

## IN THIS ISSUE: 2021 WASHOE COUNTY COMMUNITY-WIDE ANTIBIOGRAM

### 2021 Washoe County Community-wide Antibioqram Now Available Online

#### What is an Antibioqram

Antibioqrams are reports that provide information on clinically important bacteria and their susceptibility trends.<sup>1</sup> As part of antimicrobial stewardship, the Centers for Disease Control and Prevention (CDC) and the Clinical and Laboratory Standards Institute (CLSI) endorse antibioqrams be produced locally.<sup>1,2</sup>

#### Antibioqram Data

In the "Analysis and Presentation of Cumulative Antimicrobial Susceptibility Test Data", CLSI provides recommendations on antibioqram preparation. Basic features include reports be produced annually, include organisms with at least 30 isolates tested, and only count the first isolate of a species per patient within the reporting period.<sup>1</sup>

Local hospitals and some private laboratories produce annual antibioqrams for their own institutions. Between 2002 and 2006, data were provided by both clinical and private laboratories in Washoe County, which the Northern Nevada Public Health's (NNPH) Epidemiology Program aggregated to generate the community-wide antibioqram. Since 2007, antibioqram data for private laboratories have not been available; therefore, the antibioqram data since then has only covered outpatients and inpatients seen at local hospitals and their emergency departments.

#### Utility of the Antibioqram

Antibioqrams can be used by a variety of professions involved with testing organisms and their antimicrobial stewardship. The Washoe County community-wide antibioqram can be used as a reference for clinicians, pharmacists, infection control practitioners, microbiologists, public health professionals, and other interested parties. Antibioqrams may serve as a guideline for clinicians when selecting antimicrobial therapy empirically in situations where clear susceptibility results are

unavailable.<sup>1</sup> Clinicians in a hospital setting should use the hospital-specific antibioqram prepared by the hospital infection control committee, microbiologists, or pharmacists, as antimicrobial resistance varies greatly between different locales. For other health care professionals, a community-wide antibioqram may be preferred.

Although community-wide antibioqrams are a beneficial resource for local antimicrobial susceptibility, data limitations should be considered.<sup>3,4</sup> Antibioqrams are aggregate data and do not show cross resistance trends, cannot be generalized to a specific patient population, and do not consider a patient's antimicrobial treatment history.<sup>3,4</sup> Furthermore, MIC values are not presented and may miss upcoming antimicrobial resistance.<sup>4</sup>

#### Accessing the 2021 Antibioqram

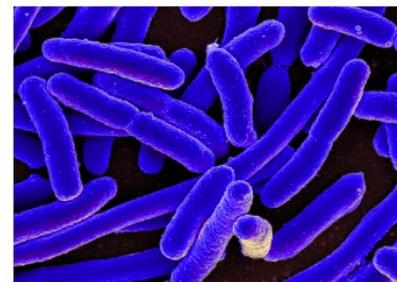
The 2021 Antibioqram was uploaded to NNPH's website on August 15, 2022.

The three formats for the antibioqram are:

- ✓ **Online** format can be easily browsed on a device (e.g., computer, laptop, iPhone, Smart Phone, etc.) with internet access.

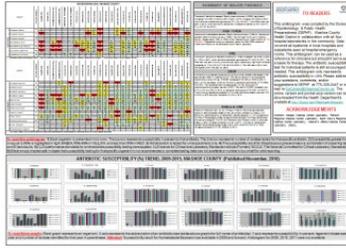
Washoe County Antibioqram

2021



- ✓ **Pocket size** format is a colored copy on legal sized paper, which can be folded into a pocket size (easy to carry).
- ✓ **Wall chart** format is a colored copy in a poster size (36"W x 26"H) and easy to read, but hard to

carry. It's good for health care providers to use in the office.



Please refer to the NNPH website at <https://nnph.org/programs-and-services/ephp/communicable-diseases-and-epidemiology/healthcare-professionals/antimicrobial-resistance/index.php> where different versions of the 2021 antibiogram are available.

### 2021 Community-wide Antibiogram

- ◆ Antibiotic susceptibility (%) data for 18 commonly seen organisms.
- ◆ Graphic presentation of 2017-2021 antibiotic susceptibility (%) trend data in Washoe County.
- ◆ Summary of major findings on Methicillin-resistant *Staphylococcus aureus* (MRSA), Drug Resistant *Streptococcus Pneumoniae* (DRSP), Vancomycin-resistant *Enterococci* (VRE), Extended-spectrum beta-lactamase (ESBLs), and Carbapenem-resistant *Enterobacteriaceae* (CRE).

### Major Findings

#### Good News

- ◆ MRSA rate decreased between 2020 (35.0%) to 2021 (33.5%). The decrease was not statistically significant.
- ◆ The rate for penicillin non-susceptible streptococcus pneumonia (PNSSP, non-meningitis breakpoint) increased from 0% in 2020 to 2.4% in 2021, which showed no statistically significant difference.
- ◆ In 2021, the VRE rate was 5.0%, which was not a significant increase from 4.0% reported in 2020.
- ◆ The CRE rate decreased from 0.27% (2020) to 0.12% (2021), but was not a significant decrease.

#### Bad News

- ◆ The total number of isolates increased, in particular for the gram-positive bacteria.

- ◆ The 2021 data are outdated, as this was published in 2023. Staff are working diligently to update the local antibiogram for more recent years (2022).

### ATTENTION!

If you are a Washoe County healthcare provider, you are eligible to receive the *Antibiogram 2021 Pocket Size* format at NO COST. Please email your request to [EpiCenter@nnph.org](mailto:EpiCenter@nnph.org) and clearly indicate your name, medical group, and local mailing address.

### Acknowledgement

In alphabetic order: Incline Village Community Hospital, Northern Nevada Medical Center, Renown Regional Medical Center, Saint Mary's Regional Medical Center, Tahoe Forest Hospital, Veterans Affairs Medical Center

### References

1. CLSI. Analysis and Presentation of Cumulative Antimicrobial Susceptibility Test Data. 5th ed. CLSI guideline M39. Clinical and Laboratory Standards Institute; 2022.
2. Centers for Disease Control and Prevention. Core Elements of Hospital Antibiotic Stewardship Programs. Atlanta, GA: US Department of Health and Human Services, CDC; 2019.
3. Simner PJ, Hindler JA, Bhowmick T, Das S, Johnson JK, Lubers BV, Redell MA, Stelling J, Erdman SM. What's New in Antibiograms? Updating CLSI M39 Guidance with Current Trends. *J Clin Microbiol.* 2022 Oct 19;60(10):e0221021. doi: 10.1128/jcm.02210-21. Epub 2022 Aug 2. PMID: 35916520; PMCID: PMC9580356.
4. Minnesota Department of Health. About Antibiograms. 2015. Accessed August 2023  
<https://www.health.state.mn.us/diseases/antibioticresistance/abx/antibiograms.pdf>