HMA

HEALTH MANAGEMENT ASSOCIATES

Boulder County:

Preliminary Assessment of Mental Health and Substance Use Provider Network and Service Continuum

PRESENTED TO

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Research and Consulting in the Fields of Health and Human Services Policy, Health Economics and Finance, Program Evaluation, Data Analysis, and Health System Restructuring

Contents

Purpose

The purpose of this preliminary assessment is to provide Boulder County with the CDHS Office of Behavioral Health (OBH) 2020 Needs Assessment data at the county level to describe the provider network and service continuum for mental health and substance use. Boulder County is interested in understanding what services are available, providers who are delivering care and where there may be gaps in the continuum to inform strategic priorities. The data will also be used to inform Boulder decision on acute care utilization and opportunities to provide upstream services. The preliminary assessment is organized into five sections:

1. Safety Net population
2. Provider Network
3. Continuum of Services
4. Adequacy of the Continuum of Services
5. Behavioral Health Outcomes and Unmet need

Safety Net Population

The term "safety net" is used to describe both a population and the provider continuum to serve the population. This analysis examined access to the "safety net" among those considered part of the "safety net population." Safety net services are services providing critical care to individuals with the most severe illnesses and those without insurance coverage or other support for their treatments.[1] Core services literally become the "net" that prevent high risk and vulnerable populations from going untreated.

"Safety net population," for the sake of the assessment, was defined using the measures created by the Colorado Health Institute (CHI)[2] for those "medically vulnerable", including:

- Incomes below 300 percent of the federal poverty level (FPL)
- No insurance
- Enrollment in a publicly financed health insurance program or high-deductible health plan
- A geographically isolated location (location based on population density per square mile)
- Cultural, language and other social barriers (defined by "speaks English not very well").

Literature suggests that safety net populations are more likely to experience behavioral health conditions. National data suggests that 28.3 percent of the adult population (ages 18 years and older) with any mental illness in the past year is more likely to be covered by Medicaid, compared to 19.1 percent of the overall adult population.[3]

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[1] Substance Abuse and Mental Health Services Administration (2017). Funding and Characteristics of Single State Agencies for Substance Abuse Services and State Mental Health Agencies, 2015. HHS Pub. No. (SMA) SMA-17-5029. Rockville, MD: Substance Abuse and Mental Health Services Administration, p4.

[2] Defined using the measures created by the Colorado Health Institute (CHI) for those "medically vulnerable," including: incomes below 300 percent of the federal poverty level (FPL), no insurance; enrollment in a publicly financed health insurance program or high-deductible health plan, geographically isolated location, cultural, language and other social barriers. Retrieved from https://www.coloradohealthinstitute.org/sites/default/files/file_attachments/2019%20Safety%20Net%20Primer.pdf

[3] SAMHSA NSDUH 2018. Table 8.2B Any Mental Illness in Past Year among Persons Aged 18 or Older, by Age Group and Demographic Characteristics: Percentages, 2017 and 2018 and
Table 8.3B Any Mental Illness in Past Year among Persons Aged 18 or Older, by Age Group and Geographic and

HMA calculated a suitability (composite score) analysis for each census tract ("neighborhoods") and ranked Colorado neighborhoods from lowest to highest in populations considered medically vulnerable by applying equal weights to CHI measures. Two types of composite scores were calculated based on population numbers for frontier and rural neighborhoods and density (i.e., number divided by square miles) for urban neighborhoods.[4] **The higher the value of the variable, the greater its effect on the final score, for all indicators except for geographically isolated areas where an opposite influence was selected. The score ranges from zero to one.**

Figure 1 illustrates the safety net score with darker areas of red indicating high safety net population (0.38) and light red representing lower safety net population (0.19). Boulder and Longmont include census tracts with the highest safety net population need.

Provider locations (n=29) are represented by the grey circles.[5] The larger the grey circle the more locations are represented, specifically:

- 80026 (7 locations)
- 80027 (2)
- 80301 (1)
- 80302 (3)
- 80303 (1)
- 80304 (6)
- 80501 (9)

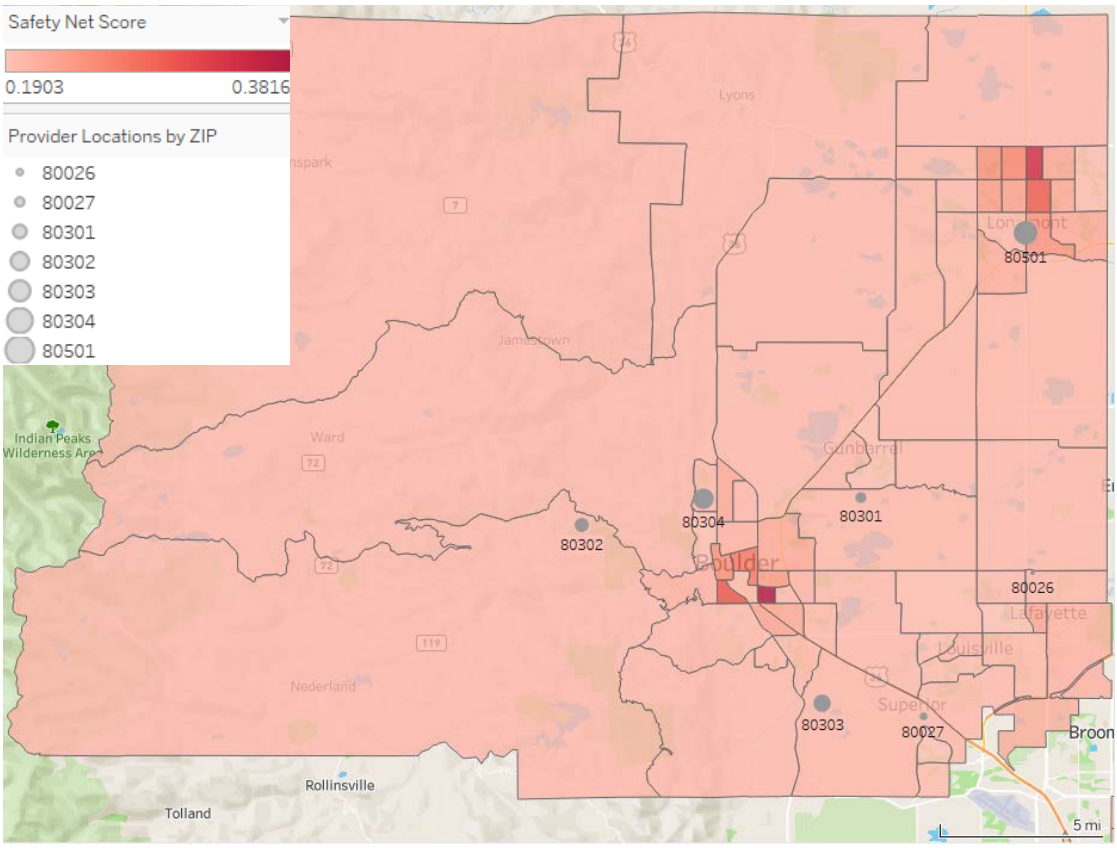
Key Takeaway: **Provider locations are in proximity of census tracts with the highest safety net population need – however there is not a direct alignment. Census tracts with highest need must travel approximately up to 5 miles in Boulder and Longmont.**

Socioeconomic Characteristics: Percentages, 2017 and 2018

[4]Colorado Rural Health Center county designations were used to determine urban, rural and frontier counties and census tracts or neighborhoods.

[5] SAMHSA Provider Locator as of January 2023.

Figure 1 Safety Net Population Score by Neighborhood (e.g., Census Tract)



Source: American Community Survey, five-year estimates, 2015-2019

Provider Network

Developed and administered by the Primary Care Office, the Colorado Health Systems Directory provides comprehensive data on licensed clinicians and health care sites in Colorado, which is used by the Primary Care Office to determine where health professional workforce shortages exist in the state.

The 2020 Needs Assessment of behavioral health disciplines from this directory suggests licensed professional counselors (38%) are the most prevalent behavioral health license in the state, followed by licensed clinical social workers (29%) and psychologists (13%). At the time of the 2020 assessment, the Colorado Providers Association reported there were also 50 certified peer specialists II and 124 certified prevention specialists in the state. Psychiatrists made up four percent of the listed disciplines.

To understand the magnitude of the underrepresentation of the behavioral health workforce in the state, in 2020, Colorado had only 15 psychiatrists per 100,000 people, compared with 92 primary care physicians per 100,000.

The extent to which the mental health providers are actively practicing, accepting new patients, and/or accepting of public insurers is unknown. Understanding the extent to which beneficiaries can “realize” access to reported provider networks is imperative in mental health care, where there are significant unmet needs. One study found that 58.2 percent of network directory listings were “phantom”

providers who did not see Medicaid patients, including 67.4 percent of mental health prescribers, 59.0 percent of mental health non prescribers, and 54.0 percent of primary care providers.[6]

Table 1 presents the rate of disciplines per 1,000 residents for Boulder County, RAE Region 6 and Statewide. Boulder County has a higher ratio than RAE Region 6 overall and statewide at 4.64 disciplines per 1,000 residents. As with the state and RAE Region 6, Boulder County's the top three providers in Boulder County's network are Licensed Professional Counselor, Licensed Clinical Social Worker, and Psychologists.

Table 1 Rate of Disciplines per 1,000 Residents

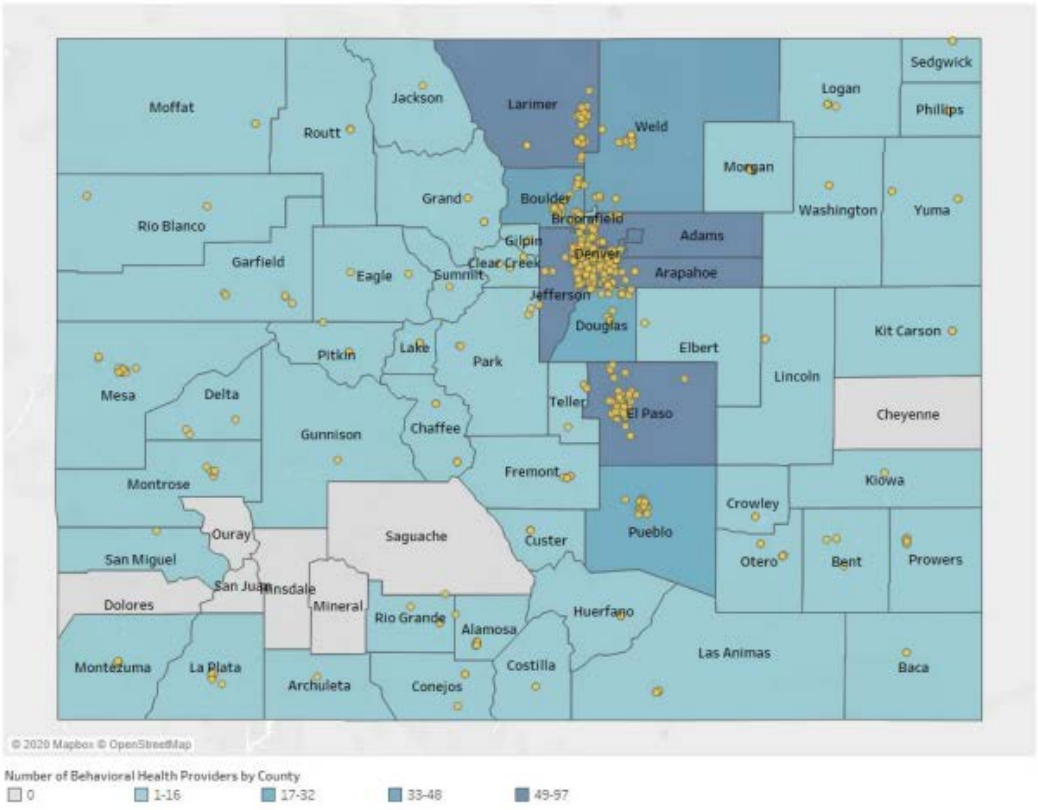
	Boulder County (Count)	Boulder County	RAE Region 6	Statewide
Licensed Professional Counselor	694	2.15	1.37	0.94
Licensed Clinical Social Worker	360	1.12	0.81	0.68
Psychologists	216	0.67	0.39	0.32
Marriage and family therapists	70	0.22	0.14	0.12
Psychiatrist	60	0.19	0.11	0.10
Certified Addiction Counselor III	31	0.10	0.09	0.08
Certified Addiction Counselor II	25	0.08	0.08	0.07
Licensed Addiction Counselor	22	0.07	0.05	0.04
Certified Addiction Counselor I	12	0.04	0.04	0.06
Master of Social Work	-	0.00	0.00	0.00
Compact Advanced Practice Nurse	-	0.00	0.00	0.00
Advanced Practice Nurse	4	0.01	0.01	0.01
Physician Assistant	3	0.01	0.00	0.00
	1,497.0	**4.64**	**3.07**	**2.44**

Orange font indicates a ratio below RAE 6 or the State ratio. Green font indicates a ratio above RAE 6 or the State. Note: This data does not account for providers who may be working outside of Colorado and delivering services via telehealth. Source: CDPHE Colorado Health Systems Directory, Primary Care Office, March 2020.

Figure 2 shows the distribution of Health First Colorado providers (n=7,532) and service locations (n=743) billing behavioral health service codes by county as of May 2020. Darker blue represents counties with the higher number of individual providers (clinicians, independent providers) and includes counties along the front range such as Larimer, Boulder, Jefferson, Adams, Arapahoe, Denver and El Paso Counties. The dots indicate a location of a Health First Colorado provider billing behavioral health services. Mapping these providers suggests there are counties with no Medicaid providers billing behavioral health services, such as Phillips, Kit Carson, Cheyenne, Kiowa, Crowley, Baca, Custer, San Juan and Mineral Counties. These rural and frontier counties also disproportionally have a high percentage of the safety net population (in part defined by those on Medicaid), high behavioral health need and poor outcomes.

[6] Zhu, J. M., Charlesworth, C. J., Polsky, D., & McConnell, K. J. (2022). Phantom Networks: Discrepancies Between Reported and Realized Mental Health Care Access In Oregon Medicaid: Study examines phantom networks of mental health care providers in Oregon Medicaid. Health Affairs, 41(7), 1013-1022.

Figure 2 Health First Colorado Provider Organizations Billing Behavioral Health Services (n=744)



Source: Health First Colorado provider list, May 2020

In Colorado, as shown in Table 2, Medicaid providers billing behavioral health services per 1,000 Medicaid members range from a low of 2.7 in RAE Region 4 to a high of 7.0 per 1,000 in RAE Region 6, including Boulder County. Statewide, there are 4.8 Medicaid providers per 1,000 Medicaid members.

Table 2. Rate of Health First Colorado Providers Billing Behavioral Health Services per 1,000 Medicaid Members by Region

Region	# of Medicaid Members in 2018/19	# of Medicaid Providers Billing Behavioral Health Services	Medicaid Provider Rate per 1,000
Region 1	228,169	1,249	5.5
Region 2	103,709	316	3.0
Region 3	343,404	1,940	5.6
Region 4	152,471	415	2.7
Region 5	246,674	1,427	5.8
Region 6	176,466	1,227	7.0
Region 7	222,226	882	4.0
Colorado*	1,557,421	7,456	4.8

**Note: There are an additional 84,302 Medicaid members not assigned to a RAE or are Fee for Service (making regional assignment difficult). Source: Health First Colorado provider list, May 2020*

Key Takeaway: **The provider network is more robust in Boulder County compared to RAE Region 6 overall or Colorado statewide. However, there is geographic disparity in access to the provider network.**

Continuum of Services

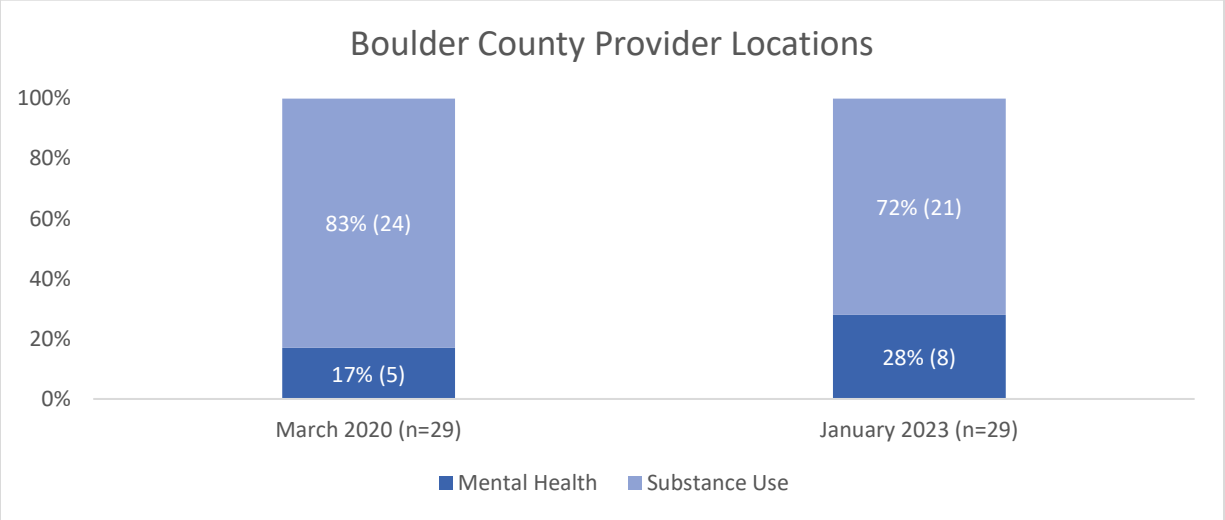
Cataloging specific behavioral health services requires data sources that detail specific services offered, locations of the service, populations served and providers delivering the serve. This includes getting detailed information on specific program locations (e.g., crisis stabilization units, mobile crisis coverage, outpatient clinics, residential services and even specific evidence-based practices such as Assertive Community Treatment (ACT).

The Substance Abuse Mental Health Services Administration's (SAMHSA) Behavioral Health Treatment Services Locator ("SAMHSA Locator")—a provider (organization) list used to understand mental health and substance use treatment locations in Boulder. For more on the SAMHSA provider locator data, see Appendix A.

Analysis of the SAMHSA Locator data offers the most detail on specific services provided across the continuum. As of March 2020, the SAMHSA locator included 533 provider locations in Colorado offering behavioral health in Colorado, of which 66 percent (n=352) reported providing both mental health and substance use treatment services, with 28 percent (n=149) offering substance use treatment only and six percent (n=32) offering mental health treatment only. Of these locations, 33 percent (n=176) were associated with a Community Mental Health Center (CMHC). Additionally, 10 percent (n=48) identified as "withdrawal management" and 8.3 percent (n=24) identified as "transitional housing, halfway house or sober living."

In Boulder County, in March 2020, 17% of provider locations were a mental health facility and 83% were substance use facility. As shown in Figure 3, by January 2023, the percentage of mental health facilities increased to 28% while the substance use provider locations dropped to 72%. For list of organizations and locations included in the SAMHSA locator, see Appendix B.

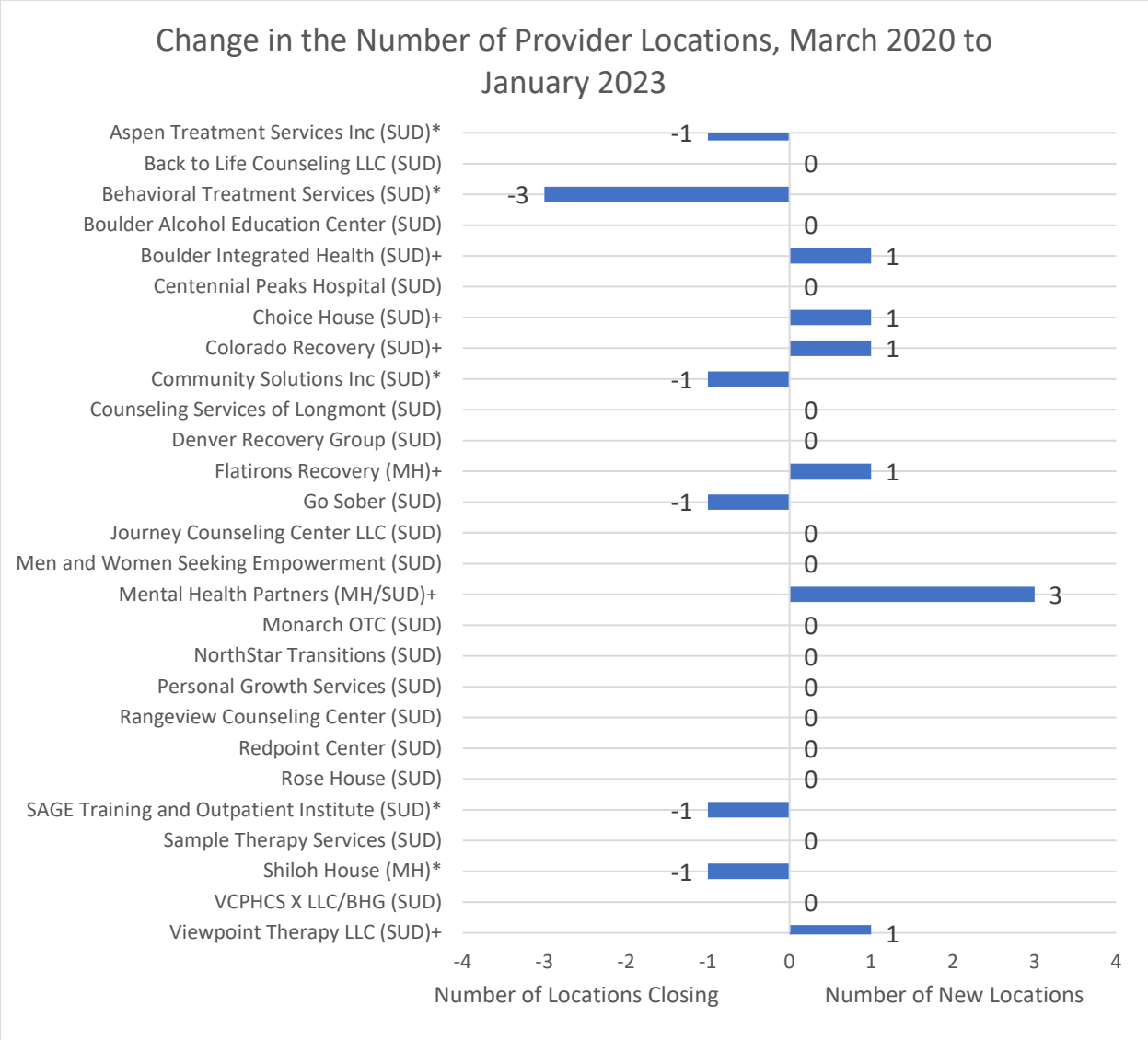
Figure 3 Percent of Locations by Facility Type, 2020 and 2023



Source: SAMHSA Provider Locator, March 2020 and January 2023.

Figure 4 illustrates the change in the number of locations by provider organization between March 2020 and January 2023. Provider organizations that closed include Aspen Treatment Services Inc, Behavioral Treatment Services, Community Solutions, SAGE Training and Outpatient Institute, and Shiloh House. One of two locations at Go Sober closed (6851 South Holly Circle).

Figure 4 Change in the Number of Provider Locations, March 2020 to January 2023



*Note: * Indicates provider organization who closed between March 2020 and January 2023. + Indicates a provider organization who opened or expanded the number of service locations between March 2020 and January 2023. Source: SAMHSA Provider Locator, March 2020 and January 2023.*

For the sake of the assessment, HMA defined the behavioral health continuum of services using the following categories:

- Community-based services
- Child and family support
- Crisis connection and care coordination
- Acute treatment services

- Outpatient
- Medication assisted treatment (MAT)/Medication management
- Intensive outpatient
- Inpatient
- Intensive case management
- Partial hospitalization
- Residential
- Recovery services
- Transitional services

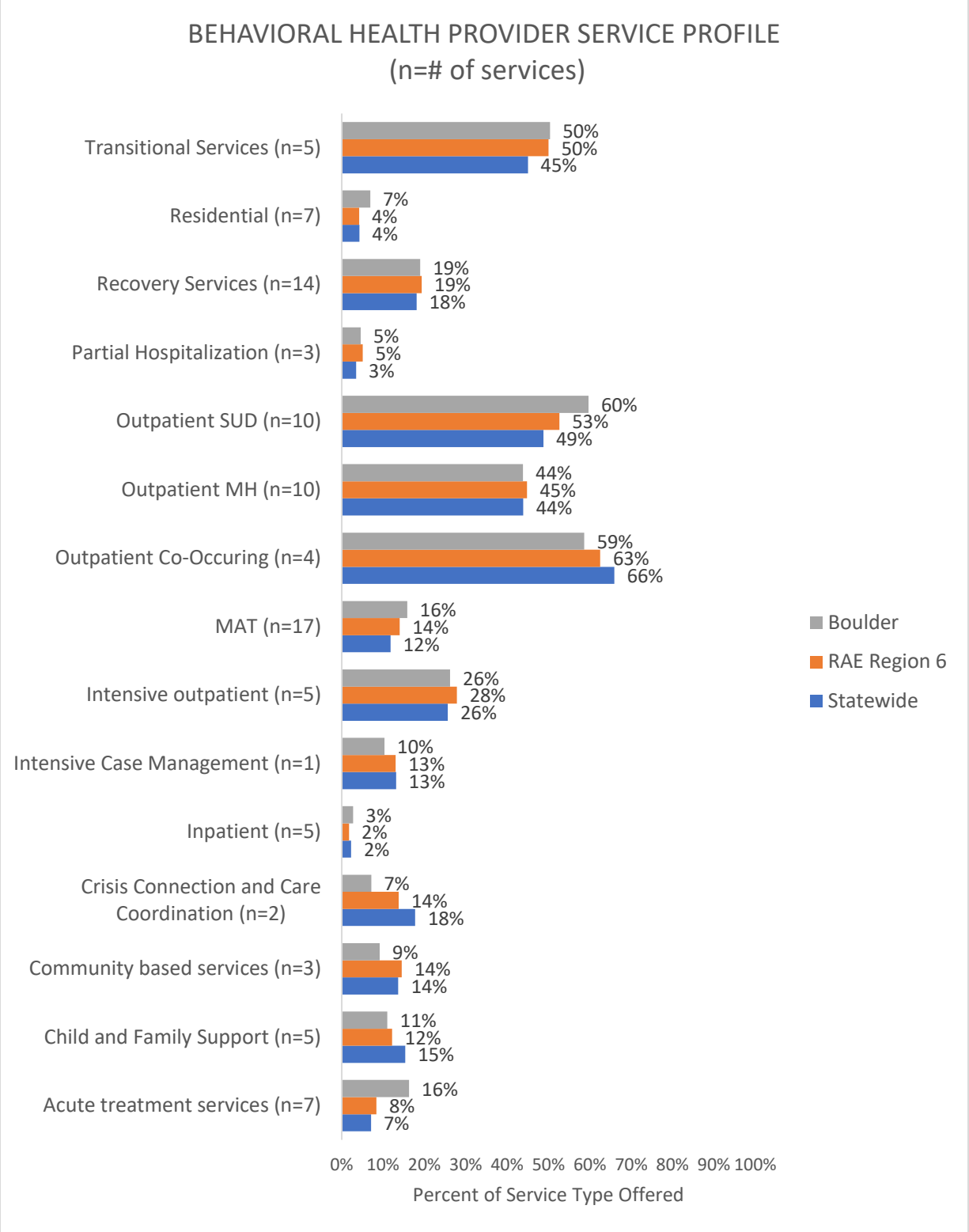
Appendix C describes the specific services included in each category using the service codes provided by the SAMHSA locator. The analysis of the continuum for the 2020 Needs Assessment revealed that, on average, outpatient mental health and/or substance use treatment and transitional services have the most robust service offerings (i.e., the greatest number of service type offered per provider within in each continuum category) across the state. The least robust service offerings are those for the most acute needs, including inpatient, partial hospitalization and residential services.

Statewide stakeholder feedback for the 2020 Needs Assessment indicated that outpatient services are the most common and that more specialized and intensive services are needed. Stakeholders across the state highlighted the need for more transitional services and particularly those for individuals moving from acute services back into the community. Although transitional services were indicated as high in the analysis, when the specific services making up transitional services were identified, it is discharge planning that is high with other parts of transitional services being low. This suggests that the type of transitional service (step down services and intensive outpatient services) is not robust as indicated by stakeholders. Similar shifts in the data occur with access to co-occurring services with case management and outpatient care being high and integrated dual diagnosis and other specialized co-occurring services being low (also what stakeholders reported).

Figure 5 illustrates the 2020 assessment continuum analysis comparing the continuum in Boulder County, RAE Region 6, and statewide**. Analysis suggests the following:**

- **A similar pattern of service offerings along the continuum is found in Boulder County as was identified for the state in the 2020 needs assessment, with outpatient mental health and/or substance use treatment and transitional services having the most robust service offerings.**
- **However, Boulder County has a more robust offering of outpatient substance use treatment, MAT, Acute Treatment, and residential services than RAE Region 6 overall or statewide.**
- **Boulder County has slightly less offerings of co-occuring mental health/substance use services, crisis connection and care coordination compared to RAE Region 6 overall or statewide**

Figure 5 The Average Distribution of Services Offered by Behavioral Health Providers



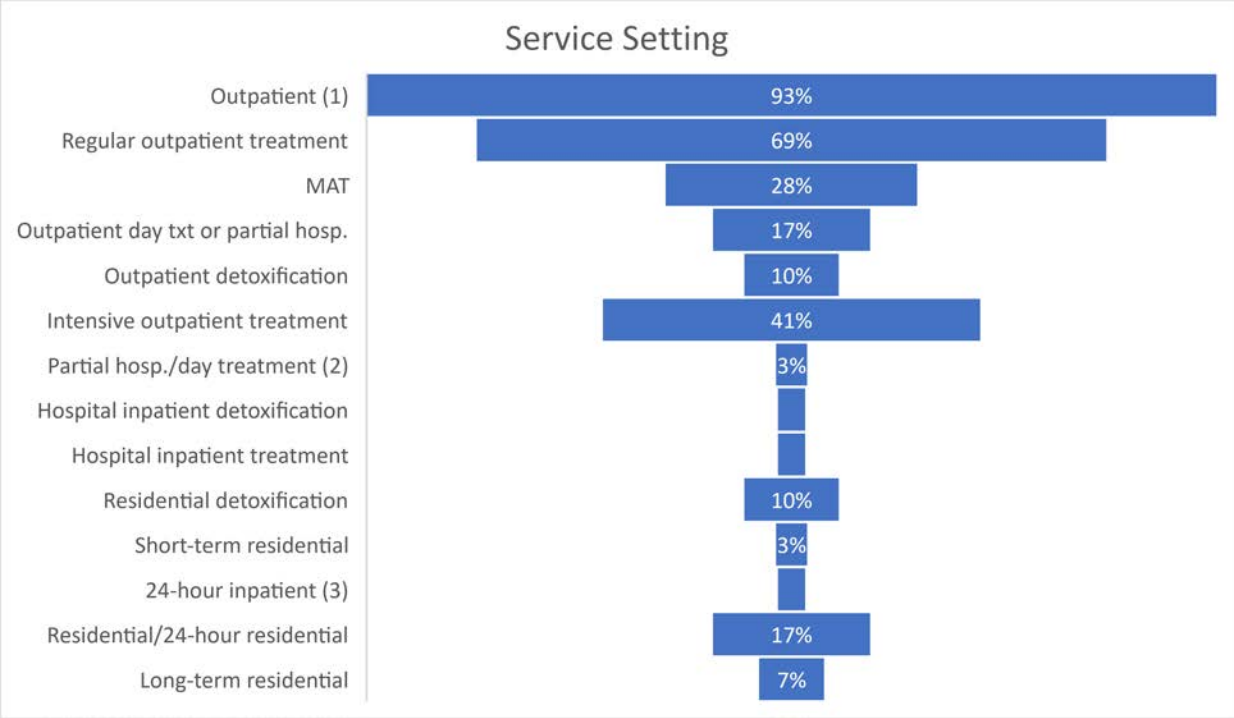
Note: The number of services per continuum category included in the analysis are provided in parenthesis (#). Source: SAMHSA locator, March 2020.

Analysis of January 2023 SAMHSA Locator Data

SAMHA locator data asks providers to select their service setting ((e.g., Outpatient, Residential, Inpatient, etc.). The service setting is another way to show the continuum of services from outpatient to intensive outpatient, inpatient and residential service offerings. Analysis of these data show a similar continuum as was identified in the 2022 NA continuum analysis. Notable differences include:

- 43% of provider locations offer intensive outpatient treatment setting
- 29% of provider locations offer MAT
- 18% of provider locations offering residential/24-hour residential.

Figure 6 Percent of Provider Locations in Boulder County by Service Setting



Note: 1. "Outpatient" describes patients who receive treatment services without an overnight stay at a treatment facility or hospital. 2. "Partial hospitalization/day treatment" describes care for offer outpatient treatment services, such as group counseling, individual therapy, and access to medical care, if needed. It is best for people who do not require 24-hour supervision, but who would still benefit from a high level of support." 3. "Hospital inpatient/24-hour hospital inpatient" describes medical treatment that is provided in a hospital or other facility and requires at least one overnight stay. Source: SAMHSA Locator, January 2023.

Key Takeaway: **Together, these analyses suggest that Boulder County has a more robust continuum of services compared to RAE Region 6 overall and Colorado. However, as noted above with the safety net population and provider locations, proximity of services for populations most in need may create access issues.**

Specialty Services

As found in the 2020 Needs Assessment, services with intensive and targeted case management and monitoring of the individual, such as evidence based assertive community treatment, have grown in the state but gaps remain, particularly in rural areas. At this time, statewide stakeholders described a need for greater focus on intensive outpatient programs, especially those that can be tailored to priority populations (e.g., assertive community treatment, intensive case and care management, high intensity wrap around, dialectical behavior therapy, intensive outpatient for substance use).

In Boulder County, as shown in Table 3 less than 30% of provider locations offer these types of specialty services.

Table 3 Specialty Services Among Boulder County Provider Locations

	Assertive community treatment	Illness management and recovery	Intensive Case Management	Dialectical behavior therapy
Number of Locations	2	1	7	8
Percent of Locations	7%	3%	24%	28%

Source: Source: SAMHSA Locator, January 2023.

Crisis Mental Health Services

Approximately one in five provider locations offer a type of emergency mental health service, as shown in Table 4

Table 4 Emergency Mental Health Services

	Crisis intervention team	Psychiatric emergency onsite services	Psychiatric emergency mobile/off-site services	Psychiatric emergency walk-in services
Number of Locations	7	6	6	0
Percent of Locations	24%	21%	21%	0%

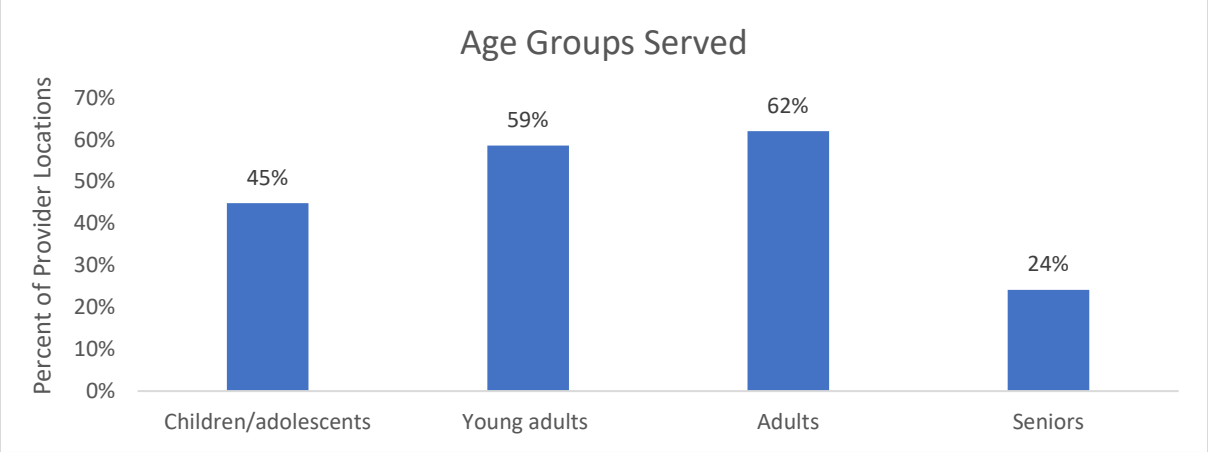
Source: Source: SAMHSA Locator, January 2023.

Adequacy of the Continuum of Services and Provider Network

Age Groups Served

As shown in Figure 7, in Boulder County, young adults (ages 18-25 years) and adults (ages 26 to 64 years) are the age groups most commonly receiving services (61 percent and 64 percent, respectively). Children/adolescents (ages 12 years and younger) and older adults (ages 65 years and older) are reported to be served by less than half of the behavioral health provider locations.

Figure 7 Age Groups Served Among Provider Locations in Boulder County



Note: Age Groups served are not mutually exclusive. A provider can serve more than one age group. Source: SAMHSA Locator January 2023.

Populations Served

Table 5 presents the number and percent of provider locations in Boulder County who have a program or group specifically tailored for a specific population. Nearly 80% of the provider locations have a program or group specific for clients with co-occurring mental and substance use disorders (SUD) or clients who have experienced trauma. The justice involved population have programs at 59% of the provider location**s. Programs or groups specific for clients with serious mental illness (SMI) or serious emotional disturbance (SED) are reported to be at less than 20% of the provider locations.**

Table 5 Number and Percent of Provider Locations in Boulder County Who Have a Program Or Group Specifically Tailored For A Specific Population

Populations as defined by SAMHSA Provider Locator Data	Percent of Locations	Number of Locations
Clients with co-occurring mental and substance use disorders	79%	23
Clients who have experienced trauma	79%	23
Criminal justice (other than DUI/DWI)/Forensic clients	59%	17
Seniors or older adults	55%	16
Adult men	52%	15
Adult women	45%	13
Veterans	45%	13
Lesbian, gay, bisexual, transgender, or queer/questioning (LGBTQ)	41%	12
Clients who have experienced sexual abuse	41%	12
Clients who have experienced intimate partner violence, domestic violence	34%	10
Active-duty military	31%	9
Members of military families	31%	9
Clients with co-occurring pain and substance use disorders	31%	9
Pregnant/postpartum women	24%	7
Persons with post-traumatic stress disorder (PTSD)	24%	7

Populations as defined by SAMHSA Provider Locator Data	Percent of Locations	Number of Locations
Clients with HIV or AIDS	21%	6
Persons 18 and older with serious mental illness (SMI)	21%	6
Children/adolescents with serious emotional disturbance (SED)	10%	3
Persons with traumatic brain injury (TBI)	3%	1
Persons experiencing first-episode psychosis	3%	1
Persons with Alzheimer's or dementia	0%	0
Persons with eating disorders	0%	0

Source: SAMHSA Locator January 2023.

Key Takeaway: **Children and adolescents, and older adults are age groups with the least provider locations offering the services. Persons 18 and older with SMI or children/adolescents with SED have the fewest locations with a program or group specifically tailored for them.**

Behavioral Health Funder/Payer Type Accepted

All provider locations accept cash or self-payment. More provider locations accept private health insurance (69%) than public insurance. Less than half of provider locations accept Medicaid (48%).

Figure 8 Payment/Insurance/Funding Accepted

Payment/Insurance/Funding Accepted Type	Number of Provider Locations	Percent of Provider Locations
Cash or self-payment	29	100%
Private health insurance	20	69%
Medicaid	14	48%
State-financed health insurance plan other than Medicaid	14	48%
Federal military insurance (e.g., TRICARE)	13	45%
Medicare	11	38%
State mental health agency (or equivalent) funds	7	24%
County or local government funds	6	21%
Community Mental Health Block Grants	6	21%
Community Service Block Grants	6	21%
Federal, or any government funding for substance use treatment programs	6	21%
Other State funds	6	21%
Private or Community foundation	6	21%
State welfare or child and family services funds	6	21%
U.S. Department of VA funds	6	21%
SAMHSA funding/block grants	3	10%

Payment/Insurance/Funding Accepted Type	Number of Provider Locations	Percent of Provider Locations
IHS/Tribal/Urban (ITU) funds	1	3%
Federal Grants	0	0%
No payment accepted	0	0%
State corrections or juvenile justice funds	0	0%
State education agency funds	0	0%

Source: SAMHSA Buprenorphine Practitioner Locator, retrieved on January 8, 2023.

Buprenorphine Provider per Capita

An analysis of SAMHSA MAT treatment location suggests that while there is MAT, it may not be enough, as shown in Table 6.[7] There are 62 reported Buprenorphine providers in Boulder County. The number of adults 18 years or older per buprenorphine provider is 4,300. This is higher than in RAE Region 6 at 1,158 and statewide at 1,370 people per Buprenorphine provider.

Table 6 Number of people per Buprenorphine Provider by Region

Region	Pop 18+ Years	Number of Buprenorphine Providers	Number of people per Buprenorphine Providers
Statewide	4,460,441	3,256	1,370
RAE Region 6	802,636	693	1,158
Boulder	266,578	62	4,300

Source: SAMHSA Buprenorphine Practitioner Locator, retrieved on January 8, 2023.

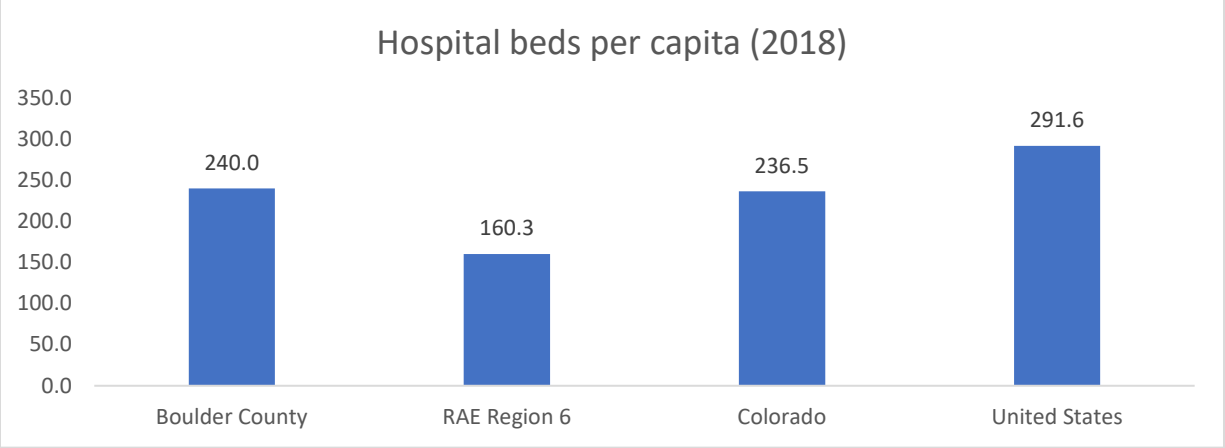
Hospital Beds per Capita

As shown in Figure 9, the number of beds regularly maintained for inpatients, per 100,000 residents, is 240 in Boulder County.[8] The rate in Boulder County is higher than RAE Region 6 overall at 160.3 and slightly higher than Colorado statewide proportion at 236.5. It is lower than the United States rate of 291.6.

[7] https://www.samhsa.gov/medication-assisted-treatment/find-treatment/treatment-practitioner-locator?field_bup_state_value=7

[8] If the hospital owns and operates a nursing home facility then total facility beds is a combined total of hospital plus nursing home unit beds. Newborn bassinets are excluded.

Figure 9 Number of beds regularly maintained for inpatients per 100,000 residents.



Source: Health Resources & Services Administration (HRSA) (AHA Annual Survey of Hospitals via file via Area Health Resources File)

Emergency Department Utilization for Mental Health or Substance Use

Regionally, there is variation across the state on the extent to which the Emergency Department (ED) is used for mental health and/or substance use diagnoses (using primary or secondary diagnoses) among both adults and children**. Table 7 presents findings from the 2020 Needs Assessment suggesting Health Statistics Region (HSR) 16 including Broomfield and Boulder experienced a drop in mental health and/or substance use related ED visits between 2016 and 2019, or a 6% decrease. This drop was also greater than Colorado's overall average (-3%)**

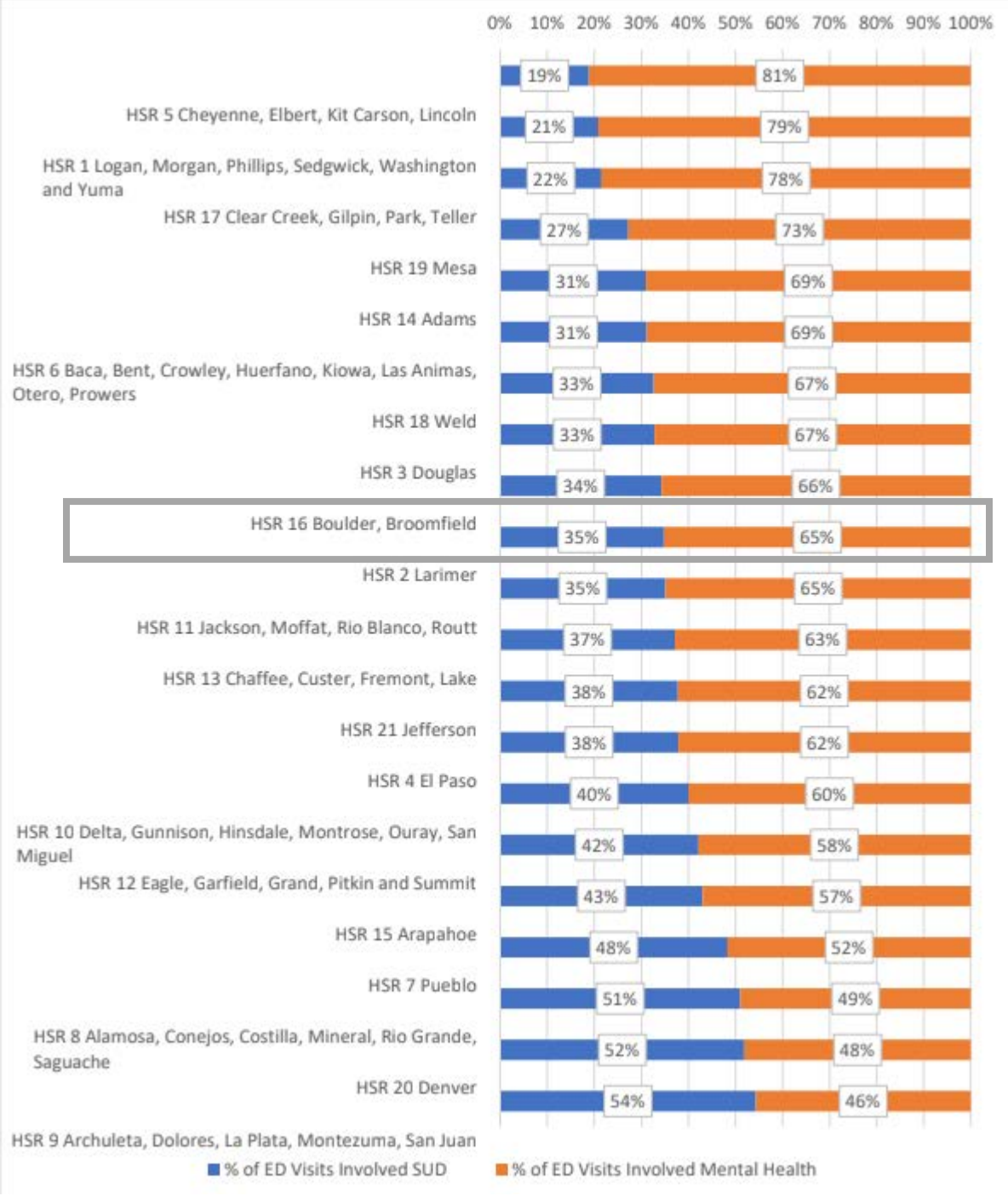
Table 7 Behavioral Health Related ED Visits for HSR 16 and Colorado

	Counties Within Each HSR Region	5 Year Total ED Visits	5 Year Total BH Related ED Visits	% of BH Visits Among All ED Visits*	% Point Difference in ED Visits as Proportion of All ED Visits, 2016 to 2019**
HSR 16	Boulder and Broomfield	485,530	67,471	14%	-6%
Statewide	Colorado	7,813,461	1,048,575	13%	-3%

Source: Colorado Hospital Association ED data, 2015-2019.

Mental health conditions are driving ED utilization at a higher level as shown in Figure 10. In HSR 16, more than two thirds (65%) of behavioral health related ED visits are due to mental health compared to 35% for substance use.

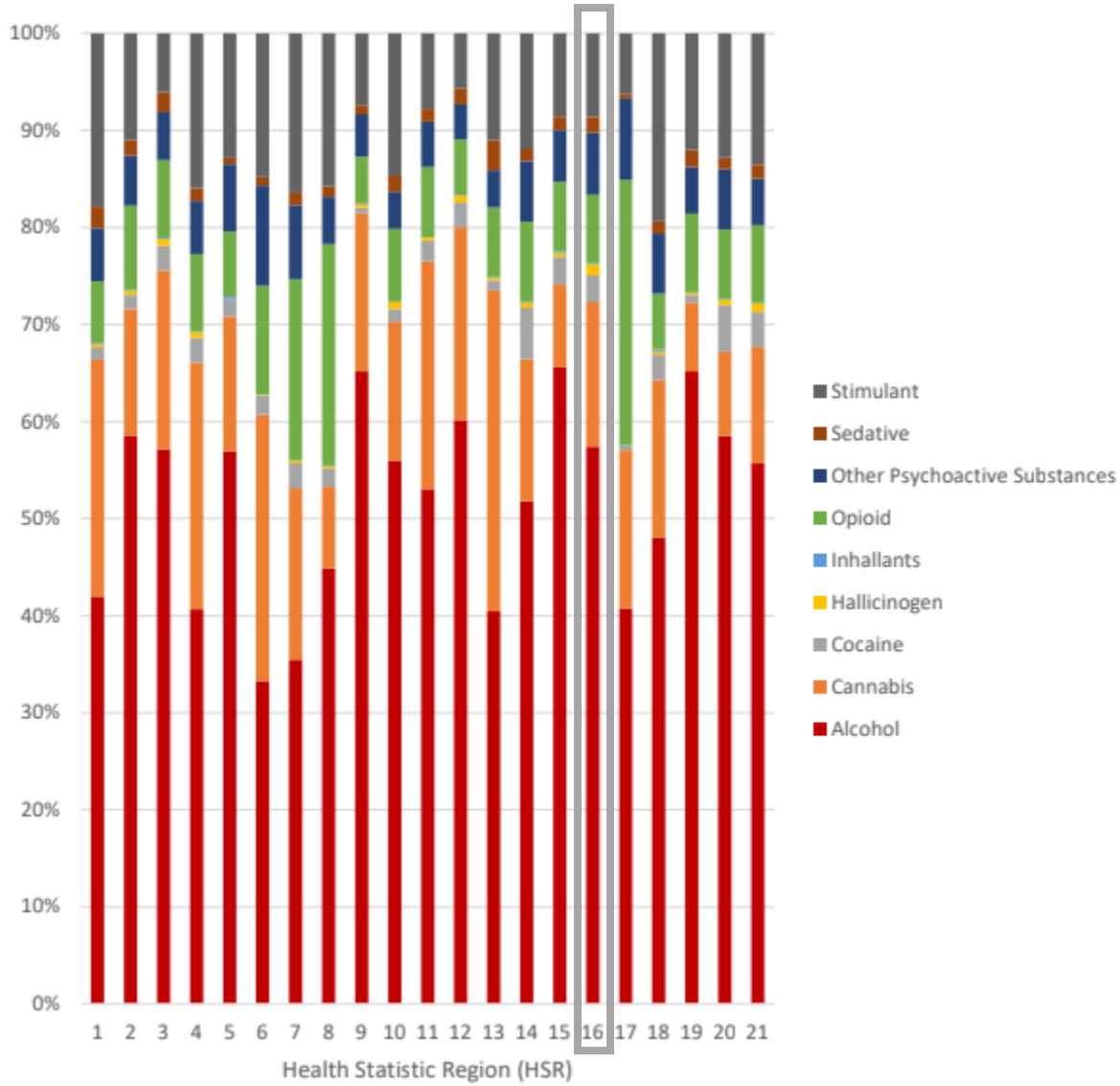
Figure 10 Percent of Mental Health and Substance Use Behavioral Health Visits, 2015 to 2019



Source: Colorado Hospital Association ED data, 2015- 2019.

In HSR 16, alcohol is the most abundant substance use reason for ED visits at nearly 60% of substance use related ED visits, followed by Cannabis and Stimulants.

Figure 11 Percent of Behavioral Health ED Visits by Substance Use Type and HSR, 2015 to 2019

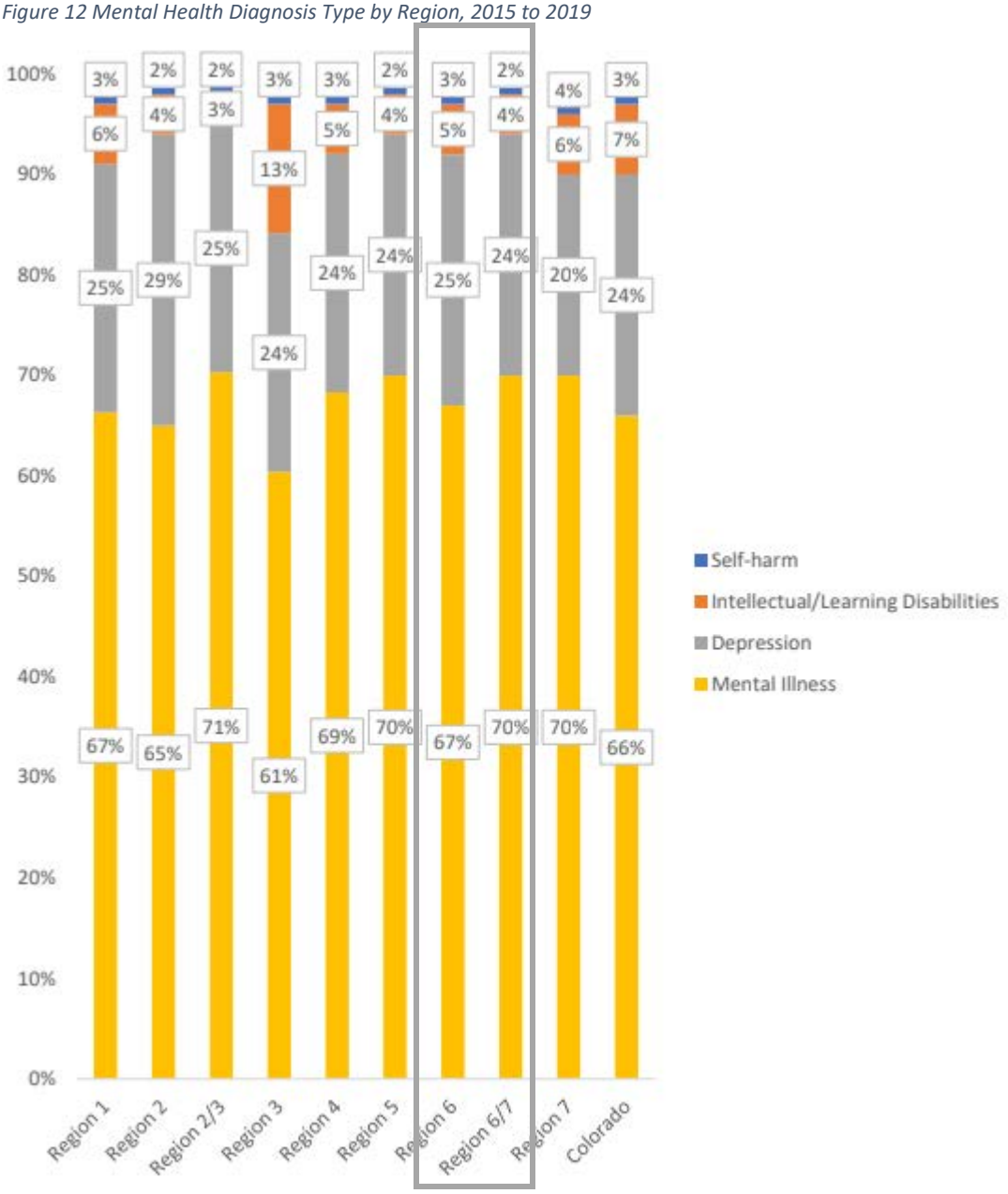


Source: Colorado Hospital Association ED data, 2015- 2019.

Statewide, as identified in the 2020 Needs Assessment, among ED visits related to behavioral health, anxiety and bipolar disorder were the predominant diagnoses (72.2 percent using both primary and secondary diagnosis) followed by depression (25.1 percent), intellectual/learning disabilities (3.7 percent) and self-harm (2.7 percent). In HSR 16, depression made up approximately one in four (24%-25%) of ED visits for mental health diagnosis. Self-harm was 2 to 3%.[9]

[9] Due to the way the data are provided, it is difficult to further define diagnoses or make interpretations. The CHA data has both specific mental health conditions named such as depression and general indication of mental health such as mental health condition. Only some data includes cause for the visit such as self-harm. This is a result of the way hospitals report the data and even how individual physicians document the condition. For example, it is unknown how many people with a diagnosis of mental illness or depression came to the ED as a result of self-harm.

Figure 12 Mental Health Diagnosis Type by Region, 2015 to 2019

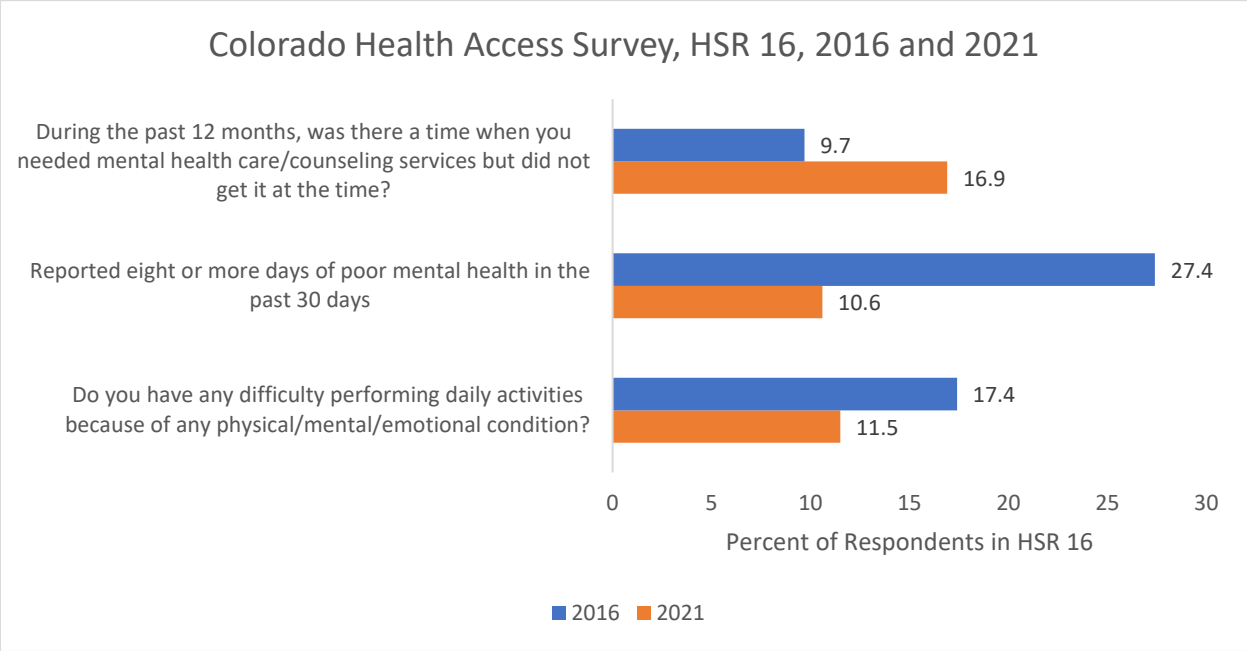


Source: Colorado Hospital Association ED data, 2015- 2019.

Behavioral Health Outcomes and Unmet Need

In HSR 16, between 2016 and 2021, the Colorado Health Access Survey[10] estimates that the prevalence of poor mental health has decreased; however, the percent of the population who needed mental health care/counseling services but did not get it at the time had increased (Figure 13). Nearly 17% of adults (18+ years old) had a mental health need but were not able to get services at the time of need, an increase from nearly 10% in 2016.

Figure 13 Mental Health Prevalence and Access to Care



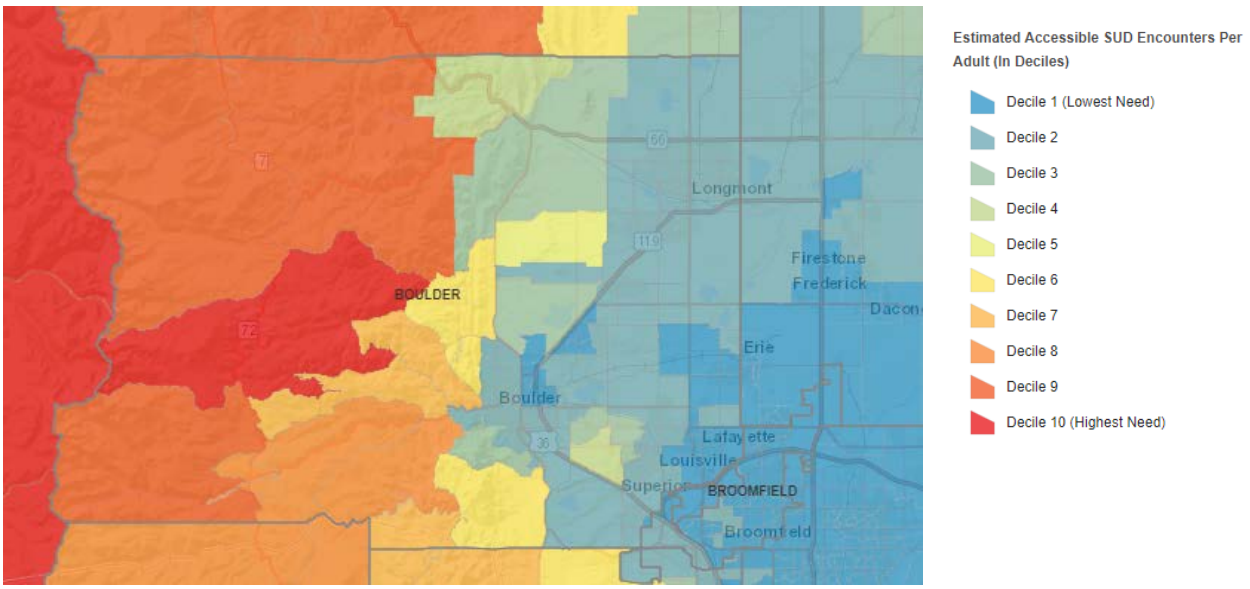
Source: Colorado Health Access Survey, 2016 and 2021.

Figure 14 is a map of Boulder County that represent the number of SUD treatment services encounters available to resident males and females ages 18 and above who are experiencing an episode of SUD. Census block groups that are not blue fall below an estimated provider capacity of eight visits per person affected by SUD and may receive formal designation as a SUD-HPSA.[11]

[10] Colorado Health Access Survey 2021 | Colorado Health Institute

[11] SB 18-024 created authority for state designation of Health Professional Shortage Areas (HPSA) which will exist in parallel to federal HPSA designations. This authority is important because CDPHE has found that current federal methods do not adequately inform state decisions regarding emerging needs for improved health care services related to the treatment of SUD. Federal methods do not consider the unique systems and professions required to deliver comprehensive SUD care or consider the population level indicators of risk for SUD. For example, federal rules only measure physicians boarded in psychiatry when evaluating workforce capacity rather than the full range of behavioral health professionals and assume a constant rate of need for care within a population regardless of age, sex or other demographic factors that correlate with SUD risk.

Figure 14 Estimated Accessible SUD Encounters Per Adult Age 18+

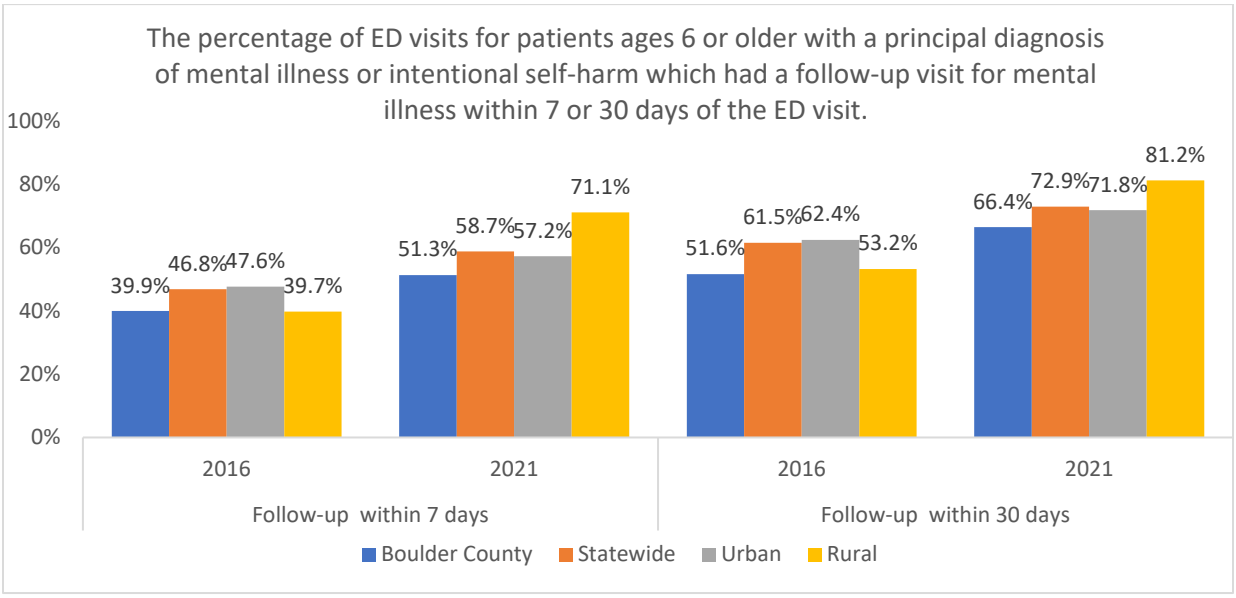


Source: CDPHE https://cdphe.maps.arcgis.com/apps/SimpleViewer/index.html?appid=9f17f6155cde42aab58b0ccf65a179d5

Mental Health ED Visits Follow-Up Care

The percentage of ED visits for patients ages 6 or older with a principal diagnosis of mental illness or intentional self-harm which had a follow-up visit for mental illness within 7 or 30 days of the ED visit was lower in Boulder County compared to Statewide, including both rural and urban geographies, between 2016 and 2021. Follow up rates were improving between 2016 and 2021.

Figure 15 Follow-up visit for mental illness within 7 or 30 days of the ED visit



Source: CIVHC Community Dashboard, retrieved on January 8, 2023.

Suicide Rates

- Age-adjusted suicide rate per 100,000 population, which has increased from 16.3 in 2016 (54 suicides) to 20.05 (72 suicides) in 2021 (not significant though)

Drug Overdose Rates

Below are findings for Boulder County related to opioid overdose rates

- Average annual age-adjusted rate of drug overdose deaths per 100,000 residents, from 15.0 in 2020 (52 deaths) to 15.9 (56 deaths) per 100,000 in 2021 (any drug, not a significant change)
    - For any opioid overdose (prescription or heroin) dropped from 11.0 (38 deaths) to 10.0 (36 deaths) per 100,000 (not a significant change)
- Age-adjusted rates of drug overdose hospital admissions at acute care hospitals which was decreasing between 2016 from 71.5 (239 hospital admissions) to 43.8 per 100,000 (153 admissions) in 2021 (for all drugs).
    - For drugs with potential for abuse, 40.9 per 100,000 residents (138 admissions) in 2016 to 25.7 per 100,000 residents (94 admissions) in 2021.
- Age-adjusted rates of drug overdose for ED Visits has remained stable between 2016 at 134.8 per 100,000 residents (431 ED visits) to 2021 to 130.3 per 100,000 residents (417 visits) in 2021
    - Drugs with potential for abuse ED visits decreased from 54.2 per 1,000 residents (177 ED visits) in 2016 to 47.5 per 100,000 residents (157 ED visits) in 2021 for drugs with potential for abuse.

Summary of Findings

Overall, data suggest that Boulder County has a more robust continuum of services compared to RAE Region 6 as a whole and Colorado statewide. However, proximity of services for populations most in need and the extent to which culturally competent and population-specific programs (e.g., adults with serious mental illness (SMI), child/adolescents with serious emotional disturbance (SED) are available may still create access considerations. Key takeaways by section include:

Safety Net population

- Provider locations are in proximity of the census tracts areas with the highest safety net population need – however there is not a direct alignment. The Census tracts with highest need must travel approximately up to 5 miles in Boulder and Longmont to receive care.

Provider Network

- Boulder County has a higher ratio of providers per 1,000 residents than RAE Region 6 overall and the Statewide ratio (4.64 disciplines per 1,000 residents in Boulder County). As with the state and RAE Region 6, Boulder County's the top three providers by discipline in Boulder County's network are Licensed Professional Counselor, Licensed Clinical Social Worker, and Psychologists.

- The provider network is more robust in Boulder County compared to RAE Region 6 overall or Colorado statewide network numbers. However, there is geographic disparity in access to the provider network.

Continuum of Services

- A similar pattern of service offerings along the continuum is found in Boulder County as was identified for the state in the 2020 Needs Assessment, with outpatient mental health and/or SUD treatment and transitional services having the most robust service offerings. However, Boulder County has a more robust offering of Outpatient SUD, MAT, Acute Treatment, and residential services than RAE Region 6 overall or the statewide average continuum.
- Boulder County has a slightly less offering of co-occuring mental health/SUD services compared to RAE Region 6 overall or the statewide average.

Adequacy of the Continuum of Services

- Children and adolescents, and older adults are age groups with the least provider locations offering relevant services. Persons 18 and older with SMI or children/adolescents with SED have the fewest locations with a program or group specifically tailored for them.
- All provider locations accept cash or self-payment. More provider locations accept private health insurance (69%) than public insurance. Less than half of provider locations accept Medicaid (48%).

Behavioral Health Outcomes and Unmet need

- In HSR 16, between 2016 and 2021, the Colorado Health Access Survey estimates that the prevalence of poor mental health has decreased; however, the percent of the population who needed mental health care/counseling services but did **not** get it at the time increased. Nearly 17% of adults (18+ years old) had a mental health need but were **not** able to get services at the time of need, an increase from nearly 10% in 2016.
- The percentage of ED visits for patients ages 6 or older with a principal diagnosis of mental illness or intentional self-harm which had a follow-up visit for mental illness within 7 or 30 days of the ED visit was lower in Boulder County compared to Statewide, including both rural and urban geographies, between 2016 and 2021. Follow up rates were improving between 2016 and 2021.
- Age-adjusted suicide rate per 100,000 population, which has increased from 16.3 in 2016 (54 suicides) to 20.05 (72 suicides) in 2021 (this is not statistically significant).

Appendix A: About the SAMHSA provider locator dataset

About the SAMHSA Provider Location data source

- About the data source: https://findtreatment.samhsa.gov/locator/about.html#.XnJw-ihKiUk
- The Behavioral Health Treatment Services Locator is a product of SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ). The Locator is compiled from responses to CBHSQ's annual surveys of treatment facilities (the National Survey of Substance Abuse Treatment Services and the National Mental Health Services Survey).

- Eligible mental health treatment facilities include:
    - Facilities that provide mental health treatment services and are funded by the state mental health agency (SMHA) or other state agency or department
    - Mental health treatment facilities administered by the U.S. Department of Veterans Affairs
    - Private for-profit and non-profit facilities that are licensed by a state agency to provide mental health treatment services, or that are accredited by a national treatment accreditation organization (e.g., The Joint Commission, NCQA, etc.)

- Eligible substance use and addiction treatment facilities must meet at least one of the criteria below:
    - Licensure/accreditation/approval to provide substance use treatment from the state substance use agency (SSA) or a national treatment accreditation organization (e.g., The Joint Commission, CARF, NCQA, etc.)
    - Staff who hold specialized credentials to provide substance use treatment services
    - Authorization to bill third-party payers for substance use treatment services using an alcohol or drug client diagnosis

- Facilities that are not eligible for the Behavioral Health Treatment Services Locator include:
    - Facilities that provide either mental health or substance use treatment exclusively to persons who are incarcerated
    - Facilities whose primary or only focus is the provision of services to persons with Mental Retardation (MR), Developmental Disability (DD), or Traumatic Brain Injuries (TBI)
    - Mental health professionals in private practice (individual) or in a small group practice not licensed or certified as a mental health clinic or (community) mental health center
    - The Behavioral Health Treatment Services Locator displays the street address at which services are provided. Organizations delivering services at different locations are requested to supply information about the services at each location, although a central intake number may be displayed if requested.

Appendix B: SAMHSA Locator Provider Locations in Boulder County

	Boulder	Lafayette	Longmont	Louisville	Total Locations
Back to Life Counseling LLC			**1**		**1**
500 9th Avenue			1		1
Boulder Alcohol Education Center	**1**				**1**
1525 Spruce Street	1				1
Boulder Integrated Health	**1**				**1**
2429 Broadway	1				1
Centennial Peaks Hospital				**1**	**1**
2255 South 88th Street				1	1
Choice House				**1**	**1**
315 West South Boulder Road				1	1
Colorado Recovery	**1**				**1**
1143 Portland Place	1				1
Counseling Services of Longmont			**1**		**1**
24 9th Avenue			1		1
Denver Recovery Group	**1**				**1**
5330 Manhattan Circle	1				1
Flatirons Recovery		**1**			**1**
2770 Dagny Way		1			1
Go Sober			**1**		**1**
752 17th Avenue			1		1
Journey Counseling Center LLC			**1**		**1**
1801 Sunset Place			1		1
Men and Women Seeking Empowerment		**1**			**1**
1300 Plaza Court North		1			1
Mental Health Partners	**4**	**2**	**2**		**8**
1000 Alpine Avenue	1				1
1455 Dixon Avenue		2			2
2833 Broadway Street	1				1
3180 Airport Road	1				1
3470 Broadway	1				1
515 Coffman Street			1		1
834 South Sherman Street			1		1
Monarch OTC		**1**			**1**
12067 Baseline Road		1			1
NorthStar Transitions	**1**				**1**
3004 Arapahoe Avenue	1				1
Personal Growth Services	**1**				**1**

	Boulder	Lafayette	Longmont	Louisville	Total Locations
2305 Canyon Boulevard	1				1
Rangeview Counseling Center		**1**			**1**
103 East Simpson Street		1			1
Redpoint Center			**1**		**1**
1375 Ken Pratt Boulevard			1		1
Rose House		**1**			**1**
601 Snowpeak Lane		1			1
Sample Therapy Services			**1**		**1**
620 Kimbark Street			1		1
VCPHCS X LLC/BHG			**1**		**1**
850 23rd Avenue			1		1
Viewpoint Therapy LLC	**1**				**1**
703 Walnut Street	1				1
Total	**11**	**7**	**9**	**2**	**29**

Appendix C: Defining the Continuum of Behavioral Health Services

Community based services	Child and Family Based Services	Crisis Connection and Care Coordination	Acute treatment services	Outpatient SUD	Outpatient MH	Outpatient Co-Occurring	MAT
• Education services • Integrated primary care services • Suicide prevention services	• Residential beds for clients' children • Childcare for clients' children • Domestic violence services-family or partner • Family psychoeducation • Couples/family therapy	• Crisis intervention team • Psychiatric emergency walk-in services	• Detox • Outpatient detoxification • Alcohol Detoxification • Benzodiazepines Detoxification • Cocaine Detoxification • Methamphetamines detoxification • Opioid Detoxification	• Substance use treatment • Regular outpatient treatment • Matrix Model • Relapse prevention • SUD counseling approach • 12-step facilitation • Drug and Alcohol Testing • SUD Education	• Mental health treatment • Mental health services • Individual counseling • Group counseling • Family counseling • Individual psychotherapy • Motivational interviewing • Psychotropic medication • Trauma-related counseling • Trauma therapy	• Treatment for co-occurring serious mental health illness/serious emotional disturbance and substance use disorders • Case management • Outpatient • Integrated dual disorders treatment	• Outpatient methadone/buprenorphine or naltrexone treatment • Methadone used in Treatment • Buprenorphine used in Treatment • Naltrexone used in Treatment • SAMHSA-certified Opioid Treatment Program • Buprenorphine detoxification • Buprenorphine maintenance • Buprenorphine maintenance for predetermined time • Methadone detoxification • Methadone maintenance • Methadone maintenance for predetermined time • Prescribes buprenorphine • Administers naltrexone • Relapse prevention from naltrexone • Use methadone/

							buprenorphine for pain management or emergency dosing • Routinely uses medication for detoxification

Intensive outpatient	Inpatient	Intensive Case Management	Partial Hospitalization	Residential	Transitional Services	Recovery Services
• Assertive community treatment • Court-ordered outpatient treatment • Therapeutic foster care • Intensive outpatient treatment • Accepts clients using medication assisted treatment for alcohol use disorder but prescribed elsewhere • This facility administers/prescribes medication for alcohol use disorder • Dialectical behavior therapy	• Hospital inpatient • Hospital inpatient detoxification • Hospital inpatient treatment • Psychiatric hospital or psychiatric unit of a general hospital • Psychiatric hospital	• Intensive Case Management	• Partial hospitalization/day treatment • Outpatient day treatment or partial hospitalization • Partial hospitalization/day treatment	• Residential • Residential detoxification • Long-term residential • Short-term residential • Other residential treatment facility • Residential treatment center (RTC) for adults • Residential treatment center (RTC) for children	• Transitional housing, halfway house, or sober home • Aftercare/continuing care • Discharge Planning • Naloxone and overdose education • Outcome follow-up after discharge • Housing services	• Acupuncture • Assistance with obtaining social services • Diet and exercise counseling • Illness management and recovery • Recovery coach • Psychosocial rehabilitation services • Supported employment • Supported housing • Social skills development • Transportation assistance • Vocational rehabilitation services • Mentoring/peer support/consumer-run services • Nicotine replacement therapy