

Steve Sisolak
Governor



Richard Whitley
Director

State of Nevada Department of Health and Human Services

Emerging Issues for Epidemiology
Tribal Consultation – 1.8.20

Division of Public and Behavioral Health
Melissa Peek-Bullock, State Epidemiologist

Julia Peek, Deputy Administrator

Helping people. It's who we are and what we do.



Our antibiotics are no match for superbugs, and it's a 'global crisis,' report says

By Susan Scutti, CNN

Updated 12:45 PM ET, Mon April 29, 2019



CDC raises alarm about "growing STD epidemic" as cases hit record high
BY BRIAN PASCUS
OCTOBER 9, 2019 / 11:22 AM / CBS NEWS

HEALTH NEWS

✓ Fact Checked

Vaping Lung Disease: Over 2,200 Cases Reported, Teen Gets 'Popcorn Lung'



ted diseases hit a record high in
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States last year with more
the most ever reported
y syphilis – the two
5,000 cases. That's



Sexual Health Epidemic

- **STDs have surged for the fifth consecutive year, reaching an all-time high.**
- Data show increases in all three STDs that are reported to CDC. From 2017-2018:
 - Primary and secondary syphilis: Increased 14% (most dramatic increases in newborns).
 - Gonorrhea: Increased 5% overall (most cases reported in older than 20 years).
 - Chlamydia: Increased 3% (highest case count ever recorded by CDC).



Nevada's Rankings 2018

- Syphilis: #1
- Congenital Syphilis: #2
- Gonorrhea: #12
- Chlamydia: #14

What is causing STDs to increase in the United States?

- Factors related to a person's social, cultural and economic environment (such as poverty, unstable housing, drug use, lack of medical insurance).
- New and/or changing transmission patterns — For example, while increases in syphilis have been seen among men who have sex with men (MSM) for nearly 20 years, in recent years we've seen increases in women and heterosexuals. As STDs increase among and expand into other populations, additional outreach and education is required to increase screening, treatment, and prevention.



What is causing STDs to increase in the United States?

- Broader behavioral issues, such as decreases in condom use among high-risk groups, including young people and gay and bisexual men.
- In recent years, more than half of local STD programs have experienced budget cuts, which has resulted in clinic closures, reduced screening and staff loss.
- Stigma and discrimination, generally speaking, may also play a role.



Why are we seeing a resurgence of congenital syphilis?

- The rise in congenital syphilis parallels an increase in primary and secondary syphilis among women overall, so the increase is largely due to more women of reproductive age becoming infected with the disease. We have two issues:
 - We need to address the rising rates of female syphilis, not only to protect the health of women but also to prevent congenital syphilis if they become pregnant.
 - The congenital syphilis increases also show we are missing opportunities to screen and treat pregnant women for STDs, especially syphilis.



e-cigarette, or vaping, product use associated lung injury (EVALI)

- CDC notified states of report(s) of illness related to vaping.
- Per CDC, epidemiology should immediately:
 - Consider conducting case-finding activities that use existing data sources (e.g., local poison control center, coroner and medical examiner's office, and other applicable surveillance systems including syndromic surveillance). CDC has developed two working syndromic surveillance definitions (one version with specific symptoms and a second focused on e-cigarette product use). CDC will be programming these definitions in CDC's National Syndromic Surveillance Program's BioSense/ESSENCE platform for case-finding within the platform.
 - Consider asking the medical examiner or coroner's office and other pathologists to report possible cases, especially those without an alternate likely diagnosis. If individuals are identified after death or at autopsy as having signs of severe pulmonary disease as described above, medical examiners and coroners are encouraged to report the cases to their local or state health department.



e-cigarette, or vaping, product use associated lung injury (EVALI) Continued

- State and local health departments soon realized this was a very time/resource-intensive investigation. Most needed to redirect resources to focus on this investigation.
- CDC is stopping the collection of data on non-hospitalized cases of EVALI for the following reasons:
 - Patients with EVALI may have similar symptoms to flu or other respiratory illness and it might be difficult to distinguish EVALI from other respiratory illnesses.
 - Case finding and reporting of non-hospitalized patients could become more difficult and burdensome given the potential for large numbers of respiratory illnesses during the emerging flu season and may be of limited value to the ongoing investigation.



The Threat of Antibiotic Resistance in the United States

Antibiotic resistance—when germs (bacteria, fungi) develop the ability to defeat the antibiotics designed to kill them—is one of the greatest global health challenges of modern time.

New National Estimate*

Each year, antibiotic-resistant bacteria and fungi cause at least an estimated:



2,868,700
infections



Clostridioides difficile is related to antibiotic use and antibiotic resistance:



223,900
cases



35,900 deaths



12,800 deaths

New Antibiotic Resistance Threats List

Updated urgent, serious, and concerning threats—totaling 18

5 urgent threats

2 new threats

NEW: Watch List with **3** threats



Antibiotic resistance remains a significant One Health problem, affecting humans, animals, and the environment. Data show infection prevention and control is saving lives—especially in hospitals—but threats may undermine this progress without continued aggressive action now.

Learn more: www.cdc.gov/DrugResistance/Biggest-Threats

*National burden reflects de-duplicated infection and death estimates.

Nevada has a high percent of CRE resistance. Nevada, New Jersey and Connecticut have the highest according to the CDC.

Although there are limitations to this data (some states have reporting requirements while others do not) it still shows the organisms tested for Nevada were resistant.



Outbreak Response

- Priority over all other infectious disease investigations.
- Coordinated efforts
 - Epidemiology
 - Laboratory
 - Environmental Health
 - Immunizations
 - Public Health Preparedness
 - Community Health Nurses
 - Centers for Disease Control & Prevention (CDC)
 - Food and Drug Administration (FDA)



Current Outbreak and Large-Scale Public Health Responses

- Syphilis & Congenital Syphilis
- Acute Hepatitis A
- Pertussis
- E-cigarette or Vaping Product Use Associated Lung Injury (EVALI)
- West Nile Virus (WNV)



Challenges

- Staffing Challenges

- Adequate staffing levels to provide effective investigations and implement appropriate intervention measures.
- Redirection of general fund staff to address the “crisis” at the detriment of other investigations.

- Programmatic Funding Challenges

- Vaccination costs.
- Vector control, such as mosquito abatement programs.

- Changing Landscape

- The ability to provide funding to the specific crisis or outbreak is limited given the specificity of funding sources.





Questions?





Contact Information

Melissa Peek-Bullock

State Epidemiologist

775-684-5285

mpeekbullok@health.nv.gov

Julia Peek

Deputy Administrator

775-684-5902

jpeek@health.nv.gov

dhhs.nv.gov

