ALEXANDRIA HEALTH DEPARTMENT

2023 Communicable Disease Report

ALEXANDRIA HEALTH DEPARTMENT COMMUNICABLE DISEASE INVESTIGATIONS: 2023

A snapshot of the communicable disease investigation and responses by AHD in calendar year 2023.

We investigated **542** communicable diseases cases

11% increase from 2022

*AHD also monitored and supported:

1,256 STI cases

134 Latent or Active TB cases

3,362 COVID-19 cases

COVID SPOTLIGHT

85% drop in reported cases

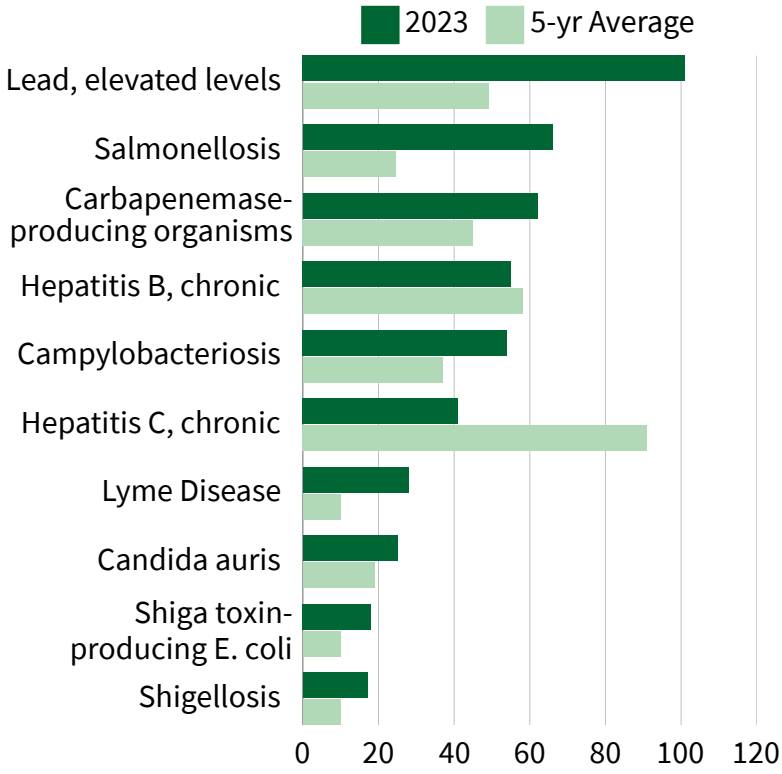
Reported COVID-19 cases dropped 85% from 22,726 cases in 2022 to 3,362 cases in 2023. This drop can be attributed to Alexandrians' COVID-19 vaccine uptake, AHD-supported infection control, and an increase in non-reported home testing.

RESPONSES/INTERVENTIONS

- Clinician Education
- Site Visits
- Outbreak Guidance
- Specimen Testing
- Community Education

TOP 10 REPORTED DISEASES

Excluding STIs, Tuberculosis, & COVID-19*



Supported, provided guidance for:

48 TOTAL OUTBREAKS

WHAT CAN PROVIDERS DO?

ALERT

Call 703.746.4951 to report diseases ASAP.

ASK

Ask questions when diseases present challenges in practice.

Subscribe to clinician updates and see the full report at **www.alexandriava.gov/DiseaseReporting**.

DEAR NEIGHBORS,

I am pleased to share the 2023 Alexandria Health Department Communicable Disease Report – a snapshot of reported communicable diseases that were investigated by our department in 2023. Alexandria Health Department (AHD) last published an annual report in 2019. Of course, shortly after, the COVID-19 pandemic transformed our department, our city, and our world more than we could have imagined.

We recognize that we are just one part of a complex health system. We rely on frontline health care providers to suspect, test for, and quickly report diseases that have the capacity for large-scale impact in our community. Our effectiveness in investigating reportable conditions and initiating a public health response (often in the span of hours) hinges on timely reporting.

We hope this report offers a clear and insightful snapshot of communicable diseases in pandemic and post-pandemic Alexandria. We encourage you to explore trends, review the in-depth disease spotlights, and consider how you and your organization can work to prevent, report, and respond to communicable diseases.

Although this data represents the state of Alexandria's communicable diseases in 2023, many of the summaries you will read describe ongoing work that has been developed as we collected and analyzed this recent data. As we move forward in 2025 and beyond, lessons from our recent past can lead transformative public health work.

We are grateful for your contributions, collaboration, and support, and we welcome feedback and suggestions on ways to improve the health of our residents.

As always, thank you for advocating and joining us in protecting and promoting health in Alexandria.

Sincerely,

David C. Rose, MD, MBA, FAAP
Health Director
Alexandria Health Department

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REPORTED COMMUNICABLE DISEASES IN ALEXANDRIA

Certain diseases and conditions are "**reportable**" to local health departments so that these departments can take steps to prevent others from becoming ill. For example, health departments might organize communications to raise public awareness, pull a contaminated item from stores, or offer preventive treatments to people who have been exposed. All these interventions help us protect the public's health. A printable Reportable Disease List with instructions on how to report is provided at the end of this report.

Since **not all diseases are reportable**, the epidemiology of diseases described in this document specifically represents reported communicable diseases investigated by Alexandria Health Department (AHD).

In 2023, AHD investigated 542 cases of communicable disease, excluding COVID-19, Tuberculosis (TB), and Sexually Transmitted Infections (STIs).

Total cases, categorized below, increased by 11%, up from 487 cases in 2022.

This report also includes "Disease Spotlights" for detailed overviews of trends in STIs, TB, and Animal Bites and Rabies Prophylaxis. Historical communicable disease case counts through 2022 are available at the Virginia Department of Health (VDH) Communicable Disease Data website.

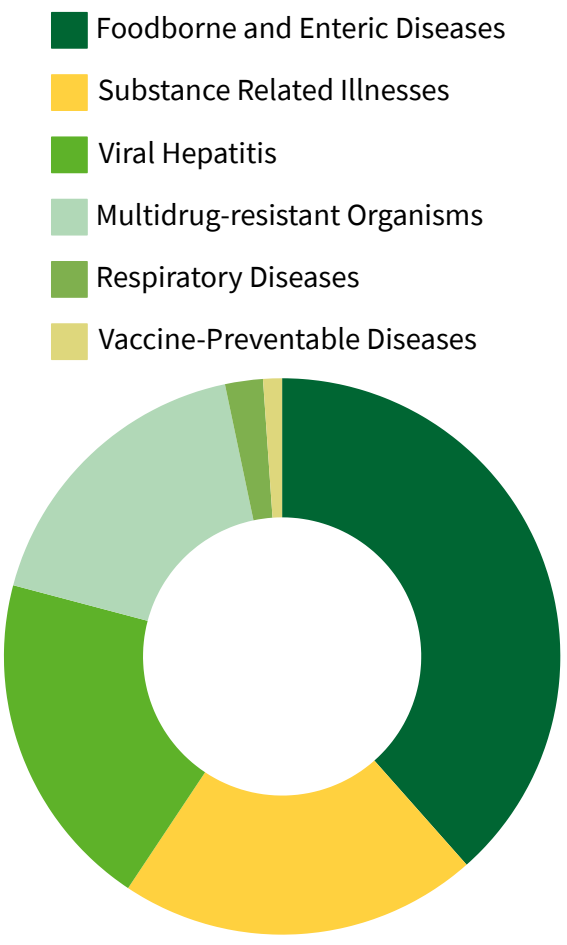
Foodborne and Enteric Diseases

Enteric conditions made up the bulk of AHD's investigations at 35% of the 2023 investigation caseload, and cases increased 62% (116 to 188) from 2022 to 2023. Major outbreaks related to salmonellosis, Shiga toxin-producing E. coli, and vibriosis resulted in higher case counts than previous years. Despite a decrease during the COVID-19 pandemic, foodborne illness cases rebounded and surpassed 2019 levels, mirroring national trends.

Multidrug-Resistant Organisms (MDROs)

Like many jurisdictions around the country, Alexandria experienced an exacerbation of MDROs since the COVID-19 pandemic. Detected cases of MDROs increased significantly in Alexandria, (11 in 2018) rose to a peak of 160 in 2021 and remained elevated at 87 cases in 2023. There was a 19% decrease in cases from 2022 to 2023. MDROs made up 16% of AHD's caseload in 2023.

Figure 1. Alexandria's 2023 Communicable Disease* Caseload
*excluding STI, TB, and COVID-19 investigations



Vaccine-preventable Diseases

Vaccine-preventable diseases increased by 33%, from 6 cases in 2022 to 8 cases in 2023. Although Alexandria did not record any cases of pertussis or meningococcal disease through calendar year 2023, other parts of the region and state experienced outbreaks and there has been an increase in cases state- and nationwide through 2024.

Zoonotic and Emerging Diseases

Zoonoses made up 8% of Alexandria's investigations in 2023, and decreased by 46%, from 85 cases in 2022 to 46 cases in 2023. Lyme disease cases increased significantly in 2023, though this is likely related to case definition changes. The Commonwealth of Virginia, a high lyme incidence state, has followed a "lab only" classification approach since 2022.

Mpox emerged in the United States during 2022. During the height of the outbreak that year, Alexandria had the highest mpox incidence rate in Virginia, 41.1 per 100,000 residents, but only investigated one case in all of 2023 (98% decrease). See more details about Alexandria's mpox response in the Disease Spotlight.

Respiratory Diseases

With the sharp 85% decrease in reported COVID-19 cases, from 22,726 cases in 2022 to 3,362 cases in 2023, came a return to pre-pandemic levels of other reportable respiratory transmissible diseases. Invasive streptococcal disease incidence, both S. pyogenes and S. pneumoniae, has increased in recent years, with cases of invasive Group A Strep increasing by 75%, from 4 cases in 2022 to 7 cases in 2023.

Toxic Substance-related Illnesses

Arsenic, carbon monoxide poisoning, and mercury cases all decreased from 2022 to 2023, while elevated lead level cases more than doubled.

The increase in lead cases is likely a surveillance artifact rather than a true increase in incidence. In 2023, the case definition for "elevated blood lead levels" changed, lowering the reportable micrograms per liter of blood cutoff from 5 to 3.5. At that lowered cutoff value, lead investigations alone made up 19% of Alexandria's 2023 case investigations.

Viral Hepatitis

While cases of chronic hepatitis B and C have decreased steadily over the past 5 years, acute hepatitis A, B, and C cases have recently reemerged in 2023 following 0 cases in 2022. Chronic viral hepatitis cases are investigated and managed by a Regional Hepatitis Coordinator for the Northern Virginia area.

SURVEILLANCE DATA NOTES

How to Interpret Results

Case counts are the number of Alexandria residents with new instances of disease reported to AHD during 2023. Rates are an estimate of the risk of disease for the relevant population during 2023. Trend lines visualize changes in case counts over five years, including 2023. Averages were calculated for the previous five years, excluding 2023 cases.

Incidence Rates

Population-based incidence rates were calculated to compare the occurrence of disease across groups or areas that have different populations. Incidence rates describe the frequency of new cases of disease in 2023, standardized to the populations of Alexandria or Virginia, and expressed as X cases per 100,000 people.

For this report, crude incidence rates were calculated without adjustment. However, when either the numerator (cases) or denominator (population) is small, the incidence rate can be subject to fluctuation due to chance alone. For this reason, rates should be interpreted cautiously (1). When rates are based on very low counts, it is challenging to discern random fluctuation from true changes in disease risk.

Limitations

Cases are counted for the individual's residence, not necessarily the location where the disease or exposure occurred; further, residence data may be incomplete or out of date when individuals cannot be reached for follow up.

Additionally, disease case definitions change over time and can impact case counts. The COVID-19 pandemic temporarily decreased baseline health care-seeking behavior, leading to fewer illnesses diagnosed and fewer diseases reported to AHD. This decrease in cases reported makes the 5-year average somewhat unreliable.

Data Sources

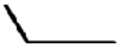
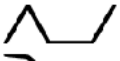
Case and outbreak data were retrieved from the Virginia Electronic Disease Surveillance System (VEDSS) and Virginia Outbreak Surveillance System (VOSS). Population data are from 2022 CDC WONDER Single-Race Population Estimates.

VDH has developed many interactive surveillance dashboards and reports and we invite you to explore the VDH Data Portal. For historical communicable disease case counts, please visit the interactive VDH Annual Report, which details case counts, incidence rates, and age group, sex, and race distributions across the 35 Virginia health districts.

Table 1. Trends in communicable disease cases from 2018-2023, 2023 case totals, and incidence rates

	Trend 2018-2023	Average 2018-2022	2023 Alexandria cases	2023 Alexandria Incidence Rate†	2023 Virginia Incidence Rate
Foodborne and Enteric Diseases					
Amebiasis		1.6	2	1.3	0.2
Campylobacteriosis		37	54	34.7	20.1
Cryptosporidiosis		15.8	11	7.1	3.3
Cyclosporiasis		2.2	1	0.6	2.1
Giardiasis		12.6	8	5.1	3.5
Listeriosis		1.2	0	0.0	0.4
Salmonellosis		24.4	66	42.4	14.5
Shiga toxin-producing E. coli		10	18	11.6	5.6
Shigellosis		10.2	17	10.9	4.7
Vibriosis		1.2	6	3.9	1.3
Yersiniosis		11.2	5	3.2	2.2
Multidrug-resistant Organisms^					
Candida auris		31*	25	16.1	2.0
Carbapenemase-producing organisms		44.6	62	39.9	5.0
Vaccine-Preventable Diseases					
Chickenpox		8.4	7	4.5	3.3
Haemophilus influenzae, invasive		2	1	0.6	2.3
Mumps		1	0	0.0	0.2
Meningococcal disease		0	0	0.0	0.3
Pertussis		1.6	0	0.0	1.4

†Incidence Rate = New cases of disease in calendar year per 100,000 residents
*Modified average displayed (<5 years of data available)
Case numbers in red are greater than the prior 5-year average (2018-2022)
^Multidrug-resistant Organisms: cases represent both infection (clinical) and colonization (screening)

	Trend 2018-2023	Average 2018-2022	2023 Alexandria cases	2023 Alexandria Incidence Rate[†]	2023 Virginia Incidence Rate
Zoonotic & Emerging Diseases					
Anaplasmosis		0.8	3	1.9	N/A
Babesiosis		0.2	0	0.0	0.1
Brucellosis		0.4	0	0.0	0.0
Dengue and Severe Dengue		0.6	1	0.6	0.3
Ehrlichiosis		1	1	0.6	N/A
Lyme Disease		10	28	18.0	20.1
Malaria		7.8	11	7.1	1.5
Mpox (formerly monkeypox)		64*	1	0.6	0.1
Spotted Fever Rickettsiosis (including RMSF)[^]		0.6	0	0.0	1.1
West Nile infection, +/- neuroinvasive		0.6	0	0.0	0.1
Zika virus infection, non-congenital		1	0	0.0	0.0
Respiratory Diseases					
Coronavirus Disease 2019 (COVID-19)		14,155*	3,362	2,161.7	2,848.2
Legionellosis		3	2	1.3	2.0
Streptococcus pneumoniae, invasive, <5 years		0	2	1.3	0.3
Streptococcus, Group A, invasive		4.4	7	4.5	7.6
Toxic-shock syndrome, streptococcal		0.2	0	0.0	N/A
Toxic Substance-related Illnesses					
Arsenic		2.4	0	0.0	N/A
Carbon Monoxide Poisoning		0.2	0	0.0	N/A
Lead, elevated levels		48.8	101	64.9	20.1
Mercury, elevated levels		1.8	0	0.0	N/A
Toxic Substance Exposures (metals, dust, chemical)		0.4	2	1.3	N/A
Viral Hepatitis					
Hepatitis A, acute		2.4	1	0.6	0.4
Hepatitis B, acute		0.4	1	0.6	0.4
Hepatitis B, chronic		58	55	35.4	20.8
Hepatitis C, acute		0.2	1	0.6	0.4
Hepatitis C, chronic		91.2	41	26.4	51.1

[^]RMSF = Rocky Mountain Spotted Fever.

N/A = Condition categories were combined differently at state and local levels; comparison would not be reliable.

*Modified average displayed (<5 years of data available)

TOP 10 REPORTED DISEASES

Excluding STIs, Tuberculosis, & COVID-19

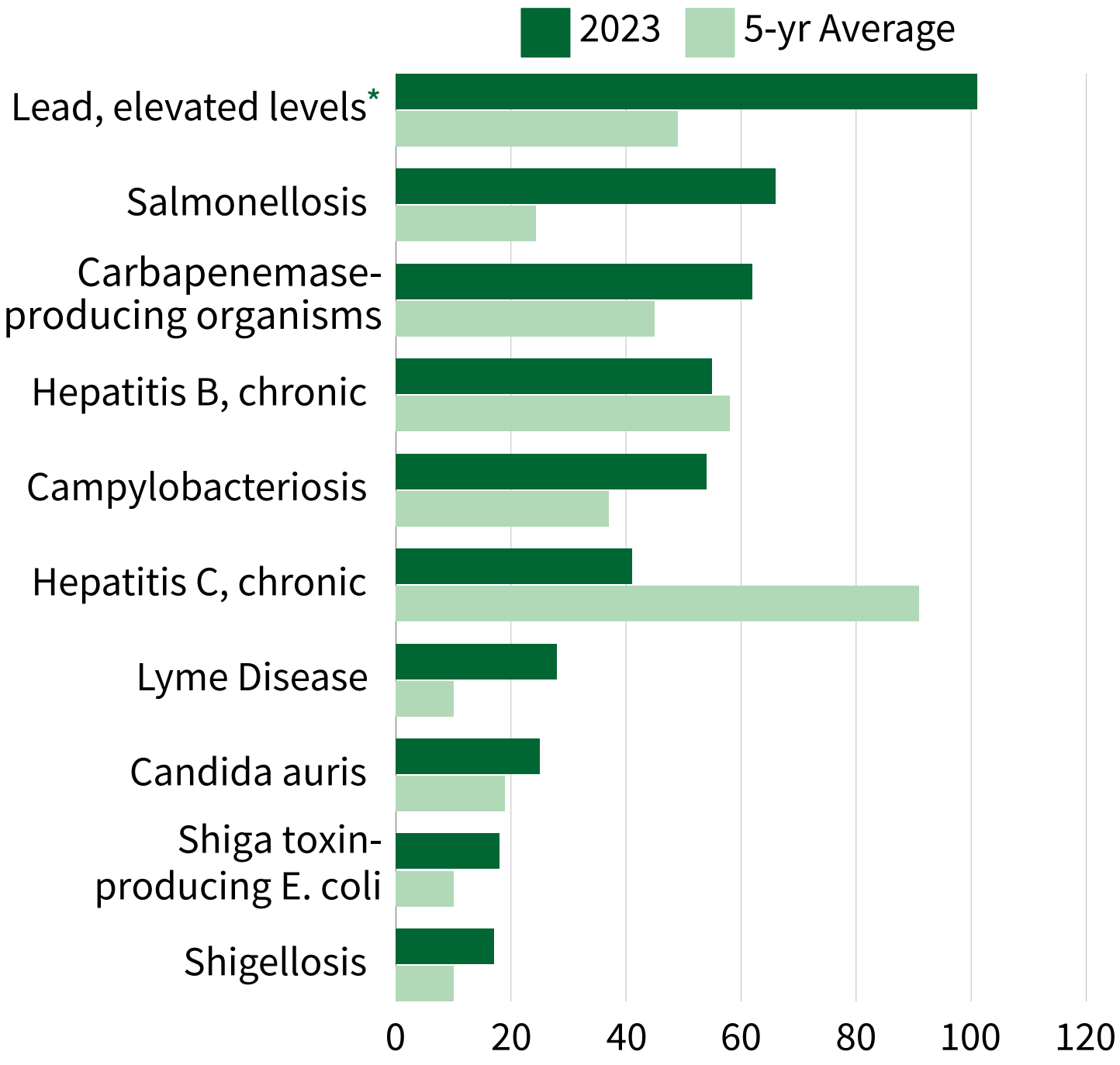
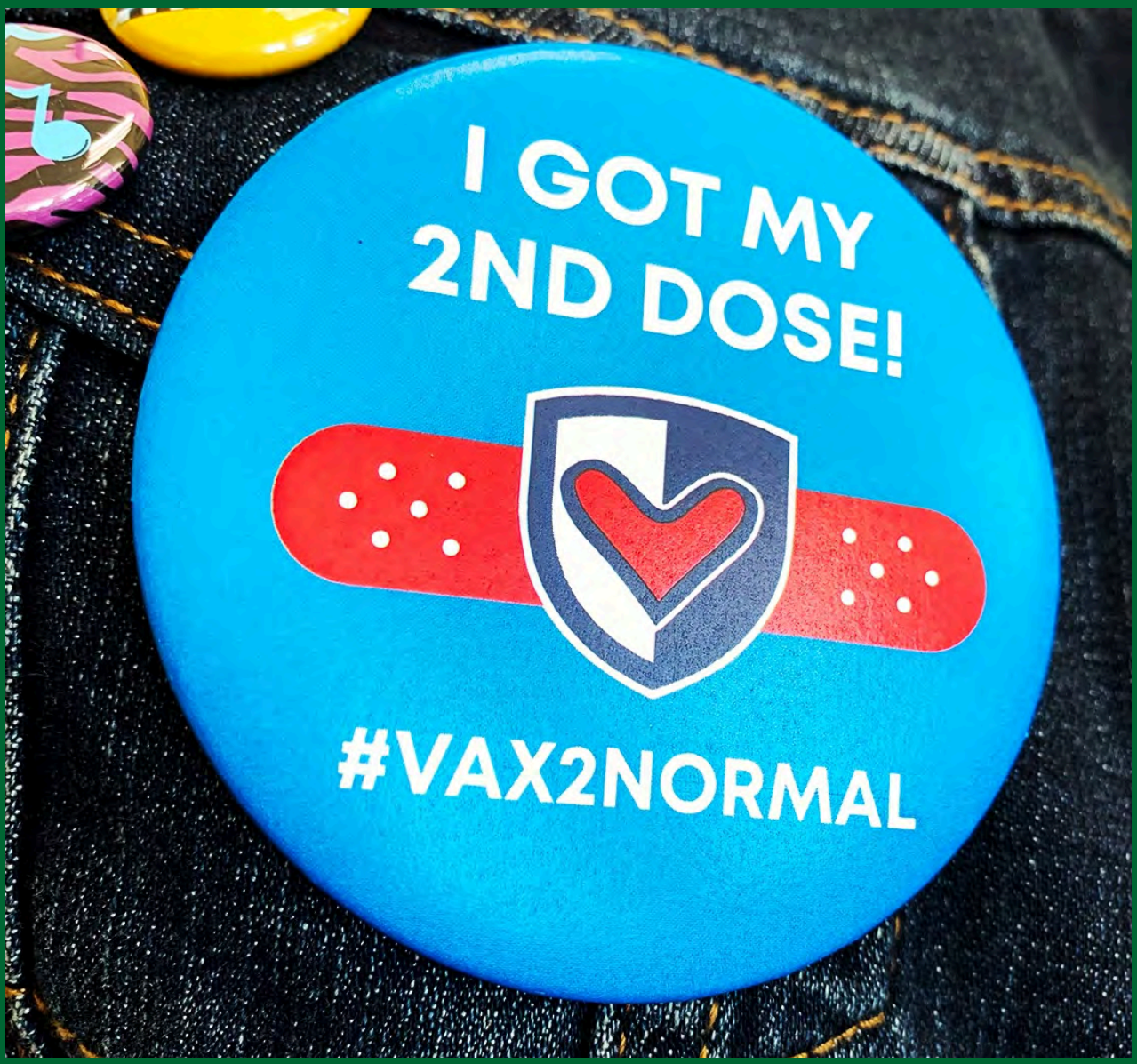


Figure 2. Top 10 most frequently reported diseases in 2023 by case number, compared to 2018-2022 average, Alexandria, VA.

*Note: In 2023, the case definition for "elevated blood lead levels" changed which lowered the reportable micrograms per liter of blood cutoff from 5 to 3.5.



DISEASE SPOTLIGHTS

Highlights of work done by Alexandria Health Department to surveil and prevent further spread of diseases of interest in 2023. Diseases include mpox, STIs, MDROs, and COVID-19.

MPOX (FORMERLY MONKEYPOX)

The first confirmed case of mpox in Alexandria was reported in June 2022. It was part of the broader outbreak that began in May 2022 when mpox cases significantly rose in the U.S. (Figure 3) and across the world. Alexandria had a high case rate per capita, 41.1 cases per 100,000 people, due to the city's proximity to Washington, D.C., which was one of the initial hotspots for mpox transmission.

During June 2022 - January 2023, a total of 65 mpox cases were reported to Alexandria Health Department. Alexandria began to respond to lab reports of mpox cases in June 2022. Toward the end of July 2022 through the beginning of August 2022, the number of positive specimen collections sharply increased.

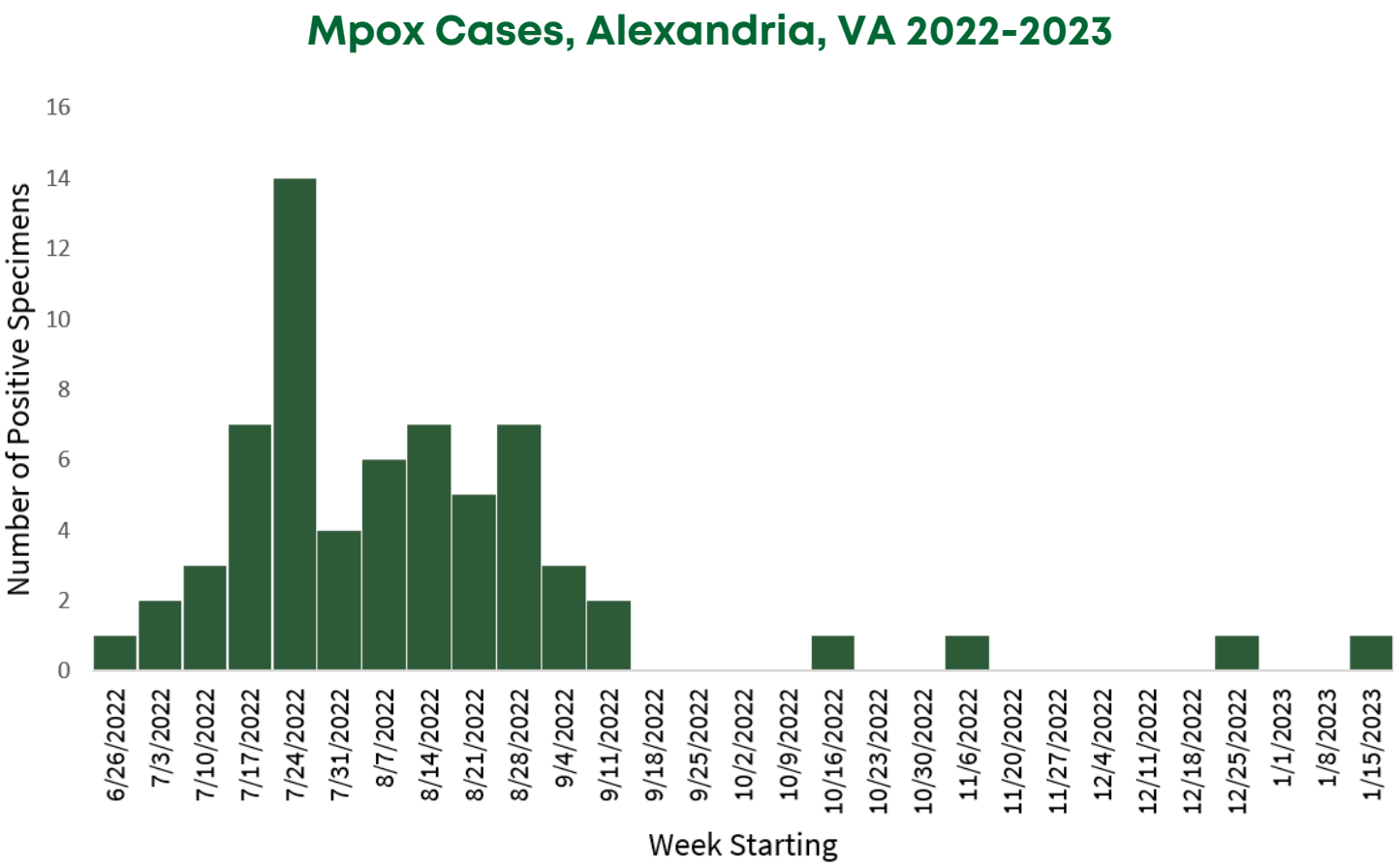


Figure 3. Cases of mpox by week of lab specimen collection date, Alexandria, VA, June 2022 - January 2023.

Mpox Cases in Alexandria

Table 2 summarizes the mpox cases in Alexandria based on age, gender, sexual contact identification, ethnicity, and race. Alexandria's mpox cases reflect a predominately male (95%) and non-Hispanic (66%) population, with the majority of cases occurring in 25–39-year-olds. Mpox cases occurred in Black or African American persons at the highest rates (42%), followed by White persons (28%). Most cases reported male sexual contact (62%), with a significant portion (34%) providing unknown responses in this category.

In response to the mpox outbreak in 2022, Alexandria implemented several measures to protect public health, mitigate the spread of the virus, and educate the community.

Vaccination Campaigns

AHD organized free vaccination clinics to administer the JYNNEOS vaccine, which was authorized for use in preventing mpox.

Between July 2022 and September 2023, Alexandria residents received 2,096 doses of JYNNEOS vaccine with 87% of individuals receiving both doses. Alexandria Health Department further provided JYNNEOS vaccine to over 2,500 individuals from around the national capital region.

The vaccine was initially offered only to a select group of people at higher risk of exposure like people with known or suspected exposure to mpox and people with connections to certain high-risk sexual events.

Table 2. Mpox Cases in Alexandria, 2022-2023

	N	%
Total	**65**	**100**
Age Group		
Under 24 years	6	9.2
25-34 years	30	46.2
34-49 years	23	35.4
50+ years	6	9.2
Gender		
Male	63	96.9
Female	*	*
Transgender Female	*	*
Unknown	*	*
Ethnicity		
Hispanic/Latino	20	30.8
Not Hispanic or Latino	44	67.7
Unknown	*	*
Race		
White	18	27.7
Black or African American	27	41.5
American Indian or Alaskan Native	*	*
Native Hawaiian or Pacific Islander	*	*
Asian	*	*
Other	*	*
Unknown	*	*
Two or more races	12	18.5
Reported male sexual contact		
Yes	40	61.5
No	*	*
Unknown	22	33.9

Sex and gender information are collected from self-reports, diagnosing provider, or electronic lab reporting, which may not reflect self-identification. “Unknown” represents non-disclosure during investigations.

*Case counts <5 are suppressed to protect patient confidentiality.

However, as the vaccine supply increased, the vaccination campaign expanded to include individuals whose behaviors may put them at increased risk of being exposed to mpox. This included people who may not have had direct contact with confirmed cases but may participate in higher risk activities (e.g., those with multiple sexual partners, etc.).

Mpox vaccination is currently recommended for the following groups:

- Individuals with a sex partner in the past two weeks who was diagnosed with mpox.
- Individuals identifying as gay, bisexual, or other man who has sex with men, or a transgender, nonbinary, or gender-diverse person who in the past six months has had any of the following:
  - A new diagnosis of one or more sexually transmitted diseases
  - More than one sex partner
- Individuals that had any of the following in the past six months:
  - Sex at a commercial sex venue
  - Sex related to a large commercial event or geographic area where transmission is occurring
- Individuals that have a sex partner with any of the above risks.
- Individuals that anticipate experiencing any of the above scenarios.
- Individuals at risk for occupational exposure to orthopoxviruses (e.g., certain people who work in a laboratory or a healthcare facility).
- Individuals traveling to a country where clade I mpox virus is spreading AND they anticipate sexual exposure while traveling, regardless of sexual orientation or gender identity

Public Awareness and Education

Information distribution: AHD and local partner organizations launched education campaigns to raise awareness about mpox, its symptoms, and how it spreads. AHD and others created and distributed flyers, social media posts, and web content.

Community outreach: Alexandria hosted a virtual townhall event in various languages to inform the community.

Image 1: Mpox virtual information session recording.

Local health workers and advocacy groups partnered with AHD to engage specific at-risk communities, particularly LGBTQ+ groups, to provide information about prevention, symptoms, and where to seek care.

Outreach through healthcare providers: Alexandria's healthcare providers were trained through clinician letters, office outreach, and webinars on educating patients about mpox, where to get tested and vaccinated.

Messaging to Combat Stigma

One of the key challenges during the mpox outbreak was stigma associated with the virus, particularly because many early cases were among men who have sex with men. Alexandria Health Department worked to reduce stigma by emphasizing that anyone could get mpox, regardless of sexual orientation or gender, focusing on messaging that was inclusive and non-discriminatory.

Collaboration with Local Organizations

Local LGBTQ+ organizations, such as the Alexandria LGBTQ+ Task Force, Inova Pride Clinic, and NovaSalud, played a significant role in the public health response by helping to spread accurate information, conducting outreach, and ensuring that the needs of vulnerable populations were met during the outbreak.

By implementing these strategies, Alexandria reduced the spread of mpox, ensured that those who were most vulnerable had access to care, and helped the community navigate the challenges of the outbreak in a compassionate and informed manner.

Provider Takeaways:

- Although the height of the mpox outbreak was in 2022, mpox is still present in the U.S. and may go underdiagnosed.
- Providers should be prepared to test and diagnose mpox.
- Providers should recommend JYNNEOS vaccine for all eligible individuals. JYNNEOS is available at local pharmacy and grocery store chains. More information on mpox for providers can be found on AHD's Disease Reporting Webpage.

Image 2: Mpox vaccine postcards were popular in the community and at providers' offices to boost awareness about the JYNNEOS vaccine.

MULTIDRUG-RESISTANT ORGANISMS (MDROS)

Preventing the Spread of MDROs in Alexandria

Antimicrobial resistance (AMR) is a global, national, and local health threat that was exacerbated during the COVID-19 pandemic, highlighting the need for health systems and health departments to be prepared to prevent and meet the challenges of AMR and multidrug-resistant organisms (MDROs) (2,3). Antibiotic-resistant organisms can be acquired in both community and healthcare settings (4). While the incidence of some MDROs have decreased over time, such as methicillin-resistant *Staphylococcous aureus* and vancomycin-resistant *enterococcus*, emerging MDROs that are particularly concerning include carbapenem-resistant *Enterobacterales* (CRE) and other carbapenemase-producing organisms (CPOs), carbapenem-resistant *Acinetobacter*, MDR *Pseudomonas aeruginosa* and *Candida auris* (3,5,6). CRE and CPOs have been found all over the world and are resistant to a variety of antimicrobial agents including last resort carbapenems, a class of beta lactam antibiotics (7,8). Persons with a CPO can either be colonized or carry CPOs without any symptoms or have CPO infections which can cause increased morbidity and healthcare stays (8,9).

Despite having evidence on how the spread of MDROs can be prevented and controlled, MDROs continue to grow as a major public health threat around the world, within the United States, and here in Virginia (4,10,11). Virginia's incidence of MDROs has dramatically increased since 2018, primarily driven by incidence of *Candida auris* (**Figure 4**).

Candida auris is a pathogenic yeast that emerged in Japan in 2009, but quickly spread to 6 continents within a short period of time (12,13). *C. auris* is often resistant to three major classes of antifungals including azoles, amphotericin B, and echinocandins which are often the first line treatments for candida infections (13,14). The CDC considers *C. auris* an "ongoing health threat" with the burden of *C. auris* infections increasing each year (14,15).

State and local health departments help combat outbreaks of MDROs and healthcare acquired infections (HAIs) due to their strong partnerships within communities and role as a bridge between healthcare facilities, regulatory agencies, and residents (16).

When CPOs and *C. auris* became reportable in Virginia, AHD epidemiologists quickly pivoted to their new role in helping to prevent the spread of these HAIs. AHD has been working hard to increase surveillance for MDROs in our community. Alexandria's higher rates of CPOs and *C. auris* is likely attributable to increased detections. In 2023, AHD's epidemiology team was awarded a grant from the National Association of City and County Health Officials to build additional capacity and expertise in infection prevention and control.

The increasing prevalence of MDRO colonization is concerning, but transmission can be reduced to prevent subsequent infections. The risk of transmission to others depends on their immune system, the presence of wounds, invasive devices, and good infection prevention practices. For more information on HAIs and current data trends please visit the VDH HAI and Antimicrobial Resistance webpage.

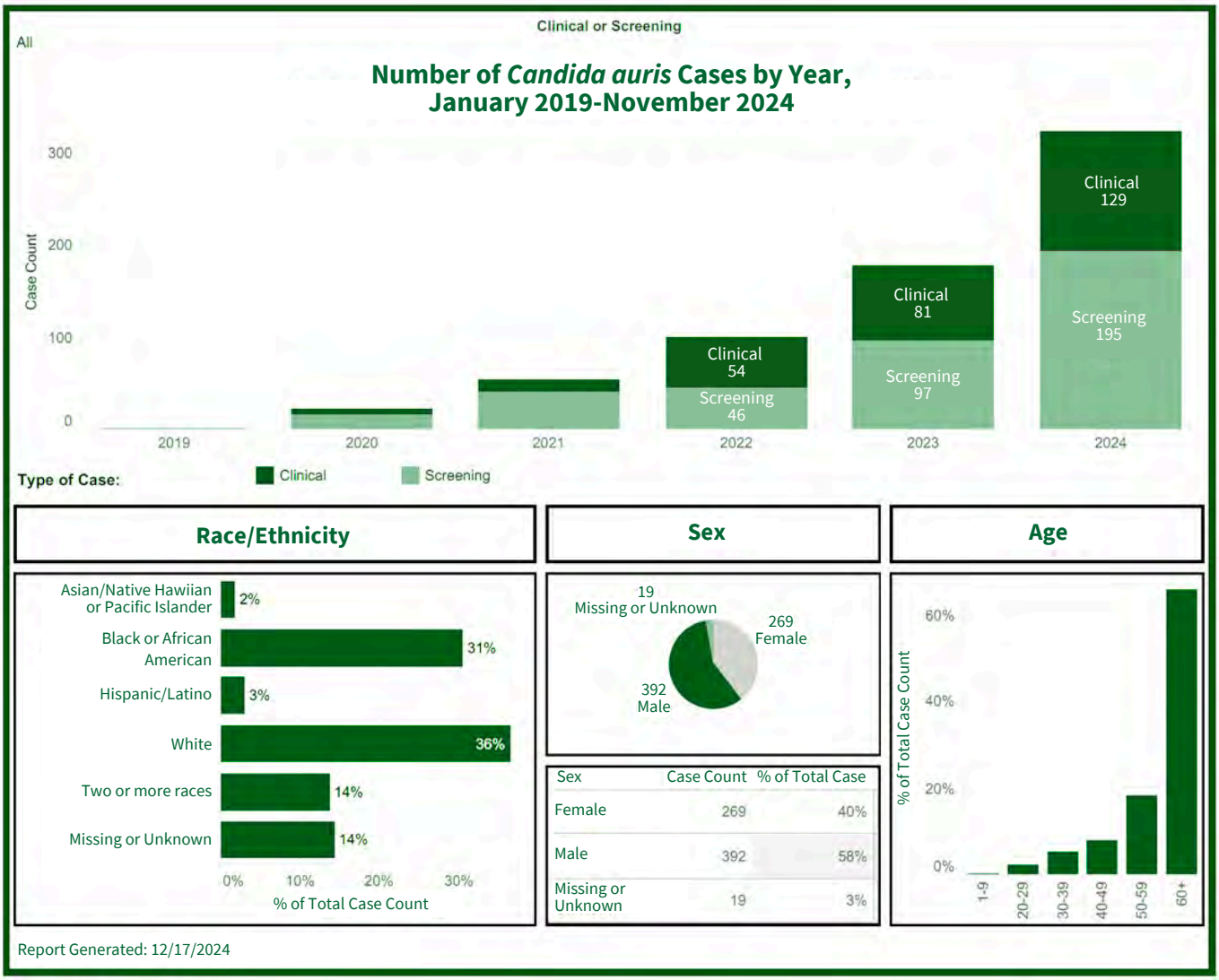


Figure 4. Candida auris cases in Virginia, 2019-2024. Retrieved from: Candida auris in the State of Virginia – HAIAR (Accessed December 20, 2024).

Provider Takeaways:

- The rise in MDRO colonizations foreshadows a rise in invasive, difficult-to-treat infections, and preventing transmission at this juncture is paramount.
- Focus on the basics of infection prevention to prevent the spread of *Candida auris* and other MDROs:
  - Practice hand hygiene with soap and water or alcohol-based hand sanitizer when interacting with patients with MDROs or surfaces that the patient came in contact with. Use recommended contact precautions with providing direct care to patient with MDROs (gown and gloves).
  - Clean and disinfect any medical equipment or room where the patient has received care. *C. auris* and CPOs can live on both hard and soft surfaces for prolonged time.
  - Pay attention to high touch surfaces and medical devices that are shared between patients. When was the last time you cleaned and disinfected your stethoscope?
- Check all products currently in use to determine if they are effective against *C. auris* by consulting EPA List P. Many common disinfectants do not kill *C. auris*, including numerous products with fungal and Candida albicans claims.

TUBERCULOSIS AND LATENT TB

Table 3. Trends in Tuberculosis and LTBI from 2018-2023, 2023 case totals, and incidence rates

	Trend 2018-2023	Average 2018-2022	2023 Alexandria cases	2023 Alexandria Incidence Rate†	2023 Virginia Incidence Rate†
Latent TB infection*		33*	127	81.7	N/A
Tuberculosis		8.8	7	4.5	2.4

*Latent TB infection became reportable in 2018; 4-year average displayed
†Incidence Rate = New cases of disease in calendar year per 100,000 residents
Case counts in red are greater than the 5-year average

Active and communicable tuberculosis (TB) disease is preventable through identification and treatment of latent TB infection (LTBI). AHD encourages providers to screen all patients for risk of TB exposure. TB testing with a Tuberculin Skin Test (TST) or interferon gamma release assay (IGRA) is warranted for patients who:

- Are born in, spent significant time in, or frequently travel to a High TB Burden Country
- Are in an immunocompromised state (i.e., Type 2 Diabetes, immunosuppressive therapy)
- Report history of close contact to someone with active TB

A positive TB test suggests TB infection, not active disease. A chest X-ray is required to rule-out active pulmonary TB. Normal chest X-ray imaging confirms LTBI.

LTBI treatment is now the recommendation over monitoring. Without treatment at the latent stage, 1 in 10 people with LTBI can develop active TB and spread the disease. This is a disease that can have devastating impacts on an individual's health and wellbeing and leave our communities at risk.

There are newer, shorter treatment options recommended by the CDC. Regimens can be as short as three months in duration and have lower rates of hepatotoxicity than the traditional nine months of Isoniazid (INH) therapy.

As of November 14, 2018, LTBI is a reportable disease in Virginia. Clinicians should report LTBI by visiting the VDH TB Program Website's "Report LTBI Portal." Provider and patient resources on LTBI testing and treatment are available on the VDH TB Program Website in multiple languages.

Provider Takeaways:

- Screen all patients for risk of TB exposure.
- Test high-risk patients, using a TST or IGRA blood test, who:
  - Are born in, spent significant time in, or frequently travel to a High TB Burden Country
  - Are in an immunocompromised state (i.e., Type 2 Diabetes, immunosuppressive therapy)
  - Report history of close contact to someone with active TB
- Treat LTBI **as soon as diagnosis is confirmed**. Shorter treatment options are now available.
- Call AHD at 703.746.4960 to report presumptive or confirmed active TB cases.

SEXUALLY TRANSMITTED INFECTIONS (STIS)

Overview

In response to the increase in STIs and HIV, AHD spearheaded the formation of the Northern Virginia STI/HIV Task Force, composed of public, nonprofit, and community representatives to evaluate the current trends in HIV/STIs, assess available resources and services, identify gaps in services, and develop strategies to reduce the spread of infections. The Provider Education Subcommittee have representatives from each Health District in NoVA and are partnering to develop provider detailing education tools for key topics that can help reduce the number of STI and HIV Infections.

Table 4. Trends in STIs from 2018-2023, 2023 case totals, and incidence rates

	Trend 2018-2023	Average 2018-2022	2023 Alexandria cases	2023 Alexandria Incidence Rate†	2023 Virginia Incidence Rate†
Chlamydia		760.0	826	531.1	473.5
Gonorrhea		226.8	359	230.8	159.4
Human Immunodeficiency Virus (HIV)		24.8	21	13.5	10.0
Total Early Syphilis		59.6	50	32.1	20.7

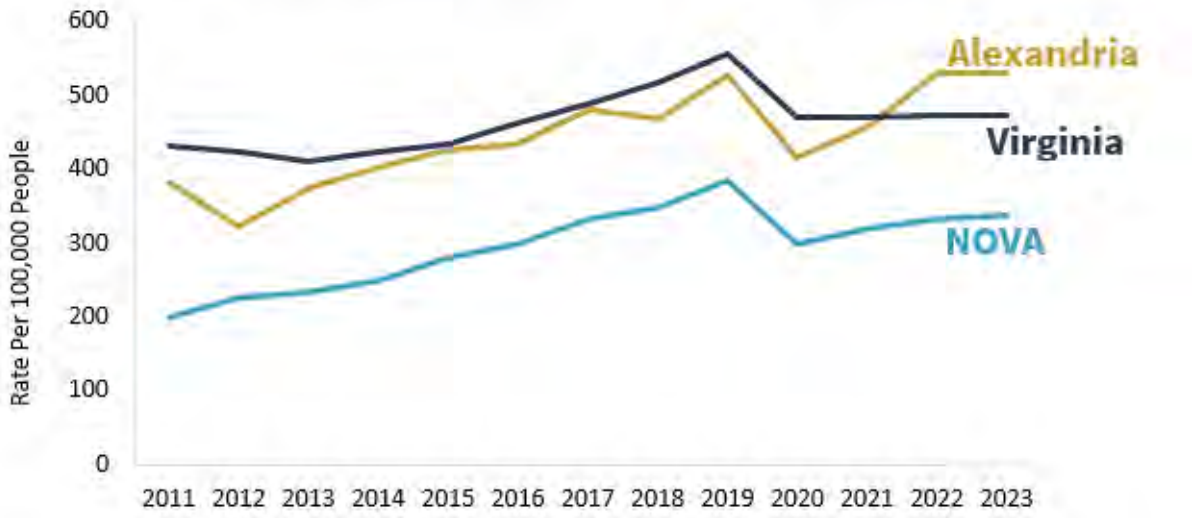
†Incidence Rate = New cases of disease in calendar year per 100,000 residents.
Case counts in red are greater than the 5-year average.
STI case data were obtained from the VDH Division of Disease Prevention annual reports.

Image 3: The "Wrap Up, Alexandria" campaign was launched by the Alexandria Campaign for Adolescent Pregnancy in 2023. Dispensers in every bathroom in Alexandria's Del Pepper Community Resource Center provide visitors with STI-preventing condoms at no cost.

Chlamydia

Chlamydia rates in Alexandria have surpassed pre-pandemic levels and are currently higher than Northern Virginia and Virginia rates. Providers in Virginia can write prescriptions or provide treatment for partners of patients with chlamydia and other STIs. Learn more about Expedited Partner Therapy (EPT) at this VDH EPT Fact Sheet. Rescreening for chlamydia is recommended 3 months after treatment.

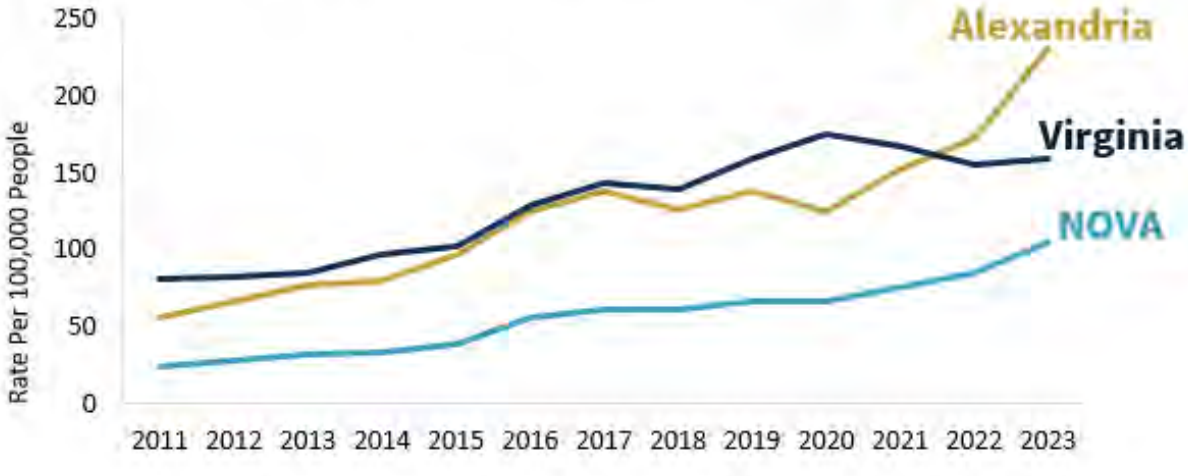
Figure 5. Rate of New Chlamydia Diagnoses Per 100,000 People



Gonorrhea

The rate of new gonorrhea diagnoses has similarly surpassed Virginia and Northern Virginia rates. Ceftriaxone and injectable treatment for contacts to gonorrhea can be administered by pharmacists or private providers without the full expense of a sick visit and testing. In addition, AHD can receive referrals for STI contacts and provide their visit, testing, and treatment at no cost. Rescreening for gonorrhea is recommended 3 months after treatment, except for a pharyngeal gonorrhea infection, where a 1-month retest is recommended.

Figure 6. Rate of New Gonnorhea Diagnoses Per 100,000 People



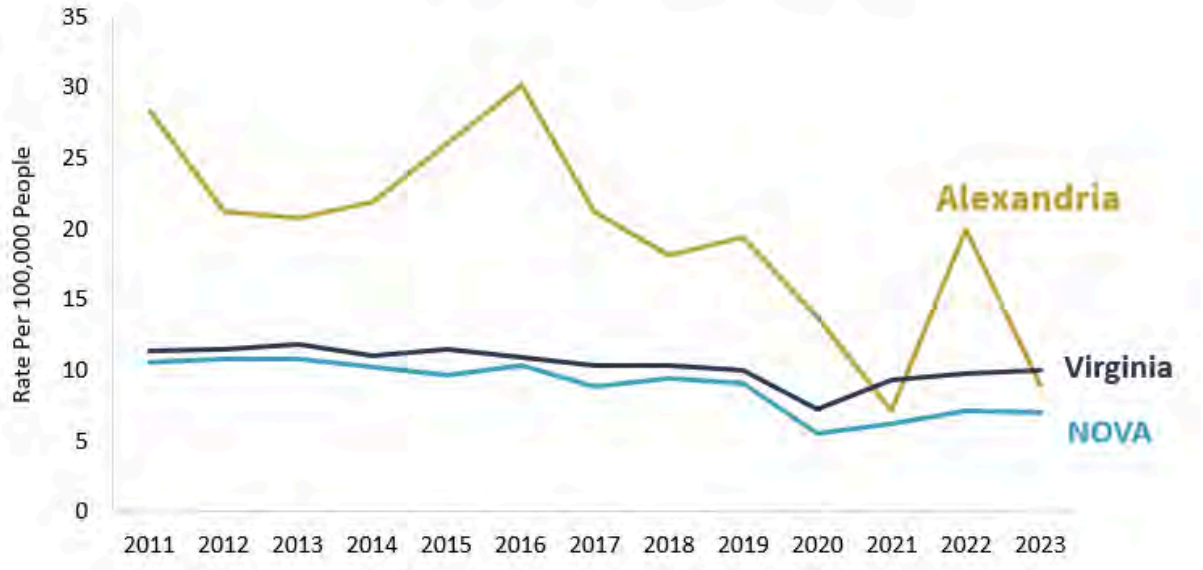
HIV

Alexandria's rate of HIV infections is currently higher than Northern Virginia's rate but lower than the statewide rate. Providers can be proactive in reducing HIV infections:

- HIV nPEP – HIV non-occupational Post-Exposure Prophylaxis – can prevent an infection by initiating antiviral medications as soon as possible within 72 hours post-exposure.
- HIV PrEP – HIV Pre-Exposure Prophylaxis: VDH – Learn More about nPEP and PREP Guidance

In 2023, the Task Force's Provider Outreach Subcommittee surveyed private providers to determine their educational and resource needs. The Data to Action Subcommittee analyzed HIV testing data to define the area with the greatest number of new cases each year. The Stakeholder Collaboration Committee grew task force membership from a small number of citizen participants and public/nonprofit organization membership to 46 members.

Figure 7. Rate of New HIV Diagnoses Per 100,000 People



Syphilis

Alexandria's rate of new early syphilis infections has historically been higher than both Virginia and Northern Virginia rates, though rates are beginning to decline.

The Northern Virginia STI/HIV Task Force works to reduce the incidence of syphilis and congenital syphilis. Task Force members participate on monthly meetings where each district identifies strategic activities and collaborations in their region to reduce congenital and adult syphilis cases in the Commonwealth.

Figure 8. Rate of New Early Syphilis Diagnoses Per 100,000 People

Provider Takeaways:

Chlamydia

- Write prescriptions or provide treatment for partners of patients with chlamydia and other STIs. Learn more about Expedited Partner Therapy (EPT) at this VDH EPT Fact Sheet.

Gonorrhea

- Ceftriaxone and injectable treatment for contacts to gonorrhea can be administered by pharmacists or private providers without the full expense of a sick visit and testing.

HIV

- Learn More about nPEP and PrEP Guidance and prescribe nPEP or PrEP to prevent infections.

Syphilis

- Offer syphilis testing for all pregnant people coming in for urgent or emergency care to identify infections that could lead to congenital syphilis. Pregnant people can walk in to AHD for a free syphilis test.
- VDH currently has adequate supplies of Bicillin and the visit cost and treatment are free.
- Acquire patients' past syphilis testing and treatment histories from AHD Public Health Nurses at 703.746.6956 or Disease Intervention Specialist (DIS) 703.746.4849 to facilitate staging and treatment recommendations.
- Contact DIS at 703.746.4849 to help notify sexual contacts and facilitate testing and treatment.
- Review VDH resources for current Syphilis Testing and Treatment Guidelines.

Comprehensive Sexual Health

- Take comprehensive sexual histories to identify sites to test (vaginal, urethral, rectal, and/or pharyngeal). Stay up to date on sexual health recommendations and STI services:
  - CDC Guide to Taking a Sexual History – increase comfort with taking a sexual history.
  - Inova Juniper Program Education Services – customized training programs and clinical consultation.
  - Download the CDC STI Treatment Guide mobile app.
- Consult with an expert at the STD Clinical Consultation Portal.
- Develop systems within the Electronic Health Record to offer **opt-out** full HIV and STI testing when a person is being evaluated for a single STI. This can identify asymptomatic infections.
- Report cases through the VDH Confidential Morbidity Reporting Portal, call 703.746.4951, or fax 703.746.4953.
- Refer persons (cases or contacts) needing free STI treatment to AHD at 703.746.4888 for an appointment.
- Encourage those with an STI to refer their partners for treatment as a contact if EPT is not provided.
- Persons can walk-in to AHD for pregnancy tests at a flat fee of $7.50.
- Consider ordering DoxyPEP for gay and transgender people who have unprotected sex to prevent bacterial STIs.

RABIES

Table 4. Trends in Alexandria rabies exposures from 2021-2023 and 2023 totals.

	Trend 2021-2023	Average 2021-2022	2023 Alexandria
Number of Exposures Reported		364	489
Animals Tested		20.5	31
Animals Positive		1.5	1
Percent of Animals Positive for Rabies		8%	3%

Counts in red are greater than the 5-year average.
Data were obtained from the Virginia Environmental Health Database.

Rabies is endemic in Alexandria. Anyone who has potentially been exposed to rabies is at risk of developing the fatal disease. From 2021 to 2024, the number of residents reporting potential exposure to rabies fluctuated, peaking at 489 in 2023. Noting that COVID-19 restrictions were being gradually lifted in 2021, the percentage of animals tested that year was roughly 3% lower than in the other years included in the data. The number of animals testing positive varied over the four-year period, with 1 case in 2021, 2 in 2022, 1 in 2023, and 3 in 2024.

Frequently Asked Questions about Rabies

Which animals can get rabies?
Only mammals (including humans) get rabies. Birds, fish, reptiles, and amphibians cannot contract the disease. Wild animals frequently diagnosed with rabies include raccoons, skunks, and foxes. In specimens submitted to the Virginia Division of Consolidated Laboratories, rabies was detected most often in raccoons, skunks, and foxes.

How is rabies transmitted?
Rabies virus is found in the saliva and brain/nervous system tissue of a rabid animal. Rabies can be transmitted through a bite, or by getting saliva, or brain tissue in one's eyes, nose, mouth, or in an open wound.

What is considered an "exposure" to rabies?
Exposure is defined as any situation where saliva or central nervous system tissue of a suspect rabid animal enters an open, fresh wound or comes in contact with a mucous membrane by entering the eye, nose or mouth. A bite exposure occurs any time the skin is penetrated by the teeth of an animal. A non-bite exposure includes the contamination of open wounds, abrasions, mucous membranes, or scratches with saliva or brain tissue from an infected animal. Other contact - with blood, urine, feces, or skin/fur of a rabid animal - does not constitute an exposure.

For bat exposures, anyone who has had direct contact with a bat and cannot rule out a bite or has been in a room with a bat and is unable to tell whether an exposure took place (e.g., infant, cognitively impaired or sleeping adult) should be considered potentially exposed to rabies.

Where can I refer a patient who needs rabies Post-Exposure Prophylaxis (PEP)?
Rabies PEP is available at all local hospital emergency departments.

What if I have questions about whether a person should receive rabies PEP or if they have had an exposure?
Please call AHD Environmental Health Division at 703.746.4910. After hours, please call 703.746.4951 and follow instructions to reach the epidemiology duty officer for consultation if you have any questions about potential exposure to rabies or questions about rabies PEP.

Who is required to report animal bites in Alexandria?
City of Alexandria Code Sec. 5-7-40 states “it shall be the duty of every physician and medical practitioner in the City and of every hospital in the City to report to an animal control officer or the health department the name and address of any person treated for bites or wounds inflicted by animals, together with all available information necessary for rabies control.”

Provider Takeaways:
- Report bites. All providers are required to report bites by Alexandria Code.
- Call AHD Environmental Health Division at 703.746.4910 (after hours - 703.746.4951) if you have questions about exposure to rabies or rabies PEP.

COVID-19

Overview

In January 2020, Alexandria Health Department (AHD) began to assemble an Incident Command System to respond to a rising number of respiratory illnesses related to a novel coronavirus, later identified as SARS-CoV-2, the virus the causes COVID-19.

Residents' experience with the virus varied. Some had asymptomatic infections, and others presented with severe respiratory symptoms, sometimes requiring intubation. SARS-CoV-2 impacted regional hospital systems and medical centers, with diagnosed COVID-19 visits taking up 8.3% of emergency department (ED) visits in Alexandria in May 2020, and a peak of 16.57% ED visits in January 2022 (17).

Over three years, AHD monitored a changing transmissibility landscape as different strains of SARS-CoV-2 vied for dominance across the U.S. AHD served the community with tailored responses to different sectors. Services included testing opportunities; ppublic health advice including infection prevention, isolation, and quarantine guidance; points of distribution for COVID-19 vaccines; outbreak management; and referrals to external resources such as food, hotel space, and utilities/rent support. Vaccine candidates were developed and fast tracked for emergency use authorization and deployed December 2020.

AHD administered a total of 88,803 vaccines and boosters for COVID-19 from 2020-2023.

The health department continues to this day an abbreviated version of our COVID-19 response as part of comprehensive respiratory illness disease control.

Image 5: Alexandria resident received a vaccine at Alexandria's Charles Houston Recreation Center.

Active Response

AHD conducted active case investigation and contact tracing for Alexandrians from 2020 to 2022. AHD case investigators helped determine families' needs and connected families with resources such as food, household items, temporary lodging for isolation or quarantine, or rent/utilities assistance. Medical Reserve Corps (MRC) volunteers played a major role in distributing resources to Alexandrians.

AHD hosted townhalls and informational trainings for daycares/schools, city employees, and city residents. They also provided access to testing, conducted onsite or virtual visits to provide infection control guidance, and offered hands-on outreach to long term care facilities and other congregate settings such as group homes and the detention center. AHD also created setting-specific guidance documents to help support schools, daycares, recreation programs, congregate settings, and skilled nursing and assisted living facilities.

ALX Promise and ALX Promise Gold were programs developed to support restaurants, hotels, and businesses ranging from hair salons to automotive shops in following best practices for the prevention of COVID-19 including vaccination, cleaning and disinfection, training staff, and reporting cases. AHD ensured that all community partners had the latest information as recommendations changed over the course of the pandemic.

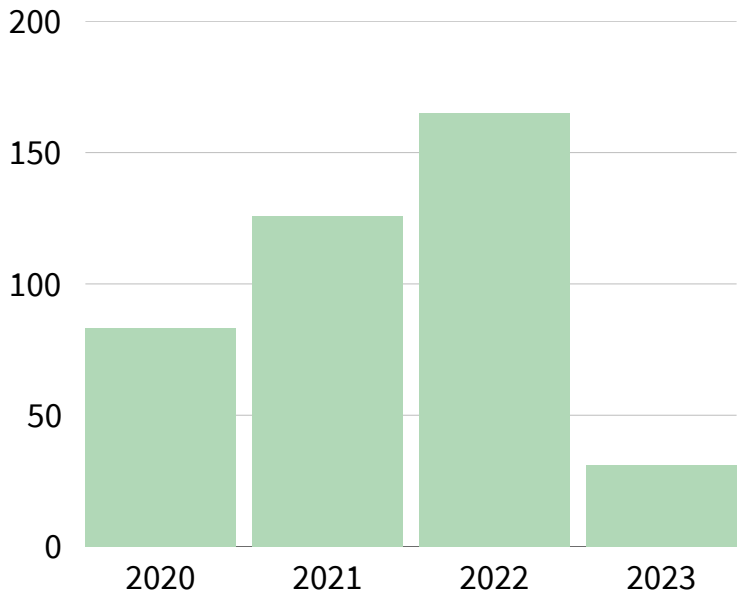
Outbreaks and clusters of multiple COVID-19 cases in one community setting required a specialized response, which included connecting with community partners to discuss reported symptoms and monitoring timelines. AHD staff taught community leaders how approach exposure events, how to identify outbreaks, and what information to report to AHD. AHD offered practical guidance, access to testing, personal protective equipment (PPE), and accessible signage.

Data That Tell Alexandria's Story

Testing: AHD facilitated testing for SARS-CoV-2 persons that met specific criteria exposure and symptom criteria through Virginia's state public health laboratory from February-May 2020 before testing was commercially available. In May 2020, AHD facilitated large testing events to the public and long-term care facilities with the help of the National Guard, the Virginia Department of Health, and our Medical Reserve Corps. In 2021, the City of Alexandria partnered with Curative, a private company, to facilitate testing in the city. Curative set up six kiosk/mobile van testing sites in multiple locations within the city to offer PCR tests to the public.

In partnership with the Virginia Department of Health (VDH), AHD helped to distribute rapid COVID-19 test kits to different settings including our detention centers, group homes, Department of Community and Human Services congregate facilities, health care facilities, long-term care facilities, City of Alexandria agencies, churches, and to the general public through the ALIVE! program and libraries. In 2022 and 2023, daycares and schools sporadically applied variations of a "Test to Stay" program to keep more students in class (18).

Figure 9. COVID Outbreaks Triggering AHD Response



Outbreaks: The AHD COVID-19 mitigation team along with the support of the epidemiology team and nursing team responded to a total of 83 COVID-19 outbreaks in 2020 across apartment complexes, assisted living facilities, residential behavioral health locations, businesses, daycares, hotels, medical offices, multi-care groups, nursing homes, parks, private residences, public service offices, restaurants, and schools.

They responded to 126 outbreaks in 2021, 165 outbreaks in 2022, and 31 outbreaks in 2023. AHD documented a grand total of 405 outbreaks from January 1, 2020 – December 31, 2023.

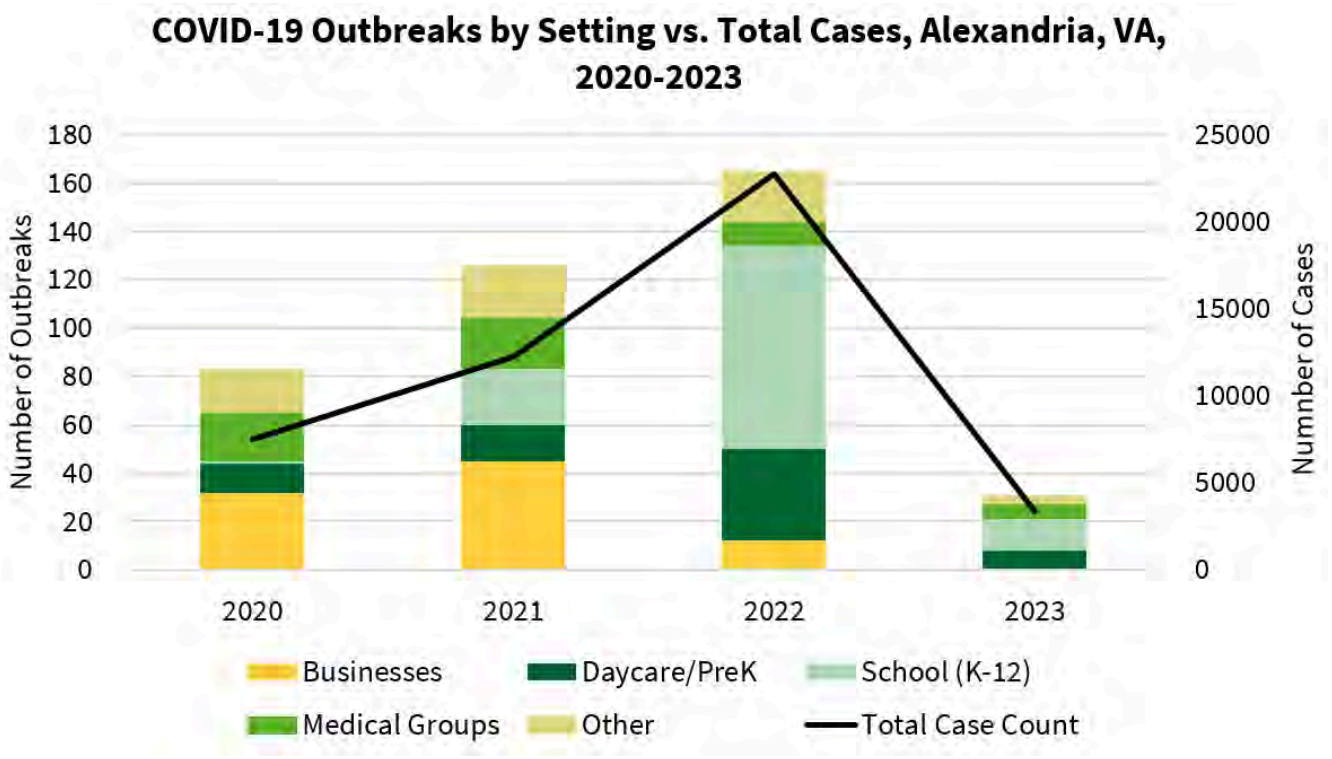


Figure 10. Alexandria SARS-CoV-2 outbreak counts by facility type and total case counts from 2020-2023 as documented in the Virginia Outbreak Surveillance System

Community Vaccination: Initially, AHD was the sole provider of COVID-19 vaccines in Alexandria. AHD hosted 331 points of distribution (PODs) for the COVID-19 vaccine/boosters from 2020-2023, where a grand total of 88,803 vaccines were administered (46,102 first doses, 34,592 secondary doses, 7,008 initial boosters, 890 secondary boosters, 211 tertiary/bivalent boosters). PODs required coordination of logistics teams as well as trained medical staff to administer each dose. AHD staff canvassed neighborhoods to promote the COVID-19 vaccine and increase the city's vaccination coverage. Once vaccines became more widely available, 613,925 vaccines were administered concurrently by private and commercial facilities and offices (19). Today, vaccine coverage for COVID-19 across Virginia can be reviewed on a public immunization dashboard (20).

Case data: Alexandria recorded 45,828 cases of COVID-19, 830 hospitalizations associated with COVID-19, and 268 deaths attributed to COVID-19 from January 1, 2020 through December 31, 2023. The total number of cases is likely an undercount of the true burden of disease in the city due to cases that were unreported, since individuals may have used at-home test kits or did not get tested (see **Figure 3** and **Figure 4**). AHD reported 121 COVID-19-associated deaths in 2020, 67 deaths in 2021, 63 deaths in 2022, and 17 deaths in 2023. From January 2020 through December 2023, Virginia recorded a total of over 24,000 deaths attributed to complications from COVID-19.

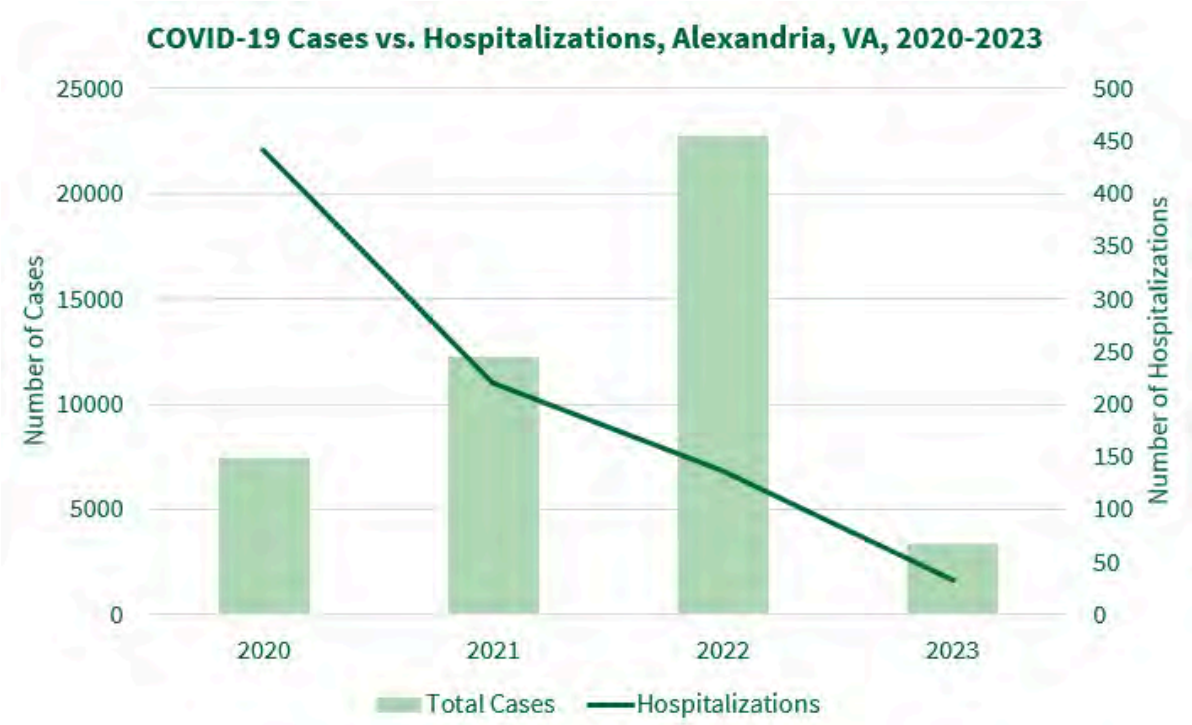


Figure 12. Alexandria SARS-CoV-2 case counts and COVID-19-associated hospitalizations from 2020-2023.

Current Surveillance

There are now multiple surveillance systems that help monitor trends and severity of COVID-19 through wastewater, hospitalizations, deaths, and Emergency Department/Urgent Care visits. AHD closely monitors VDH and CDC wastewater genomic surveillance to track the presence and quantity of SARS-CoV-2 in wastewater samples, how COVID-19 is spreading, and how the virus is constantly changing (21,22). VDH maintains a dashboard to monitor trends in emergency visits for respiratory illnesses including COVID-19 in Virginia. Emergency Department/Urgent Care visit data are one of the fastest ways to spot changing trends in COVID-19 transmission. Finally, AHD monitors home test kit uptake from VDH program sites as an indicator of community illness burden.

- For Virginia trends, visit VDH Emergency Visits for Respiratory Illness
- To see national trends, visit CDC COVID Data Tracker and CDC Respiratory Virus Activity Levels

Clinician Work Restrictions

Since September 2022, health care workers (HCWs) with mild to moderate COVID-19 infections have been required to stay at home until symptoms have improved, and they are fever-free for 24 hours. They can return to work after 7 days have passed since illness onset date if a negative viral test is obtained within 48 hours prior to returning to work (or return to work after 10 days if testing is not performed or if a positive test is obtained at day 5-7). Asymptomatic HCWs exposed to SARS-CoV-2 do not require work restriction

- The CDC offers guidance on strategies to mitigate health care personnel staffing shortages.

Looking Forward

COVID-19 has become endemic in United States, and AHD will continue to track the virus in our community, promote vaccinations, and work with more vulnerable populations to prevent severe illness through education and promotion at outreach events. AHD partners with schools and daycares in the area to send out newsletters to families. AHD conducts outreach calls to ask about vaccination rates to help vulnerable populations, especially those in Long Term Care Facilities and other congregate settings. AHD offers vaccinations for people without health insurance whenever necessary and continues to provide free test kits through the VDH distribution program at community sites. AHD and VDH will continue to work together to monitor trends, provide guidance, and adapt to evolving scenarios.

Conclusion

From 2020 through 2023, AHD responded to a novel coronavirus, SARS-CoV-2, which greatly impacted local Emergency Department/Urgent Care capacity. AHD provided guidance, testing, and access to additional resources to thousands of Alexandrians affected by SARS-CoV-2 over the years. We administered tens of thousands of vaccines to offer the community added protection against severe health outcomes.

With the steady drop in cases and outbreaks reported in 2023, AHD's public health emergency response became folded into everyday operations. Most community partners were able to resume their regular activities. Although AHD's response is reduced, AHD remains alert and continues to support our community by tracking surveillance trends in wastewater and Emergency Department/Urgent Care visits and promoting healthy respiratory habits.

Image 6: Vaccine POD way-finding sign in English, Spanish, Amharic, and Arabic used for health department clinics.

VIRGINIA REPORTABLE DISEASE LIST

Reporting of the following diseases is required by state law (Sections 32.1-36 and 32.1-37 of the Code of Virginia and 12 VAC 5-90-80 of the Board of Health Regulations for Disease Reporting and Control). Report all conditions when suspected or confirmed to your local health department (LHD). Reports may be submitted by Confidential Morbidity Report Portal (Epi-1 form), computer-generated printout, CDC or VDH surveillance form, or upon agreement with VDH, by means of secure electronic submission.

REPORT IMMEDIATELY

- Anthrax *(Bacillus anthracis)*
- Botulism *(Clostridium botulinum)*
- Brucellosis *(Brucella* spp.)
- Cholera *(Vibrio cholerae* O1/O139)
- Coronavirus infection, severe (e.g., SARS-CoV, MERS-CoV)
- Diphtheria *(Corynebacterium diphtheriae)*
- Disease caused by an agent that may have been used as a weapon
- *Haemophilus influenzae* infection, invasive
- Hepatitis A
- Influenza-associated deaths if younger than 18 years of age
- Influenza A, novel virus
- Measles (Rubeola)
- Meningococcal disease *(Neisseria meningitidis)*
- Outbreaks, all (including foodborne, healthcare-associated, occupational, toxic substance-related, waterborne, and any other outbreak)
- Pertussis *(Bordetella pertussis)*
- Plague *(Yersinia pestis)*
- Poliovirus infection, including poliomyelitis
- Psittacosis *(Chlamydophila psittaci)*
- Q fever *(Coxiella burnetti)*
- Rabies, human and animal
- Rubella [a], including congenital rubella syndrome
- Smallpox (Variola virus)
- Syphilis *(Treponema pallidum)*, congenital, primary, secondary, and other
- Tuberculosis, active disease (*Mycobacterium tuberculosis* complex) [a]
- Tularemia *(Francisella tularensis)*
- Typhoid/Paratyphoid infection (*Salmonella* Typhi, *Salmonella* Paratyphi (all types))
- Unusual occurrence of disease of public health concern
- Vaccinia, disease or adverse event
- Vibriosis (*Vibrio* spp.) [d]
- Viral hemorrhagic fever
- Yellow fever

REPORT WITHIN 3 DAYS

- Amebiasis *(Entamoeba histolytica)*
- Arboviral infections (e.g., CHIK, dengue, EEE, LAC, SLE, WNV, Zika)
- Babesiosis *(Babesia* spp.)
- Campylobacteriosis *(Campylobacter* spp.)
- *Candida auris*, infection or colonization [b]
- Carbapenemase-producing organism, infection or colonization
- Chancroid *(Haemophilus ducreyi)*
- Chickenpox (Varicella virus)
- Chlamydia trachomatis infection
- Coronavirus disease 2019 (COVID-19 or SARS-CoV-2)
- Cryptosporidiosis *(Cryptosporidium* spp.)
- Cyclosporiasis *(Cyclospora* spp.)
- Ehrlichiosis/Anaplasmosis *(Ehrlichia spp., Anaplasma phagocytophilum)*
- Giardiasis *(Giardia* spp.)
- Gonorrhea *(Neisseria gonorrhoeae)*
- Granuloma inguinale *(Calymmatobacterium granulomatis)*
- Hantavirus pulmonary syndrome
- Hemolytic uremic syndrome (HUS)
- Hepatitis B (acute and chronic)
- Hepatitis C (acute and chronic)
- Hepatitis, other acute viral
- Human immunodeficiency virus (HIV) infection
- Influenza, confirmed [e]
- Lead, blood levels
- Legionellosis *(Legionella* spp.)
- Leprosy/Hansen's disease *(Mycobacterium leprae)*
- Leptospirosis *(Leptospira interrogans)*
- Listeriosis *(Listeria monocytogenes)*
- Lyme disease *(Borrelia* spp.)
- Lymphogranuloma venereum *(Chlamydia trachomatis)*
- Malaria *(Plasmodium* spp.)
- Mumps
- Neonatal abstinence syndrome (NAS)
- Ophthalmia neonatorum
- Rabies treatment, post-exposure
- Salmonellosis *(Salmonella* spp.)
- Shiga toxin-producing *Escherichia coli* infection [c]
- Shigellosis *(Shigella* spp.)
- Spotted fever rickettsiosis *(Rickettsia* spp.)
- Streptococcal disease, Group A, invasive or toxic shock
- *Streptococcus pneumoniae* infection, invasive and <5 years of age
- Syphilis *(Treponema pallidum)*, if not primary, secondary, or congenital
- Tetanus *(Clostridium tetani)*
- Toxic substance-related illness
- Trichinosis (Trichinellosis) *(Trichinella spiralis)*
- Tuberculosis infection
- Vancomycin-intermediate or vancomycin-resistant *Staphylococcus aureus* infection
- Yersiniosis *(Yersinia* spp.)

Reportable by directors of laboratories. Additional condition-specific requirements for directors of laboratories available here. These and all other conditions listed must be reported by physicians and directors of medical care facilities.

Laboratories must submit initial isolate or other initial specimen to the Division of Consolidated Laboratory Services (DCLS) within 7 days of identification. All specimens must be identified with patient and physician information, and the LHD must be notified within the timeframe specified below.

Include available antimicrobial susceptibility findings in report.

a Laboratories report AFB, *M. tuberculosis* complex or any other mycobacteria, and antimicrobial susceptibility for *M. tuberculosis* complex.

b Includes submission of *Candida haemulonii* specimens to DCLS.

c Laboratories that use EIA without a positive culture should forward positive stool specimens or enrichment broth to DCLS.

d Includes reporting of *Photobacterium damselae* and *Grimontia hollisae*.

e By culture, antigen detection by direct fluorescent antibody (DFA), or nucleic acid detection.

ALL REPORTS ARE CONFIDENTIAL AND SHOULD INCLUDE -

1. *the disease or condition diagnosed or suspected*
2. *patient's name, date of birth, age, sex, race/ethnicity, pregnancy status, address, and telephone number*
3. *physician's name, address, and telephone number*
4. *method of diagnosis, if available*

Effective January 2023

REPORT IMMEDIATELY: 571.259.8549 (24/7)
For Inquiries or Reporting: 703.746.4951 | TB: 703.746.4960 | Fax: 703.746.4953
Visit www.alexandriava.gov/DiseaseReporting

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AUTHORS

Alyssa Granillo, MPH
Christina Chommanard, MPH
Maggie Gorini, MPH
Tosin Ogunsola, MPH
Skyler Mackey, MPH
Lina Zimmerman, MPH
Luisa Cortes Angel, CIC
Tiffany Johnson-Wiggins, BS, CP-FS, CPO
Debby Dimon, RN, MPH
Emily Astorga, RN, MSN

CONTACT US

Epidemiology: 703.746.4951
Environmental Health: 704.746.4910
Tuberculosis: 703.746.4960
STI: 703.746.4992

Join our provider listserv for alerts and updates by emailing Alex_Epi@vdh.virginia.gov.