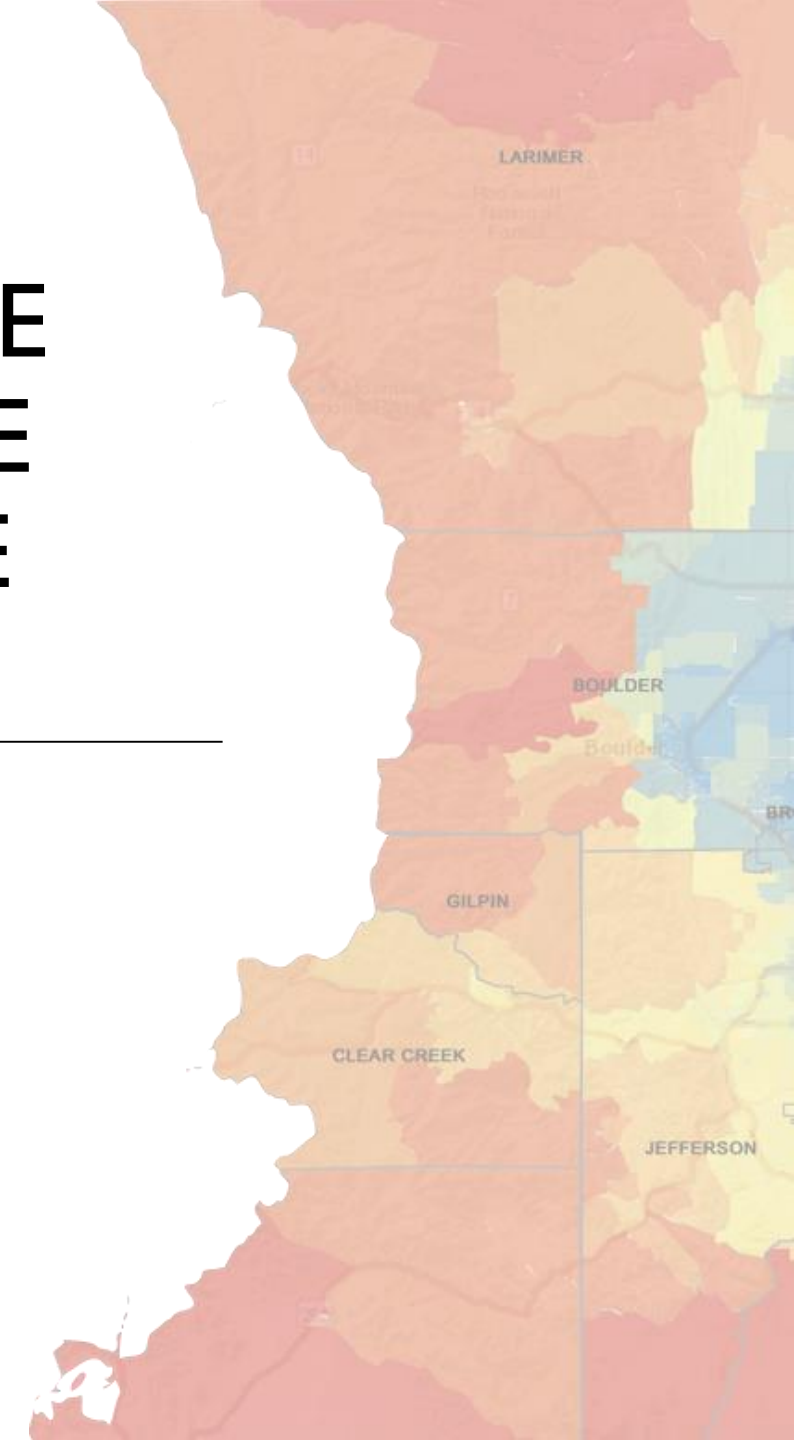


ASSESSING AND EXPANDING THE CLINICAL WORKFORCE FOR THE TREATMENT OF SUBSTANCE USE DISORDER IN COLORADO

Forum on Mental Health and Substance Use Disorders
National Academies of Sciences, Engineering and Medicine
October 15-16, 2019



DISCLOSURES

I have no personal or affiliated financial or non-financial interest in the subject matter or content of this presentation.



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CONTEXT

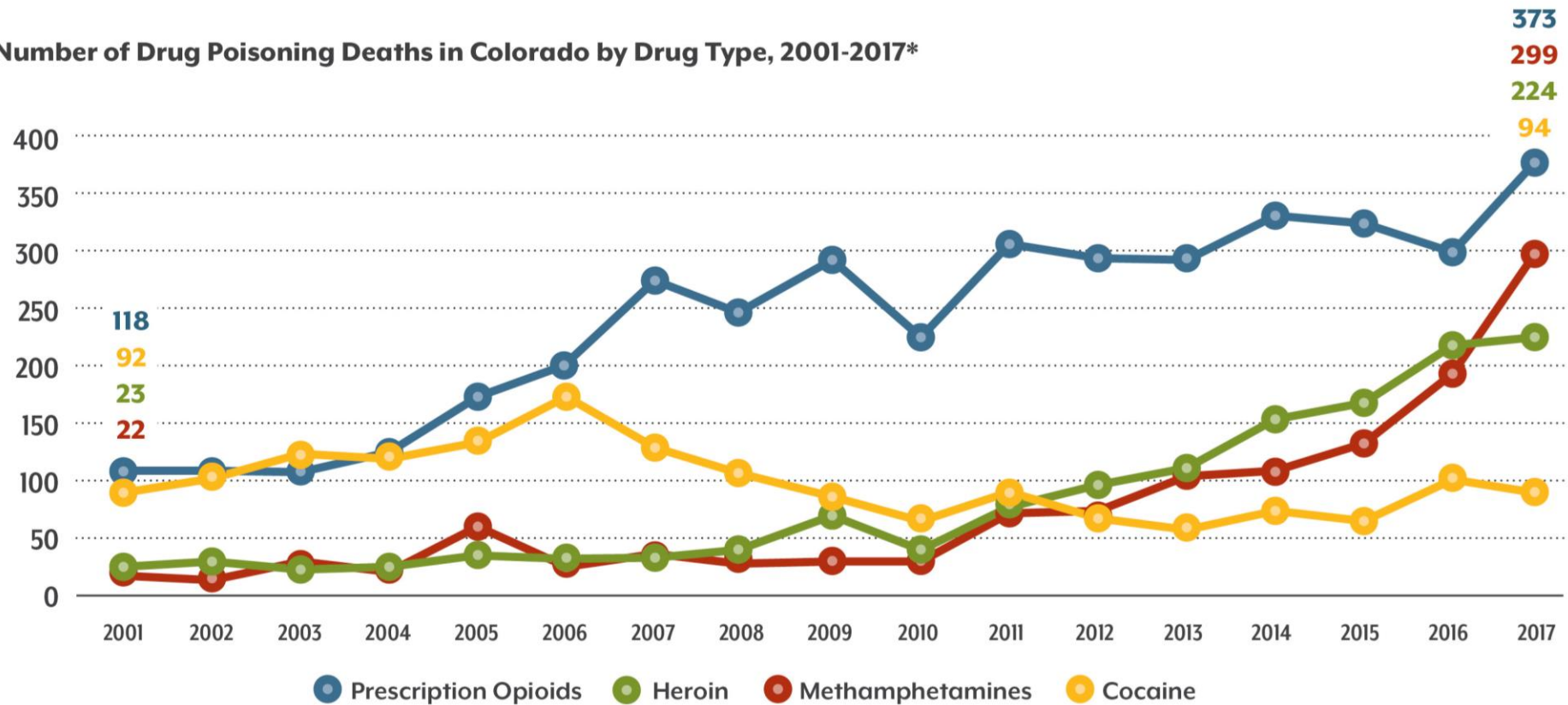
- Like the nation, **Colorado is in the midst of an epidemic of substance use disorder** typified by the non-proscribed use of opioids, methamphetamine and alcohol.
- Though Colorado has a reputation for a healthy population, **the state has higher rates of substance misuse**, suicide and poor access to behavioral health services.



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NUMBER OF DRUG POISONING DEATHS IN COLORADO BY DRUG TYPE, 2001-2017

Number of Drug Poisoning Deaths in Colorado by Drug Type, 2001-2017*



* Categories are not mutually exclusive (may total to more than 100% of total drug overdoses) or comprehensive (other drugs not listed).

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

CONTEXT

- In response to these trends, the Colorado legislature convened an interim study committee on the Opioid and Other Substance Use Disorders in 2018.
- The committee lead the passage of legislation directing the Primary Care Office to **1) improve the assessment of the substance use disorder workforce, 2) expand practice incentives for treatment providers, and 3) implement a scholarship program for certified addiction counseling.**



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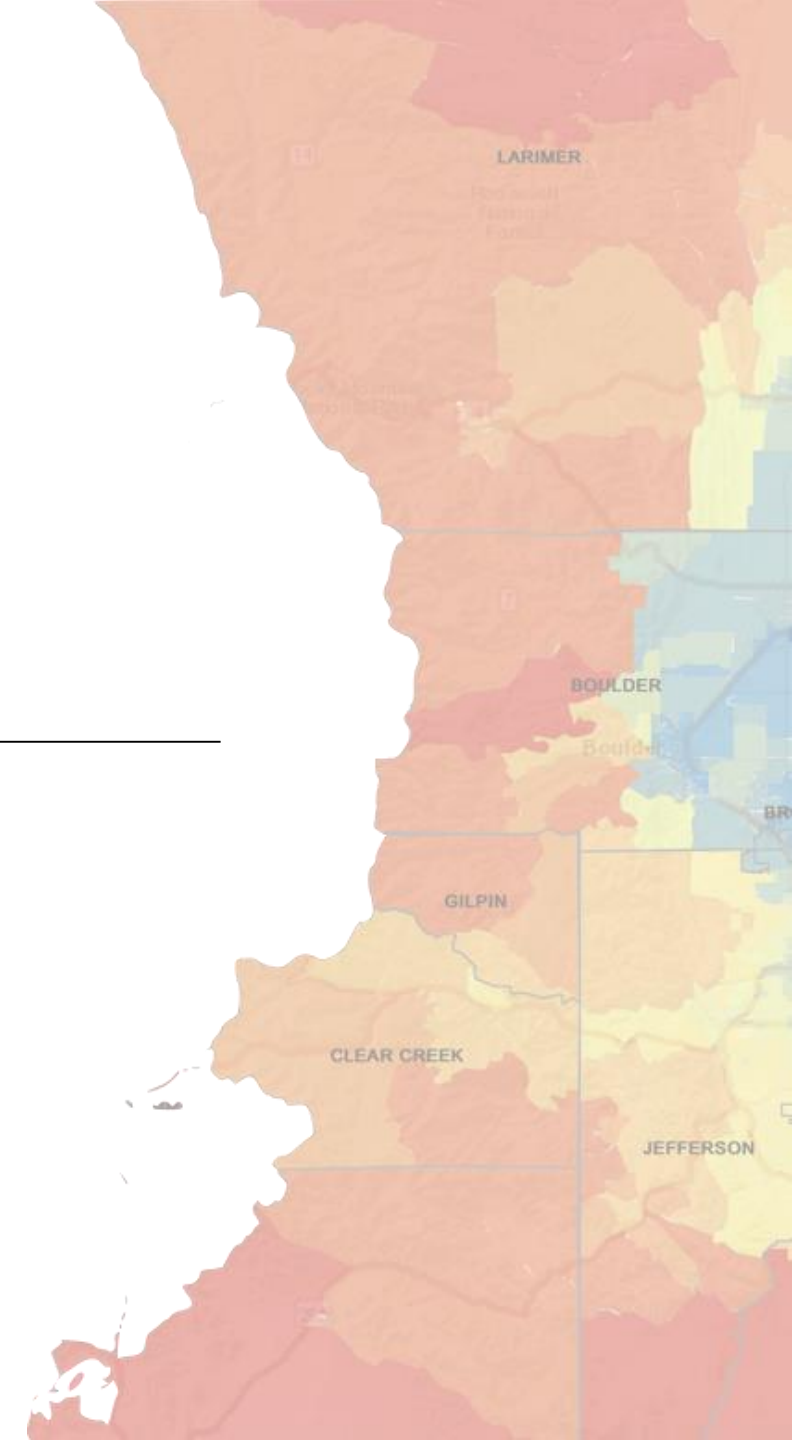
TRACK RECORD

- In 2009, the Colorado Health Service Corps began with \$250,000 available to motivate more care to the uninsured, publicly insured, and low-income Coloradans in poorly served communities. **Program focus did not include SUD treatment.**
- In 2019, the Colorado Health Service Corps will invest \$10.6 million in provider incentives to improve access – **\$3.3 million of which is specifically designated for SUD access capacity.**



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WORKFORCE DATA



WORKFORCE DATA: CHALLENGES

- Current, accurate and comprehensive **provider profile data is required** for effective workforce capacity assessment, directory services, secure messaging and network analysis.
- Information about the workforce changes rapidly, is often incomplete, prone to error, and **segregated in narrow purpose built data systems**.
- Commercial solutions tend to be **limited in scope, expensive and use restrictive**.



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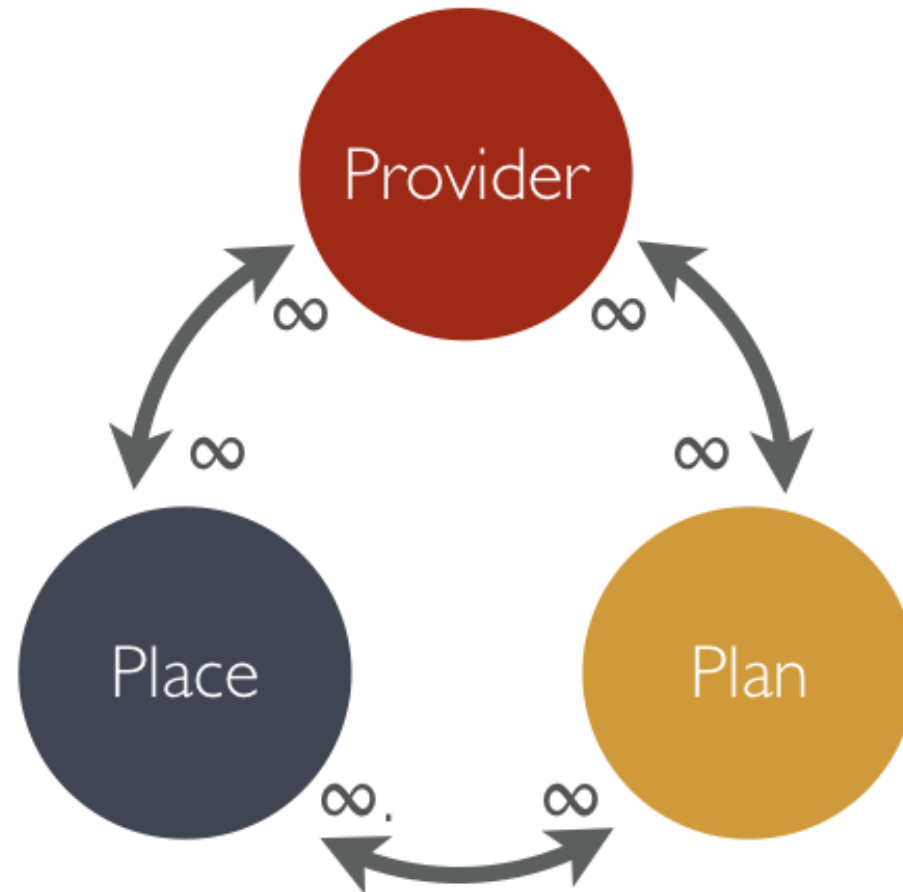
WORKFORCE DATA: STRATEGY

- State and federal **investment in provider data collection is substantial** but uncoordinated and often designed for single use cases.
- Though no single public data set identified was complete, comprehensive, current and standardized, **aggregated datasets can inform state workforce analysis in ways that single sets cannot.**



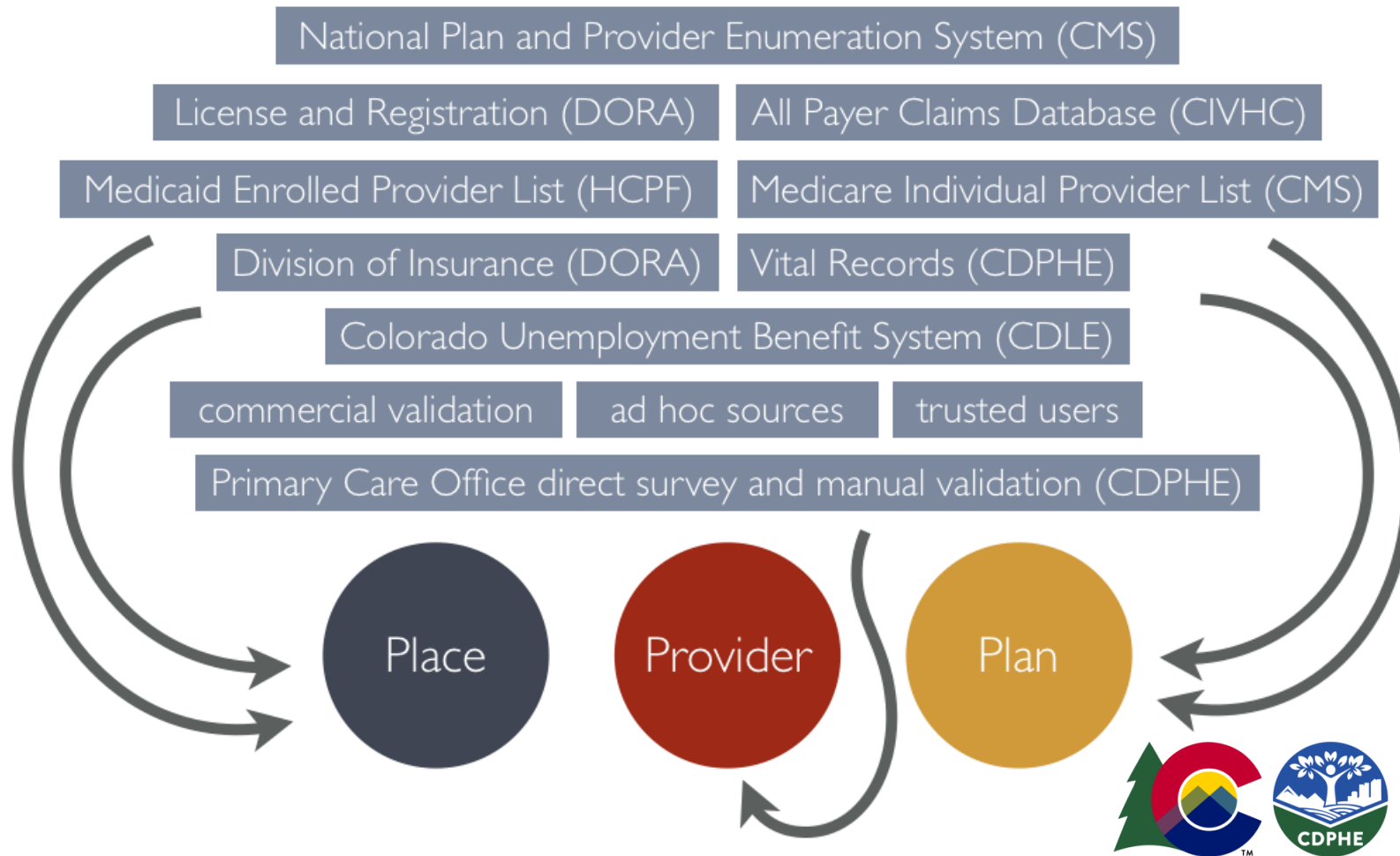
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WORKFORCE DATA: DESIGN

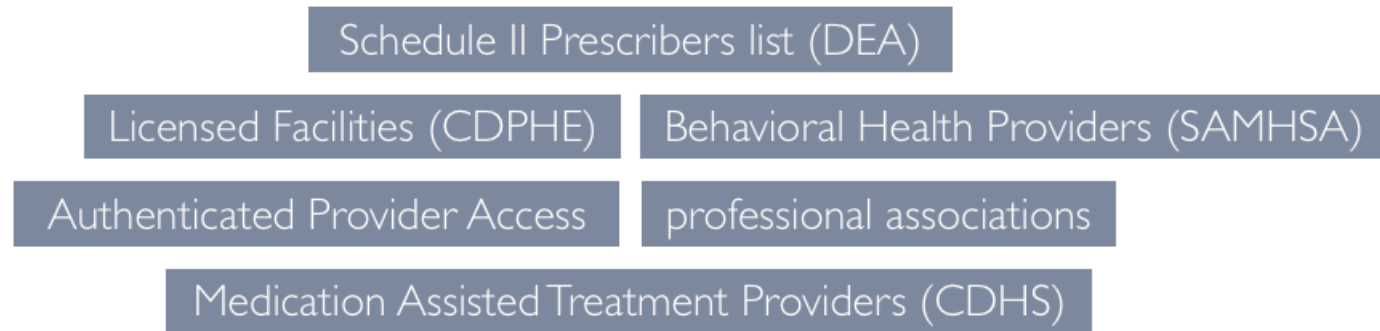


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WORKFORCE DATA: SOURCES



WORKFORCE DATA: FUTURE SOURCES



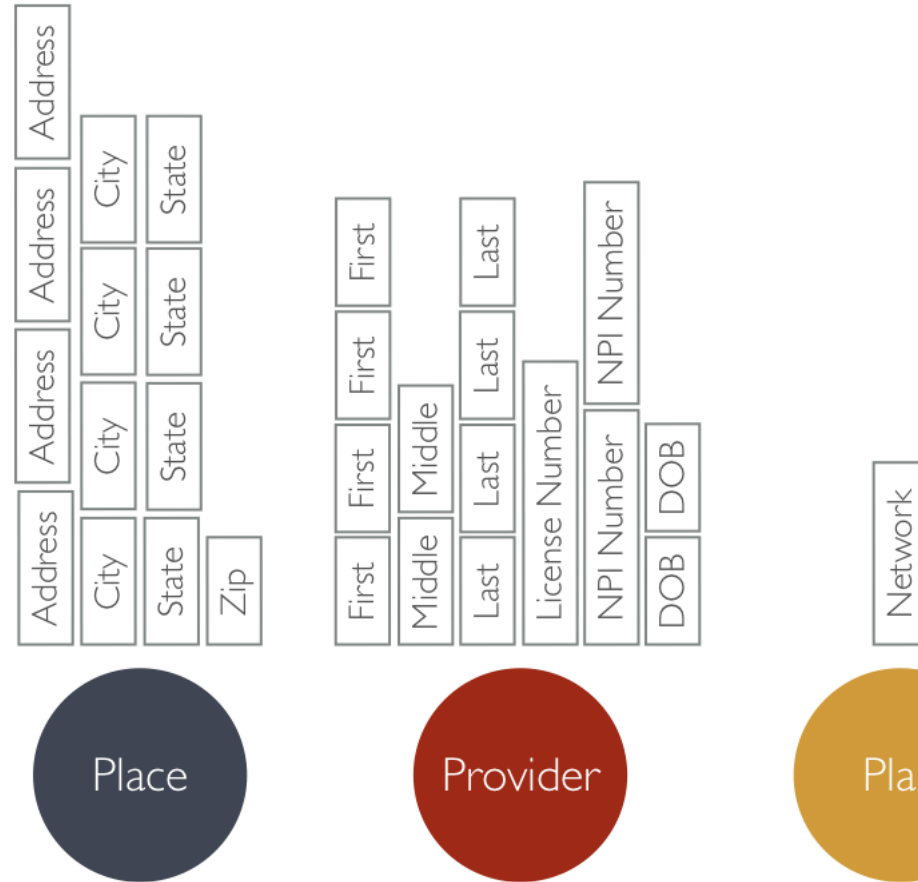
DATA STRATEGY: PARCSING & ANALYSIS

NPI	First	Middle	Last	License Number	Address	City	State	
Licence	First	Last	NPI Number	Address	City	State	Network	
APCD	Address	City	State	DOB	Zip	First	Last	NPI Number
PCO	First	Middle	Last	DOB	Address	City	State	



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DATA STRATEGY: PARCSING & ANALYSIS



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DATA STRATEGY: RESULTS

Colorado Health Systems Directory

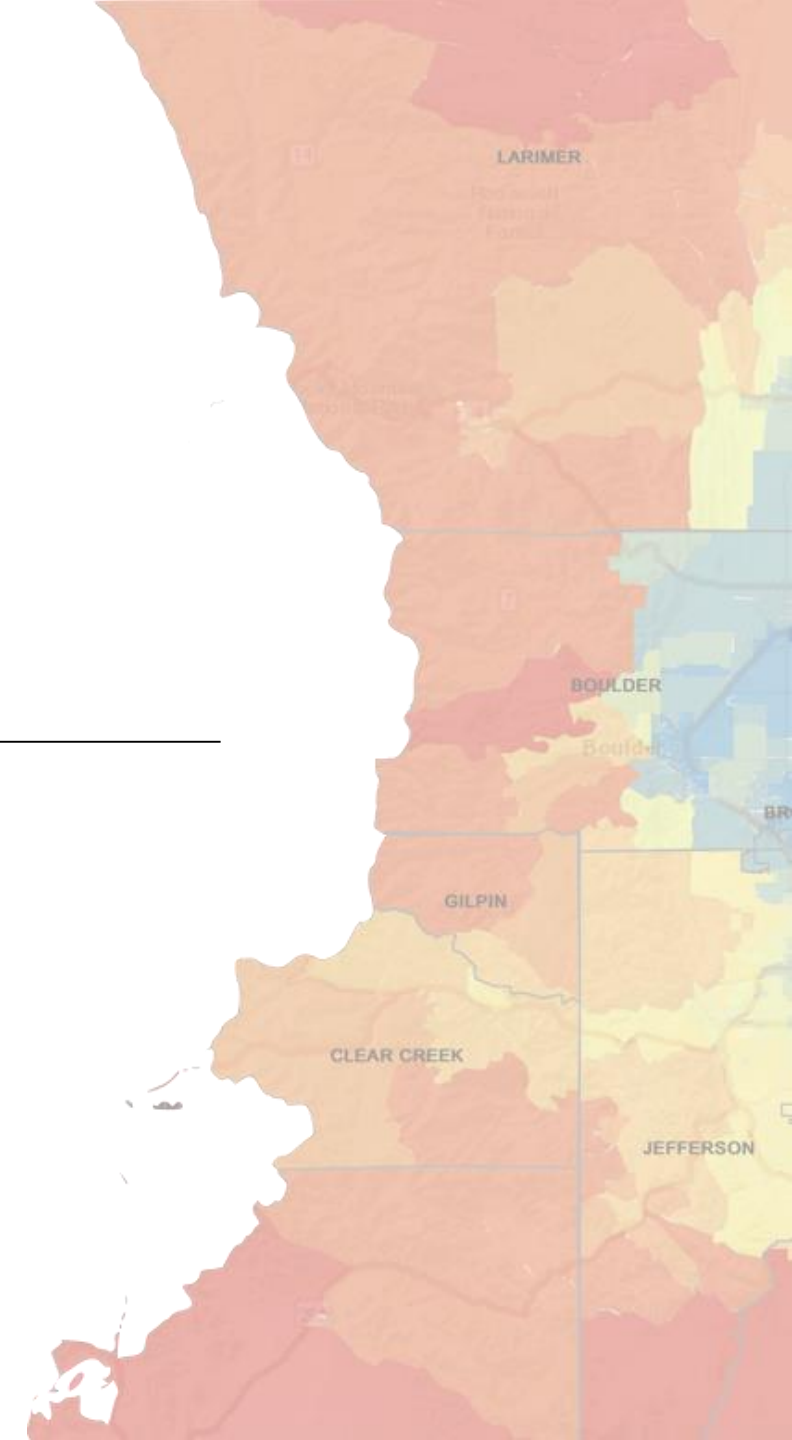
- Dataset of all licensed and registered clinicians in Colorado.
- Queryable by multiple record characteristics.
- Iteratively refreshed with regular imports of new data.
- Shared through standard reports, API, and secure user interface.

NPI	Last Name	First Name	Middle Name	Organization Name
1003001256	CARAGOL	JENNIFER	A	UNIVERSITY PHYSICIANS INCORPORATED
1003019043	GOEKE	KATHRYN	BURKHARDT	CATHOLIC HEALTH INITIATIVES COLORADO
1003067547	LY	HUY	C	SAINT JOSEPH HOSPITAL, INC
1003070400	MUELLER	CLAIRE	M	COLORADO PERMANENTE MEDICAL GROUP, P.C.
1003075151	SHAMIS	MASON	SIDNEY	
1003080565	GUIROY	JESSICA	A	
1003088840				



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ASSESSMENT MODEL



ASSESSMENT MODEL: EXISTING METHODS

- **Assumes demand for care is similar** regardless of age or sex.
- **Applies state licensure or National Provider Identifier data**, which does not accurately represent actual SUD treatment capacity or location.
- Relies upon **civil boundaries**, which may not reflect how Coloradans seek treatment.
- **Does not represent regional variation** and does not reliably stratify relative need.



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ASSESSMENT MODEL: STRATEGY

- Define service areas for SUD treatment according to **standardized criteria**.
- Assess SUD treatment **capacity within each service area**.
- Compute the **ratio of SUD treatment encounter capacity to treatment encounter demand** within each service area.
- **Stratify all service areas into deciles** according to relative shortage or surplus of SUD treatment capacity.



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ASSESSMENT MODEL:TREATMENT SUPPLY

Provider Type	Active License in Colorado	Practicing in SUD Treatment	Mean SUD encounter/ provider/year
Advance Practice Nurse	623	270	465
Cert.Addiction Counselor I	450	228	501
Cert.Addiction Counselor II	580	365	549
Cert.Addiction Counselor III	800	552	1,218
Licensed Addiction Counselor	238	172	1,280
Licensed Clinical Social Worker	4,598	3,555	513
Licensed Professional Counselor	6,107	4,836	515
Marriage and Family Therapist	775	634	468
Physician	1,146	560	514
Physician Assistant	13	13	854
Psychologist	2,311	1,693	258
Total	17,641	12,878	



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ASSESSMENT MODEL: CARE DEMAND

Specific Substance Use Disorder in Past Year among Persons Aged 12 or Older in Colorado, by Gender and Age Group: Percentages and Standard Errors of Percentages, 2015-2017 Combined

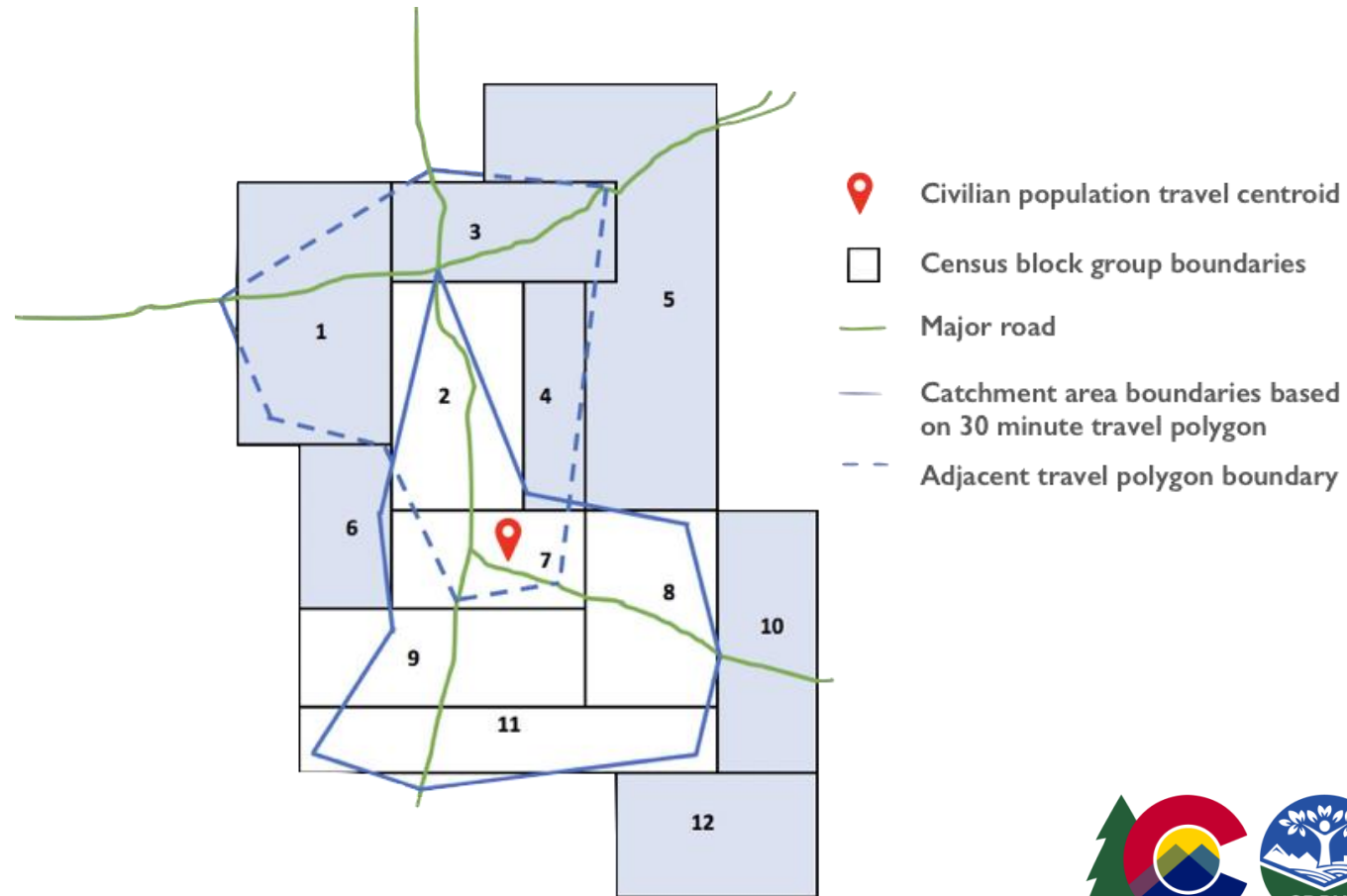
Age Group	Illicit Drug Use Disorder		Opioid Use Disorder		Alcohol Use Disorder		Substance Use Disorder	
	Male % (SE %)	Female % (SE %)	Male % (SE %)	Female % (SE %)	Male % (SE %)	Female % (SE %)	Male % (SE %)	Female % (SE %)
TOTAL	4.4 (0.65)	3.0 (0.49)	1.0 (0.28)	0.7 (0.24)	8.2 (0.76)	5.4 (0.75)	11.3 (0.89)	7.3 (0.84)
12-19	6.0 (1.49)	6.7 (1.40)	0.9 (0.67)	2.0 (0.83)	2.1 (0.72)	6.8 (1.64)	7.9 (1.60)	10.9 (1.92)
20-29	11.9 (2.48)	5.6 (1.27)	4.0 (1.50)	1.1 (0.60)	14.1 (2.35)	10.1 (1.57)	22.4 (3.14)	14.0 (1.86)
30-39	3.4 (1.39)	2.2 (1.10)	1.0 (0.69)	* (*)	13.4 (2.33)	5.1 (1.73)	15.6 (2.36)	6.1 (1.91)
40-49	3.2 (1.72)	3.6 (1.85)	* (*)	* (*)	6.4 (1.78)	7.3 (2.17)	8.1 (2.04)	9.0 (2.29)
50 or Older	1.2 (0.84)	0.8 (0.51)	* (*)	* (*)	6.4 (1.62)	2.5 (1.07)	7.0 (1.70)	3.2 (1.03)

National Survey on Drug Use and Health (SAMHSA)



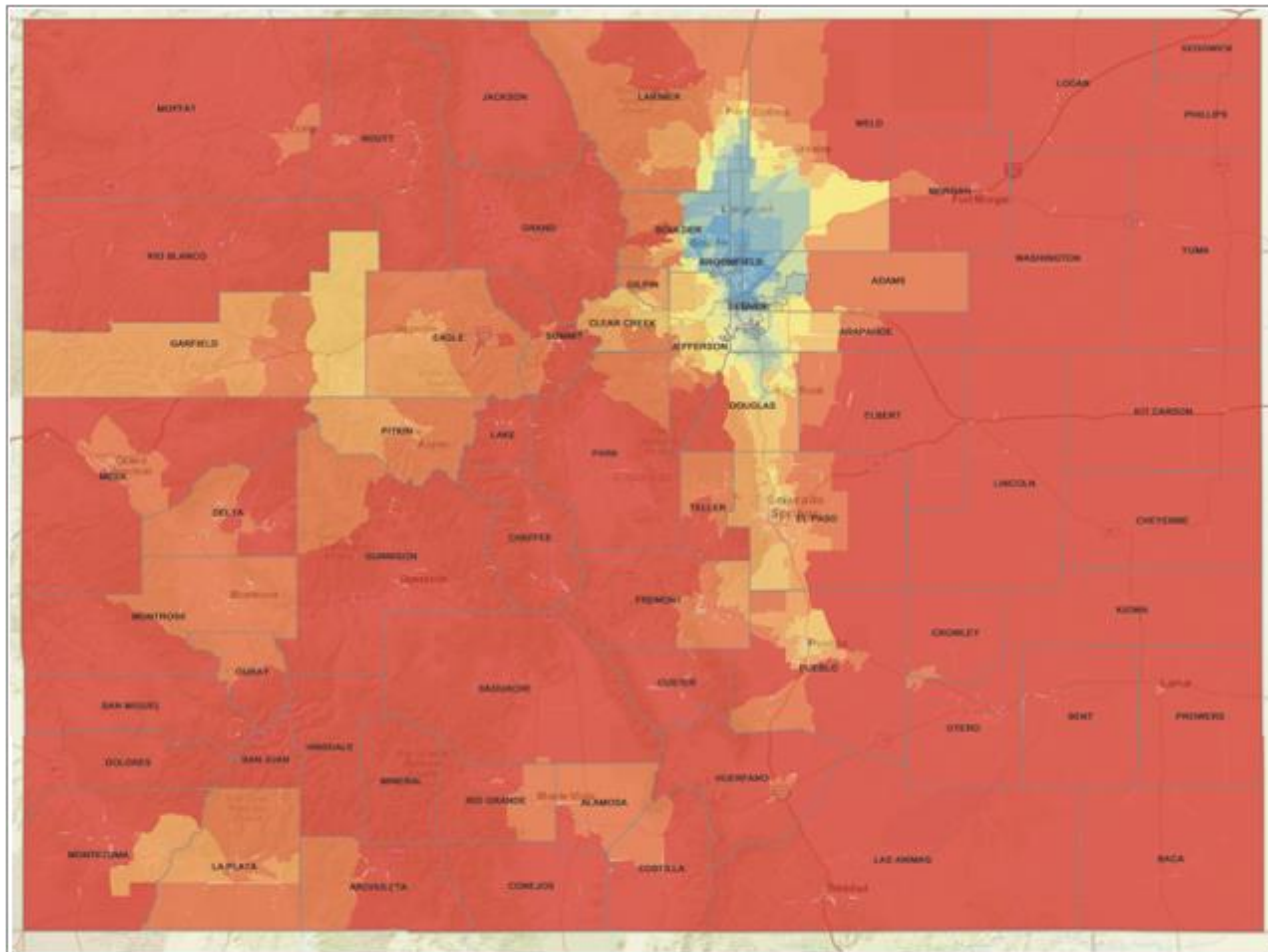
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ASSESSMENT MODEL: ENHANCED 2-STEP FLOATING CATCHMENT AREA METHOD



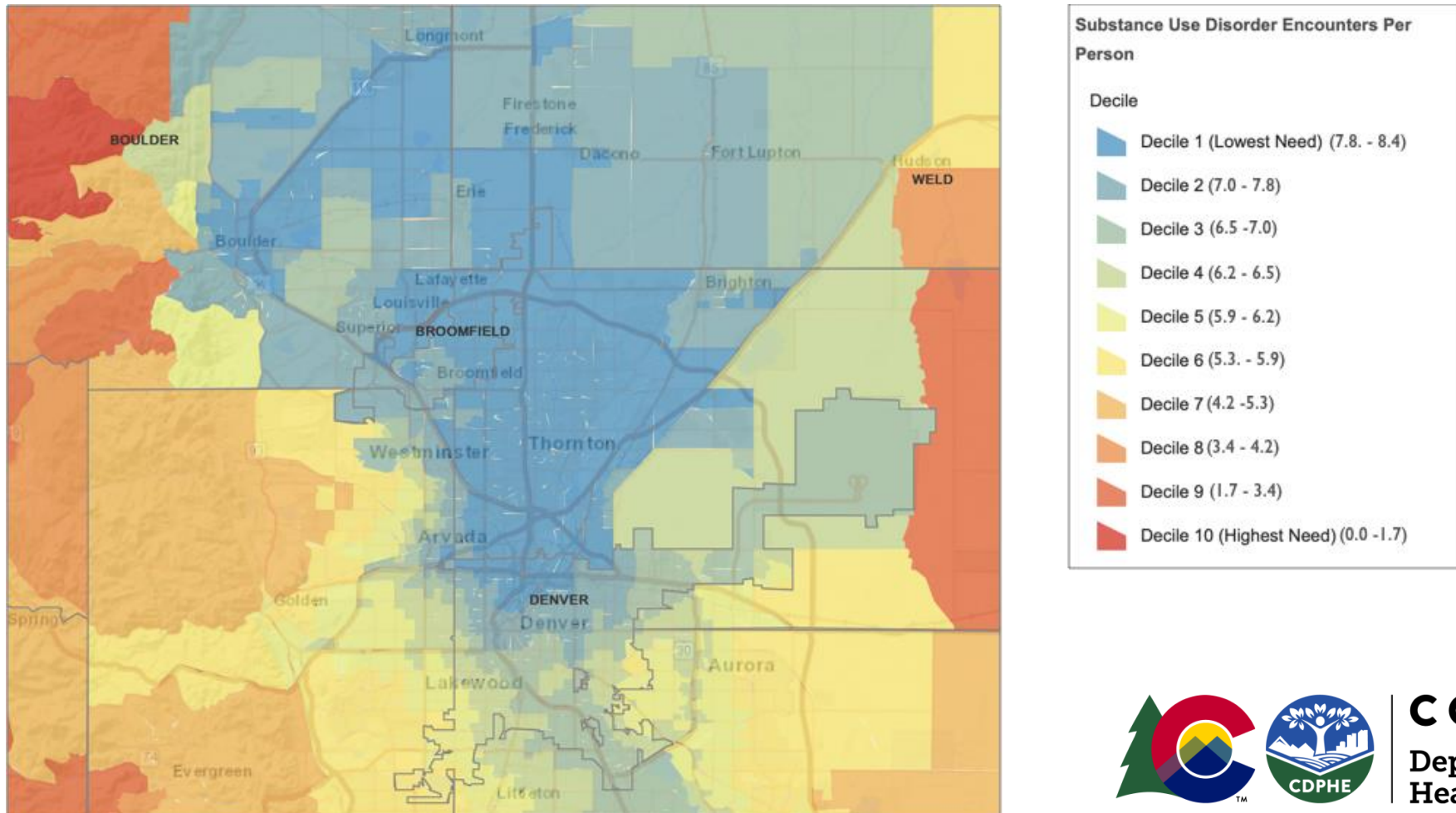
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ASSESSMENT MODEL: COLORADO RESULTS



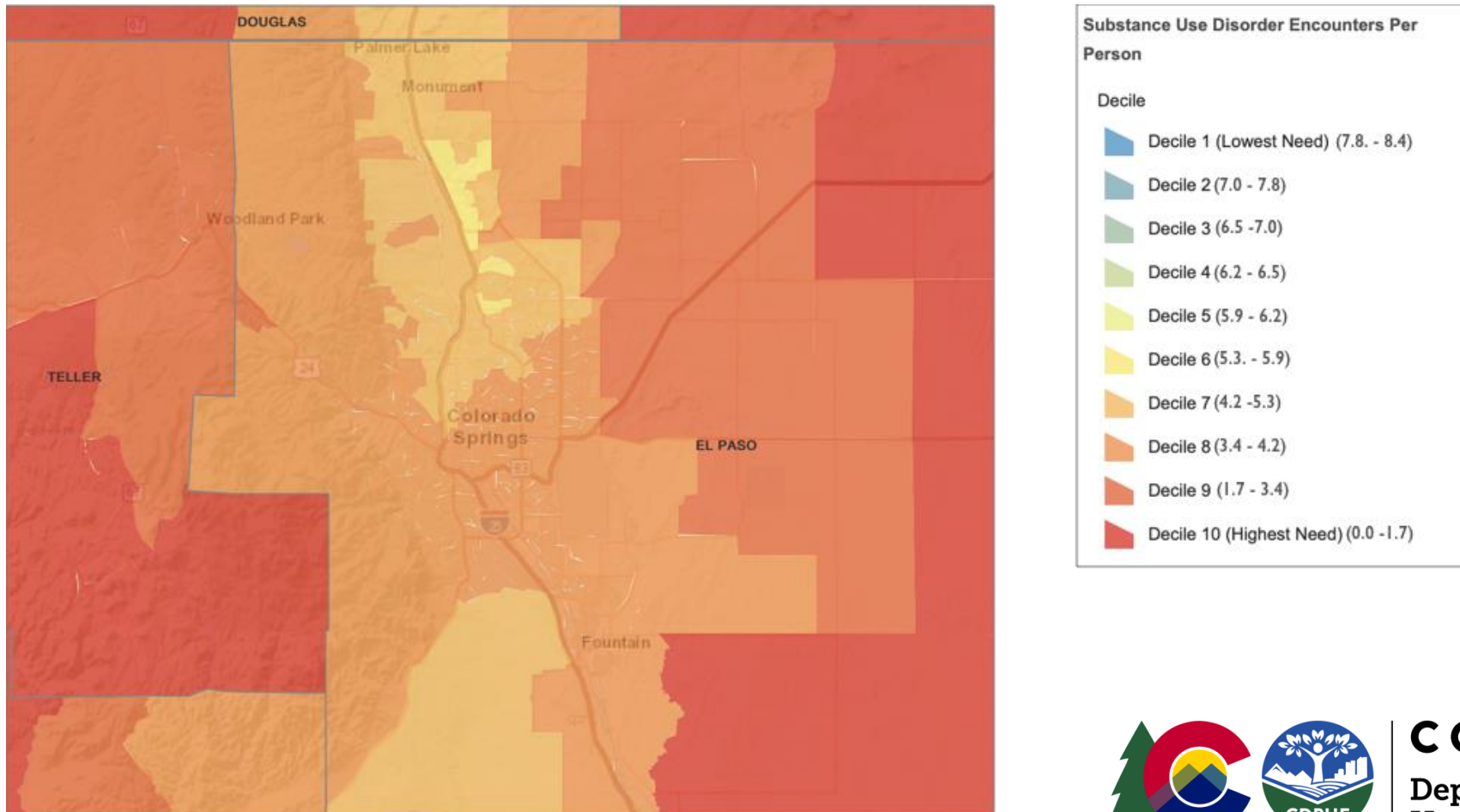
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ASSESSMENT MODEL: DENVER RESULTS



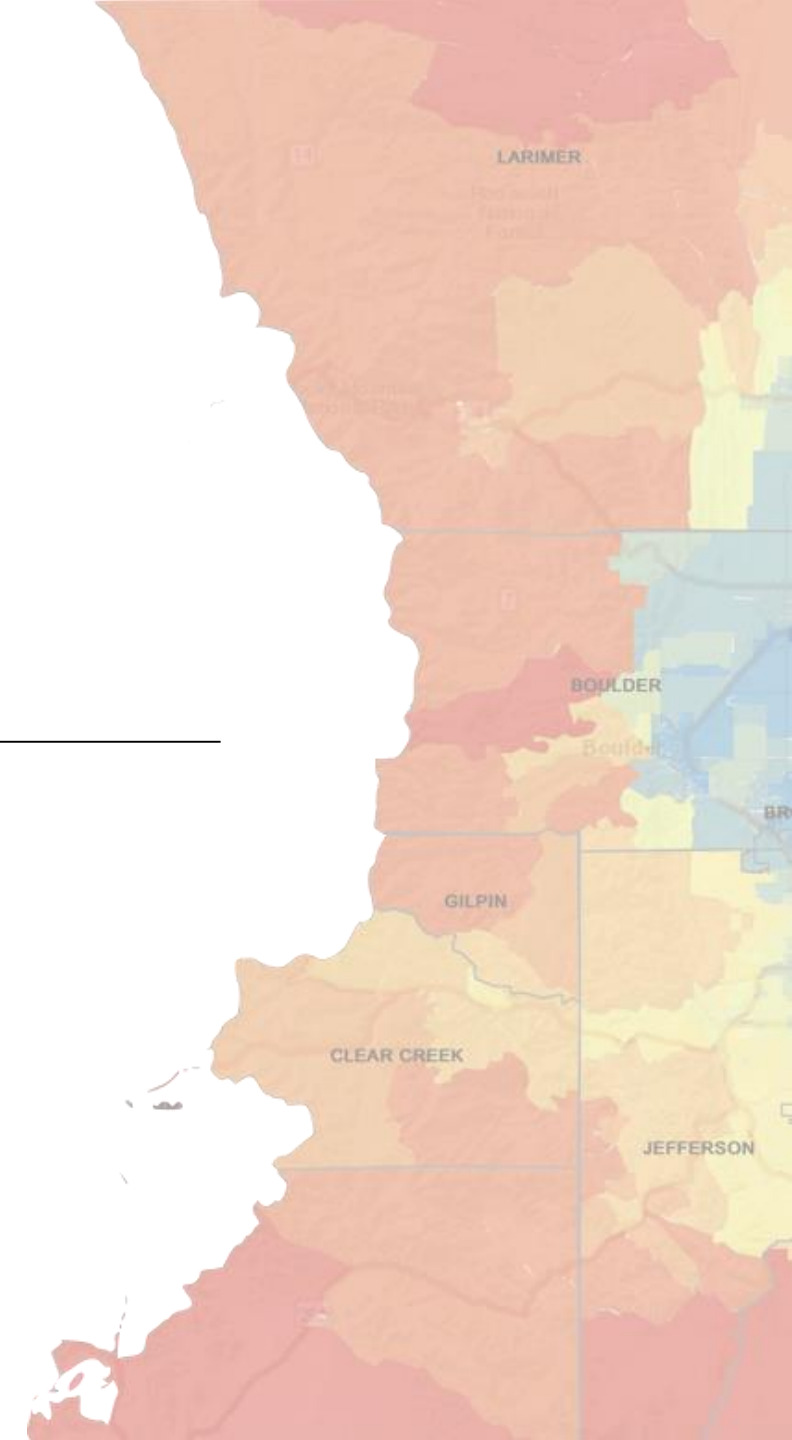
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ASSESSMENT MODEL: COLO. SPRINGS RESULTS



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PRACTICE INCENTIVE PROGRAM EXPANSION



PROGRAM EXPANSION: CANDIDATE SELECTION

Applications are scored on a 100 point scale. **Criteria weighted to select for retention attributes of the candidate.** Scored elements include:

- Decile of shortage.
- Graduation from a Colorado training program.
- Personal experience of underservice.
- Prior experience working with an underserved population.
- Training specific to practice in a rural or underserved area.
- Ability to provide care in a language other than English.
- Letters of support (2) from employer and clinical peer.
- Likelihood of retention score based on an interview conducted with clinic leadership at the applicant's site/organization.



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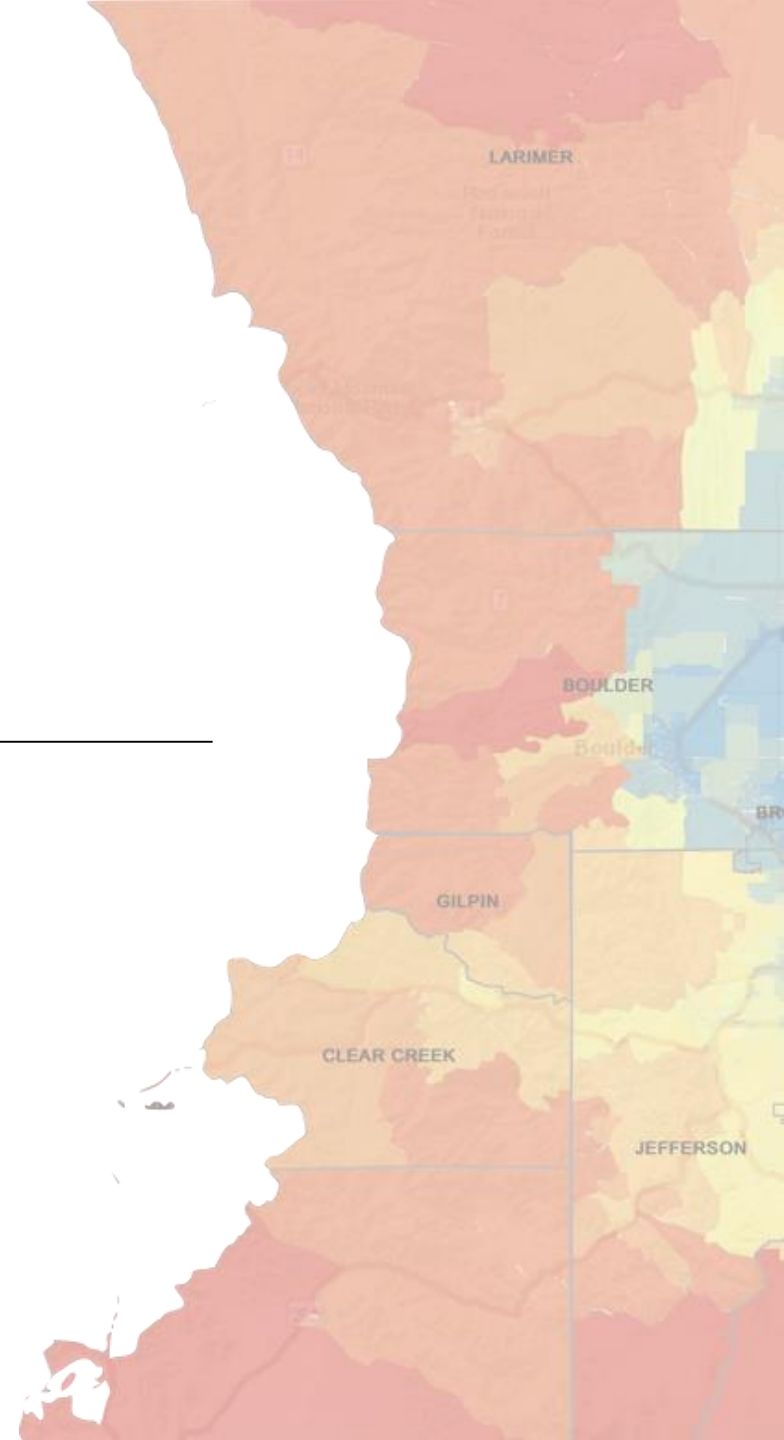
PROGRAM EXPANSION: YEAR ONE CONTRACTS

Provider Type	Active License in Colorado	Estimated Treatment Encounters Over Life of Contract
Advance Practice Nurse	7	9,765
Cert. Addiction Counselor I	3	4,509
Cert. Addiction Counselor II	6	9,882
Cert. Addiction Counselor III	5	18,270
Licensed Addiction Counselor	13	61,440
Licensed Clinical Social Worker	9	13,851
Licensed Professional Counselor	13	20,085
Physician	7	10,794
Marriage and Family Therapist	0	0
Physician Assistant	1	2,562
Psychologist	2	1,548
Total Loan Repayment Awards	73	152,706
Total Addiction Scholarships	5	



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EVALUATION



EVALAUTION: PROGRAM EFFECTIVENESS

- Determine the cost per retention year.
- Determine the provider retention effect of program expansion.
- Assess the effect of program expansion on increased treatment capacity, by decile.
- Assess the effect of program expansion on hospitalizations and inpatient treatment for SUD.



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EVALUATION: FUTURE DIRECTIONS

- Advise policy makers and academic programs on training and workforce needs affecting the state.
- Collaborate with state Medicaid and human services agencies on allocation of public resources, program coordination, mobile Medication Assisted Treatment, and network sufficiency assessments.
- Further develop scholarship model to increase the training capacity to respond to service demands.
- Support community initiated strategies to respond to treatment needs through philanthropic and federal grant making.

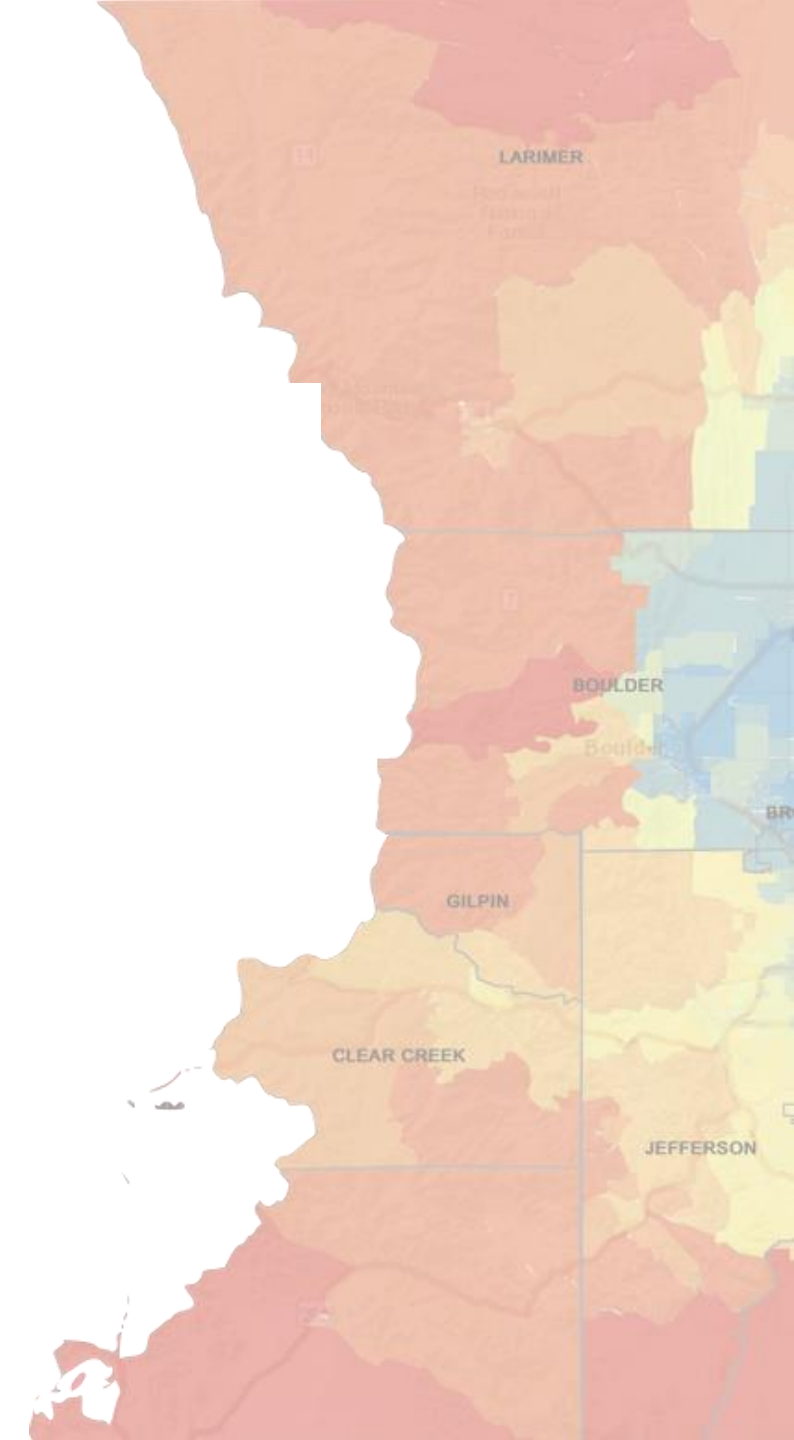


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