COLORADO
Department of Public Health & Environment

To: Members of the State Board of Health

From: Stephen Holloway, MPH, Branch Director for Health Access
Prevention Services Division

Through: Carrie Cortiglio, MPH, Prevention Services Division Director

Date: May 19, 2021

Subject: Proposed Amendments to 6 CCR 1015-6, State-Designated Health Professional Shortage Area Designation

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The Primary Care Office requests promulgation of amended rules for State-Designated Health Professional Shortage Areas (HPSA) to include the assessment of the primary care health professional workforce. Rulemaking is authorized by Section 25-1.5-404 (1)(a) C.R.S.

This rulemaking request is part of a planned expansion of authority to assess workforce categories beyond the current assessment of Substance Use Disorder provider capacity authorized in current rule. Future requests for amendments to this rule may include the oral health workforce, maternal health, and the mental health workforce.

CCR 1015-6 is an important component of the administration of the Colorado Health Service Corps (CHSC). The CHSC program provides an education loan repayment incentive to clinicians in exchange for a period of clinical practice in a designated HPSA. There are more than 800 CHSC clinicians currently working under a contract with the state.

These proposed rule amendments are a necessary improvement to the distribution of CHSC resources to areas of Colorado with the most acute primary care provider shortages. Federal HPSA assessment methodologies are inadequate in describing specific provider shortages because they do not account for the contributions of non-physician primary care professionals, consider the variable primary care needs of populations according to age and sex, or reliably stratify relative need among designated shortage areas.

If these proposed state rule amendments are not adopted, state and philanthropic funds intended to improve access to primary health care will continue to be less efficiently targeted to areas of Colorado with the highest need for additional primary care workforce capacity.

STATEMENT OF BASIS AND PURPOSE
AND SPECIFIC STATUTORY AUTHORITY
for Amendments to
6 CCR 1015-6, State-Designation Health Professional Shortage Area Designation

Basis and Purpose.

Background

The Primary Care Office (PCO) in the Prevention Services Division administers the Colorado Health Service Corps (CHSC). The CHSC promotes improved primary, oral and behavioral health care access in underserved Colorado communities. This goal of the program is achieved by reducing student loan debt of health professionals in exchange for a period of contracted service in a designated health professional shortage area (HPSA).

CHSC clinicians are typically obligated to three years of service in a practice that accepts Medicaid, Medicare, the Child Health Plan+, and uninsured patients on a sliding fee scale. The practice must also be located in a HPSA, which is determined by assessment conducted by the PCO according to federal and state methodologies. Existing state methodologies for substance use disorder (SUD) workforce analysis are set forth in current rule.

Authority for state HPSA designation was created in 2018 by the passage of Senate Bill 18-024. This legislation expanded the scope of the CHSC to include clinicians and facilities that provide treatment for SUD and increased appropriations to the program for SUD providers.

The authority for the PCO to administer state shortage designation rules is important because current federal shortage designation methods do not adequately inform the eligibility and prioritization of CHSC contracts to areas of highest primary health workforce needs. Federal methodologies were first created in 1970 and later revised in 1976. Federal HPSA regulations have remained largely unchanged since that time even as health care service delivery and health care service utilization has significantly changed.

An example of deficiency in federal rules is that primary care shortage assessment only measures the capacity of physicians boarded in a primary care specialty. Federal rules do not consider the increasingly important contributions of non-physician providers to primary care capacity such as advanced practice nurses and physician assistants. Furthermore, federal methodologies assume the same demand for primary health services regardless of age and sex, each of which is known to substantially modulate primary care access needs for individuals.

Request for Promulgation of Amended Rules

The PCO requests promulgation of amended rules that add a methodology for State-Designated HPSA for the primary care workforce. The shortage designation analysis and process, as described in the proposed amended rule, will produce detailed quantitative information regarding local shortages of health professionals who provide primary care services.

Once the amended rule for primary care HPSA is effective, more than $2.1 million in state, federal and private funds will be distributed annually, in the form of educational loan

repayment, to clinicians who provide primary care services in state-designated primary care HPSA.

Description of Primary Care Methodology

Population

The population considered for analysis is all persons who are resident[1] in Colorado but not part of a group quarter such as a military base or correctional facility. Group quartered populations are excluded from analysis because primary health services are presumed to be provided in closed health care delivery systems that are supported and maintained specifically for the quartered population (*e.g.*, U.S. Department of Defense or Colorado Department of Corrections). The cross interaction of primary health services supply and demand between quartered and unquartered populations within the same service area are assumed to be de minimis.

Estimating Demand for Primary Care

A table of civilian population estimates in Colorado was created from data downloaded from American FactFinder[2] (American Community Survey, 2015-2019 5-year estimates, Table B21001). The table consisted of civilian noninstitutionalized population totals for each Colorado census block group[3] broken down by age and sex.

Demand for primary care services was determined by multiplying the number of persons in each age and sex subset within the census block group and the mean number of primary care visits for that age sex subset. The mean number of primary care visits for each subset was derived from the Medical Expenditure Panel Survey (MEPS), administered by the Agency for Healthcare Research and Quality at the US Department of Health and Human Services.

Table 1: Mean Primary Care Visits Per Person, Per Year, Age and Sex Stratified

Age	Male	Female
≤5	1.55	1.54
6-17	1.33	1.29
18-24	0.81	1.30
25-44	1.20	2.15
45-64	2.21	2.91
65+	3.80	6.11

[1] Where individuals live and sleep most of the time. The resident population excludes people whose usual residence is outside of the U.S., such as the military and federal civilian personnel living overseas, as well as private U.S. citizens living overseas.
[2] American FactFinder is the U.S. Census Bureau's online self-service data tool, which supports public query of population, economic, geographic, and housing data.
[3] Census block groups are statistical divisions of census tracts that generally contain between 600 and 3,000 residents.

Estimating Supply of Primary Care Services

A table of primary care professionals who are licensed in Colorado and have evidence of recent practice within the state was downloaded from the Colorado Health Systems Directory.[4] The table consisted of the name, license type, professional discipline, and practice location(s) of each primary care health professional under consideration.

A total of 3,464 primary care clinicians who matched these criteria were surveyed to determine practice characteristics (*e.g.*, patient contact time, accepted health plan payers, proportion of practice in direct primary care service delivery) and annual primary care encounter rates.

The survey response rate exceeded 68 percent. Non-responders to the survey were assigned an estimated encounter rate using a linear regression model applied separately to each clinician type and specialty where the known encounter rate mean, derived from survey results, was used as the predictor variable for mean encounter rates of non-responders.

Table 2: Results for Measured and Predicted Primary Care Encounters by Clinician Type

Primary Care Discipline	Mean Encounters/Year
Physician (MD, DO) boarded in Family Medicine, General Internal Medicine, or Pediatrics	1,989
Nurse Practitioner specializing in primary care, women's health, or nurse midwifery	2,469
Physician Assistant practicing in primary care	2,757

A total state-wide primary care encounter supply of 9,770,521 was derived from the sum of reported primary care encounters and non-responder estimates. The sum primary care capacity of each census block group was determined by aggregating the encounter responses of all respondents and the estimated encounter rates for non-responders in each group.

Estimating the Spatial Relationship of Supply and Demand for Primary Care Services

The relationship of demand and supply for primary care services was evaluated at the service area level. Service area is defined as a discrete geographic area where a preponderance of the civilian noninstitutionalized population within the service area could reasonably expect to access primary health services within the service area, when it is adequately resourced. All providers within the service area are presumed to be generally accessible and similarly proximate to the residents of the service area. Primary care service locations that lie outside of the service area are assumed to be generally inaccessible by distance for the purposes of analysis.

[4] The Colorado Health Systems Directory is a work product of the PCO, which provides a comprehensive database of all licensed clinicians and health care sites in Colorado. The database aggregates information from multiple data sources, matches records from those sources, standardizes information contained within those sources, and applies a probabilistic algorithm to determine current practice information for clinicians at the date of query.

To estimate the availability of primary care services within each block group, considering the demand for and supply of primary care encounters within the service area the Two-step Floating Catchment Area (2SFCA) method developed by Wei Luo and Fahui Wang was applied (Luo and Wang, 2003). The 2SFCA method was selected because spatial accessibility of primary care is not defined by the boundaries of a block group or any other census or political subdivision. This is because most civil boundaries can be easily traversed by patients for the purposes of acquiring primary health services.

The application of the 2SFCA began with representing the population as a travel centroid[5] for each block group. The boundaries of each catchment area are then calculated by determining a 30-minute travel distance from the population centroid (derived from ESRI Street Map data, ArcGIS v. 10.4x). Thirty minutes by ordinary road travel was selected because it is the current standard for accessible primary care services according to distance as defined in federal primary care HPSA rules (Federal Register, Vol 73, No 41, 42 CFR Part 5 and 51c, 2008). Thirty minutes travel distance was also the measure used in the original development of the 2SFCA method.

Once the catchment area was defined by the 30-minute travel polygon,[6] the sum of predicted demand for primary care encounters and the sum of predicted supply of primary care encounters for each block group within the boundaries of the catchment area was calculated.

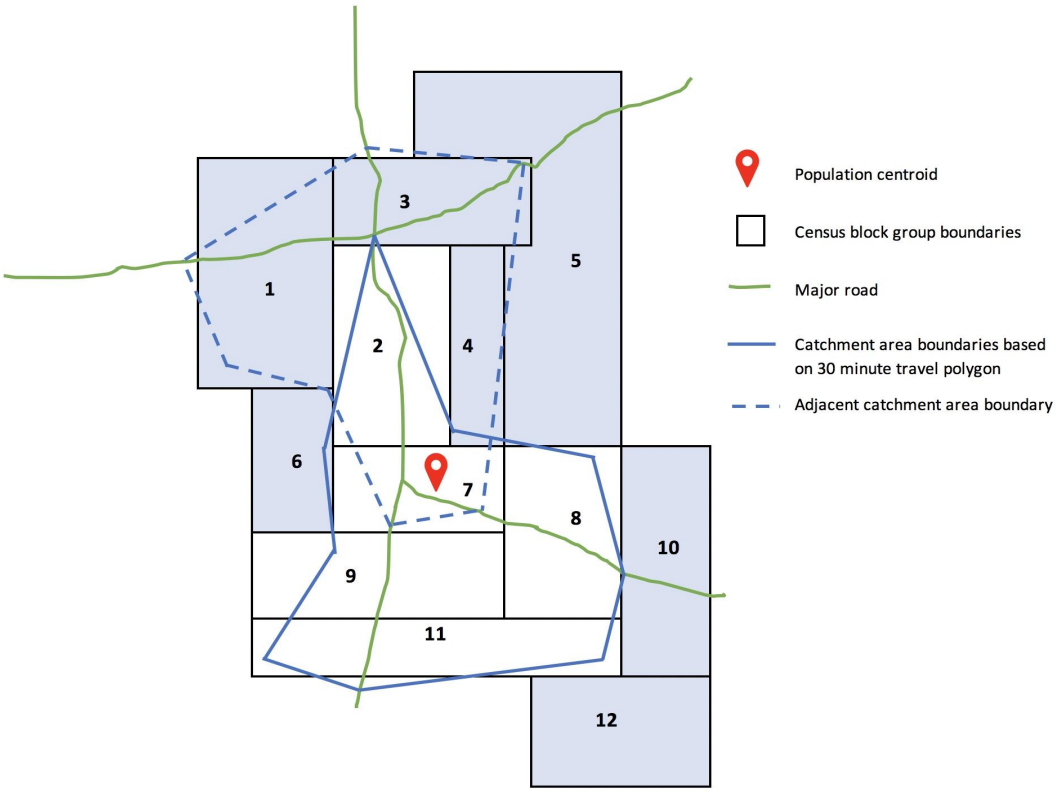
Figure 1: Hypothetical Catchment Area Map with 30-Minute Travel Polygon

[5] A travel centroid is the geometric center of a group of points within a geographic shape (*e.g.*, Census block group) where the center point generally falls within the shape.
[6] A closed, irregular geometric shape on a map surface that defines equivalent road travel distances from a central point within the shape.

In the example represented in Figure 1, estimated primary care service encounter demand from block group 1, 2, 3, 4, and 7 would be summed to estimate total encounter demand in the catchment area. Similarly, estimated treatment encounter supply from block group 1, 2, 3, 4, and 7 would be summed to estimate total encounter supply in the catchment area. A ratio of encounter supply to encounter demand for the catchment area is then derived for each census block group.

In the example represented in Figure 2, estimated primary care service encounter demand from block group 2, 7, 8, 9, and 11 would be summed to estimate total encounter demand in the catchment area and the encounter supply from the same block groups would be summed to estimate total encounter supply in the catchment area.

Figure 2: Hypothetical Catchment Area Map with 30-Minute Travel Polygon



The catchment area definition process and demand supply computation is repeated for each block group in the state. As expected under the 2SFCA model, adjacent block groups of relatively small geographies tended to create overlapping or "floating" catchment areas. In these two hypothetical examples, block group 2 and block group 7 are included in both hypothetical catchment area constructions.

Calculating the Ratio of Supply and Demand for Primary Care Services and Stratifying Relative Workforce Shortage

The ratio of demand to supply was calculated for all 3,532 census block group catchment areas in Colorado. The resultant ratio of encounter demand to supply was then binned into ten deciles. Those catchment areas where the aggregate demand for primary care services

fell short of the estimated supply of primary care services is deemed to be a HPSA for primary care.

Limitations

1. Census block group level population estimates have a higher error rate than larger census geographies such as census tracts or metropolitan statistical areas. Use of block groups improves small area analysis but may introduce more error. The overlapping nature of the floating catchment area analysis may reduce the overall effect of individual block group population error rates.

2. Test analysis for the purpose of this rulemaking was based upon primary care provider data collection that preceded the COVID-19 pandemic. Current primary care clinician productivity may be different as a result of modified practice and reduced productivity during 2020. New primary care workforce survey data is scheduled to be gathered in 2021. If these amended rules are adopted, updated survey data will be applied to future analysis.

Application to Colorado Health Service Corps Program

Shortage designation determines which geographic areas of the state experience a shortage of health care professional capacity relative to the predicted primary care needs of the local population. Independent of this rule, the CHSC also assesses individual clinical locations to determine eligibility of participation in the CHSC program. Criteria used to determine eligibility include that the practice accepts all patients regardless of ability to pay, has an established nondiscrimination policy, accepts Medicaid, Medicare, and the Child Health Plan+, and offers comprehensive primary care services.

Individual clinician participants in the CHSC must apply to the program to participate. Clinicians are selected for personal attributes that indicate a higher likelihood of long-term retention in practice in the shortage area once the service obligation to the state is concluded. Attributes of "retainability" include training specific to rural or underserved practice, personal commitment to the needs of the underserved, personal "lived" experience of being underserved, graduation from a Colorado based health education program, and ability to deliver clinical services in a language other than English.

Specific Statutory Authority.

These rules are proposed pursuant to Section 25-1.5-404, C.R.S. and Section 25-1.5-501 *et seq*, C.R.S.

Is this rulemaking due to a change in state statute?

_____ Yes, the bill number is _____. Rules are ___ authorized ___ required.

___✓__ No

Does this rulemaking include proposed rule language that incorporate materials by reference?

_____ Yes ___ URL

___✓__ No

Does this rulemaking include proposed rule language to create or modify fines or fees?

_____ Yes

___✓__ No

Does the proposed rule language create (or increase) a state mandate on local government?

__✓__ No.

- The proposed rule does not require a local government to perform or increase a specific activity for which the local government will not be reimbursed;
- The proposed rule requires a local government to perform or increase a specific activity because the local government has opted to perform an activity, or;
- The proposed rule reduces or eliminates a state mandate on local government.

REGULATORY ANALYSIS
for Amendments to
6 CCR 1015-6, State-Designation Health Professional Shortage Area Designation

1. A description of the classes of persons affected by the proposed rule, including the classes that will bear the costs and the classes that will benefit from the proposed rule.

While all are stakeholders, groups of persons/entities connect to the rule and the problem being solved by the rule in different ways. To better understand those different relationships, please use this relationship categorization key:

C = individuals/entities that implement or apply the rule.
S = individuals/entities that do not implement or apply the rule but are interested in others applying the rule.
B = the individuals that are ultimately served, including the customers of our customers. These individuals may benefit, be harmed by or be at-risk because of the standard communicated in the rule or the manner in which the rule is implemented.

More than one category may be appropriate for some stakeholders.

No person or class of persons are likely to be harmed by this rule nor will any directly bear the costs of this rule. All costs associated with implementation of this rule are borne by state appropriations from General Fund, retail marijuana tax revenue, and the Master Tobacco Settlement.

Other classes of or persons affected by this proposed rule amendment include:

Primary Care Office: Implementation of this rule.
Relationship: C
Size: 3 staff assigned to various aspects of designation analysis

Clinic Employers: Safety net clinic entities that employ primary care clinicians may benefit from this rule in that their provider recruitment and retention costs will be reduced when clinicians receive incentives to practice in State-Designated Health Professional Shortage Areas (HPSA) where their agencies are located. In excess of 480 health care sites could conceivably receive some direct or indirect benefit of the shortage designation process.
Relationship: B
Size: 480 clinic sites

Colorado residents: Because the need for primary care services is universal, nearly all residents of communities with insufficient primary care provider capacity may benefit from this shortage designation analysis.
Relationship: B
Size: Estimated to exceed one million persons in Colorado

Health Equity Orgs.: Organizations that promote better access to health services for medically underserved populations may benefit from the

assessment of need and the promotion of improved access for underserved people. Perhaps 15 to 20 organizations and advocacy groups may benefit from this rule in this way. Other state and local governments may benefit if Colorado is better able to address primary care access needs.

2. To the extent practicable, a description of the probable quantitative and qualitative impact of the proposed rule, economic or otherwise, upon affected classes of persons.

Entities that employ primary care clinicians in primary care HPSA may experience reduced costs of clinical provider recruitment and retention. The magnitude of this effect is not precisely known but could be substantial in aggregate across all eligible safety net clinic sites. There are no anticipated negative impacts of this proposed rule upon these entities.

No local government impact of these rules is predicted.

Economic outcomes

Summarize the financial costs and benefits, include a description of costs that must be incurred, costs that may be incurred, any Department measures taken to reduce or eliminate these costs, any financial benefits.

Anticipated Costs:	Anticipated Benefits:
Clinic Employers (B)	Costs associated with recruiting health care professionals to underserved Colorado communities can be substantial (in excess of $120,000 for certain physician specialties for example). Most Colorado Health Service Corps (CHSC) clinicians report that loan repayment had a meaningful effect on their decision on where to practice (program evaluation 2017). Current CHSC employers report that loan repayment is an important component of their recruitment and retention strategy. State financed practice incentives that will result from this rule will lower employer retention costs. This is true even for those clinicians who do not ultimately receive a CHSC award but were motivated to apply for qualified employment for the prospect of educational loan repayment.
Clinic Employers (B)	If employer recruitment costs are reduced by a conservative $5,000 per CHSC applicant for clinician types eligible for CHSC, aggregate annual employer savings

	could exceed $1,025,000. These savings are estimated according to the following: • Employers recruit health professionals in advance of clinicians' CHSC application. • Recruitment and retention cost savings accrue to employers when clinicians choose to work at eligible practice sites for the prospect of loan repayment benefits, regardless of whether individual clinicians receive a CHSC award. • The CHSC program typically receives five applications for each available award. • If 205 CHSC applications are received in year one (41 x 5) and employers experience a modest $5,000 per applicant reduction in recruitment costs per applicant, then aggregate recruitment cost savings per year experienced by all employers will be approximately $1,025,000 (205 x 5,000).
Clinic Employers (B)	There are positive secondary economic benefits to health systems capacity development in underserved communities. For example, multiple non-clinical jobs are created when clinicians are added in a given service area. Communities also benefit when economic activity related to health care spending occurs within their community as opposed to adjacent communities where access to care may be better.

Non-economic outcomes

Favorable non-economic outcomes: For individuals that are publicly insured, treatment participation may increase thus increasing the demand for public financing of care; however, it is anticipated that these costs will be offset and outweighed by the health care costs for individuals that do not address their primary care needs and experience other comorbidities as a result.

The CHSC and this rule may enhance resource allocation and policy attention of organizations that promote better access to health services for medically underserved populations, nongovernmental organizations that advocate for the needs of underserved populations, and support other state agencies and local governments.

Unfavorable non-economic outcomes: None are anticipated.

3. The probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues.

   A. Anticipated CDPHE personal services, operating costs or other expenditures specific to the Primary Care HPSA:

Type of Expenditure	Year 1	Year 2
Personnel Time	$ 25,251	$ 21,152
Data collection, analysis and systems database	$ 20,000	$ 6,250
Total	**$ 45,251**	**$ 27,402**

   Anticipated CDPHE Revenues: None.

   B. Anticipated personal services, operating costs or other expenditures by another state agency:

   Anticipated Revenues for another state agency: None.

4. A comparison of the probable costs and benefits of the proposed rule to the probable costs and benefits of inaction.

   Along with the costs and benefits discussed above, the proposed revisions:

   ✓ Comply with a statutory mandate to promulgate rules.
   ___ Comply with federal or state statutory mandates, federal or state regulations, and department funding obligations.
   ✓ Maintain alignment with other states or national standards.
   ___ Implement a Regulatory Efficiency Review (rule review) result
   ✓ Improve public and environmental health practice.
   ___ Implement stakeholder feedback.

   Advance the following CDPHE Strategic Plan priorities (select all that apply):

1. Reduce Greenhouse Gas (GHG) emissions economy-wide from 125.716 million metric tons of CO2e (carbon dioxide equivalent) per year to 119.430 million metric tons of CO2e per year by June 30, 2020 and to 113.144 million metric tons of CO2e by June 30, 2023. ___ Contributes to the blueprint for pollution reduction ___ Reduces carbon dioxide from transportation ___ Reduces methane emissions from oil and gas industry ___ Reduces carbon dioxide emissions from electricity sector
2. Reduce ozone from 83 parts per billion (ppb) to 80 ppb by June 30, 2020 and 75 ppb by June 30, 2023.

___ Reduces volatile organic compounds (VOC) and oxides of nitrogen (NOx) from the oil and gas industry.
___ Supports local agencies and COGCC in oil and gas regulations.
___ Reduces VOC and NOx emissions from non-oil and gas contributors

3. Decrease the number of Colorado adults who have obesity by 2,838 by June 30, 2020 and by 12,207 by June 30, 2023.

___ Increases the consumption of healthy food and beverages through education, policy, practice and environmental changes.
___ Increases physical activity by promoting local and state policies to improve active transportation and access to recreation.
___ Increases the reach of the National Diabetes Prevention Program and Diabetes Self-Management Education and Support by collaborating with the Department of Health Care Policy and Financing.

4. Decrease the number of Colorado children (age 2-4 years) who participate in the WIC Program and have obesity from 2120 to 2115 by June 30, 2020 and to 2100 by June 30, 2023.

___ Ensures access to breastfeeding-friendly environments.

5. Reverse the downward trend and increase the percent of kindergartners protected against measles, mumps and rubella (MMR) from 87.4% to 90% (1,669 more kids) by June 30, 2020 and increase to 95% by June 30, 2023.

___ Reverses the downward trend and increase the percent of kindergartners protected against measles, mumps and rubella (MMR) from 87.4% to 90% (1,669 more kids) by June 30, 2020 and increase to 95% by June 30, 2023.
___ Performs targeted programming to increase immunization rates.
___ Supports legislation and policies that promote complete immunization and exemption data in the Colorado Immunization Information System (CIIS).

6. Colorado will reduce the suicide death rate by 5% by June 30, 2020 and 15% by June 30, 2023.

___ Creates a roadmap to address suicide in Colorado.
___ Improves youth connections to school, positive peers and caring adults, and promotes healthy behaviors and positive school climate.
___ Decreases stigma associated with mental health and suicide, and increases help-seeking behaviors among working-age males, particularly within high-risk industries.
___ Saves health care costs by reducing reliance on emergency departments and connects to responsive community-based resources.

7. The Office of Emergency Preparedness and Response (OEPR) will identify 100% of jurisdictional gaps to inform the required work of the Operational Readiness Review by June 30, 2020.

___ Conducts a gap assessment.
___ Updates existing plans to address identified gaps.

___ Develops and conducts various exercises to close gaps.
8. For each identified threat, increase the competency rating from 0% to 54% for outbreak/incident investigation steps by June 30, 2020 and increase to 92% competency rating by June 30, 2023. ___ Uses an assessment tool to measure competency for CDPHE's response to an outbreak or environmental incident. ___ Works cross-departmentally to update and draft plans to address identified gaps noted in the assessment. ___ Conducts exercises to measure and increase performance related to identified gaps in the outbreak or incident response plan.
9. 100% of new technology applications will be virtually available to customers, anytime and anywhere, by June 20, 2020 and 90 of the existing applications by June 30, 2023. ___ Implements the CDPHE Digital Transformation Plan. ___ Optimizes processes prior to digitizing them. ___ Improves data dissemination and interoperability methods and timeliness.
10. Reduce CDPHE's Scope 1 & 2 Greenhouse Gas emissions (GHG) from 6,561 metric tons (in FY2015) to 5,249 metric tons (20% reduction) by June 30, 2020 and 4,593 tons (30% reduction) by June 30, 2023. ___ Reduces emissions from employee commuting ___ Reduces emissions from CDPHE operations
11. Fully implement the roadmap to create and pilot using a budget equity assessment by June 30, 2020 and increase the percent of selected budgets using the equity assessment from 0% to 50% by June 30, 2023. ___ Used a budget equity assessment

___ Advance CDPHE Division-level strategic priorities.

The costs and benefits of the proposed rule will not be incurred if inaction was chosen. Costs and benefits of inaction not previously discussed include: None.

5. A determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule.

Rulemaking is the only statutorily allowable method for achieving the purpose of the statute. Implementation of this rule is not expected to be intrusive on any affected person or class of persons. Costs of implementation are borne by a specific state appropriation to the PCO for the purpose of administering state health professional shortage area designation. These proposed rules provide the most benefit for the least amount of cost and are the minimum necessary to achieve compliance with statute.

6. Alternative Rules or Alternatives to Rulemaking Considered and Why Rejected.

This rule is required by statute, therefore there are no alternatives to rulemaking.

7. To the extent practicable, a quantification of the data used in the analysis; the analysis must take into account both short-term and long-term consequences.

Proposed amended rules will apply a modified "two-step floating catchment area" method first proposed by Luo and Wang in 2003 (Measures of Spatial Accessibility to Health Care in a GIS Environment: Synthesis and a Case Study in the Chicago Region. Environment and Planning B: Planning and Design, 30, 865-884.)

Instruments that were applied in the test analysis included:

- ArcView GIS®, Version 10.4.1 © 2018 Esri
- Microsoft® Excel, Version 16.13.1 (180523). © 2019 Microsoft
- Qualtrics®, subscription data collection software, © 2019 Qualtrics
- Remark® Office OMR, © 2018 Gravic, Inc.

These instruments may be replaced with similar tools in implementation of the final rule and future shortage assessments.

Data sources that inform test determinations of state-designated Primary Care Health Professional Shortage Areas include:

- Colorado Health Systems Directory, Version 2.5. Colorado Department of Public Health and Environment
- U.S. Census Bureau, American FactFinder; American Community Survey, 2015-2019 5-year estimates, Table B21001
- Survey findings of the PCO derived from approximately 3,464 solicited responses of licensed primary care clinicians in the state of Colorado
- Medical Expenditure Panel Survey, Mean Primary Care Visits Per Person, Per year, Age and Sex Stratified, custom data request 2021

These sources may be replaced by better quality analogous data sets as they become available in implementation of the final rule and future shortage assessments.

STAKEHOLDER ENGAGEMENT
for Amendments to
6 CCR 1015-6, State-Designation Health Professional Shortage Area Designation

State law requires agencies to establish a representative group of participants when considering to adopt or modify new and existing rules. This is commonly referred to as a stakeholder group.

Early Stakeholder Engagement:
The following individuals and/or entities were invited to provide input and included in the development of these proposed rules:

Organization	Representative Name and Title (if known)
Denver Health and Hospital Authority	Aaron Ortiz, Manager of Provider Recruitment
Colorado Coalition for the Homeless	Andrew Grimm, Vice President of Integrated Health Operations
Colorado Department of Public Health and Environment, Maternal and Child Health	Alex Murphy
Sterling Regional Medical Center	Amanda Amen, Clinic Manager
Colorado Department of Public Health and Environment, Maternal and Child Health	Angela Goodger, Pediatric Care Coordination Systems Consultant
Valley-Wide Health Systems, Inc.	Jania Arnoldi, Chief Executive Officer
Stride Community Health Center	Athena Baca-Chieza
Kiowa County Hospital District	Charlene Korrell, Chief Executive Officer
University of Colorado at Denver	Christopher Neuman
Colorado Hospital Association	Darlene Tad-Y, MD, Vice President for Clinical Affairs
Children's Hospital of Colorado	David Keller, MD, Vice Chair of Clinical Strategy and Transformation
Northwest Colorado Health	Desiree Moore, Development Coordinator
Mount San Rafael Hospital and Clinic	David Rollins, Chief Financial Officer
River Valley Family Health Center	Debby Harrison-Zarki, Chief Executive Officer
Pueblo Community Health Center	Donald Moore, Chief Executive Officer
American Academy of Pediatrics, Colorado Chapter	Ellen Brilliant, Executive Director
Axis Health Systems	Jennifer Bearden, Human Resources Manager
Telluride Medical Center	John Gardener, Chief Executive Officer
Salud Family Health Center	Jennifer Morse, Vice President of Development

Salud Family Health Center	Jonathan Muther, Vice President of Behavioral Health
Salud Family Health Center	John Santistevan, Chief Executive Officer
Colorado Rural Health Center	Kelly Erb, Policy Manager
River Valley Family Health Center	Karen Hotsenpiller, Chief Operating Officer
Inner City Health Center	Kraig Burleson, Chief Executive Officer
Pagosa Springs Medical Center	Krista Starr, Manager, Medical Staff Office & Credentialing
Marillac Clinic	Kristy Schmidt, Chief Development Officer
Mount San Rafael Hospital and Clinic	Kathleen Topping, Director of Patient Financial Services
East Morgan County Hospital	Linda Thorpe, Chief Executive Officer
Heart of the Rockies Medical Center	Lori Rucker, Clinics Nurse Manager
Denver Health and Hospitals	Lucy Loomis, MD, Medical Director of Community Health
University of Colorado, School of Medicine	Melanie Deherrera, Manager, Rural Track/Undergraduate Medical Education
Tepeyac Community Health Center	Olga Webber, Chief Operating Officer
Axis Health Systems	Sarada Leavenworth, Senior Director, Strategy & Development
Colorado Community Health Network	Suzanne Smith, Director of the Health Center Operations Division
Mount San Rafael Hospital and Clinic	Tammy Rogers, Human Resources Director
Inner City Health Center	Wes Sykes, Chief Operating Officer

Stakeholder meetings have been ad hoc and one large group stakeholder feedback meeting was also conducted. Individuals from numerous state agencies, non-profit organizations, safety net clinics, hospitals and member-organizations were included in the stakeholder engagement discussions and meetings. These include Denver Health and Hospital Authority, Colorado Coalition for the Homeless, Colorado Department of Public Health and Environment's Children Youth and Families Branch, Inner City Health, Valley-Wide Health Systems, Metro Community Provider Network, University of Colorado- Denver, Colorado Hospital Association, Children's Hospital Colorado, Northwest Colorado Health, Pueblo Community Health Centers, Mt San Rafael Hospital, River Valley Family Health Center, American Academy of Pediatrics- Colorado Chapter, Axis Health Systems, Salud Clinic, Colorado Rural Health Center, SCL Health, Presbyterian/ St Luke Medical Center, Banner Health, Heart of the Rockies Regional Medical Center, Tepeyac Health Center, Axis Health Systems and Colorado Community Health Network.

Stakeholder Group Notification

The stakeholder group was provided notice of the rulemaking hearing and provided a copy of the proposed rules or the internet location where the rules may be viewed. Notice was provided prior to the date the notice of rulemaking was published in the Colorado Register (typically, the 10th of the month following the Request for Rulemaking).

____ Not applicable. This is a Request for Rulemaking Packet. Notification will occur if the Board of Health sets this matter for rulemaking.

✓ Yes.

Summarize Major Factual and Policy Issues Encountered and the Stakeholder Feedback Received. If there is a lack of consensus regarding the proposed rule, please also identify the Department's efforts to address stakeholder feedback or why the Department was unable to accommodate the request.

No major factual or policy issues were encountered during the preparation of this rulemaking packet. No local government mandate or impact is anticipated.

Please identify the determinants of health or other health equity and environmental justice considerations, values or outcomes related to this rulemaking.

Overall, after considering the benefits, risks and costs, the proposed rule:

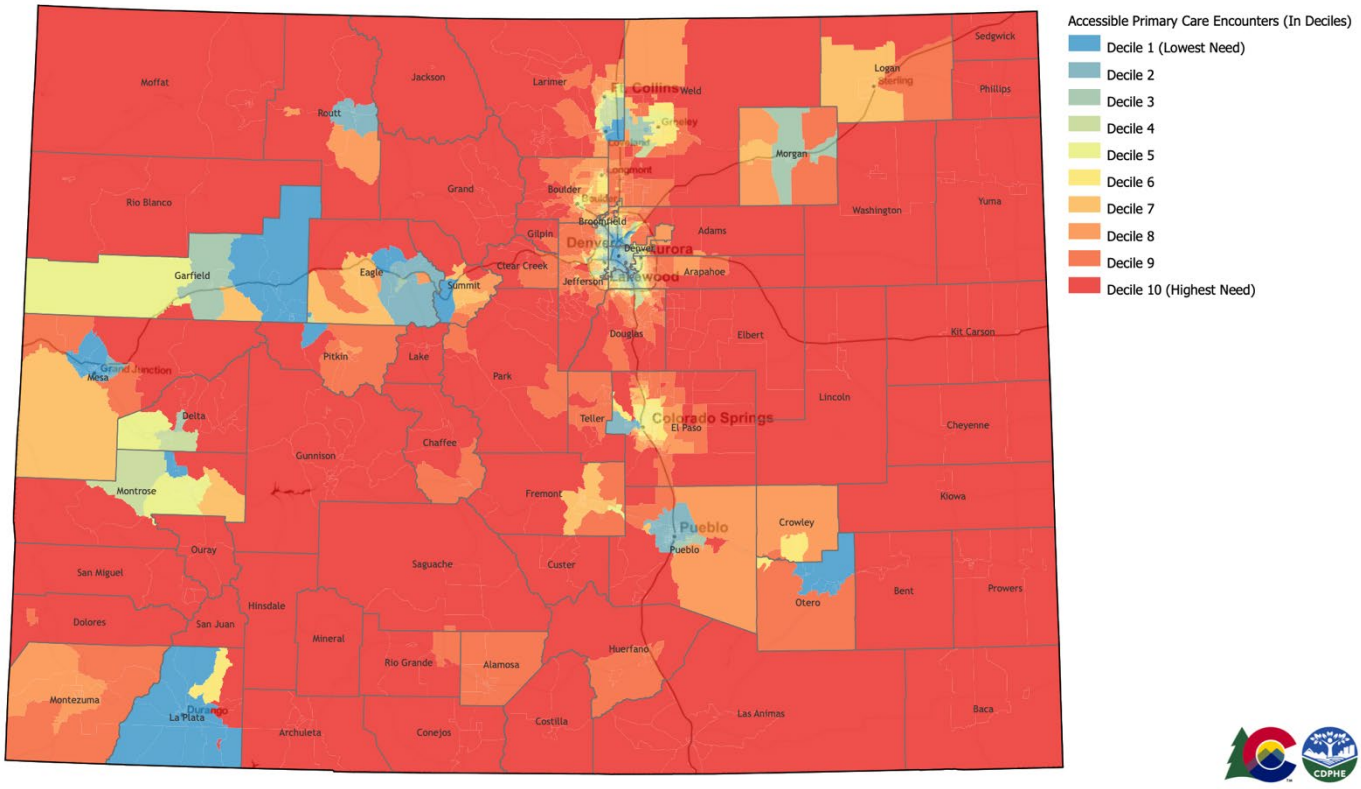
Select all that apply.

✓	Improves behavioral health and mental health; or, reduces substance abuse or suicide risk.	✓	Reduces or eliminates health care costs, improves access to health care or the system of care; stabilizes individual participation; or, improves the quality of care for unserved or underserved populations.
	Improves housing, land use, neighborhoods, local infrastructure, community services, built environment, safe physical spaces or transportation.		Reduces occupational hazards; improves an individual's ability to secure or maintain employment; or, increases stability in an employer's workforce.
	Improves access to food and healthy food options.		Reduces exposure to toxins, pollutants, contaminants or hazardous substances; or ensures the safe application of radioactive material or chemicals.
	Improves access to public and environmental health information; improves the readability of the rule; or, increases the shared understanding of roles and responsibilities, or what occurs under a rule.	✓	Supports community partnerships; community planning efforts; community needs for data to inform decisions; community needs to evaluate the effectiveness of its efforts and outcomes.
	Increases a child's ability to participate in early education and educational opportunities through prevention efforts that increase protective factors and decrease risk factors, or stabilizes individual participation in the opportunity.		Considers the value of different lived experiences and the increased opportunity to be effective when services are culturally responsive.
	Monitors, diagnoses and investigates health problems, and health or environmental hazards in the community.		Ensures a competent public and environmental health workforce or health care workforce.
	Other:_____ _____		Other:_____ _____

Supplemental Information: Draft Model Results
State-Designated Primary Care Health Professional Shortage Areas

The following figure represents test results of the methodology proposed in this amended rule. Additional and more contemporary data collection may modify these results in implementation of the amended rule, if adopted.

Figure 1: Draft State-Designated Primary Care Health Professional Shortage Areas



DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
Prevention Services Division
STATE-DESIGNATED HEALTH PROFESSIONAL SHORTAGE AREA DESIGNATION
6 CCR 1015-6
Adopted by the Board of Health on _____; effective _____.

1.1 Purpose

This rule establishes quantitative methods for determining which areas of Colorado have a shortage of health care providers and thus, should receive a state designation as a health professional shortage area. The methodology for substance use disorder designation is based upon:

1) The estimated demand for substance use disorder service encounters within a population defined by a discrete geographic area;
2) The estimated supply of substance use disorder service encounters for the population within a discrete geographic area;
3) The determination of whether supply meets demand within a discrete geographic area; and
4) The designation of geographic areas as substance use disorder health professional shortage areas where the resultant supply falls short of estimated demand for minimally adequate substance use disorder treatment.

The methodology for primary care designation is based upon:

1) The estimated demand for primary care service encounters within a population defined by a discrete geographic area;
2) The estimated supply of primary care service encounters for the population within a discrete geographic area;
3) The determination of whether supply meets demand within a discrete geographic area; and
4) The designation of geographic areas as primary care health professional shortage areas where the resultant supply falls short of estimated demand for primary care services.

1.2 Authority

This regulation is adopted pursuant to the authority in Section 25-1.5-404(1)(a), Colorado Revised Statutes.

1.3 Definitions

1) "Behavioral Health Care Provider," pursuant to Section 25-1.5-502(1.3), C.R.S., means the following providers who provide behavioral health care services within their scope of practice:
   a) a licensed addiction counselor (LAC),
   b) a certified addiction counselor (CAC),
   c) a licensed professional counselor (LPC),
   d) a licensed clinical social worker (LCSW),
   e) a licensed marriage and family therapist (LMFT),
   f) a licensed psychologist (Ph.D. or Psy.D.),

g) a licensed physician assistant (PA) with specific training in substance use disorder,
h) an advanced practice nurse (APN) with specific training in substance use disorder, pain management, or psychiatric nursing, or
i) a physician with specific board certification or training in addiction medicine, pain management, or psychiatry.

2) "Behavioral Health Care Services," pursuant to Section 25-1.5-502(1.5), C.R.S., means services for the prevention, diagnosis, and treatment of, and the recovery from, mental health and substance use disorders.

3) "Capacity" means the typical volume of health service encounters a health care professional can produce within the scope of his or her practice and scheduled clinical hours.

4) "Catchment Area" means a discrete geographic area where a preponderance of the civilian noninstitutionalized population within the service area could reasonably expect to access behavioral health services within the service area without excessive travel, when it is adequately resourced.

5) "Census Block Group" means a statistical division of a census tract defined by the ~~United States~~U.S. Census Bureau.

6) "Civilian Noninstitutionalized Population" are all people who live and sleep most of the time within the boundaries of a geographic area but are not housed in a group quarter such as a correctional institution, juvenile facility, military installation, or dormitory.

7) "Colorado Health Systems Directory" means the clinician data system administered by the Colorado Department of Public Health and Environment's Primary Care Office (section 25-1.5- 403, C.R.S.) which provides a comprehensive database of all licensed clinicians and health care sites in Colorado.

8) "Encounter" means an instance of direct provider to patient interaction with the primary purpose of diagnosing, evaluating or treating a patient's substance use disorder.

9) "Minimally Adequate Treatment" means the minimum necessary health care service visits for diagnosis, treatment or recovery needed to address a specific or general medical or behavioral health care service need.

10) "Prevalence" means the proportion of a population who has substance use disorder at some point within the previous year.

11) "Primary Care Provider" means the following health care professionals as defined in Section 25-1.5-502(5), C.R.S., who provide primary care services within their scope of practice:
a) an advanced practice nurse (APN) with a focus or specialty in primary care, women's health, or nurse midwifery;
b) a physician (MD or DO) with specific board certification or training in family medicine, general internal medicine, or general pediatrics; or
c) a physician assistant (PA) with a practice focus on primary care services.

12) "Primary Care Services," means a type of primary health services, as defined in Section 25-1.5-502(10), C.R.S., that involves comprehensive first contact and continuing care services for the prevention, diagnosis, and treatment of any undiagnosed sign, symptom or health concern not limited by problem origin or diagnosis.

13~~11~~) "Polygon" means a closed, irregular geometric shape on a map surface that defines equivalent road travel distances from a central point within the shape.

14~~12~~) "Population Centroid" means the geometric center of a group of population points within a geographic shape (e.g., census block group).

15~~13~~) "State-Designated Health Professional Shortage Area," pursuant to Section 25-1.5-402(11) and Section 25-1.5-502(13), C.R.S., means an area of the state designated by the Primary Care Office in accordance with state-specific methodologies established by the State Board by rule pursuant to Section 25-1.5-404 (1)(a), C.R.S., as experiencing a shortage of health care professionals or behavioral health care providers.

16~~14~~) "State Designated Substance Use Disorder Health Professional Shortage Area" means a State- Designated Health Professional Shortage Area experiencing a shortage of behavioral health care providers providing behavioral health care services for substance use disorder.

17~~15~~) "Substance Use Disorder" means mild, moderate, or severe recurrent use of drugs and/or alcohol that causes clinically and functionally significant impairment of individuals. Impairment may include health concerns, disability, risky behavior, social impairment, and failure to perform significant responsibilities at work, school, or with family. The diagnosis may be applied to the abuse of one or more of ten separate classes of drugs including alcohol, caffeine, cannabis, hallucinogens, inhalants, opioids, sedatives, stimulants, tobacco, and other substances. The dependent use of tobacco and caffeine are not a primary focus of this rule.

1.4 Substance Use Disorder Health Professional Shortage Area Determination Method

1) Catchment areas are created for analysis of behavioral health care provider capacity by determining standard road travel distances from the population centroid of each census block group in Colorado using a variable two-step floating catchment area method.

2) The population of each catchment area is the civilian noninstitutionalized population according to the most recent available data from U.S. ~~United State~~ Census Bureau at the time of analysis.

3) The estimated burden of substance use disorder within each catchment area is determined by multiplying the civilian noninstitutionalized population in the catchment area (section 1.4(2)) by substance use disorder prevalence according to age and sex. Substance use disorder prevalence is determined using the most recent available data from the National Survey on Drug Use and Health administered by the ssssss Department of Health and Human Services, Substance Use and Mental Health Services Administration.

4) The estimated behavioral health services demand for substance use disorder in each catchment area is determined by multiplying the estimated burden of substance use disorder (section 1.4(3)) by the number of minimally adequate treatments as reported in the National Comorbidity Survey – Replication administered by the U.S. Department of Health and Human Services, Substance Use and Mental Health Services Administration.

5) The estimated substance use disorder services supply in each catchment area is determined by evaluating a list of behavioral health care providers with a practice address within the catchment area and the behavioral health care providers' encounter productivity. The list of behavioral health care providers is derived from the most recent available data reported in the Colorado Health Systems Directory administered by the Colorado Department of Public Health and Environment's Primary Care Office. Each behavioral health care provider is assigned a behavioral health service 12 month productivity rate. The sum of encounter productivity for all practicing behavioral health care providers in the catchment area is the total estimated substance use disorder services supply in the catchment area.

6) Designation of a census block group as a State Designated Substance Use Disorder Health Professional Shortage Area occurs when the supply of behavioral health service encounters falls below the per capita demand for minimally adequate treatment for those who experience substance use disorder within the catchment area.
7) Current designation status of each region of the state will be posted at least annually on or about July 1 on a publicly accessible website.

1.5 Primary Care Health Professional Shortage Area Determination Method

1) Catchment areas are created for analysis of primary care provider capacity by determining standard road travel distances from the population centroid of each census block group in Colorado using a variable two-step floating catchment area method.
2) The population of each catchment area is the civilian noninstitutionalized population according to the most recent available data from U.S. Census Bureau at the time of analysis.
3) The estimated demand for primary care services within each catchment area is determined by multiplying the civilian noninstitutionalized population in the catchment area (section 1.5(2)) adjusted for rates of demand for primary care services according to age and sex. Rates of demand for primary care services are determined using the most recent available data from the Medical Expenditure Panel Survey administered by the U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality.
4) The estimated primary care services supply in each catchment area is determined by surveying primary care providers with a practice address within the catchment area. The list of primary care providers is derived from the most recent available data reported in the Colorado Health Systems Directory administered by the Colorado Department of Public Health and Environment's Primary Care Office. Each primary care provider is assigned a primary care service 12 month productivity rate. The sum of encounter productivity for all practicing primary care providers in the catchment area is the total estimated primary care services supply in the catchment area.
5) Designation of a census block group as a State Designated Primary Care Health Professional Shortage Area occurs when the supply of primary health service encounters falls below the per capita demand for primary care demand within the catchment area.
6) Current designation status of each region of the state will be posted at least annually on or about July 1 on a publicly accessible website.

1.65 Data Sources

1) If current data from the sources cited above are unavailable, the department may rely upon ~~a~~ comparable data sources.
2) To the extent available, reliable and practicable, the department will rely upon data collected within one year prior to analysis.
3) Health~~Behavioral health~~ care providers practice characteristics data may be derived from direct survey methods, claims analysis, peer reviewed and validated workforce research tools, and statistical methods.

1.76 Review

Shortage designation status will be reviewed in ~~2018~~ 2022 and at least every three years thereafter. More frequent review may be performed where data is available and analytical resources are available. Designation status of each area will remain effective for 36 months from the date of publication or when replaced by a more recent analysis.