharmaceutical companies, is educating health professionals and consumers about the appropriate use of antibiotics; and

WHEREAS, these collaborative efforts seek to increase awareness about the overuse and misuse of antibiotics and work to prevent the increase and spread of antibiotic-resistant bacteria;

NOW, THEREFORE, I, BRIAN SANDOVAL, GOVERNOR OF THE STATE OF NEVADA, do hereby proclaim November 14-20, 2016

GET SMART ABOUT ANTIBIOTICS WEEK IN NEVADA

In Witness Whereof, I have hereunto set my hand and caused the Great Seal of the State of Nevada to be affixed at the State Capitol in Carson City, this 24th day of October, 2016.



Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™



Nevada Division of Public and Behavioral Health (DPBH)





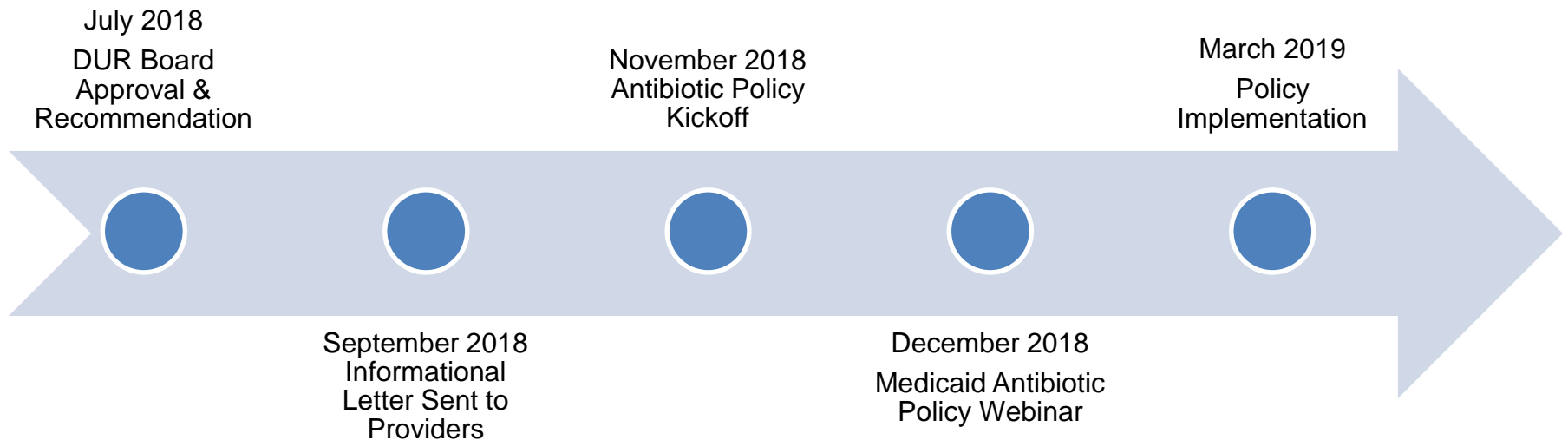
Antibiotic Policy/Antimicrobial Stewardship in Other States

- Oregon
 - AWARE
- Pennsylvania
 - Antibiotic Resistance Awareness Initiative
- New York
 - NY Be Antibiotics Awareness Team
- Idaho
- Colorado
 - Get Smart Colorado: Use Antibiotics Wisely
- Massachusetts
- Hawaii
 - State of Hawaii Antimicrobial Resistance Project (SHARP)
- Vermont
 - Get Smart Vermont: Antibiotics Aren't Always the Answer
- Georgia
- South Dakota
- Utah
 - Utah Alliance Working for Antibiotic Resistance Education
- Texas
- Illinois
- Maine



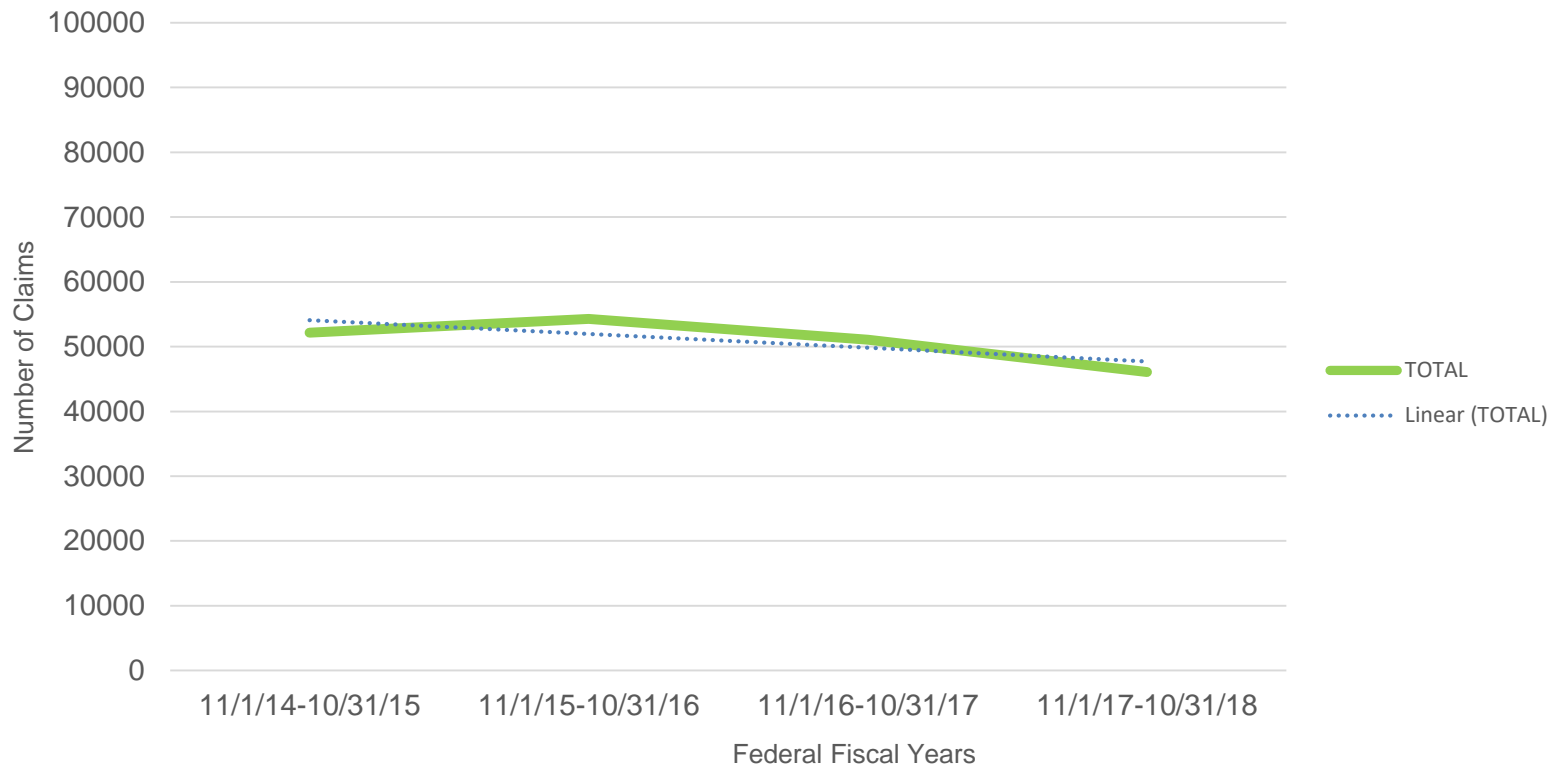


Policy Implementation Timeline





Nevada Antibiotic Claim Utilization FFS and MCO, 2014-2018





Prior Authorization Approval

3rd Generation Cephalosporins and Fluoroquinolones:
Approval will be provided if: Culture and sensitivity-proven susceptibilities and resistance to other agents suggest the requested antibiotic is necessary

***Approval will be for a single course*





Antibiotic PA Form Examples



Third Generation Cephalosporins and Fluoroquinolone Prior Authorization Request Form

Member Information (required)			Provider Information (required)		
Member Name:			Provider Name:		
Member ID#:			NPI #:		Specialty:
Date of Birth:			Office Phone:		
Street Address:			Office Fax:		
City:	State:	Zip:	Office Street Address:		
Phone:			City:	State:	Zip:
Medication Information (required)					
Medication Name:			Strength:	Dosage Form:	
<input type="checkbox"/> Check if requesting brand <input type="checkbox"/> Check if request is for continuation of therapy			Directions for Use:		
Exception Criteria					
<input type="checkbox"/> Prescribed by an infectious disease specialist or an emergency department provider. <input type="checkbox"/> Ceftriaxone prescribed as first line treatment for gonorrhea, pelvic inflammatory disease, epididymo-orchitis and an alternative to benzylpenicillin to treat meningitis for those with a severe penicillin allergy The recipient resides in one of the following: <ul style="list-style-type: none"> <input type="checkbox"/> Acute Care <input type="checkbox"/> Long-term Acute Care (LTAC) <input type="checkbox"/> Skilled Nursing Facility (SNF) 					
Clinical Information (required)					
Diagnosis:			ICD-10 Code:		
Clinical Information: Does a culture and sensitivity (C&S) suggests susceptibility to the requested agent? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes to the above, list the date the C&S was performed: _____ Is resistance to first-line agents shown? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes to the above, list agents: _____ Was treatment started with intravenous antibiotic(s) in the hospital and the recipient requires continued outpatient therapy? <input type="checkbox"/> Yes <input type="checkbox"/> No Does the member have any contraindications to alternative antibiotics? <input type="checkbox"/> No <input type="checkbox"/> Yes - Describe (eg. allergy, drug interaction): _____ Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the prescriber feels is important to this review? _____ _____ _____					



Prior Authorization Approval



Oxazolidinones:

Approval will be provided if:

- Sivextro (tedizolid)
 - Appropriate diagnosis (ABSSSI)
 - Infection is caused by MRSA
 - Documented trial of or has a contraindication to an alternative antibiotic that the organism is susceptible to
 - Or the individual started treatment with intravenous antibiotics in the hospital and requires continued outpatient therapy
- Zyvox (linezolid)
 - Appropriate diagnosis (VRE or MRSA)
 - Documented trial of or has a contraindication to an alternative antibiotic that the organism is susceptible to
 - Or the individual started treatment with intravenous antibiotics in the hospital and requires continued outpatient therapy

***Approval will be for a single course*



Antibiotic PA Form Examples



Tedizolid (Sivextro®) Prior Authorization Request Form

Member Information (required)		Provider Information (required)	
Member Name:		Provider Name:	
Member ID#:		NPI #:	Specialty:
Date of Birth:		Office Phone:	
Street Address:		Office Fax:	
City:	State:	Zip:	Office Street Address:
Phone:		City:	State: Zip:
Medication Information (required)			
Medication Name:		Strength:	Dosage Form:
<input type="checkbox"/> Check if requesting brand <input type="checkbox"/> Check if request is for continuation of therapy		Directions for Use:	
Exception Criteria			
<input type="checkbox"/> Prescribed by an infectious disease specialist or an emergency department provider. The recipient resides in one of the following: <ul style="list-style-type: none"> <input type="checkbox"/> Acute Care <input type="checkbox"/> Long-term Acute Care (LTAC) <input type="checkbox"/> Skilled Nursing Facility (SNF) 			
Clinical Information (required)			
Diagnosis:		ICD-10 Code:	
Clinical Information: (mark all that apply) <ul style="list-style-type: none"> <input type="checkbox"/> Infection is caused by methicillin-resistant Staphylococcus aureus (MRSA). <input type="checkbox"/> Recipient has had a trial of or has a contraindication to an alternative antibiotic that the organism is susceptible to (depending on manifestation, severity of infection and culture or local sensitivity patterns, examples of alternative antibiotics may include, but are not limited to: TMP/SMX, doxycycline, vancomycin, daptomycin, telavancin, clindamycin). <input type="checkbox"/> Treatment started with intravenous antibiotic(s) in the hospital and the recipient requires continued outpatient therapy. Does the member have any contraindications to alternative antibiotics? <input type="checkbox"/> No <input type="checkbox"/> Yes - Describe (eg. allergy, drug interaction):			
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the prescriber feels is important to this review?			



Linezolid (Zyvox®) Prior Authorization Request Form

Member Information (required)		Provider Information (required)	
Member Name:		Provider Name:	
Member ID#:		NPI #:	Specialty:
Date of Birth:		Office Phone:	
Street Address:		Office Fax:	
City:	State:	Zip:	Office Street Address:
Phone:		City:	State: Zip:
Medication Information (required)			
Medication Name:		Strength:	Dosage Form:
<input type="checkbox"/> Check if requesting brand <input type="checkbox"/> Check if request is for continuation of therapy		Directions for Use:	
Exception Criteria			
<input type="checkbox"/> Prescribed by an infectious disease specialist or an emergency department provider. The recipient resides in one of the following: <ul style="list-style-type: none"> <input type="checkbox"/> Acute Care <input type="checkbox"/> Long-term Acute Care (LTAC) <input type="checkbox"/> Skilled Nursing Facility (SNF) 			
Clinical Information (required)			
Diagnosis:		ICD-10 Code:	
Clinical Information: (mark all that apply) <ul style="list-style-type: none"> <input type="checkbox"/> Infection is caused by vancomycin-resistant enterococcus (VRE) faecium. <input type="checkbox"/> Infection is caused by methicillin-resistant Staphylococcus aureus (MRSA). <input type="checkbox"/> Recipient has had a trial of or has a contraindication to an alternative antibiotic that the organism is susceptible to (depending on manifestation, severity of infection and culture or local sensitivity patterns, examples of alternative antibiotics may include, but are not limited to: TMP/SMX, doxycycline, vancomycin, daptomycin, telavancin, clindamycin). <input type="checkbox"/> Treatment started with intravenous antibiotic(s) in the hospital and the recipient requires continued outpatient therapy. Does the member have any contraindications to alternative antibiotics? <input type="checkbox"/> No <input type="checkbox"/> Yes - Describe (eg. allergy, drug interaction):			
Are there any other comments, diagnoses, symptoms, medications tried or failed, and/or any other information the prescriber feels is important to this review?			



Summary

- Overall, we are promoting for the advocacy and safety of Medicaid recipients
- Helping to increase awareness and understand the impact of inappropriate use and antibiotic resistance
- Optimize antibiotic prescribing to preserve antibiotics and treat infections effectively



Next Steps



- Capture baseline antibiotic utilization data
 - Continue to monitor quarterly
- Evaluate policy for needed updates
 - DUR Board
 - Appropriate Antibiotic Selected, Appropriate Dose & Duration of Treatment
- Establish antimicrobial resources and contacts
 - DPBH
- Collaboration
 - Antimicrobial Stewardships throughout Nevada



Resources

- Nevada Medicaid: <http://www.Medicaid.nv.gov/providers/rx/rxinfo.aspx>
- Division of Health Care Financing & Policy, Pharmacy Services: <http://dhcfc.nv.gov/Pgms/CPT/Pharmacy/>
- Nevada Division of Public and Behavioral Health (DPBH) – Antibiotic/Antimicrobial Resistance: <http://dpbh.nv.gov/Programs/HAI/dta/AMR/>
- Nevada Antimicrobial Stewardship Program: <https://www.nvasp.net/>
- CDC Antibiotic/Antimicrobial Resistance: <https://www.cdc.gov/drugresistance/about.html>
- CDC Antibiotic Prescribing and Use in Doctor's Offices: <https://www.cdc.gov/antibiotic-use/community/for-hcp/outpatient-hcp/index.html>
- CDC Improving Prescribing: <https://www.cdc.gov/antibiotic-use/community/improving-prescribing/index.html>
- IDSA: <https://www.idsociety.org/practice-guidelines/#/score/DESC/0/+/>



References

- 1: http://emerald.tufts.edu/med/apua/consumers/personal_home_5_1451036133.pdf
<https://search.proquest.com/docview/1945630086?pq-origsite=gscholar>
<https://www.cdc.gov/antibiotic-use/healthcare/evidence/asp-int-costs.htm>
Cai B, Echols R, Magee G, Arjona Ferreira JC, Morgan G, Ariyasu M, Sawada T, Nagata TD. Prevalence of Carbapenem-Resistant Gram-Negative Infections in the United States Predominated by *Acinetobacter baumannii* and *Pseudomonas aeruginosa*. *Open Forum Infect Dis*. 2017 Aug 16;4(3):ofx176. doi: 10.1093/ofid/ofx176.
- 2: <https://gis.cdc.gov/grasp/PSA/MapView.html>
- 3: <https://gis.cdc.gov/grasp/PSA/MapView.html>
Important caveats- <https://gis.cdc.gov/grasp/PSA/Downloads/AR-Data-Methodology.pdf>
- 4: <https://www.shea-online.org/index.php/practice-resources/priority-topics/antimicrobial-stewardship/she-policy-statement/30-priority-topics/antimicrobial-stewardship/377-antimicrobial-stewardship-overview>
<https://www.cdc.gov/antibiotic-use/community/improving-prescribing/core-elements/core-outpatient-stewardship.html>
5. King, Laura M., Fleming-Dutra, Katherine E., and Hick, Lauri A. (2018). Advances in optimizing the prescription of antibiotics in outpatient settings. *BMJ* 2018; 363-k3047 doi: 10.1136/bmj.k3047
6. Hyun, David (2018), Antibiotics are Overprescribed in Urgent Care, <https://www.pewtrusts.org/en/research-and-analysis/articles/2018/07/16/antibiotics-are-overprescribed-in-urgent-care>
7. Palms DL, Hicks LA, Bartoces M, et al. Comparison of Antibiotic Prescribing in Retail Clinics, Urgent Care Centers, Emergency Departments, and Traditional Ambulatory Care Settings in the United States. *JAMA Intern Med*. 2018;178(9):1267–1269. doi:10.1001/jamainternmed.2018.1632



Contact Information

James M. Wilson V., MD FAAP

jameswilson@unr.edu

(571)225-3671

Beth Slamowitz, PharmD

bslamowitz@dncfp.nv.gov

(775)684-7967

Holly M. Long

hlong@dncfp.nv.gov

(775)684-3150

Julia Peek, MHA, CPM

jpeek@health.nv.gov

(775)684-4224

Victoria L. LeGarde

vlegarde@dncfp.nv.gov

(775)684-3791

Carl Jeffery, PharmD

Carl.Jeffery@optum.com

(775)737-1877

