

Methodology for the Colorado Medication Assisted Treatment County Profiles

Description

In 2024, the Center for Addiction Medicine (CAM) Academy at Denver Health contracted with the Colorado Health Institute (CHI) to create county opioid profiles. These profiles describe the state of opioid treatment and referrals in each county by detailing available treatment facilities and services, measures of access, and community status related to mental health, opioid deaths, and emergency department visits.

Data for these profiles combines publicly available data and data requests to state agencies. The metrics chosen are intended to provide a snapshot of important information and contextualize elements in opioid use and treatment availability in Colorado.

For questions about the methodology or data for these profiles, please contact Rachel Bowyer at bowyerr@coloradohealthinstitute.org or 720.975.9260.

The project to create these profiles was funded by an Opioid Abatement Innovation Challenge Grant from the Colorado Attorney General’s Office.

Data Metrics

Metric	Description	Location on Profile	Source	Data Year/Date
Regional Opioid Abatement Council (ROAC) Region	The majority of the Opioid Settlement Funds are distributed and administered by 19 Colorado regions (groups of counties) that were configured by local governments to make use of existing local infrastructure and relationships. Some ROAC regions are single counties and others are groups of counties.	Profile Header	Colorado Attorney General (link)	Current
County Population	County population estimate for 2023.	Profile Header	Colorado State Demography Office (link)	2023
ROAC Population	ROAC region population estimate for 2023, calculated from “County Population” source	Profile Header	see “County Population”	see “County Population”
Hubs	A hub is an opioid treatment program (OTP) that provides methadone. OTPs provide patients with medication for opioid use disorder (MOUD), paired with	Hub and Spoke Model of Care (Blue Section)	Behavioral Health Administration – (Licensing and Designation	Current as of January 2025

	counseling and other behavioral therapies to provide a whole-person approach. For this data, a list of OTPs from the Behavioral Health Administration (BHA) was acquired.		Database and Electronic Records System) LADDERS (link) via a data request	
Closest Hub – IF NO HUB IN COUNTY	The distance, in miles by driving distance, of the closest hub in another county to the nearest spoke in the selected county or ROAC region. This metric only appears if there is NO hub in the selected county.	Hub and Spoke Model of Care (Blue Section)	Calculated using geospatial software. For source of hub and spoke locations, see “Hub” and “Spokes”	Current as of January 2025
Spokes	A spoke provides ongoing treatment, monitoring, and support services in the community. For this data, the state licensing database (LADDERS) was used. All facilities in the database are considered spokes. Facilities that are not licensed by the state are not reflected in this data.	Hub and Spoke Model of Care (Blue Section)	Behavioral Health Administration – (Licensing and Designation Database and Electronic Records System) LADDERS (link) via a data request	Current as of January 2025
Drug Court	If the county or ROAC region has at least one drug court of any kind.	Hub and Spoke Model of Care (Blue Section)	National Treatment Court Resource Center, 2023 (link)	2023
Spoke Density – Spokes per 100,000 Population	Number of spokes per 100,000 population by county or ROAC region. Calculated by dividing “Spokes” by “County Population” or “ROAC Population” and multiplying by 100,000.	Hub and Spoke Model of Care (Blue Section)	See “Spokes” and “County Population” or “ROAC Population”	Spokes – 2025, Population – 2023
Spoke Density – Spokes per 100 square miles	Number of spokes per square mile by county or ROAC region. Calculated by dividing “Spokes” by the county or ROAC area in square miles and multiplying by 100.	Hub and Spoke Model of Care (Blue Section)	See “Spokes” County Area: IPUMS Geographic Crosswalks (link)	Spokes – 2025, Square miles – Current
Map Data	County or ROAC maps that show hubs, spokes, and correctional facilities. Hubs and spokes locations are given by the same sources as “Hubs” and “Spokes.” Maps created by CHI using mapping software.	Hub and Spoke Model of Care (Blue Section)	CHI, see “Hub” and “Spokes”	Current, see “Hub” and “Spokes”
Buprenorphine Prescribers per 100,000 Residents	The number of buprenorphine prescribers per 100,000 residents in quarter four (Q4) of 2023 at the county, ROAC, and state level.	Treatment Overview (Purple Section)	Colorado Department of Public Health via data request. A dashboard of the county data is available here . Population counts based on county counts from Colorado State Demography Office (link)	Buprenorphine prescribers - Q4 2023 Population counts - 2023
Patients per Buprenorphine Prescriber	For county level: The average number of patients who received at least one buprenorphine prescription per buprenorphine prescriber by county of prescriber in Q4 of 2023. For ROAC level: An estimate of patients per prescriber based on calculations with	Treatment Overview (Purple Section)	Colorado Department of Public Health via data request. A dashboard of the county data is available here .	Q4 2023

	<p>county-level data. This number is not an average and does not account for which patient saw which prescriber (because that data is not available on the ROAC region level). Counties with no data are excluded from the calculations.</p> <p>Numerator: The number of patients who received at least one buprenorphine prescription in the ROAC region in Q4 of 2023.</p> <p>Denominator: The number of buprenorphine prescribers in the ROAC region in Q4 of 2023.</p> <p>For state level: An estimate of patients per prescriber based on calculations with county-level data. This number is not an average and does not account for which patient saw which prescriber (because that data is not available on the state level). Counties with no data are excluded from the calculations.</p> <p>Numerator: The number of patients who received at least one buprenorphine prescription in the state in Q4 of 2023.</p> <p>Denominator: The number of buprenorphine prescribers in the state in Q4 of 2023.</p>			
Number of Facilities – Prevention/Early Intervention per 100,000 residents	The number of state-licensed facilities that offer prevention and/or early intervention substance use services per 100,000 residents of the county, ROAC, or state. This is equivalent to the American Society of Addiction Medicine (ASAM) level of care of 0.5.	Treatment Overview (Purple Section)	Behavioral Health Administration – (Licensing and Designation Database and Electronic Records System) LADDERS (link) via a data request	Current as of January 2025
Number of Facilities – Outpatient per 100,000 residents	The number of state-licensed facilities that offer outpatient substance use services per 100,000 residents of the county, ROAC, or state. This is equivalent to the ASAM level 2, including multiple 2.X levels.	Treatment Overview (Purple Section)	Behavioral Health Administration – (Licensing and Designation Database and Electronic Records System) LADDERS (link) via a data request	Current as of January 2025
Number of Facilities – Intensive Outpatient/Partial Hospitalization per 100,000 residents	The number of state-licensed facilities that offer intensive outpatient and/or partial hospitalization substance use services per 100,000 residents of the county, ROAC, or state. This is equivalent to the ASAM level 2, including multiple 3.X levels.	Treatment Overview (Purple Section)	Behavioral Health Administration – (Licensing and Designation Database and Electronic Records System) LADDERS (link) via a data request	Current as of January 2025
Number of Facilities – Residential/Inpatient per 100,000 residents	The number of state-licensed facilities that offer residential and/or inpatient substance use services per 100,000 residents of the county, ROAC, or state. This is equivalent to the ASAM level 4	Treatment Overview (Purple Section)	Behavioral Health Administration – (Licensing and Designation Database and Electronic Records System) LADDERS	Current as of January 2025

			(link) via a data request	
Poor Mental Health	<p>The percentage of people who report experiencing poor mental health in the past 12 months at the county, ROAC, or state level. Data from the combined years of 2021 and 2023 was used for this calculation.</p> <p>For the county level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, the county-level values for this metric are the value of that county's HSR, and therefore may include other counties. See the CDPHE website for more information about these regions.</p> <p>For the ROAC level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, in order to estimate the ROAC region value, each county was assigned its HSR's value. Then the values for the counties in each ROAC region were averaged using a population weighted average to achieve the ROAC estimate.</p>	Community Opioid Status (Orange Section)	2021 and 2023 Colorado Health Access Survey (link)	2021, 2023
Opioid Deaths per 100,000	Average annual crude rate of opioid overdose deaths per 100,000 residents from 2020 to 2022 at the county, ROAC, or state level.	Community Opioid Status (Orange Section)	Colorado Department of Public Health and the Environment Drug Overdose Dashboard (link)	2021-2023
Emergency Room Visits for All Overdoses	Average annual crude rate of emergency department visits from 2020-2022 for overdose involving all drugs per 100,000 residents at the county, ROAC, or state level.	Community Opioid Status (Orange Section)	Colorado Department of Public Health and the Environment Drug Overdose Dashboard (link)	2021-2023
Population in Poverty	The percentage of the population that has incomes below the federal poverty threshold at the county, ROAC, and state level. In 2023 a family of 4 would need to make more than \$30,000 to be above the poverty level.	Measures of Access (Green Section)	Census Bureau Poverty Status in the Past 12 Months (link)	2023 ACS 5-Year Estimates (2018-2022)
Population Uninsured	The percent of the population that does not have health insurance at the county, ROAC, and state level.	Measures of Access (Green Section)	Census Bureau Selected Characteristics of Health Insurance Coverage in the United States (link)	2023 ACS 5-Year Estimates (2018-2022)
Population without Broadband	The percent of the population that does not have an internet subscription at the county, ROAC, and state level.	Measures of Access (Green Section)	Census Bureau Types of Computers and Internet Subscriptions (link)	2023 ACS 5-Year Estimates (2018-2022)
Barriers to Care – Unable to get mental health or substance use care	The percent of the population over 5 years old who did not get needed mental health or substance use treatment services in the past 12 months at the county, ROAC, and state level. Data from the combined years of 2021 and 2023 was used for this calculation. People older than 5 and	Measures of Access (Green Section)	2021 and 2023 Colorado Health Access Survey (link)	2021, 2023

	<p>younger than 18, are not surveyed if they needed substance use care, only if they needed mental health care.</p> <p>For the county level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, the county-level values for this metric are the value of that county's HSR, and therefore may include other counties.</p> <p>For the ROAC level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, in order to estimate the ROAC region value, each county was assigned its HSR's value. Then the values for the counties in each ROAC region were averaged using a population weighted average to achieve the ROAC estimate.</p>			
<p>Barriers to Care – Unable to get mental health or substance use care – reason: unable to get appointment</p>	<p>Of the percent of the population who did not get needed mental health or substance use treatment services in the past 12 months...the percent of people who indicated that they had a hard time getting an appointment with a provider. Data at the county, ROAC, and state level. Data from the combined years of 2021 and 2023 was used for this calculation.</p> <p>For the county level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, the county-level values for this metric are the value of that county's HSR, and therefore may include other counties.</p> <p>For the ROAC level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, in order to estimate the ROAC region value, each county was assigned its HSR's value. Then the values for the counties in each ROAC region were averaged using a population weighted average to achieve the ROAC estimate.</p>	<p>Measures of Access (Green Section)</p>	<p>2021 and 2023 Colorado Health Access Survey (link)</p>	<p>2021, 2023</p>
<p>Barriers to Care – Unable to get mental health or substance use care – reason: cost</p>	<p>Of the percent of the population who did not get needed mental health or substance use treatment services in the past 12 months...the percent of people who indicated they were concerned about the cost of treatment. Data at the county, ROAC, and state level. Data from the combined years of 2021 and 2023 was used for this calculation.</p> <p>For the county level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, the county-level values for this metric are the value of that county's HSR, and therefore may include other counties.</p> <p>For the ROAC level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, in order to estimate</p>	<p>Measures of Access (Green Section)</p>	<p>2021 and 2023 Colorado Health Access Survey (link)</p>	<p>2021, 2023</p>

	<p>the ROAC region value, each county was assigned its HSR's value. Then the values for the counties in each ROAC region were averaged using a population weighted average to achieve the ROAC estimate.</p>			
<p>Barriers to Care – Unable to get mental health or substance use care – reason: didn't think insurance covered</p>	<p>Of the percent of the population who did not get needed mental health or substance use treatment services in the past 12 months... the percent of people who indicated they did not think their health insurance would cover it. Data at the county, ROAC, and state level. Data from the combined years of 2021 and 2023 was used for this calculation.</p> <p>For the county level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, the county-level values for this metric are the value of that county's HSR, and therefore may include other counties.</p> <p>For the ROAC level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, in order to estimate the ROAC region value, each county was assigned its HSR's value. Then the values for the counties in each ROAC region were averaged using a population weighted average to achieve the ROAC estimate.</p>	<p>Measures of Access (Green Section)</p>	<p>2021 and 2023 Colorado Health Access Survey (link)</p>	<p>2021, 2023</p>
<p>Barriers to Care – Unable to get mental health or substance use care – reason: stigma</p>	<p>Of the percent of the population who did not get needed mental health or substance use treatment services in the past 12 months...the percent of people who indicated they were concerned about what would happen if someone found out they had a problem OR did not feel comfortable talking to a professional about their personal problems. Data at the county, ROAC, and state level. Data from the combined years of 2021 and 2023 was used for this calculation.</p> <p>For the county level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, the county-level values for this metric are the value of that county's HSR, and therefore may include other counties.</p> <p>For the ROAC level: Data is only available at the CDPHE Health Statistics Region (HSR) level. Therefore, in order to estimate the ROAC region value, each county was assigned its HSR's value. Then the values for the counties in each ROAC region were averaged using a population weighted average to achieve the ROAC estimate.</p>	<p>Measures of Access (Green Section)</p>	<p>2021 and 2023 Colorado Health Access Survey (link)</p>	<p>2021, 2023</p>
<p>Workforce – Certified Addiction Technician</p>	<p>Raw number of state certified addiction technicians per 100,000 residents the county, ROAC, and state level. Raw numbers may not reflect one full-time position.</p>	<p>Measures of Access (Green Section)</p>	<p>Colorado Health Systems Directory – includes 14 data sources updated on a rolling basis</p>	<p>Current as of January 2025</p>

			Data hosted by Colorado Department of Public Health and Environment – Primary Care Office	
Workforce – Certified Addiction Specialist	Raw number of state certified addiction specialist per 100,000 residents the county, ROAC, and state level. Raw numbers may not reflect one full-time position.	Measures of Access (Green Section)	Colorado Health Systems Colorado Health Systems Directory – includes 14 data sources updated on a rolling basis Data hosted by Colorado Department of Public Health and Environment – Primary Care Office	Current as of January 2025
Workforce – Certified Addiction Counselor	Raw number of state certified addiction counselor per 100,000 residents the county, ROAC, and state level. Raw numbers may not reflect one full-time position.	Measures of Access (Green Section)	Colorado Health Systems Colorado Health Systems Directory – includes 14 data sources updated on a rolling basis Data hosted by Colorado Department of Public Health and Environment – Primary Care Office	Current as of January 2025

Additional Data Information

Reportability Standards

The Colorado Medication Assisted Treatment County Profiles combine many sources of data and each administrator of each data source has their own standards for reportability. Because reportability standards are not always made public, it is best to contact data administrators directly to ask about their processes. If data is not available for a county or ROAC it may be because the data was not collected or did not meet the administrator’s reportability standard.

CHI is the administrator of the Colorado Health Access Survey (CHAS). In order for data to be reported from the CHAS, it must meet certain reportability thresholds. The data presented in the Colorado Medication Assisted Treatment County Profiles combines two years of CHAS data. The reportability standards in this case are (1) that there are at least 30 responses to each survey question and (2) that the relative standard error (RSE) is below 40%. Data that does not meet these standards is suppressed and appears on the profiles as NA.

County, ROAC, and State Comparisons Statistical Significance

Data presented on the Colorado Medication Assisted Treatment County Profiles shows various statistics at the county, ROAC, and state levels. This data comes from many sources, and each source provides data in a different way. Some provide counts while others provide summary statistics (percentages) at the county or HSR level. This meant that some ROAC percentages had to be estimated from county data (as noted in the table above). Because of these limitations, it is not straightforward to run statistical significance tests on the differences between the county, ROAC, and state values of the data presented. Users can interpret the data presented as a snapshot of key metrics in recent years that indicate some variation in how different parts of the state are experiencing the opioid crisis and access to treatment and other resources