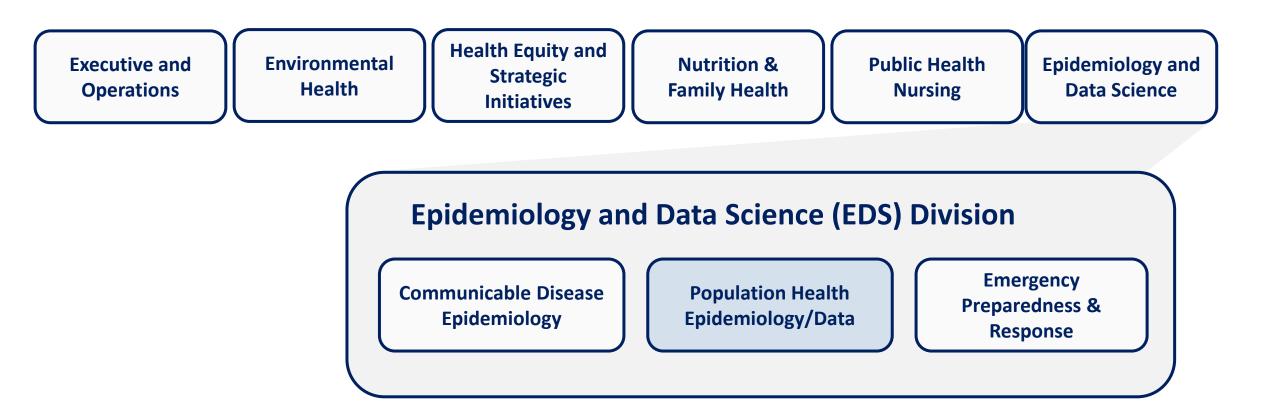
Epidemiology and Data Science Division **Population Health Epidemiology & Data** Program Overview



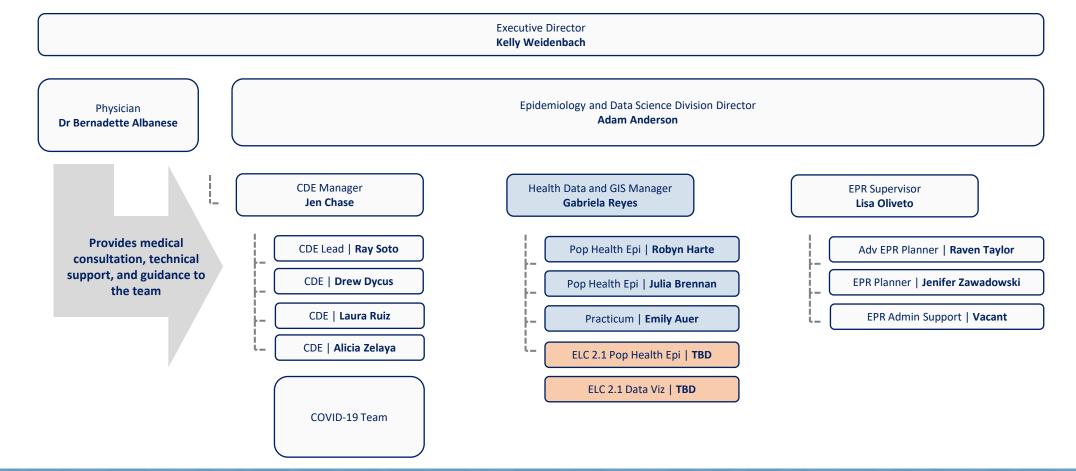
Adams County Board of Health August 17th 2023

Adams County Health Department Divisions:





Division Organization Chart:





Mission and Vision Statement:

Epidemiology and Data Science Division

Epidemiology and Data Science Vision Statement:

The Epidemiology and Data Science Division at ACHD strives to eliminate disease and health disparities in Adams County through **Innovation, Collaboration, Inclusion**

The team will work toward this vision by working through the following goals:





Services Provided

Population Health Epidemiology & Data Program



- Provide data and analytics to all Adams County Health Department programs and partners
 - Analysis/Statistics
 - > Health Data (Vital Records, Surveillance systems, hospitalization, disease reporting...)
 - > Demographic (Census and ACS...)
 - > Environmental (Oil & Gas, water wells, climate data, parcel/zoning...)
 - Septic records/permits
 - > Facility Inspection (restaurants, pools, childcare...)
 - > Community Data (liquor, tobacco, mj, firearm licensing, crime data...)
 - Data Collection Tools
 - Survey123
 - Smartsheet
 - Data Visualizations
 - GIS Mapping
 - Web-based Mapping and Visualizations
- Support Program Evaluation
- Support Community Health Assessment

Services Provided

Population Health Epidemiology & Data Program



EALTH DEPARTMEN

IT Related Tasks

- Administration of
 - ArcGIS Server (4 Named users)
 - > ArcGIS Online (21 named users)
 - > Tableau Server (15 named users)
 - > Tableau Public
 - FME Server (ETL and Data Automation) (5 named users)
 - Databases (MySQL, geodatabases..)
- Software
 - > ArcGIS
 - > SAS/R
 - > Tableau
 - > FME
 - Smartsheet
 - > Monday.com
 - > Vizio
 - > Adobe Creative Cloud

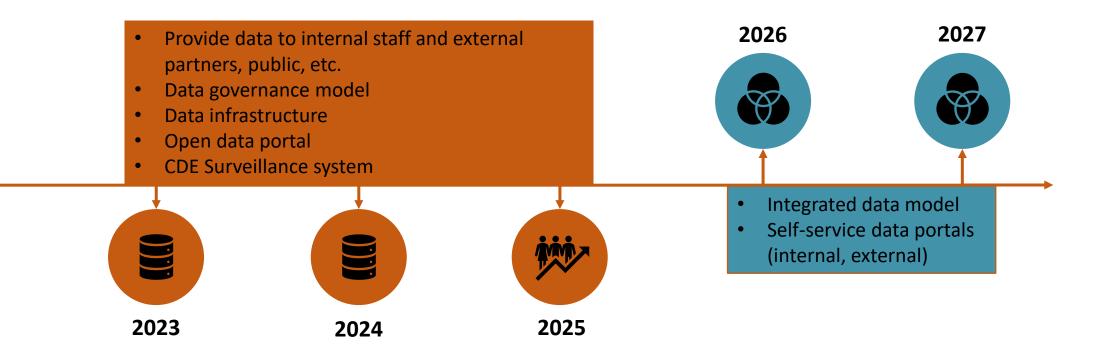
Goals

Population Health Epidemiology & Data Program



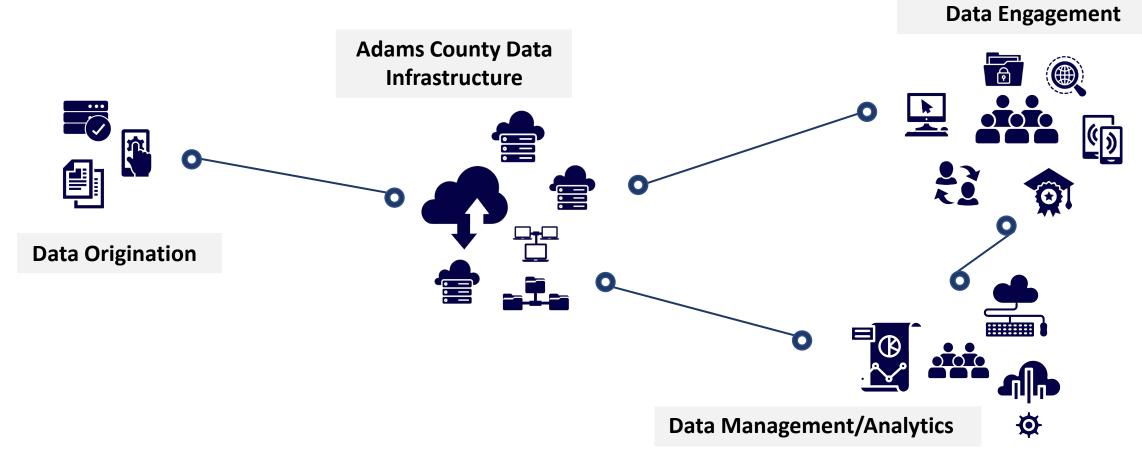
- Identify areas where we are seeing health outcomes or behaviors that we need to address
- Describe characteristics of the communities experiencing those outcomes or behaviors
 - Majority of health outcomes and behaviors are driven by characteristics within the community
 - Neighborhood & Built Environment
 - Economic Security
 - Social Inclusion
 - Healthcare Access
 - Food Access
 - Climate
 - Education
 - Understanding these characteristics is essential to address the needs of Adams County residents

Timeline:

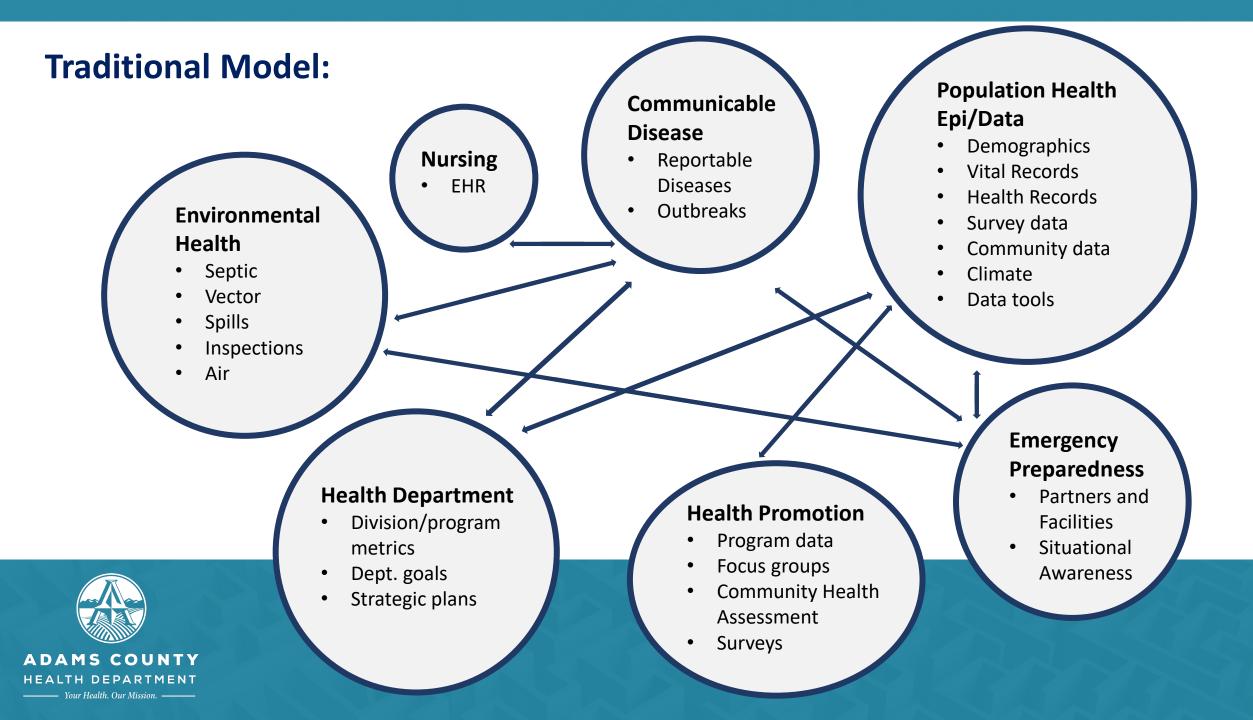


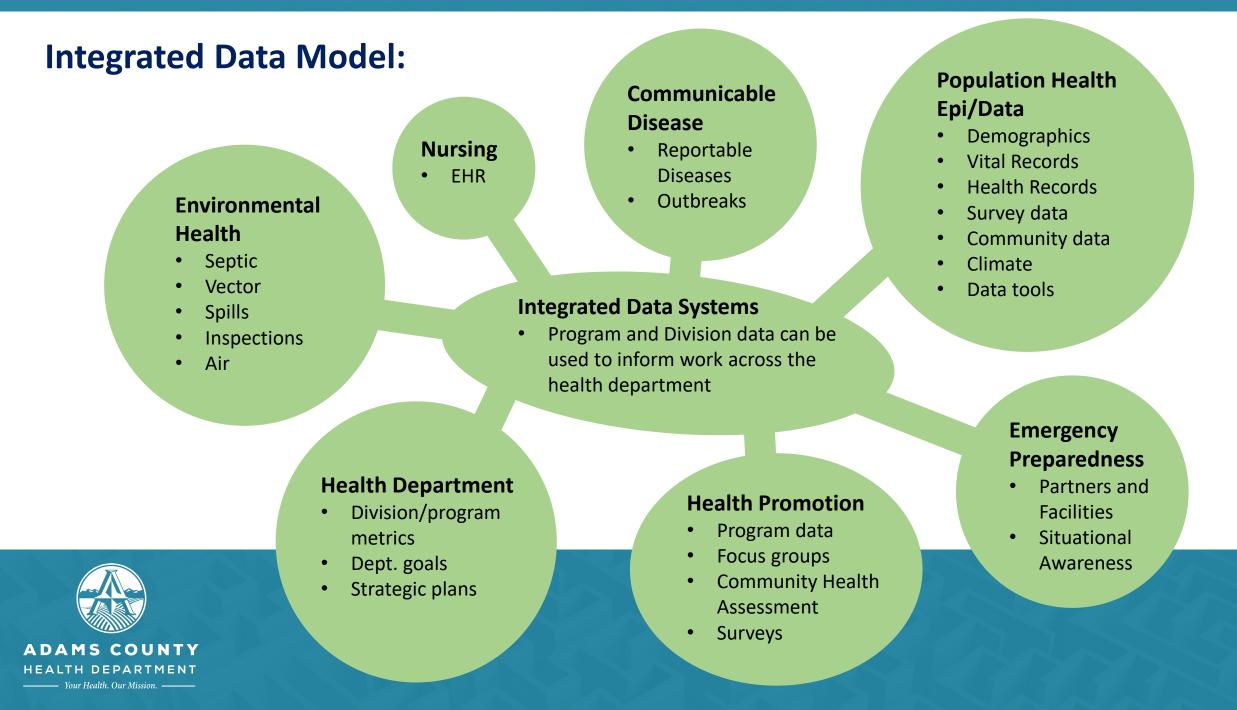


Data Governance Framework:









Data Site

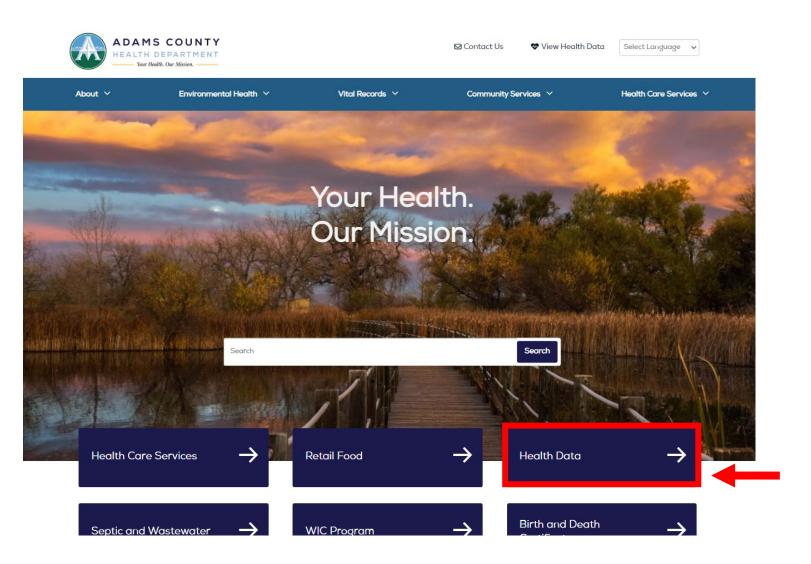
Population Health Epidemiology & Data Program



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Click 'Health Data' from the ACHD website

https://adamscountyhealthdepartment.org/



Data Site



Adams County Health Department

Home Data Request Form ACHD Website Smartsheet Links Contact

Health Data & GIS Resources

Adams County Health Department

Open Data

Access selected geospatial datasets published by Adams County Health Department below.

*Please note the open data site is still under development









Resources & Boundaries Demographics

Health Behaviors

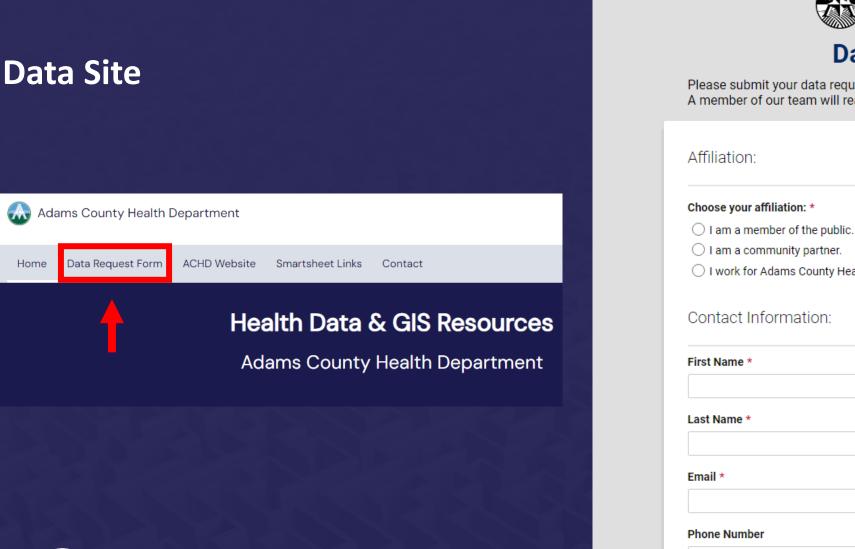
Health Outcomes



Need help?

Environment

Please use the data request form link at the top of this page or click <u>here</u> to submit a data request for Adams County Health Department. A member of our team will reach out to you via email or phone within 3 business days. Please allow for 1-2 week turnarounds depending on project scale.







Data Request

Please submit your data request for Adams County Health Department below. A member of our team will reach out to you via email or phone. Thank you!

- I work for Adams County Health Department.

Data Request Details:

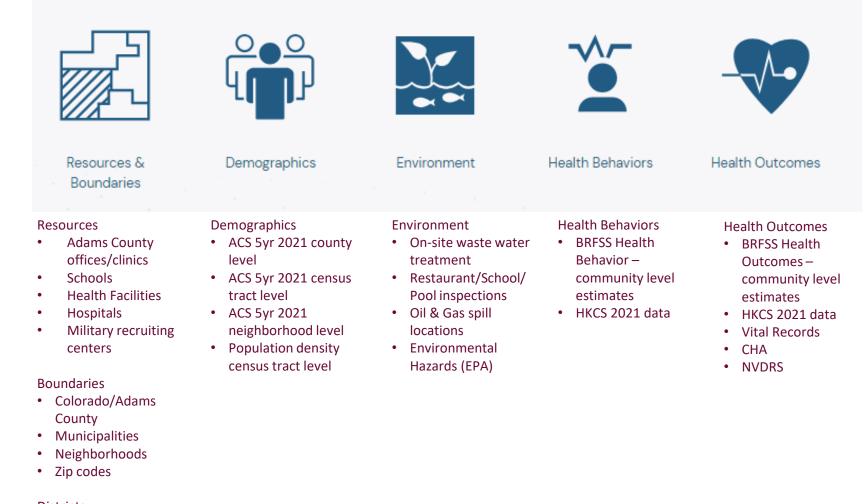
Title of Request: *

Data Site



ADAMS COUNTY HEALTH DEPARTMENT ______Your Health. Our Mission. _____

Section 1: Open Data Site



- Districts
- Water/Sanitation
- School
- Animal Control
- Fire protection

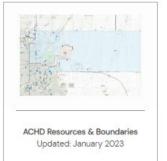
Data Site



Health Data Sites and Maps

The data sites and interactive maps below visualize topic-specific data and resources around important health topics for Adams County.

Interactive Maps





Sociodemographics in Adams County Updated: February 2023



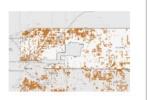
Historic Landfills Updated: June 2022



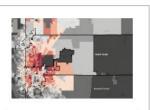
Updated: February 2023



CDPHE Environmental Hazards Updated: May 2023



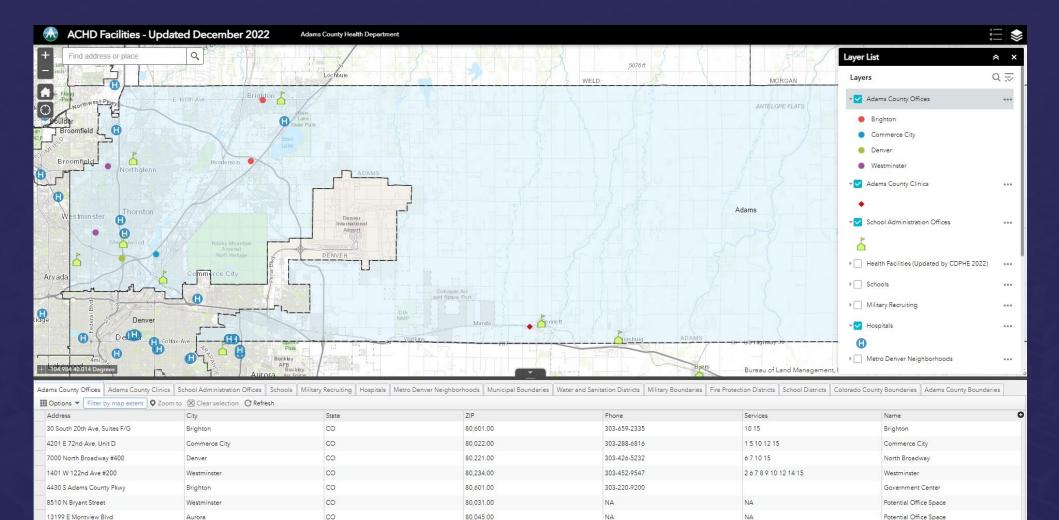
ACHD On-Site Waste Water Treatment Systems Search Updated: Dec 2022



EPA Environmental Justice Screening Updated: June 2023



Interactive Map Example



80,045.00

NA

NA

Potential Office Space



13199 E Montview Blvd

Aurora

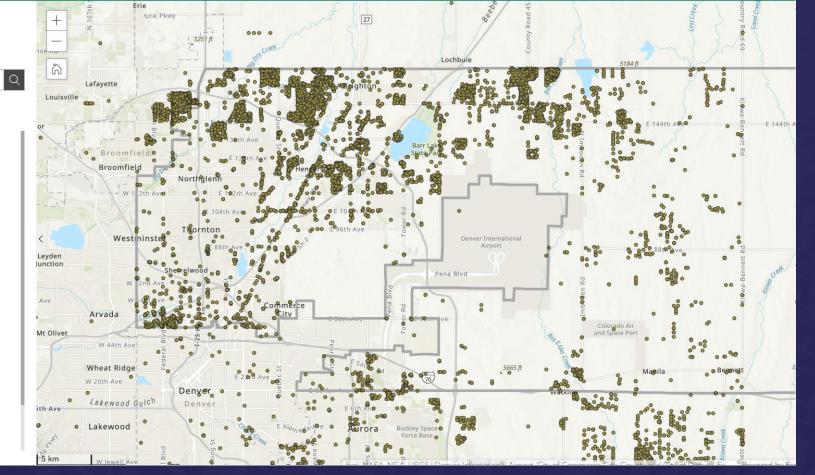
Interactive Map Example



Adams County Health Department

Search for On-Site Waste Water Treatment Systems (OWTS) in Adams County, Colorado

Search by owner, address, or record ID



Record ID: ON0020435

Description Septic - New Permit

Status Permit - Issued/Approved Completed

Site Address: 2008 E 141st Ave Brighton 80,602 CO

Application Date: September 10, 2002 - Active, Billable

Parcel #: 157323010002

County: Adams

> Owner: Howard Doughman 10481 Pennsylvania Street Northglenn CO 80233

Lot Type and Size: Single Family - 267

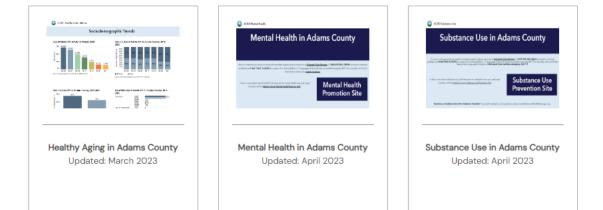


Data Site



HEALTH DEPARTMENT
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Section 3: Health Data Sites and Reports



Health Data Sites

Health Data Reports



Adams County Health Factsheet Updated: January 2023



Adams County Community Health Assessment Updated: May 2022



Adams County Municipal Factsheets Updated: August 2023

Health Site Example

ACHD Mental Health Mental Health in Adams County

If you or someone you know is in need of immediate support, please reach out to Colorado Crisis Services at 1-844-493-TALK (8255) to speak to a trained professional or text "TALK" to 38255 to access a live chat available in 17 languages. Help and hope are available everyday 24/7. You may also visit one of their Denver metro area walk-in locations.

To learn more about mental health, find resources for mental health care, and to get involved, visit the Adams County Mental Health Resource Hub.

Mental Health Promotion Site

Questions or Feedback about the Mental Health data? To provide feedback or ask questions, please email BehavioralHealth@adcogov.org.

Introduction

At Adams County Health Department, mental health and suicide prevention are a priority and we are working to achieve the overarching outcome of a mentally healthy, suicide-free community where individuals have a feeling of hope for their future, a sense of purpose and meaning in their lives, and feel they belong in their families, communities, and culture.

Mental Health Data and Resource Web Maps

Data provides some insights on the health outcomes that need to be addressed to improve mental health and prevent suicide. The web maps below help to identify data and resources surrounding issues involving mental health.



Mental Health & Access to Care in Adams County

Sources: Colorado Health Access Survey and Healthy Kids Colorado Survey

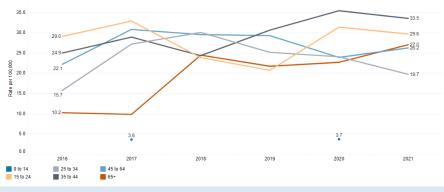
As a result of COVID-19, 37% of Adams County residents reported a decline in mental health.

Suicide Mortality Rates by Age Group, 2016-2021

Source: Colorado Department of Public Health and Environment Vital Statistics Program

Note: Data from CDPHE Vital Statistics Program with 0-3 events are not displayed and marked with an asterisk (*) for confidentiality.

Suicide Mortality Rates (per 100k population) by Age Group in Adams County, Colorado, 2016 - 2021



Circumstances, Toxicology, and Injury Locations of Suicides

The Colorado Suicide Data Dashboard is an interactive data tool using data from the Colorado Violent Death Reporting System (CVDRS) to examine suicide deaths in Colorado residents. This tool is designed to help inform suicide prevention efforts at any level and allows you to look at specific counties and regions of interest.

> Click here to view the full Colorado Suicide Data Dashboard. Click here to view the Colorado Suicide Data Dashboard Guide (documentation).

> > ٠

517

495

22

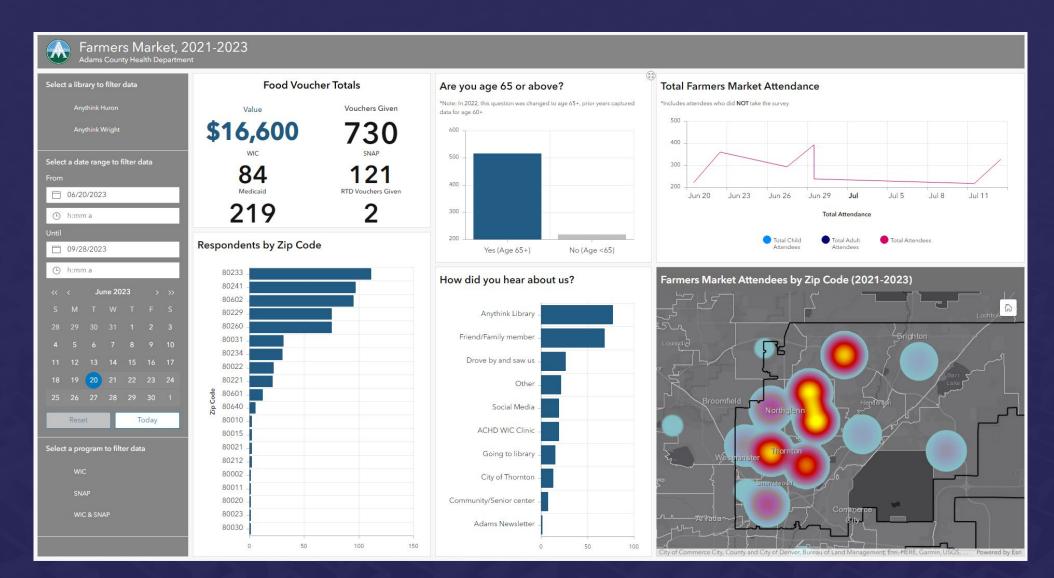
43.0%

| | MENT | Colorado Violen | t Death Reporting Sy | | , | cology, and | Injury Location | |
|---|-------|------------------|----------------------|--------------------------------------|-------|-------------|-----------------|--|
| | | Filter dashboard | by State or County | Adams | | | | |
| Total Suicides in Colorado (2016-2020): | | | | Total Suicides in Adams (2016-2020): | | | | |
| Colorado | | | 6,094 | Adams | | | 517 | |
| Circumstances | | | | Toxicology | | | | |
| Colorado | | Adams: | | Colorado | | Adams: | | |
| Known | 5,928 | Known | 513 | Available | 4,890 | Available | 49 | |
| Unknown | 166 | Unknown | 4 | Unavailable | 1,205 | Unavailable | 2 | |

| Unknown | 166 | Unknown 4 | | Unavailable 1,205 | | Unavailable | | |
|---------------------------------------|-----|-----------|-------|-------------------|-------------------|-------------|--|-------|
| History of suicidal thoughts or plans | | | | 61.6% | Alchohol Present | | | |
| Current depressed mood | | | | 56.5% | Marijuana present | | | 22.2% |
| Crisis two weeks prior to death | | | 53.2% | Opiates present | | 14.7% | | |
| | | | | | | | | |



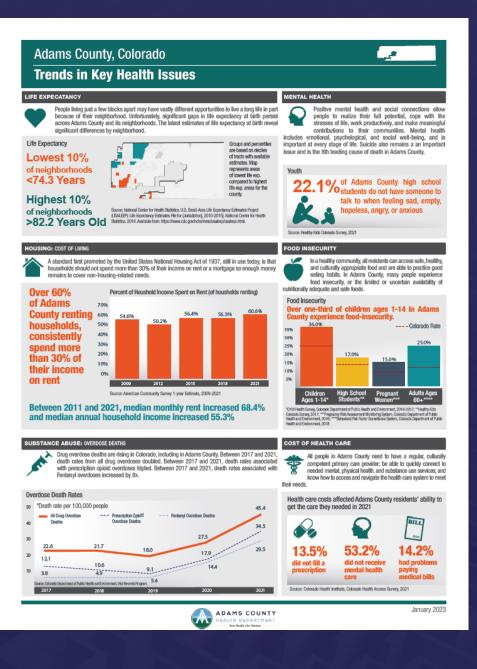
Dashboard Example





Report Example







Report Example

Findings of Mass Shootings and Related Firearm Data

United States and Colorado | June 2022

Purpose

Recent mass shootings have again focused attention on the United States as an outlier in gun violence among more developed counties.^{1,2} They have also encouraged discourse on prevention. While we focus on mass shootings in this brief, as German Lopez reminds us in his May 26, 2022 New York Times article, "Most shootings in America never appear in national headlines. The majority of gun deaths in 2021 were suicides. Nearly half were homicides that occurred outside mass shootings; they are more typical acts of violence on streets and in homes (and most involve handguns). Mass shootings were responsible for less than 2 percent of last year's gun deaths.² Mass shootings are, however, what typically drive public response and dialogue. Despite personal and political beliefs about guns and gun access, most Americans agree that the now common mass murders of school children, grocery shoppers, and everyday workers have crossed a line. They are too much. They are too horrible.

Mass shootings are a specific type of violent crime, often with characteristics different from other violent crimes. In order to better understand mass shootings and the factors related to them, this brief explores available national and state data related to mass shootings. Data in this brief include the type and legal status of guns used in U.S. mass shootings, guns traced and recovered in Colorado crimes, gun sales, offender characteristics and motivation, and firearm policy and regulation.

We hope this brief, which only skims the surface, provides useful information for people interested in learning about mass shootings from a public health perspective, summarizing and synthesizing information that will support continued, thoughtful, and useful discourse and action.



¹Grinshteyn, E., & Hemenway, D. (2016). Violent Death Rates: The US Compared with Other High-Income OECD Countries, 2010. The American Journal of medicine, 129 (3), 266–273. https://doi.org/10.1016/j.amjmed.2016.10.005 //mps.//www.nyimes.com/2022/082/86hteffogginus-america-shooting-deaths.html

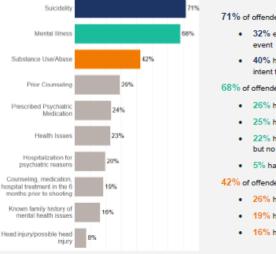


Promote, protect and improve the lifelong health of individuals and communities in Adams, Arapahoe and Douglas Counties through the effective use of data, evidence-based prevention strategies, leadership, advocacy, partnerships, and the promotion of health equity.

Offender Mental Health

Some data exist that explore offender mental health. Most offenders experience the desire to commit suicide at some point before or after a mass shooting event. In fact, 68% are considered to have a mental illness, with a quarter of offenders experiencing thought and/or mood disorders. Nearly half of all offenders used or abused substances, with alcohol being the most common substance used or abused.

Figure 9: Percent of Offenders Mental Health prior to event, 1966-2022



71% of offenders experienced suicidality

- 32% experienced suicidality prior to the event
- 40% had no prior suicidality, but had an intent to die in the event

68% of offenders had a mental illness

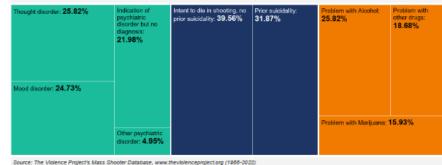
- 26% had a thought disorder
- 25% had a mood disorder
- 22% had indication of psychiatric disorder, but no diagnosis
- 5% had other psychiatric disorder

42% of offenders used or abused substances

- 26% had a problem with alcohol
- 19% had a problem with other drugs
- 16% had a problem with marijuana

Source: The Violence Project's Mass Shooter Database, www.theviolenceproject.org (1965-2022)

Figure 10: Percent of Offenders most common Mental Health Indicators, 1966-2022



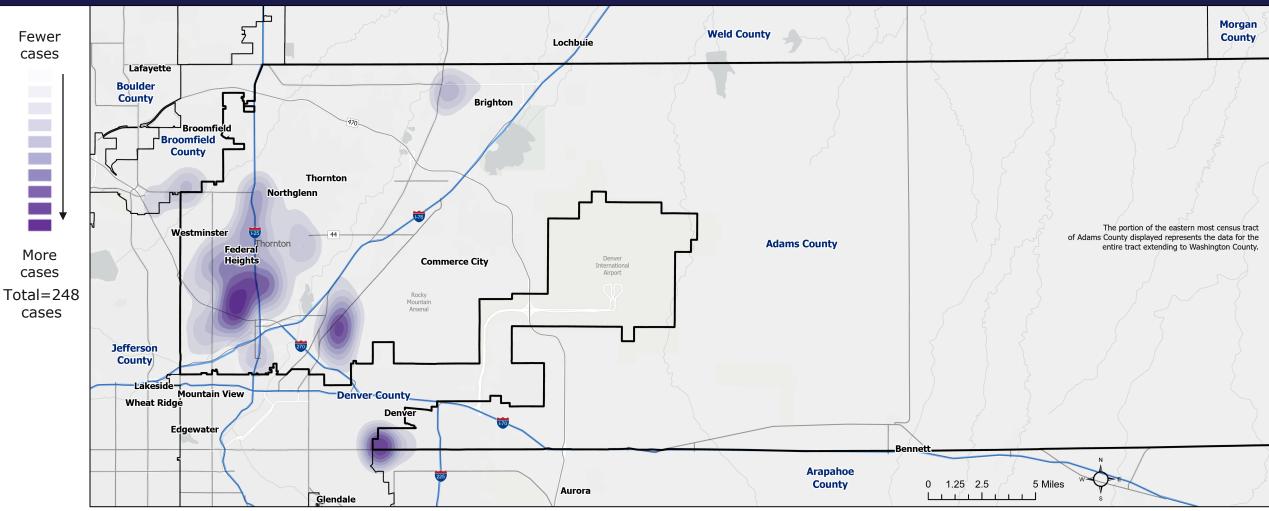
Tri-County Health Department

Mass Shooting Analysis Offender Mental Health | Page 6

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Firearm-Related Cases Filed between 07/01/2022 - 09/30/2022

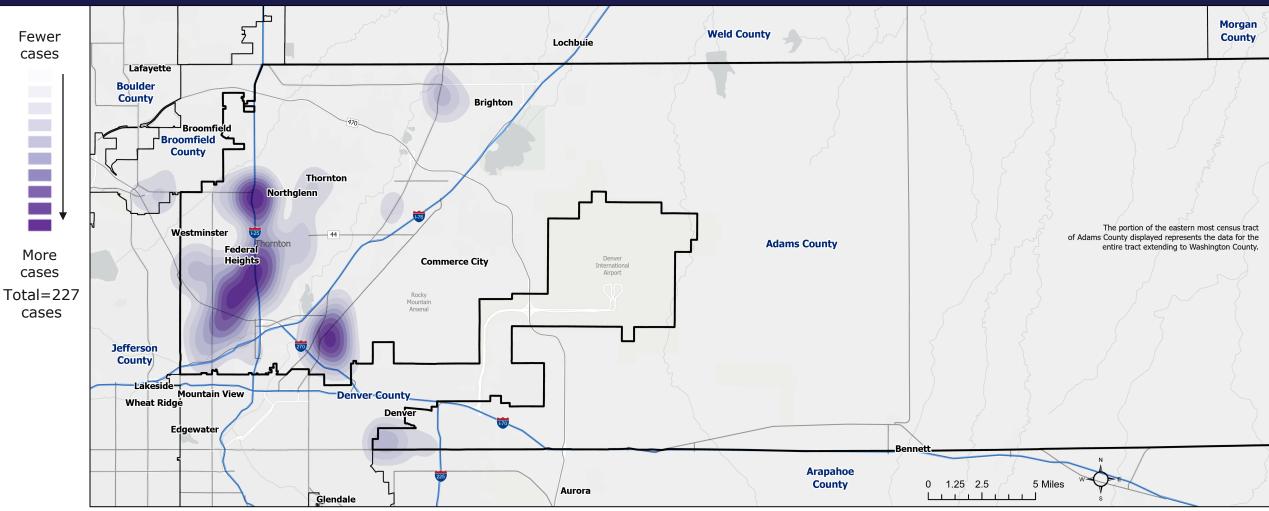


This map shows the geographic areas with the highest density of Firearm-related cases filed between July 1, 2022 to September 30, 2022. There were **248 Firearm-related cases filed** with offense dates ranging from 5/27/2013 to 9/28/2022. Cases filed may have more than one charge associated with the case, but this map only displays deduplicated cases, regardless of the number of charges.





Firearm-Related Cases Filed between 10/01/2022 - 12/31/2022

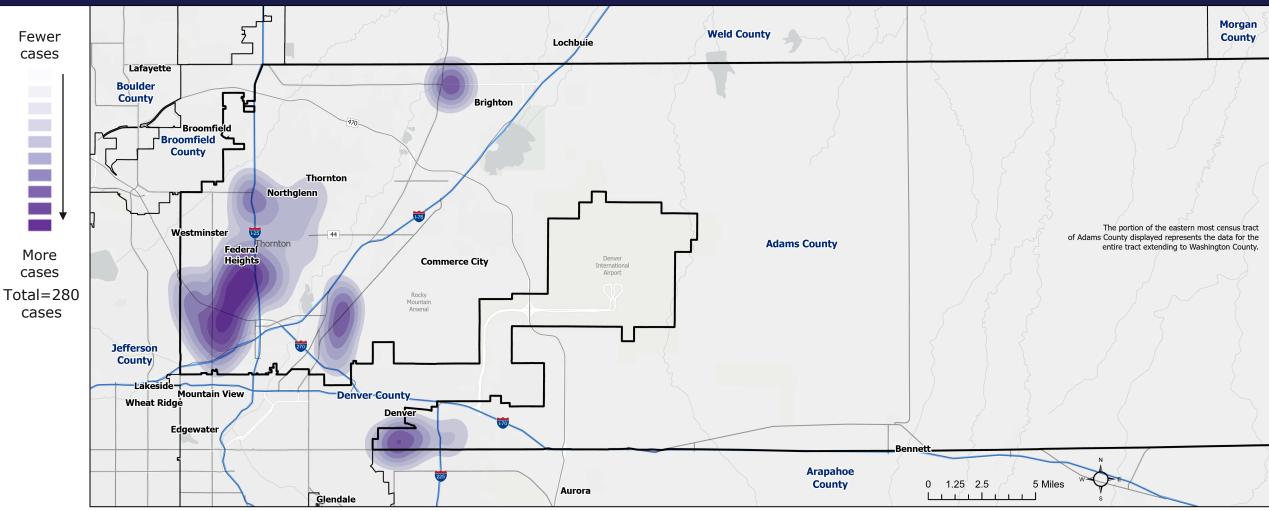


This map shows the geographic areas with the highest density of Firearm-related cases filed between October 1, 2022 to December 31, 2022. There were **227 Firearm-related cases filed** with offense dates ranging from 4/10/2021 to 12/26/2022. Cases filed may have more than one charge associated with the case, but this map only displays deduplicated cases, regardless of the number of charges.





Firearm-Related Cases Filed between 01/01/2023 - 03/31/2023



This map shows the geographic areas with the highest density of Firearm-related cases filed between January 1, 2023 to March 31, 2023. There were **280 Firearm-related cases filed** with offense dates ranging from 12/20/2020 to 3/28/2023. Cases filed may have more than one charge associated with the case, but this map only displays deduplicated cases, regardless of the number of charges.

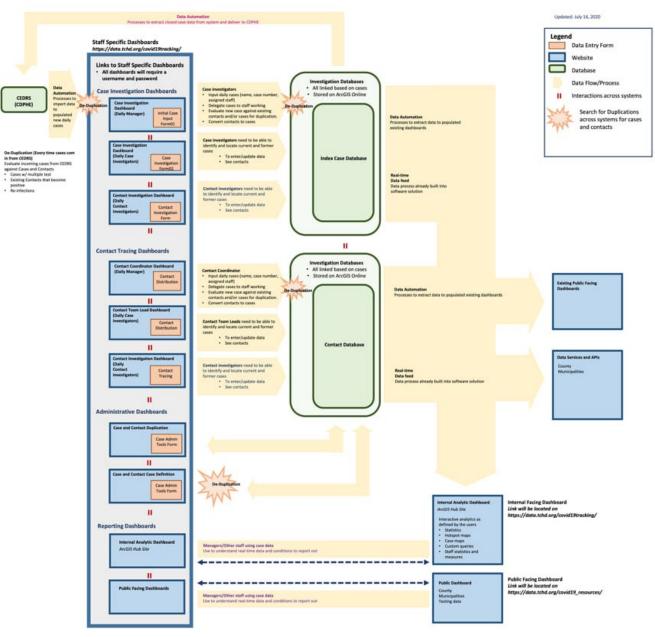


Source: 17th Judicial District Attorney's Office, 2022



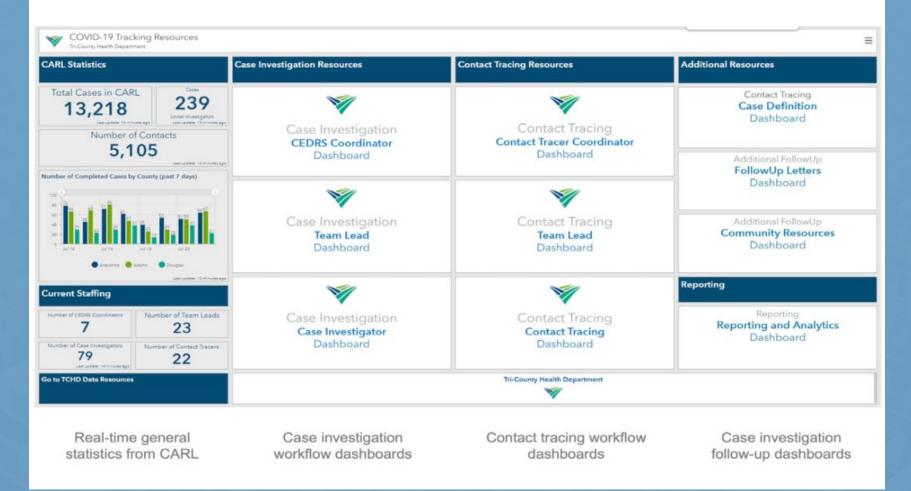
COVID19 Case Investigation Main Dashboard

Using ESRI ArcGIS Online



COVID19 Case Investigation Main Dashboard

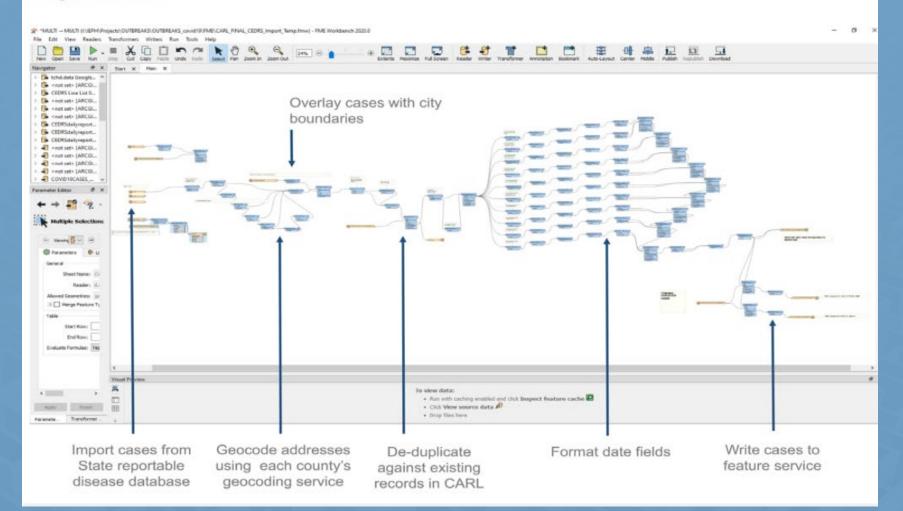
Using ESRI ArcGIS Online Dashboards







Using FME Workbench

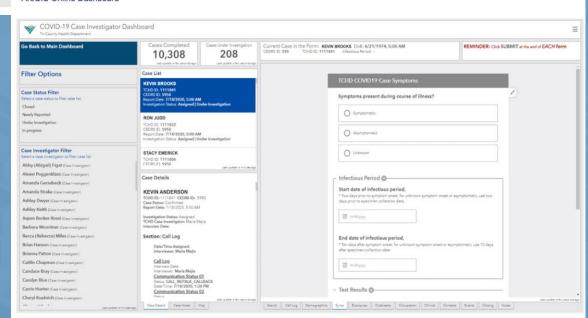




| Dashboard | Team Lead: All cases | | 124 | 100 case requesting reasoning reason | Current Case in the Form: Selected a Case!!!, !!!You Have Not, Do8: CEDR3:0: No Case Selected, Report Dos; | | |
|---|--|---------------------|---|--|---|--|--|
| Case Status Filter Gelect a case status to filter case | Completed Cases | Under Investigation | ar gan the montesp | - | | | |
| Confirmed Probable | 10,936 | 242 | Newly Reported Cases Refects cases that need to be assigned | | TCHD COVID19 Case Distribution | | |
| Suspect | Number of Assigned Cases Team Lead | | JENNIFER SMITH TCHD ID: 1111787 CEDRS ID: 595 Case Status: Confirmed | | Case ID Case Number in former Google Sheet No Case Selected | | |
| Feam Lead Filter Relect a case status to fiber case | Danst Rena Sank Event Ower/ Kabino | - | Report Date: 7/18/2020, 5:00 AM Investigation Status: TCHD Case Investigator: | | Case first name | | |
| Barbara Woontner Becca (Rebecca) Miles | Cattin Diagnar Michael Diagnar | | RON JUDD TCHD ID: 1111784 CEDRS ID: 595 | | 10/You Have Not | | |
| Cailtín Chapman Charyl Kuabrich | Sul Laske Varier | | Case Status: Confirmed Report Data: 7/18/2020, 5:00 AM Investigation Status: TOHD Case Investigator: | | Case last name | | |
| Connor Carrillo Janina Runfola Jannifar Chana | Kata (Katarina) bihaf Bacca (Rebecca) Milas | | Cases to be assigned Requested Re | augunan | Selected e Case??! | | |
| XIIIan Jaskunas Kaltin Harama | Disnessen Davis | _ | Case Details: I!!You Have Not Selected a Case!!! TOND Care ID: No Case Selected / CEDSID: No Case Selected Date of Smir. Age | | CEDRSID To Case Selected | | |
| Karon Millor Katio (Kethorine) Schaff | Steve Material Lesle Tech | _ | | | | | |
| Kim Strenge Leslee Warren Leslie Finch | Sin Sninge Center Cente | | Address: No Case Selected, , Phone: No Case Selects Report Date: | | Report Date | | |
| Leslie Finch Lori Haas Maggie DeRose | Yatin Harane Baitara Hourman Lon Haa | | Status: Newly Reported Test Results: | | 30 m/dr/2007 | | |
| Marianne Toledo Meredith Brown Michael Chase | Magge Delive Magge Delive | | Test 1 Specimen Type: Collection Date: | | | | |
| michael Chase | | 2 200 400 | Originating Lab: Testing Lab | C | OVID19 Case Investigator | | |

COVID19 Case Investigation Coordinator

ArcGIS Online Dashboard



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Review:



Population Health Epidemiology & Data Science

The Epidemiology and Data Science Division at ACHD strives to eliminate disease and health disparities in Adams County through Innovation, Collaboration, Inclusion



Thank you!

Gabriela Reyes, MPH Health Data & GIS Manager greyes@adcogov.org (832) 948-8420



Adams County Board of Health August 17th, 2023