



COLORADO HEALTH WORKFORCE DEVELOPMENT STRATEGY

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
PRIMARY CARE OFFICE**

TABLE OF CONTENTS

Executive Summary.....	1-2
Colorado Health Workforce Development Strategy.....	3-8
ORGANIZE	
EDUCATE	
RECRUIT & RETAIN	
ADVOCATE	
Context and Background.....	9-14
Colorado’s Primary Care Workforce Development Infrastructure and Capability.....	15-16
Rural Frontier and Urban Underserved Focus.....	17-19
Determination of Priority Focus.....	20-21
Labor Trends.....	22-25
Current and Projected High Demand Areas.....	26-28
Recruitment and Retention.....	29-41
Educational Practices.....	42-48
Policy.....	49-54
Appendix 1 Maps.....	55-59
Appendix 2 Primary Care Professions Education and Training Programs.....	60-87
Appendix 3 Primary Care Provider Loan Repayment Options-Colorado, 2011.....	88-91
Appendix 4 Education and Training Programs Clinical and Residency Overview.....	92-108
Appendix 5 Rural, Statewide and Urban Workforce Initiatives-Colorado, 2010.....	109-111
Appendix 6 Colorado CAP4K Post Secondary and Workforce Readiness.....	112-114
Acknowledgements.....	115-116
Authors.....	117
Endnotes.....	118-123

EXECUTIVE SUMMARY

The goal of the Colorado State Health Workforce Development Strategy is to improve the health status of all Coloradans by developing the health workforce, emphasizing the primary care access needs of vulnerable, low income, and geographically isolated communities.

Colorado is currently experiencing well-documented and widespread primary care shortages. In rural, frontier, and urban underserved communities the primary care workforce (which includes physical, mental, and oral health care providers) does not meet the current need. Furthermore, a significant increase in need is expected within the decade due to an aging population, an aging workforce, and an increased number of covered individuals with the implementation of the Patient Protection and Affordable Care Act.

While Colorado's health workforce is insufficient to the needs of the population, there is an abundance of will amongst many diverse individuals and organizations to address the state's primary care needs. Through consultation with many of Colorado's innovative thought leaders in the health workforce community, key recommendations emerged. The Colorado Health Workforce Development Strategy groups these recommendations under four headings: **Organize, Educate, Recruit, Retain, and Advocate.**

In accordance with the Affordable Care Act State Health Care Workforce Development Planning Grants (HRSA-10-284), and as authorized by Section 5102 of the Patient Protection and Affordable Care Act of 2010, this state strategy includes approaches to health workforce development that will lead to a 10 percent to 25 percent increase in Colorado's primary care workforce over a ten year period. Colorado is one of twenty-five states to receive funding for this planning activity.

The primary authoring entity for this project is the Primary Care Office (PCO), which is located in the Health Equity and Access Branch of the Prevention Services Division at the Colorado Department of Public Health and Environment. Colorado's Primary Care Office is charged with reducing health inequity caused by lack of access to primary care services including physical health, mental health, and oral health needs.

As required by the U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Office of Workforce Policy and Performance Management all states receiving funding under the Affordable Care Act State Health Care Workforce Development Planning Grants are required to complete their respective state health workforce development plan under the auspices of an eligible state partnership.

The Colorado State Health Workforce Development Strategy is the result of extensive inter-organizational participation of all required members of the prescribed eligible state partnership including the Colorado Department of Higher Education, Colorado Department of Education, Colorado Workforce Development Council, Colorado Community Health Network, Colorado Community College System and the Colorado Area Health Education Center.

As a balance to state agency representation, the Colorado Health Professions Workforce Policy Collaborative (the Collaborative) served as the consenting authority for all recommendations articulated in this state strategy. The Collaborative is a multidisciplinary group of more than thirty organizations that is committed to ensuring a highly qualified health workforce to provide all Coloradans with access to quality health care. The Collaborative exists through the generous support of The Colorado Trust and was housed at the Colorado Rural Health Center during the timeframe in which this state strategy was completed.

This state health workforce development strategy, affirmed by the Collaborative in the summer of 2011, is intended to be a living document, a pioneering first step in coordinated health workforce development. As such, this plan articulates a structure and process through which organizations representing the interests of health workforce development in the state may discuss, propose and advance evidence-based action and policy associated with health professions education, training and allocation. Naturally, it is anticipated that this comprehensive state strategy for health workforce development will be periodically reviewed and re-prioritized to address emerging health workforce needs in Colorado.

COLORADO HEALTH WORKFORCE DEVELOPMENT STRATEGY

STRATEGY 1: ORGANIZE COLORADO'S HEALTH WORKFORCE INITIATIVES

A. Establish a Colorado Health Workforce Leadership Team

Facilitated within the Primary Care Office of the Colorado Department of Public Health and Environment, the Colorado Health Workforce Leadership Team will be governed by an Advisory Committee comprised of representatives from the state's various workforce-related entities. The role of the Leadership Team will be to organize the state's workforce development initiatives in accordance with data regarding current and prospective workforce shortages. The Leadership Team will provide comprehensive information about the state's health workforce to granting agencies, foundations, and educational institutions along with guidelines and recommendations to ensure that all current and future initiatives are on track and non-duplicative. The Leadership Team will also collaborate with other CDPHE departments and stakeholders to help advance initiatives aiming to remedy population health issues which strain health care resources.

B. Collect Licensure Data

In order to organize Colorado's health workforce development initiatives it is necessary to implement a mechanism for collecting provider information on an ongoing basis and at the time of professional license acquisition and renewal at the Colorado Department of Regulatory Agencies (DORA). Without accurate data about current providers the state's workforce development initiatives are operating in the dark. Currently House Bill 12-1052 promises to enact this important data collection, if passed by the state legislature.

C. Organize Communities around Health Workforce Issues

Educators and health employers often coexist in close proximity within small communities without communicating with one another clearly and consistently, or at all. The Health Workforce Leadership Team will organize routine community engagement designed to gather information regarding local workforce needs and to engage employers, educators, and other community leaders in continuous strategic planning to address those needs. The Leadership Team will compile the local data gathered at these meetings, monitor trends across the state, and disseminate reports to granting agencies, foundations, and educational institutions to ensure that current and future initiatives are on track and non-duplicative. The regular community meetings will also provide a venue

for advancing initiatives aiming to remedy population health issues which strain health care resources.

STRATEGY 2: EDUCATE COLORADO'S HEALTH WORKFORCE

A. Educate Integrated Teams to Serve the Underserved

Integrated teams of health professionals provide quality service to larger populations at reduced cost. Colorado must prioritize educational programming that is interdisciplinary and that incorporates clinical placements within integrated environments in rural and urban underserved areas. Such prioritization must include increased financial commitment, on the part of all funding sources, for student support, for the recruitment and training of skilled educators, and for the development and support of clinical placements and residencies within integrated environments. This will promote the movement of new providers into careers in patient-centered medical homes and other environments that implement integrated, interprofessional and, collaborative models of care.

B. Educate a Diverse and Culturally Competent Workforce

To best serve the health needs of rural and urban underserved communities, a diverse and culturally competent workforce is required. Colorado must prioritize educational programming that incorporates training in cultural competence, and that aims to increase the racial, ethnic, and cultural diversity of Coloradans entering the health workforce.

C. Harness the Power of the Internet to Educate and to Collect Data

The Colorado Health Workforce Leadership Team must collaborate toward the formation of a sustainable health industry and career pipeline portal. This portal will be a one-stop web destination through which all health professional education and career pipeline programs are profiled, and all participants are tracked and monitored. The portal will also provide job hunting resources, links to loan repayment and other incentive programs, along with a social networking component to foster mentor relationships and connect individuals discerning their careers with others who are already established in the workforce.

D. Support Health Sciences and Health Professions Academic Advising

The Colorado Health Workforce Leadership Team must systematically collaborate with academic advisers across the academic and institutional

spectrum to empower advisers' capability to cultivate student success at all levels in areas of study that are aligned with state and regional workforce needs.

STRATEGY 3: RECRUIT & RETAIN A HEALTH WORKFORCE FOR COLORADO'S UNDERSERVED COMMUNITIES

A. Create a Clinical Placement Clearinghouse

Colorado must develop and launch a centralized system of clinical placement and residency tracking for health care professions. This centralized system will make it possible to: 1) identify and efficiently utilize all available placement sites across the state, and 2) place students from different disciplines in sites together in order to best prepare them to work within integrated and collaborative models of care.

B. Recruit and Retain Faculty and Preceptors

Education programs and clinical placement sites must collaborate to recruit preceptors on a one-on-one basis, matching them with students who have similar interests. The Colorado Health Workforce Leadership Team will support this collaboration by supporting and providing a forum for educator-employer engagement.

C. Develop Additional Clinical Placement Sites

Colorado is unable to place all of its students in clinical placements due to a shortage of available and qualified sites. As a result, our developing health professionals must seek clinical training in other states, where they often end up remaining to practice. In order to recruit and retain a health workforce for Colorado's underserved communities, additional clinical placement sites must be identified and supported throughout the state.

D. Support Community-Based Efforts to Recruit and Retain Health Workers

The Colorado Health Workforce Leadership Team must collaborate with other programs to engage community-level leadership in strategic discussions about how to effectively draw individuals to their communities, and support them in their efforts to increase the "attractiveness" and "liveability" of their communities.

E. Sustain and Create Loan Repayment Incentive Programs

Colorado must continue to support the J-1 Visa Waiver program, the National Health Service Corps program, the Colorado Health Service Corps program, the Expanded Dental Loan Option of the Colorado Health Service Corps, and the Health Care Professions Faculty Loan Repayment program. These programs are crucial to assisting health professionals with managing the financial costs of education and clinical experience and are known to be effective in recruiting professionals to underserved communities, and in retaining them in those communities. The Colorado Health Workforce Leadership Team must work with community leaders and employers to create additional loan repayment and other incentive programs on a local level.

STRATEGY 4: ADVOCATE FOR HEALTH WORKFORCE POLICY REFORM

A. Support the Ongoing Development of Workforce-Related Policy Recommendations

The Colorado Health Professions Workforce Policy Collaborative has outlined a plan of action for necessary policy reform (adopted here, with detail below). Colorado must support the ongoing development of workforce-related policy recommendations by the Collaborative, or an equivalent body of key stakeholders.

B. Advocate for the Passage of House Bill 12-1052

The passage of this bill will implement a mechanism for collecting provider information on an ongoing basis and at the time of professional license acquisition and renewal at the Colorado Department of Regulatory Agencies (DORA). The collection of this data is vital to the development and assessment of workforce initiatives.

C. Advocate for Prioritized Reimbursement to Primary Care Providers

Make reimbursement to primary care providers a top priority in the state budgeting process, avoid additional cuts, and restore the cuts to previous levels; ensure that the implementation of [Colorado] HB 10-1330, the All-Payer Claims Database, includes disclosure and reporting of reimbursement policies to ensure that they are based on fair and reasonable criteria for all providers; maintain or improve the current tort environment so that liability insurance costs to providers are contained; mitigate the additional practice costs associated with payer requirements, quality improvement, and patient safety programs; and support development of new payment models that encourage greater access,

reduce waste, and recognize the value of primary care services across provider types, and help implement collaborative and integrated care.

Associated policy work should effort to meet the increased demand for providers who serve Medicaid patients by expanding capacity of those entities which already serve the largest share of Medicaid enrollees. This support ought to include the gathering and dissemination of best practices for integrated systems of care (e.g. the patient-centered medical home model) that decrease administrative burdens while improving patient outcomes (minimizing ED visits, controlling chronic conditions, facilitating specialty referrals, improving overall community health, etc.). A discussion of the Colorado Primary Care Office's 2012 research regarding primary care workforce and Medicaid participation is provided in the policy section of this State Health Care Workforce Development Strategy.

D. Advocate for Prioritized Health Professions Education Funding

The legislature should look for new sources of revenue for health professions education funding separate from general higher education funding; create a legislative interim task force consisting of members of the Colorado State Senate and House of Representatives, and charge its members to work with relevant state departments, institutions of higher education, and other key stakeholders to examine the issue of health professions education funding within the state budget appropriations for secondary and higher education; and increase salaries for health professions faculty at public schools to alleviate large gaps between what a provider can make as a clinician and what a provider makes as a teacher.

E. Advocate for Prioritized Creation of Residencies and Clinical Placement Opportunities

The legislature should support: measures that will increase the state's ability to train more health professionals through increased funding and more flexible parameters; programs that encourage health care providers to offer clinical learning opportunities for all health disciplines; and, electronic platforms and clearinghouses that facilitate clinical placements.

F. Advocate for Measures Enabling Top-of-License Practice

Colorado should revise regulations that restrict the range of practice of nurse practitioners, physician assistants, and other health professionals who are allowed to practice at a higher level in other states. If the state is to adequately meet the challenges posed by health professional shortages, all health professionals must be allowed to practice at the top of their licenses.

CONTEXT & BACKGROUND

Effect of Health Insurance Coverage Expansion on Employment

New America Foundation and University of Denver's Center for Colorado's Economic Future

Successfully expanding health insurance coverage will not only enhance the Colorado economy, but also create new jobs for Coloradans. Health care expansion in Colorado would create 23,319 jobs by 2019.

Colorado has a unique state history of legislative action in health care reform that includes efforts to expand eligibility for enrollment in Medicaid and the State Children's Health Insurance Program (SCHIP). In Colorado this program is called the Children's Health Plan Plus (CHP+). Legislative priorities have also centered on the delivery of quality, affordable health care services to all Coloradans.

A historical overview of health care reform nationally and in Colorado provides context for the inventories and recommendations presented in this state strategy. It is important to acknowledge the state's

legislative history in health care reform as directly influencing the environment in which the future primary care workforce will train and practice.

The state's current budget shortfall is of equal importance. Diminishing state revenues and reduced funding for higher education and K-12 education is likely to impact the state's capacity to educate and train its future primary care workforce. The impact of reduced funding for higher education is further explored in the *Recruitment and Retention* discussion of this state strategy.

Existing Primary Care Workforce Development

This state strategy does not supplant existing primary care workforce development plans and their associated recommendations. Rather, this state strategy provides structure and process through which all existing planning efforts may find thoughtful consideration and application. Publications supporting primary care workforce development in the state and that are currently accessible include, but are not limited to, the following:

Colorado Health Institute. (2011). *Oral Health in Colorado, Barriers to Care and the Role of Workforce* (**Note: in development during completion of this state strategy**)

The Colorado Health Foundation and the Western Interstate Commission for Higher Education (2010). *The Behavioral Health Care Workforce in Colorado: A Status Report*

Colorado Health Professions Workforce Policy Collaborative. (2011). *Addressing Colorado’s Primary Care Provider Shortage-Final Recommendations from the Colorado Health Professions Workforce Policy Collaborative*

SB06-208 Blue Ribbon Commission for Health Care Reform

In 2006 the Colorado General Assembly authorized the formation of a Blue Ribbon Commission for Health Care Reform. SB06-208 represents the state’s first step in General Assembly directed, comprehensive health care reform. This legislation specifically acknowledges that Americans spend an exorbitant amount on health care and that the complex health care system diverts too many dollars away from the delivery of cost-effective, evidenced-based health care. SB06-208 also notes that health care policy dialogues too often do not include enough community and business leaders and do not adequately consider the political process essential to bringing about the systemic reforms needed to lower and contain cost.ⁱ

The Commission’s final report to the Colorado General Assembly was released in January of 2008. The report contained thirty-two recommendations for future action and included a detailed description

of the state’s uninsured population. Factors associated with the rising cost of care and coverage in Colorado were also identified.ⁱⁱ The Commission’s final report is particularly noteworthy as it provided a rational and platform for incremental state level health care reform in the years to follow (Table 1).

Table 1. Blue Ribbon Commission for Health Care Reform-Key Recommendations

Reduce Health Care Costs, Enhance Quality of Care	Provide a Medical Home for All Coloradans
	Create a multi-stakeholder “Improving Value in Health Care Authority.”
	Pay providers based on quality.
	Commission an independent study to explore ways to minimize barriers to mid-level providers such as Advanced Practice Nurses, Physician Assistants and others from practicing to the fullest extent of their licensure and training.
Improve Access to Health Care with Mechanisms to Improve Choices	Develop a statewide system aggregating data from all payer plans, public and private.
	Require every legal resident of Colorado to have at least a Minimum Benefit Plan, with provisions to make the mandate enforceable.
	Require all health insurance carriers operating in Colorado to offer a minimum benefit plan in the individual market.
	Expand eligibility in combined Medicaid/CHP+ program to cover more uninsured, low-income Coloradans.

Enhance access to needed medical care, especially in rural Colorado where provider shortages are common.

Improve delivery of services to vulnerable populations.

Adopt recommendations as a comprehensive, integrated package but do so in stages, increasing efficiency and assuring access before expanding coverage.

SB07-130 Medical Homes for Children

SB07-130 was the catalyst for pediatric medical home development throughout the state. The legislation specifically notes that the best medical care for infants, children and adolescents is provided through a medical home that is consistent with the principles of a patient centered medical home. Those principles include a whole person orientation, care that is coordinated and integrated across all elements of the complex health care system and the patient's community, and care that provides for the quality and safety of the patient, where qualified health care practitioners provide primary care and help manage and facilitate all aspects of medical care.ⁱⁱⁱ

The law directs the Colorado Department of Health Care Policy and Finance (HCPF) and the Colorado Department of Public Health and Environment's (CDPHE) Colorado Medical Home Initiative, established in 2001, to develop standards and processes that ensure that children covered under Medicaid or CHP+ have access to a medical home that is accessible, family centered,

continuous, comprehensive, coordinated, compassionate, and culturally responsive.

By March of 2009 approximately 88,000 Medicaid and 62,000 CHP+ children were enrolled in a medical home. The medical home system in the state at that time consisted of ninety-seven practices, representing three hundred and ten physicians. Median medical costs were lower for children in a medical home, \$785 compared to \$1,000 for children not in a medical home.^{iv}

Executive Order D 005 08 Establishing the Center for Improving Value in Health Care (CIVHC)

Executive Order D 005 08 directed the formation of the Center for Improving Value in Health Care (CIVHC). Citing the evident need to develop a structured, coordinated approach to improving quality, contain costs, and protect consumers CIVHC is charged with the following tasks^v:

1. Convene a health care quality steering committee of relevant state departments, health care stakeholder organizations, and individuals.
2. Establish priorities, develop strategies, coordinate existing efforts and begin implementing strategies to improve health care quality and manage growth of health care costs.
3. Research quality forums or councils in other states, including best

practices on governance structure, funding, roles and responsibilities, and engagement of the private sector.

4. Identify strategies for tying quality measurement to rate setting methodologies and payment structures for providers in public insurance programs. Research general trends in private sectors that relate to quality improvement and cost management.

During the development of this state strategy, and as of January 2011, CIVHC was in the process of becoming 501(c)(3) not-for-profit entity. CIVHC has the stated mission of developing and implementing strategic initiatives that will improve the health of Coloradans, contain costs, and ensure better value for health care received. Its current initiatives principally focus on health care delivery redesign in Colorado and directly align with the intent and scope of Executive Order D 005 08. This includes payment reform, consumer engagement, business engagement, data, and transparency including the All Payer Claims Database.

HB09-1293 Colorado Health Care Affordability Act

The Colorado Health Care Affordability Act (CHCAA) authorizes HCPF to collect a provider fee from all licensed or certified hospital providers. When fully implemented the CHCAA will provide

health care coverage to more than 100,000 uninsured Coloradans, reduce uncompensated care costs, and allow the state to draw down an estimated \$600 million in federal Medicaid matching funds.^{vi} In meeting this goal, HB09-1293 increased the eligibility level for parents of children with incomes up to 100 percent of the federal poverty level (FPL) through Medicaid.

The CHCAA also increased the eligibility level for children and pregnant women under the Child Health Plan Plus (CHP+) up to 250 percent of FPL. HB09-1293 reduces the number of uninsured through implementation of health care coverage for adults without dependent children with incomes up to 100 percent of FPL and established a Medicaid buy-in program for individuals with disabilities whose family incomes are too high for Medicaid eligibility but are under 450 percent of FPL. CHCAA also provides for 12-months of continuous eligibility for children enrolled in Medicaid.^{vii}

For the 2009-2010 fiscal year approximately \$341 million in hospital provider fees were collected. On May 1, 2010 expansions to Medicaid parents up to 100 percent of FPL and CHP+ up to 250 percent of FPL went into effect. The Colorado Department of Health Care Policy and Finance reports that by September 30, 2010 CHCAA expansions enabled enrollment of 25,000 Medicaid parents, 2,500 CHP+ children and 200 CHP+ pregnant women.^{viii} HCPF projects that

between October 2010 and September 2011 approximately \$473 million in hospital provider fees will be matched by the federal government.^{ix}

HB10-1330 Concerning the Creation of an Advisory Committee to Make Recommendations Regarding the Creation of a Colorado All-Payer Health Claims Database for the Purpose of Transparent Public Reporting of Health Care Information

HB10-1330 enabled the formation of an Advisory Committee to make recommendations regarding the development of an All Payer Claims Database (APCD). Eleven states have APCDs and are currently collecting data. Colorado will begin collecting data in 2011.^x CIVHC is charged with fulfilling the necessary administrative functions for the state's APCD. Once operational, Colorado's APCD will provide businesses and consumers with comparative data regarding health care quality and cost.

The Patient Protection and Affordable Care Act of 2010

The Patient Protection and Affordable Care Act (PPACA) was signed into law on March 23, 2010. The PPACA is a monumental, transformative step in federally initiated health care reform. PPACA's intent is fourfold: hold insurance companies more accountable, lower health care costs, increase health care choices, and enhance quality of health care available for all

Americans. For Colorado, the PPACA, as originally signed into law, has the potential to realize the following advances in how Coloradans obtain, access, and receive health care:

1. An estimated reduction in family health insurance premiums in the range of \$1,510 to \$2,160.^{xi}
2. In addition to expansions associated with the Colorado Health Care Affordability Act, an additional 500,000 Coloradans will have access to health care coverage under the PPACA's coverage expansions and state Exchange.^{xii}
3. An estimated 90,000 small businesses in Colorado may be eligible for tax credits designed to make coverage for employees more affordable.^{xiii}
4. \$1.5 billion over five years for scholarships and loan repayment for doctors, nurses and other health care professionals through the National Health Service Corp activities in the state.^{xiv}

Colorado's FY2011-12 Budget

Forty-four states, and the District of Columbia, reported budget shortfalls for the 2012 fiscal year. Colorado's budget deficit for the 2011-2012 fiscal year is projected at \$988 million to \$1.3 billion.^{xv,xvi} Efforts to close the state's budget gap for FY 2011-2012 resulted in significant cuts to state departments that play a vital role in educating, training and retaining the future

primary care workforce including the Colorado Department of Education and the Colorado Department of Higher Education.

The National Conference of State Legislatures provides current data regarding the extent of budget cuts to K-12 education and higher education in Colorado over the last two fiscal years. The FY 2010-2011 budget included a \$260 million (6.4 percent) cut from K-12 education. The FY2011-2012 budget cut funding for K-12 education by \$160 million.^{xvii,xviii} The FY2010-2011 budget included a \$61.5 million cut to higher education with another \$36 million in reduced funding for FY2011-2012.^{xix,xx} The cumulative effective of these budget cuts has resulted in a 27 percent reduction in state support for Colorado higher education over the last two years.^{xxi}

Cuts to higher education are particularly relevant to primary care workforce education and training capacity. Among Colorado’s public institutions, the state’s community colleges are a principal source of affordable, entry-level nurse education including Certified Nurse Aide (CNA), Licensed Practical Nurse (LPN), and RN-Associate Degree in Nursing (ADN). Colorado’s community colleges are also the primary sources of dental hygienist education and training in the state. Colorado’s public 4-year institutions are the sites for undergraduate and graduate level advanced practice education, training and/or clinical placement for Physicians, Physician Assistants, Dentists,

Psychologists, Psychiatrists, Social Workers and Counselors, and Advanced Practice Nurses including Family Nurse Practitioners, and Certified Nurse Midwives.

The State of Colorado Joint Budget Committee’s *Appropriations Report Fiscal Year 2011-12* contains a comprehensive overview of the state’s general tax revenues and expenditures, including comparative and historical information associated with appropriations made during the Colorado General Assembly’s 2011 legislative session. This document details the magnitude of budget cuts to Colorado’s institutions of higher education (Table 2).^{xxii}

Table 2. Percent Budget Cuts by Institution of Higher Education FY10-11, FY11-12

Institution	FY10-11	FY11-12	Percent
Adams State College	\$13,447,945	\$11,190,415	-16.8%
Mesa State College	22,087,052	18,500,575	-16.2%
Metro State University	44,067,731	36,961,479	-16.1%
Western State College	11,208,881	9,344,247	-16.6%
CSU System	132,060,260	106,476,533	-19.4%
Fort Lewis College	11,503,271	9,323,117	-19.0%
CU Regents	192,465,520	145,775,732	-24.3%
Colorado School of Mines	21,456,245	16,254,242	-24.2%
University of Northern Colorado	40,624,090	32,806,606	-19.2%
Community Colleges	131,965,957	112,832,926	-14.5%

Colorado's Primary Care Workforce Development Infrastructure

A vast community of public and private organizations and educational institutions in Colorado are invested in primary care workforce development, advocacy, education, and training. Workforce efforts are largely focused on rural, frontier and urban underserved communities. The following Colorado-based entities constitute the state's existing primary care workforce development infrastructure.

Colorado's public and private universities are central to primary care workforce education and training in the state. These institutions are not listed here, but they are fully detailed in Appendix 2.

Adams County Education Consortium

Caring for Colorado Foundation

Center for Research Strategies

ClinicNET

Colorado Academy of Family Physicians

Colorado Academy of Physician Assistants

Colorado Area Health Education System

Colorado Association of Family Medicine Residencies

Colorado Association of School-based Health Centers

Colorado Behavioral Health Council

Colorado Center for Nursing Excellence

The Colorado Children's Hospital

Colorado Coalition for the Medically Underserved

Colorado Commission on Family Medicine

Colorado Community College System

Colorado Community Health Network

Colorado Dental Association

**Colorado Department of Education
Data and Research**

Secondary Services and Initiatives

Individual and Career Academic Plan
(ICAP)

**Colorado Department of Higher Education
CollegeInvest
College in Colorado**

Colorado Commission on Higher Education
Review and Approve Degree Programs
Statewide Enrollment Policies and
Admissions Standards

Colorado Department of Labor and Employment

Workforce Development Council
SECTORS-Strategies to Enhance
Colorado's Talent through Regional
Solutions

Colorado Department of Public Health and Environment

Primary Care Office

Center for Healthy Families and Communities-Children and Youth Branch
School-based Health Center Program

Office of Health Disparities
Recruiting and Retaining Youth of
Color into Health Professions
Taskforce

Office of Planning and Partnerships
Public Health Improvement Planning

Children with Special Needs Unit
Colorado Public Health Medical Home
Initiative

Colorado Department of Regulatory Agencies

The Colorado Health Foundation

The Colorado Health Institute

The Colorado Health Professions Workforce Policy Collaborative

The Colorado Hospital Association

The Colorado Medical Society

Colorado Nurses Association

Colorado Rural Health Center-State Office of Rural Health

Colorado Society of Osteopathic Medicine

The Colorado Trust

Community Health Association of Mountain Plains States

El Pomar Foundation

Engaged Public

Mental Health America of Colorado

Western Interstate Commission for Higher Education

University of Colorado College of Liberal Arts and Sciences

Rural, Frontier, and Urban Underserved Focus

This state strategy targets the primary care workforce needs of the state's rural, frontier and urban underserved communities. The state's geography, respective of existing health professional shortage designations, provides perspective for the future need and distribution of an increased primary care workforce in high need areas. Data collection and needs assessment processes articulated in this state strategy are identified as the necessary measurement processes required for the provision of specific types of primary care providers and services within an identified region or community.

Rural and Frontier Colorado

The definition of rural is complex and variable. There are over 20 different definitions of "rural" applied by federal agencies. This state strategy utilizes the current U.S. Census Bureau definition of rural.^{xxiii} In defining rural the U.S. Census Bureau elaborates on the following definitions of an "urbanized area":

Urbanized Area- includes a central city and the surrounding densely settled territory that together have a population of 50,000 or more and a population density generally exceeding 1,000 people per square mile.

Urban Cluster-consists of a central core and adjacent densely settled territory that together contains between 2,500 and 49,999

people. Typically, the overall population density is at least 1,000 people per square mile.

"Rural" encompasses all population, housing, and territory not included within an urban area. "Frontier" areas are sparsely populated rural areas having a population density of six persons per square mile or less.^{xxiv} Seventy-three percent of Colorado's 64 counties are classified as either rural or frontier (Appendix 1, Map 1).

Population data for 2010 identifies the magnitude of population distribution across rural and frontier Colorado. Population data available from the Colorado State Demography Office indicates that in 2010 Colorado was home to 5,029,196 residents. In 2010, rural and frontier counties were home to 687,293 Coloradans or 14 percent of the state's total population.^{xxv}

Lack of primary care providers creates high barriers to access for low-income, publicly insured, uninsured and geographically isolated Coloradans.^{xxvi} Existing and current primary care, dental and mental health, Health Professional Shortage Area (HPSA) designations affirms this state strategy's rural and frontier focus as a target for primary care workforce development (Appendix 1, Maps 2-4).

Health Disparity

Office of Health Disparities- Colorado Department of Public Health and Environment

Improved technologies within the medical, public health, and environmental fields have resulted in increased life expectancy and better quality of life. However, racial and ethnic groups have not benefited equally from these advances. Underserved communities of Colorado are disproportionately affected by disease, disability, and preventable death. These differences are known as health disparities and are present at the national, state and local levels.

Rural and frontier residence has a direct correlation to primary care need, access and utilization. In 2008, an average of 13.1 percent of the population in rural counties was over 65 years as compared to only 8.7 percent of the population in urban counties. In 2010, the median age for Coloradans was 36.3 years while in rural counties the median age was 41 years. The current average rate of uninsured individuals aged 0-64 years in Colorado's rural and frontier counties is 23.5 percent, above the state average of 18.6 percent.^{xxvii}

Colorado's Urban Communities

Colorado's urban counties are home to 4,341,903 residents or 86.3 percent of the state's total population. Health disparity, in relation to the racial/ethnic composition of Colorado's urban counties supports this state strategy's urban, underserved focus particularly with respect to vulnerable populations.

In 2009 the Colorado Department of Public Health's Office of Health Disparities produced a report entitled *Racial and Ethnic Health Disparities in Colorado 2009*. This publication comprehensively documents and describes the impact of health disparity on Colorado's racial/ethnic communities with an emphasis on such determinants of health as income, education, employment, physical environment, personal health practices, access and use of health services, and culture.

The Colorado State Demography Office indicates dramatic increases among racial/ethnic populations most affected by health disparity including Hispanics, African-Americans, Asian-Pacific Islanders and American Indians (Table 3).^{xxviii}

**Table 3: Population Forecasts by Race/Ethnicity
2015-2040**

Group	2015	2025	2030	2040
Hispanic	1,133.1	1466.8	1,632.8	1,952.4
African-American	238.2	293.1	317.8	366.0
Asian-Pacific Islander	158.5	192.2	207.7	236.5
American Indian	58.4	70.7	76.3	86.0

(Note: Numbers in Thousands)

Colorado’s racial/ethnic communities are expected to continue growing into the foreseeable future. Important to this state strategy, is the distribution of these communities throughout the state’s urban, front-range counties. Population data provided by the Annie E. Casey Foundation and the Colorado Children’s Campaign are an indicator of where sustained population growth among Colorado’s racial/ethnic populations is likely to occur (Appendix 1, Maps 5-9).

Determination of Priority Focus

Primary Care Workforce Planning

*U.S. Department of Health and
Human Services, Health
Resources and Services
Administration*

The Nation's health care needs are constantly changing and the health care system must evolve to meet the demand. In developing and implementing workforce plans, States are encouraged to examine a wide variety of strategies to meet their specific identified needs.

Achieving a 10 to 25 percent increase in Colorado's primary care workforce over a ten-year period is a monumental task, requiring priority focus on key planning themes. Focus areas identified in this state strategy are consistent with the granting requirements of the Affordable Care Act State Health Care Workforce Development Planning Grant: HRSA 10-284.

The formation of Colorado's Health Workforce Development Strategy was a process involving over a hundred individuals representing over fifty separate organizations from a myriad of disciplines and areas of expertise. Two workforce

planners were hired in January 2011 by the Colorado Department of Public Health and Environment, Prevention Services Division, Primary Care Office for the express purpose of completing the strategy. The planners were responsible for crafting a strategy for effective research, coordinating and executing all activities related to the Affordable Care Act State Health Care Workforce Planning Grant, engaging stakeholders from across the state, and coalescing all gathered information into a singular planning strategy

Prior to beginning the research and writing processes, all relevant stakeholders were identified and contacted. One group of stakeholders belonged to the group of mandated state partnerships as required by the original grant guidance. This group was a diverse cross-section of individuals and organizations that are critical to the primary care workforce discussion in Colorado.

Additionally, the Colorado Health Professions Workforce Policy Collaborative (the Collaborative) proved to be a key venue for engaging stakeholders. The purpose of the Collaborative is to convene policy leaders, health care providers, educational institutions, and economic development and workforce planning authorities to collectively establish a strategic public policy framework for Colorado that will advance health professions workforce priorities to alleviate

provider shortages and strengthen the health care system.^{xxix}

Participants were engaged in the process through working subgroup meetings. Five subgroups were created and distinguished by topic, each aligned with HRSA's required elements of The Affordable Care Act State Health Care Workforce Development Planning Grants:

- **Subgroup I:** Labor Trends
- **Subgroup II:** Current and Projected High Demand Areas
- **Subgroup III:** Recruitment and Retention
- **Subgroup IV:** Education Practices
- **Subgroup V:** Policy

These meetings yielded valuable information and discussions that greatly contributed to the comprehensiveness of this workforce development strategy. Additionally, the subgroup meetings brought together many individuals and organizations that do not typically coordinate their efforts or communicate openly, leading all to recognize the need for increased cohesion among health workforce initiatives in Colorado.

In addition to the working subgroup meetings, one-on-one key informant interviews were conducted with over sixty individuals. Sixteen of the stakeholder interviews pertaining specifically to *Educational Practices* were conducted by the

Colorado Rural Health Center via a guided interview questionnaire, over email, with the opportunity for follow-up. The remaining key informant interviews were conducted either in person or on the phone by the Primary Care Office Workforce Planners.

In addition to gathering information from stakeholders across the state, the Primary Care Office researched resources and literature related to primary care workforce, state-level initiatives, federal-level initiatives, previously collected data and other relevant information.

Labor Trends

Colorado has multiple sources of primary care workforce provider and consumer data that inform different programs, designations, and paint the picture of access and coverage across the state. The Colorado Department of Labor and Employment (CDLE) employs extensive data collection techniques to document how many providers are licensed in the state and who they serve^{xxx}. Their data is sortable by:

- County
- Metropolitan Area
- State
- Workforce Region
- Occupation
- Industry
- Educational Program

Not all of the geographically-based sorting mechanisms yield results and some parts of Colorado appear to have more consistently gathered data than others. The occupation/industry search tools return information about salary, current workforce in 2009, projected workforce in 2019, education requirements, tasks typical of the specific professions and standard workplace conditions. It is of note that the projections for workforce in 2019 are basic projections based on the continuation of the status quo and do not take into account factors critical to primary care workforce discussions, such as aging population, aging workforce, primary care/specialty

selection trends and projects, and potential shortage designation changes. CDLE projects that a broad majority of professions identified as being primary care deficient will experience extreme shortages over the next ten years (Table 4).

The Colorado Department of Regulatory Agencies (DORA) collects data related to provider location and nature of practice as part of their licensure and licensure renewal processes.^{xxxi} Information collected at the point of licensure includes:

- Contact information
- Education
- Previous disciplinary measures
- Licenses held in other states
- Specialty
- Practice history

An immediate challenge associated with this method of data collection and dissemination is that information is not sortable and extractable to the general public and to other agencies. When DORA requests provider's information about their contact information, they do not specify whether or not they should provide their home address and phone number or their practice address and phone number. This makes it difficult to have a precise count of how many providers are serving in any given geographic area. Many providers live in one county and work in another (or, in

some cases, multiple counties). Furthermore, providers may choose to maintain an active license into their retirement, so they are documented as being active providers but are not currently seeing patients.

The Colorado Health Institute (CHI) is a private nonprofit organization that serves “as a comprehensive source of health data resources and policy analysis.”^{xxxii} Since its inception in 2002, CHI has completed many different studies on health workforce across the state, including multiple surveys that were far reaching and captured a large percentage of practicing providers. CHI’s contributions to understanding health workforce in Colorado have been invaluable, but their data collection efforts are point-in-time pictures of workforce, rather than continuous mechanisms for gathering accurate up to date information.

While Colorado benefits from having multiple engaged stakeholder groups contributing to the larger provider data set, frequently their data are in conflict with one another and no one entity is currently capable of gathering truly comprehensive and up to date information on the number of providers practicing in the state.

A method that Colorado could choose to increase the quality and usability of their provider data is to institute new methods of data collection centered around the licensure and licensure renewal processes at DORA. This will be an efficient way to establish comprehensive, reliable baseline

data about the current number of primary care providers while formalizing a process for the continual update of provider information. Because Colorado mandates license renewal every two years for all primary care-related professions, the data will never be more than two years out of date. In order to have the most complete possible picture of primary care workforce in the state, the following data elements can be collected, as appropriate, and at the time of license application or renewal.

- Physical location of practice(s)
- Direct patient care hours at each practice location per week
- Services rendered at each practice location
- Practice setting

In the 2011 legislative session, HB 11-1152 *A Bill for an Act Concerning the Collection of Health Care Workforce Data from Health Care Professionals* was introduced in the Colorado State House of Representatives. The following summary describes the intent of this bill:

The bill requires the Director of the Division of Registrations (Director) to implement a system to collect workforce data from specified health care professionals. The data is required to be anonymous and extractable for research purposes. The Director is also required to provide the option for health care professionals to provide additional workforce data through a voluntary on-line survey. The Director

will designate an advisory group to develop the structure of the mandatory questions and the on-line survey and to advise the director regarding the appropriate release of the data to the public.^{xxxiii}

Despite strong support from many different community and governmental agencies, the bill was postponed indefinitely in the

House Committee on Economic and Business Development. However, strong support for the data collection processes articulated in HB 11-1152 remains. Such critical legislation has the potential to provide Colorado with a true count of practicing primary care providers.

Table 4: Primary Care Workforce Projections

Profession	Employed in 2009	Projected Employed in 2019	Average Annual Change in Employment	Total % Change from 2009-2019	Increased Demand from 2006-2016	% of Projected Shortage
Physician Assistants	1,459	1,893	2.6%	29.7%	33.7%	7.7%
OB/GYN	643	772	1.8%	20.1%	23.6%	5.6%
Family Physicians	2,276	2,536	1.1%	11.4%	15.3%	4.3%
General Pediatricians	214	351	1.1%	11.8%	14.5%	3.5%
General Internists	240	268	1.1%	11.7%	14.4%	3.4%
Nurse Practitioners	719	839	1.1%	unavailable		unknown
All other Physicians and Surgeons	3,565	4,231	1.7%	18.7%	22.0%	5.0%
Registered Nurses	43,361	55,416	2.5%	27.8%	36.2%	11.2%
LPN/VPN	7,162	8,281	1.5%	15.6%	22.6%	7.6%
Certified Nurse Midwives	414	473	1.3%	unavailable		unknown
Dental Hygienists	3,397	4,316	2.4%	27.1%	31.0%	7.0%

Profession	Employed in 2009	Projected Employed in 2019	Average Annual Change in Employment	Total % Change from 2009-2019	Increased Demand from 2006-2016	% of Projected Shortage
Dentists, General	2,643	2,821	0.7%	6.7%	9.8%	2.8%
Mental Health and Substance Abuse Social Workers	2,850	3,647	2.5%	28.0%	40.5%	15.5%
Substance Abuse and Behavioral Disorder Counselors	1,160	1,535	2.8%	32.3%	39.4%	11.4%
Mental Health Counselors	3,179	3,994	2.3%	25.6%	35.9%	12.9%
Medical and Public Health Social Workers	2,727	3,297	1.9%	20.9%	35.3%	16.3%
Child/Family/School Social Workers	5,358	6,113	1.3%	14.1%	28.0%	15.0%
Rehabilitation Counselors	1,615	1,818	1.2%	12.6%	25.2%	13.2%
Psychiatrists	324	380	1.6%	17.3%	23.4%	7.4%
Clinical/Counseling/School Psychologists	3,705	4,173	1.2%	12.6%	23.0%	11.0%
All Other Psychologists	244	271	1.1%	11.1%	18.0%	7.0%
All Other Social Workers	1,308	1,534	1.6%	17.3%	32.4%	16.4%
Home Health Aides	unknown				56.0%	unknown
Respiratory Therapists	1,706	2,185	2.5%	28.1%	37.2%	12.2%
Pharmacists	4,364	5,524	2.4%	26.6%	33.5%	9.5%
Physical Therapists	3,677	4,684	2.5%	27.4%	33.4%	8.4%

Current and Projected High Demand Areas

Colorado has historically engaged in many needs assessment efforts across the state to ascertain what the current areas of high demand are with regard to primary care workforce, as well as to project where future areas of high demand will be. The Colorado Health Institute (CHI) has collected a wealth of data over the past nine years related to the health care needs of the state. Some of their projects have focused on provider shortages, profiling different disciplines within the primary care workforce, health insurance access, and the impacts of the Affordable Care Act, all of which have a role to play in assessing where Colorado's current and projected high demand areas are. Of particular note are CHI's regional health profiles, which document anticipated population shifts (divided by age), unemployment, median household income, health insurance status, health risk factors, and health care utilization.

The regional health profiles published in 2010 are available at the Colorado Health Institute website. Highlights from these reports represent predictors of emerging areas of high demand:

- Population projections for Health Statistics Region 5 (Cheyenne, Elbert, Kit Carson, and Lincoln Counties) indicate a 44.1% increase in over all population between the years 2010 and 2020.
- Population projections for Health Statistics Region 3 (Douglas County) indicate a 142.6% increase in the 65+ population between the years 2010 and 2020.
- In Health Statistics Region 12 (Eagle, Garfield, Grand, Pitkin, and Summit Counties), over 1 out of every 5 residents (20.7%) are uninsured.
- In Health Statistics Region 20 (Denver County) only 84.6% of the population saw a primary care physician in the past year.^{xxxiv}

The Center for Research Strategies (CRS) has also engaged in assessment of primary care needs and how physician workforce affects demand for services. In a position paper published in July 2010, CRS paints a picture of Colorado's shifting community health care demands as the population and workforce age. They assert that "by 2025, the share of Colorado's population aged 65 and over will nearly double. At the same time, approximately one-third of physicians in Colorado now are older than 55.

Thus, many physicians will be retiring while demand for health care will be rising."^{xxxv} Additionally, "by 2020, adjusted for patient age and demand, the number of family physicians relative to the population aged 55 and over could plummet by 38% in Colorado."^{xxxvi} These changes, which are quickly approaching, will change the face of

what areas become high demand and what that demand will specifically look like.

The Colorado Department of Public Health and Environment Health Statistics Section also uses multiple data sources to craft Colorado Health Watch assessments, which cover many different factors that contribute to assessing whether or not an area is high demand or not. These assessments are presented by age group: perinatal and infant, child, adolescent, and adult.^{xxxvii} A broad range of health indicators are surveyed to create as comprehensive a picture of general state health as possible. While this is a useful tool for capturing a point-in-time snapshot of Colorado's health, it does not provide a means for projection and is not necessarily as current as other assessment methods.

In addition to Colorado-specific needs assessments, there are national-level assessment tools from which inferences about high demand areas are drawn and on which policy and program decisions are based. The United States Census Bureau uses three sub-census national surveys including the Current Population Survey's Annual Social and Economic Supplement (CPS ASEC), the American Community Survey (ACS) and the Survey of Income and Program Participation (SIPP). The CPS ASEC collects health insurance data on an annual basis at the national and state level geographies. The ACS collects data on an annual basis for the nation, all 50 states, the District of Columbia, Puerto Rico, every

congressional district and all counties, places and metropolitan areas with populations of 65,000 or more. The SIPP collects longitudinal health insurance data at the national level of geography^{xxxviii}.

Whether or not an individual or household has adequate health insurance (or health insurance at all) is an indicator of where potential high demand areas currently are. Because these surveys are completed annually, changes in coverage in individual census tracts can be observed and when this information is combined with other census information (i.e. age of population, known social determinants of health such as gender, race, ethnicity, and socioeconomic status, etc.) predictions can be made about future coverage. Copies of the survey tools can be found on the U.S. Census Bureau's Health Insurance website.

These assessment tools all paint a large scale picture of Colorado's general health and allow for inferences to be made about where areas of high demand are emerging. However, the state is lacking in a continuous assessment mechanism that focuses on individual communities and allows residents and local leaders to tell their own stories about their current and anticipated needs. Routine participatory research regarding current and projected high demand areas for primary care, is a potential method for describing the primary care needs of Coloradans.

Such description may be achieved through the alignment of existing and routine

community health assessment processes that incorporate a primary care focus. Currently a county or region may be the focus of multiple community health assessments conducted by local public health departments, hospitals, federally qualified health centers or health care research and advocacy organizations. Specific regulation(s) or funding requirements typically dictate the process, scope and breadth of a community health assessment. However, frameworks such as Project TEACH (Teaching Equity to Advance Community Health) and MAPP (Mobilizing for Action through Planning and Partnerships) can provide tools and processes for effectively mobilizing the community voice.

Where existing community health assessments are unable to effectively garner a local perspective routine community engagement organized and administered by county departments of health represents an opportunity for community residents to engage in dialogue about what they perceive their needs to be and whether or not they feel like their community has adequate primary care services. As communities engage in ongoing qualitative data collection to supplement the quantitative data gathered by Colorado's many assessment organizations, the data would could be gathered by a central organization responsible for analyzing the information and releasing periodic updates on the state of the State's health, as described by its residents and specific to

primary care delivery and need. This has the potential to be a powerful addition to the discussion about current and projected high demand areas with regard to primary care.

Recruitment and Retention

Key informant interviews and inventory of recruitment and retention practices of primary care providers in Colorado established that programmatic and organizational investment in recruitment and retention practices are a substantial component of existing workforce development initiatives in the state. The prospect of implementation was viewed as a means of empowering existing partnerships and initiatives that support recruitment and retention of primary care providers through incentive programs, clinical and residency placement and community development.

Effective recruitment and retention require coordinated and sustained interactions among state departments, academic institutions, safety-net providers, funders, and non-profit organizations in rural, frontier and underserved communities across the state. Also captured in the interview process was the need to harness the expertise and resources of nontraditional partners identified as vital to recruitment and retention in rural, frontier and urban underserved communities. These include local businesses, local government, and regional coalitions engaged in the ongoing development and delivery of economic development initiatives at the community level.

Inventory of primary care professions recruitment and retention practices in

Clinical Placement

Colorado Health Professions Workforce Policy Collaborative

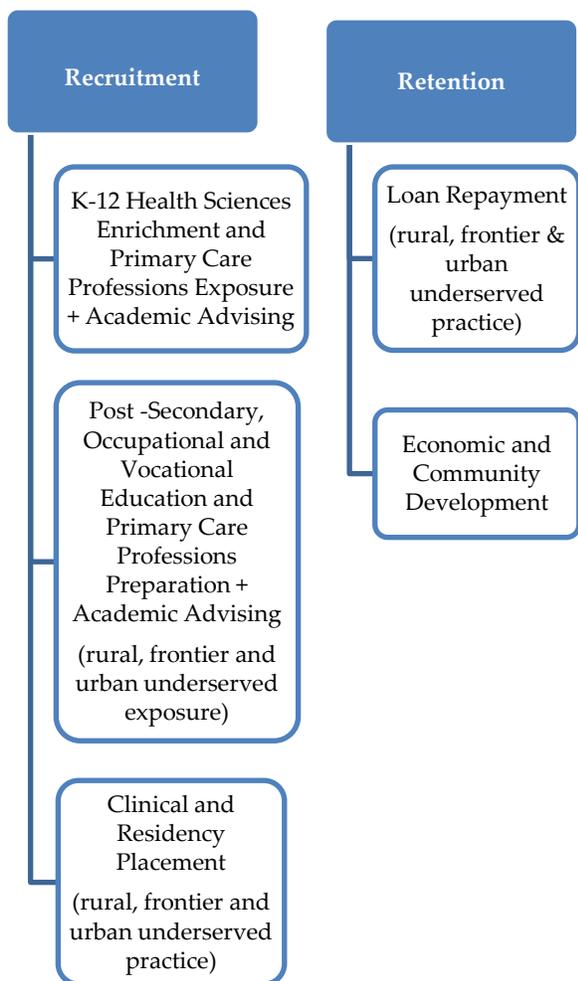
Not all components of health care workforce education can be taught from a book or through distance learning. Clinical experiences are essential to preparing future health care providers, and all types of provider facilities should offer their patient settings to help prepare the next generation of health care providers.

Colorado demonstrates outreach early on in the educational process (Figure 1). This includes K-12 enrichment programs designed to support student success in the health sciences, and programs that provide direct observational exposure to primary care practice.

At the post-secondary level, the state's academic and training institutions (community colleges, public and private universities, occupational schools, and area technical colleges) educate and prepare primary care professionals in training for the required clinical and residency placement necessary for graduation, state licensure, and competent primary care practice. This requires coordinated

collaborations across a diverse community of hosting sites that are qualified to provide the required level of clinical and practical experiences. Clinical and residency placement also plays a vital recruitment role in rural, frontier and urban underserved practice. Upon licensure and entry into the primary care workforce a combination of incentive programs, loan repayment, and economic development initiatives supports the long-term retention of primary care practitioners in rural, frontier and urban underserved communities across the state.

Figure 1. Essential Components of Primary Care Professions Recruitment and Retention Efforts in Colorado



Each recruitment and retention component identified in Figure 1 involves a strategic mix of federal, state and private resources designed to educate, train, recruit and retain a skilled primary care workforce in Colorado. The *Educational Practices* section of this state strategy describes the breadth, importance and limitations associated with existing K-12 health sciences enrichment and primary care professions exposure activities in the state. As an essential recruitment and retention component however, these activities demand sustained federal, state and private investment. Analysis of organizations hosting recruitment and retention focused workforce initiatives in 2010 illustrates the significant influence of philanthropic resources in program delivery (Table 7).

Recruitment to Rural and Underserved Practice-Secondary Education & Training

Colorado’s community colleges, public and private universities, occupational schools, and area technical colleges are the providers of primary care professions education, preparation and training. Their role in supporting recruitment to primary care practice is two-fold. Program location ensures that rural and frontier residents have access to primary care education and training in their own communities. Importantly, program design captures and motivates student interest in rural, frontier and urban underserved practice.

Analysis of all primary care professions training programs, and associated pathways

to primary care professions in the state, reveals that of the ninety-one (91) Certified Nurse Aide (CNA) and Home Health Aide programs approved by the Colorado State Board of Nursing, 34 percent (N = 31) are located in federally designated rural or frontier counties (Table 5).

Table 5. Rural & Frontier-based Certified Nurse Aide (CNA) and Home Health Aide Programs-Colorado, 2011

Program	City	County	Type
Trinidad State Junior College-Valley Campus	Alamosa	Alamosa	Rural
Southeast Colorado Hospital & Long Term Care Ctr.	Springfield	Baca	Frontier
Delta Montrose Technical College-Post Secondary	Delta	Delta	Rural
Colorado Mountain College Vail	Edwards	Eagle	Rural
Florence High School-HSTE	Florence	Fremont	Rural
Hildebrand Care Center	Cañon City	Fremont	Rural
Pueblo Community College-Fremont Campus	Cañon City	Fremont	Rural
Colorado Mountain College-West Garfield	Rifle	Garfield	Rural

Program	City	County	Type
Colorado State Veterans Nursing Home	Rifle	Garfield	Rural
Heritage Park Care Center	Carbondale	Garfield	Rural
Senior Living Community at Gunnison Valley Health	Gunnison	Gunnison	Frontier
Katelens Health Care Education	Walsenburg	Huerfano	Frontier
Weisbrod Memorial County Hospital and Nursing Home	Eads	Kiowa	Frontier
Morgan Community College-Burlington	Burlington	Kit Carson	Frontier
St. Vincent Nurse Aide Training Program	Leadville	Lake	Rural
Devonshire Acres Ltd	Sterling	Logan	Rural
Northeast Junior College-HTSE	Sterling	Logan	Rural
Northeast Junior College-Post Secondary	Sterling	Logan	Rural

Program	City	County	Type
Colorado Northwestern Community College	Craig	Moffat	Frontier
College of Eastern Utah	Cortez	Montezuma	Rural
Southwest Colorado Community College	Mancos	Montezuma	Rural
Valley Inn	Mancos	Montezuma	Rural
Morgan Community College-HSTE	Fort Morgan	Morgan	Rural
Morgan Community College-Post Secondary	Fort Morgan	Morgan	Rural
Otero Junior College	La Junta	Otero	Rural
Holly Nursing Care Center	Holly	Prowers	Rural
Lamar Community College	Lamar	Prowers	Rural
Yampa Valley Medical Center/Doak Walker Care Center	Steam-Boat Springs	Routt	Rural
Summit High School Health Sciences	Frisco	Summit	Rural
Morgan Community College-Wray	Wray	Yuma	Frontier
Yuma Life Care Center	Yuma	Yuma	Frontier

In Colorado, institutions providing the approved academic and practical experiences leading to licensure as a Licensed Practical Nurse (LPN) may offer an LPN certificate only program or an LPN exit option as part of the institution's approved nursing program (Appendix 2). Of twenty-four (24) Licensed Practical

nursing (LPN) programs approved by the Colorado State Board of Nursing, nearly half or 46 percent (N = 11) are located in federally designated rural or frontier counties. Of the twenty-four (24) Associate Degree of Nursing (ADN) programs approved by the Colorado State Board of Nursing, 42 percent (N =10) are located in federally designated rural or frontier counties (Table 6). Rural and frontier areas also host programs in Bachelors of Science in Nursing (BSN), Dental Hygiene (RDH), Psychology (Associate Degree and Bachelor's Degree) and Mental Health and Addictions Counseling (Masters, Associate and Certificate).

Table 6. Rural & Frontier-based Licensed Practical Nurse (LPN), Associate Degree of Nursing (ADN), Bachelor's of Science Degree Nursing (BSN) and Primary Care Professions Pathways -Colorado, 2011

Training Program	City	County	Rural/ Frontier
Delta Montrose Technical College- LPN	Delta	Delta	Rural
Northeastern Junior college (LPN, ADN, Psychology)	Sterling	Logan	Rural
Colorado Mountain Junior College (LPN, ADN)	Glenwood Springs	Garfield	Rural
Colorado Northwestern Community College (LPN, ADN, Dental Hygiene)	Rangely	Rio Blanco	Frontier

Training Program	City	County	Rural/ Frontier
Lamar Community College (LPN, ADN)	Lamar	Prowers	Rural
Morgan Community College (LPN, ADN)	Ft. Morgan	Morgan	Rural
Otero Junior College (LPN, ADN, Psychology)	La Junta	Otero	Rural
Pueblo Community College, Fremont Center (LPN, ADN)	Cañon City	Fremont	Rural
Pueblo Community College, Southwest Center (LPN-ADN)	Durango	La Plata	Rural
Trinidad State Junior College (LPN, ADN, Psychology)	Trinidad	Las Animas	Frontier
Trinidad State Junior College, Valley Campus (LPN, ADN, Addictions Counseling)	Alamosa	Alamosa	Rural
Adams State College (BSN, Counseling, Psychology)	Alamosa	Alamosa	Rural
Fort Lewis College (Psychology)	Durango	La Plata	Rural
Western State College (Psychology)	Gunnison	Gunnison	Rural

Table 7. Workforce Initiatives 2010-Federal, State and Private Participation

Organization	Program(s)	Funding
Adams County Education Consortium	Career Expo	Local Gov't, Donations
	Experience 9 to 5	Foundations, Donations
	Health Care Pathways	Foundations
	Workforce Connect	Foundations
Colorado Dept. of Public Health & Environment	Emergency Medical and Trauma Services Grants Program	State Gov't, Matching Funds (local)
	Recruiting and Retaining Youth of Colorado in the Health Professions Taskforce	State Gov't
	Colorado Health Service Corps	Foundations, State Gov't, Federal Gov't
	Dental Loan Repayment Program	State Gov't, Federal Gov't
	National Health Service Corps	Federal Gov't
	9 Health Fair in the Classroom	State Gov't
	AHEC SHCI	Foundations, State Gov't
Colorado Area Health Education System	Aurora Lights Saturday Academy	Federal Gov't
	Aurora Lights Summer Institute	Federal Gov't
	RN, LPN Refresher Online Course	State Gov't, Other funding sources
	Youth For Health-Explorer Post #246	State Gov't, Federal Gov't
	Clinical Connections	Foundations

Colorado Area Health Education System	Workforce Investment- CREATE Health	Foundations, State Gov't, Federal Gov't
Colorado Dental Association	CDA Dental Workforce Taskforce	Dues
	Explorers Program	
Community Health Association of Mountain/Plains States	Distance Learning Program	Federal Gov't, Dues
	Online Job Opportunities Bank (JOB)	Federal Gov't, Dues
	Region VIII Health Center Salary, Benefits, Turnover and Vacancy Survey	
Colorado Community Health Network	Incentive Program Development	Foundations, Federal Gov't
	Job Fairs	Foundations, Federal Gov't
	Navigator Program	Foundations, Federal Gov't
	Residency Presentations	Foundations
Colorado Rural Health Center-State Office of Rural Health	Colorado Rural Outreach Program	Foundations
	Colorado Provider Recruitment Program	Foundations, Fees
Colorado Commission on Family Medicine	Recruitment and Retention of Family Medicine Residents	Foundations, Dues
Dental County Memorial Hospital	Health Professions Initiative	Foundations, Donations

Denver Health Foundation	Carol Prishtaschew Scholarship in Nursing	Donations
	Dollars for Scholars	Donations
National Association of Social Workers Colorado Chapter	Membership Services	Fees
University of Colorado School of Medicine-Dept. of Family Medicine	Rural Track	Foundations, other

(Source: Colorado Health Institute, Workforce Initiatives Inventory-2010)

Key informant interviews and inventory of primary care professions training programs reveal the importance of infusing concepts and practical experiences in integrated care, patient centered medical homes, and rural and underserved practice into primary care education and training. The presence of such programs is beneficial to Colorado as it supports an education and training environment that is directly aligned with known and developing concepts in primary care delivery. As a result, Colorado is ensuring capacity to develop and sustain a training culture capable of recruiting talent into the state, while providing pathways to rural and underserved practice at home (Table 8).

Table 8. Colorado Post Secondary Health Professions Training Programs, Pathways to Rural, Frontier and Underserved Practice-2011

Institution	Specialization	Pathway
University of Colorado School of Medicine-Department of Family Medicine	Medical Doctor	Rural Track
		Colorado Urban Underserved Interprofessional Training and Education
		Graduate Medical Education and Colorado Family Medicine Residencies-Rural and Underserved Rotations
		ACT Program-Integrated Care Family Medicine Residency-Patient Centered Medical Home Training Project
Rocky Vista University	Doctor of Osteopathic Medicine	OMS Year I-Rural Medicine Component
		OMS IV-Rural Medicine Component
University of Colorado School of Medicine	Physician Assistant	Rural Track
		Urban Underserved Track
		Year 3 Regular Track-Rural Rotation and Medically Underserved Rotation

Red Rocks Community College	Physician Assistant	Clinical Rotations in Medically Underserved Areas Colorado Collaboration for Rural Health Care Access
University of Colorado School of Dental Medicine	Doctor of Dental Surgery	Community Service Program incl. Dental Van Public Health and Advanced Clinical Training Service Program for Underserved Communities
		Regis University Loretto Heights School of Nursing & Physical Therapy Program
Regis University Loretto Heights School of Nursing & Physical Therapy Program	Nursing incl. Advanced Practice Nursing. Doctor of Physical Therapy	Service Learning Components to Undergraduate and Graduate Clinical Education Rural Rotation
Regis University School of Pharmacy	Doctor of Pharmacy	Service Learning Component to Graduate Clinical Education
University of Colorado School of Pharmacy	Doctor of Pharmacy	Collaborative Care Practice in Clinical Pharmacology Residency

Funding Colorado’s Public Institutions of Higher Education

State funding for higher education in Colorado is on the decline. In 2007-08, before the onset of the recession, Colorado’s public colleges and universities received \$629.9 million in general fund support. The following year, 2008-09, that amount

dropped to \$535 million. In 2009-10 general fund support for the state's public colleges and universities amounted to \$313 million, representing a 50% cut in two years.^{xxxix} By 2008, Colorado ranked 48th in the nation in state and local funding for higher education operating expenses per \$1,000 of personal income and 48th in the nation for state and local support for higher education per capita.^{xl}

Key informants affiliated with primary care professions, education and training noted the presence of numerous unfunded projects designed to recruit primary care professionals to rural, frontier and underserved practice. Such efforts indicate a desire to expand such educational opportunities however declining revenue support for higher education has elevated the role of private funding in ensuring program viability. Given the current reliance on private funders to address multiple and critical funding priorities, the sustainability of programs such as the Rural Track at the University Of Colorado School Of Medicine is in jeopardy.

Loan Repayment and IMG Waiver Programs

Loan repayment in Colorado utilize a combination of federal, state and private resources in an effort to retain licensed primary care professionals in rural and underserved practices (Appendix 3). Physicians graduating from medical school in 2008 reported an average debt load of \$142,000 dollars^{xli}. High loan debt is known

to strongly influence the decision of health care providers to opt for higher paying sub specialties and opt for practices that do not significantly care for medically underserved people. Loan forgiveness significantly diminishes a key barrier to health professionals who would consider rural or low-income primary care settings.^{xlii}

Analysis of Colorado's health professional loan repayment programs conducted in 2009 reveals that these programs do have an influence on rural provider retention.^{xliii} A study conducted by the Colorado Commission on Family Medicine concluded that one-third of family medicine residents who leave Colorado for rural and underserved communities report that a loan repayment incentive was a critical factor in their decision to relocate. In addition, this study indicated that loan repayment is becoming more important among all the factors that contribute to the practice choice of new graduates.^{xliv}

In 2008 loan forgiveness recipients in Colorado delivered 27,000 patient visits in underserved Colorado communities. Of these patient visits, it is estimated that 33 percent involved patients covered by Colorado Medicaid, 7 percent served patients insured by Medicare, 5 percent served patients insured by the Child Health Plan+, and 44 percent served uninsured patients. The combined total of these groups, collectively known to have difficulty acquiring health services because of provider shortages, is 89 percent. This is

a rate that is 11 times that of a typical private practice in Colorado.^{xlv}

Colorado also has a recognizable presence of foreign-trained physicians. The International Medical Graduate J-1 Visa Waiver Program puts international medical graduates (IMGs) in rural and urban underserved areas. Presently, there are forty-two (42) IMG physicians delivering primary care services in Colorado. Colorado’s IMG physicians are practicing in high need rural, frontier and urban underserved settings across the state (Table 9).

Table 9. IMG Practice Representation by Facility Type-2011

Name	Facility Type(s)	City	Rural/Urban
Salud Family Health Center	FQHC	Sterling	Rural
Parkview Medical Center	Hospital	Pueblo	Urban
Sterling Regional Medical Center	Hospital	Sterling	Rural
St. Mary-Corwin Medical Center	Hospital	Pueblo	Urban
Salud Family Health Center	FQHC	Brighton	Urban
Colorado Plains Medical Center-	Hospital & Clinics	Ft. Morgan	Rural
Prowers Medical Center	Hospital	Lamar	Rural

Peak Vista Community Health Center	FQHC	Colorado Springs	Rural
Platte Valley Medical Center	Hospital	Brighton	Urban
Rocky Mountain Internal Medicine	Specialized Care	Strasburg	Urban
Denver Health and Hospital Authority	Hospital and FQHCs	Denver	Urban
San Luis Valley Regional Medical Center	Hospital	Alamosa	Rural
Metro Community Provider Network (MCPN)	FQHCs	Aurora	Urban
The Children’s Hospital	Hospital & Clinic	Aurora	Urban
Rocky Mountain Cancer Centers	Specialized Care	Pueblo	Urban
University of Colorado	Clinic & Infectious Disease Practice Group	Aurora	Urban
St. Thomas Moore Hospital	Hospital and Physicians Clinic	Cañon City	Rural
East Morgan County Hospital	Hospital & Clinic	Brush	Rural
Sangre de Cristo Surgical Associates, PC	Specialized Care	Pueblo	Urban

Clinical Placement and Residency

Clinical and residency placement is a complex challenge. Clinical placement is an informative and defining period in a health professional’s education and an influential element in recruiting trained talent to rural, frontier and urban underserved practice. As education and training programs begin infusing primary care delivery concepts such as patient centered medical home and collaborative models of care into clinical and residency training, Colorado is constructing an infrastructure for quality, cost-effective primary care delivery (Appendix 4).

In a white paper commissioned by the Colorado Health Professions Workforce Policy Collaborative, seven challenges and barriers to clinical and residency placement in Colorado are described. Notably, there is competition for clinical and residency placement within a small community of agencies qualified to provide the necessary level of clinical and practical exposure for the primary care professions. More clinical placements are needed for some health professions in the state in order to produce the health workforce necessary to meet the health care needs of Coloradans (Table 10).^{xlvi}

Table 10. Challenges and Barriers to Clinical and Residency Placement in Colorado-2010

Issue	Description
Cost	Providing staff time for students is an expense to health care organizations and educational

	resources are becoming increasingly scarce in the health care system.
Transparency	Transparency is desirable at the statewide policy level but not so at the facility level. The transparency that comes from openly displaying real time information about a facility’s placement capacity or willingness is not always appreciated in a time of scarce resources and competition.
Interest of Clinical Placement Provider	Facilities and practices often provide the clinical training on a volunteer basis.
Turnover	Coordinator positions have a high burnout rate and see frequent turnover, which presents challenges in maintaining relationships between programs and facilities.
Out of State Competition	Schools report increased competition for clinical placements from out-of-state schools and students, specifically in medical school rotations, PA rotations, dental student placements and pharmacist interns. For dental students out of state admissions is a competitive factor.
Patient Safety	Patients are seen multiple times a day by multiple students and providers, and this can affect their health status. Hospitals have reduced their nursing cohorts and cite patient safety and staffing capacity as a reason.

Incentives to Facilities

The challenge to increasing capacity may be identifying methods that would incentivize facilities' expansion of training programs.

(Source: Engaged Public, formerly Tag Strategies-2010)

Colorado does not have a centralized system or data hub for clinical placement across primary care professions training programs and facilities. Historically, private funding and resources have been the principal means of addressing challenges and barriers associated with clinical and residency placement. Between the years 2005-2008 the Colorado Trust's \$10.2 million Health Professions Initiative provided funding to increase the number of health professionals in Colorado and across all disciplines. Funding allowed grantees to enhance training programs by creating networks of clinical preceptors and increase lab and simulation experiences in-house in an effort to decrease requirements for external clinical placements.^{xlvii}

Funds also supported the Commission on Family Medicine's development of rural and underserved training sites for family medicine residents. In a step toward coordinated clinical placement across nursing professions, private funders including The Colorado Health Foundation and the Robert Wood Johnson Foundation/Northwest Health Foundation supported the development of the Colorado Center for Nursing Excellence's (CNE)

Nursing Student Clinical Placement Clearing House.

In its public policy agenda for 2010 the Colorado Health Professions Workforce Policy Collaborative suggests important first steps in the movement toward coordinated clinical and residency placement. First, an increase in the number of clinical placement and training sites requires identification of current and potential sites for all programs. Second, encourage the state's existing clinical placement programs to study the most effective methods for providing statewide coordination of clinical placements with the goal of increasing successful placements and graduating increased numbers of health care professionals. Third, include in the study of statewide coordination of clinical training programs an examination of the need to require health care facilities licensed by the Colorado Department of Public Health and Environment to fully disclose the number of clinical training placements each has available for health professions students in Colorado educational programs.^{xlviii}

Community and Economic Development

Community and economic development is fundamental to the recruitment and retention of primary care practice in rural and underserved communities in Colorado. First, community development elicits important community-based partnerships and local funding opportunities to develop and maintain a community-level

infrastructure necessary to community longevity, but also, essential to sustaining a local atmosphere attractive to primary care practice. Second, the presence of primary care practice in rural communities is an economic driver for a community and region. The American Academy of Family Physicians reports that the economic activity generated by one primary care physician in Colorado in 2006 was equal to \$892,177 per year. The economic impact of primary care delivery is also explored in the *Policy* section of this state strategy. Providers recruited or retained through the interactions of clinical and residency placement plus loan forgiveness, have the potential to assist in the creation of significant economic activity in communities acutely affected by the recent economic recession. In turn, State tax revenue would be enhanced because of the positive economic externalities associated with Colorado and Federal loan forgiveness programs and options.^{xlix}

In Colorado, USDA-Rural Development and the Colorado Department of Labor and Employment are active in the promotion and delivery of economic development programs in rural, frontier and urban underserved communities across the state. In addition, the Colorado STRIDES program represents a model for community development with the retention of primary care providers as primary focus (Table 11).

Table 11. Colorado’s Economic, Community Development and Advocacy Infrastructure-2011

Agency	Development Mechanisms	Program Description
USDA Rural Development	Loans & Grants	Community Facilities and Guaranteed Loan Program The USDA Rural Development’s Community Facility (CF) Guaranteed Loan Program partners with private lenders to finance public facilities in rural areas. Health care specific facilities include health clinics, assisted and skilled living facilities, hospitals, medical rehabilitation and telemedicine. Achievements include 2004 Cottonwood Ridge Assisted Living in Rocky Ford, 2003 Southwest Memorial Hospital Modernization Project in Cortez and 2001 Renatta Health Care Systems in Wray.
Club 20	Advocacy	Coalition Building, Marketing, Advertising and Public Education Club 20 is a coalition of individuals, businesses, tribes and local governments in Colorado’s 22 western counties. Club 20 is the voice of the Western Slope. Club 20 is a forum for the discussion of complex and controversial issues affecting Colorado’s Western slope and includes issues associated with agriculture, business affairs, education and workforce development, energy, health care, public lands and natural resources, tourism, telecommunications, transportation, and water.
Progressive 15	Advocacy	Coalition Building, Marketing, Advertising and Public Education Progressive 15 was formed to speak with a single unified voice in Northeastern Colorado and to influence public policy and enhance the economic viability and quality of life in the region.
Action 22	Advocacy	Coalition Building, Marketing, Advertising and Public Education

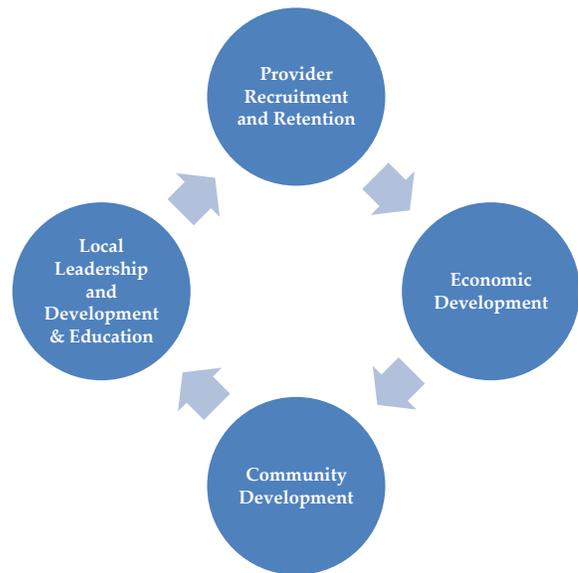
Action 22 is a volunteer-driven membership organization of individuals, cities, communities, counties, associations, businesses and organizations in a 22-county region of Southern Colorado. Activities include building resources and relationships to enhance economic development in Southern Colorado.

Colorado STRIDES relies on the collaboration of members from all facets of the local community, working in tandem with state, federal and philanthropic resources offered through the Colorado Rural Health Center. Drawing from existing economic and community development models, such as West Virginia’s Recruitable Communities Program, Economic Gardening programs around the country, and Asset Based Community Development, Colorado STRIDES identifies and builds upon community assets while identifying opportunities for improvement, thereby enhancing the ability of communities in rural Colorado both to recruit and to retain quality health care providers¹.

Colorado STRIDES is a state example of how a collaboratively driven community action planning process can support 1) increased economic vitality through development of community amenities, 2) increased infrastructure for healthy living and 3) increased knowledge and leadership around health care provider recruitment and retention. SWOT (Strength, Weaknesses, Opportunities and Threats) analysis is a component of STRIDES community engagement plan and assists communities in a preliminary overview of where community development activities

can be directed. Upon completion of the SWOT analysis, the STRIDES community embarks on a collaborative action planning process that incorporates business development, health care capacity, and housing development themes as essential components of a targeted community development process (Figure 2).

Figure 2. Colorado STRIDES Focus Areas



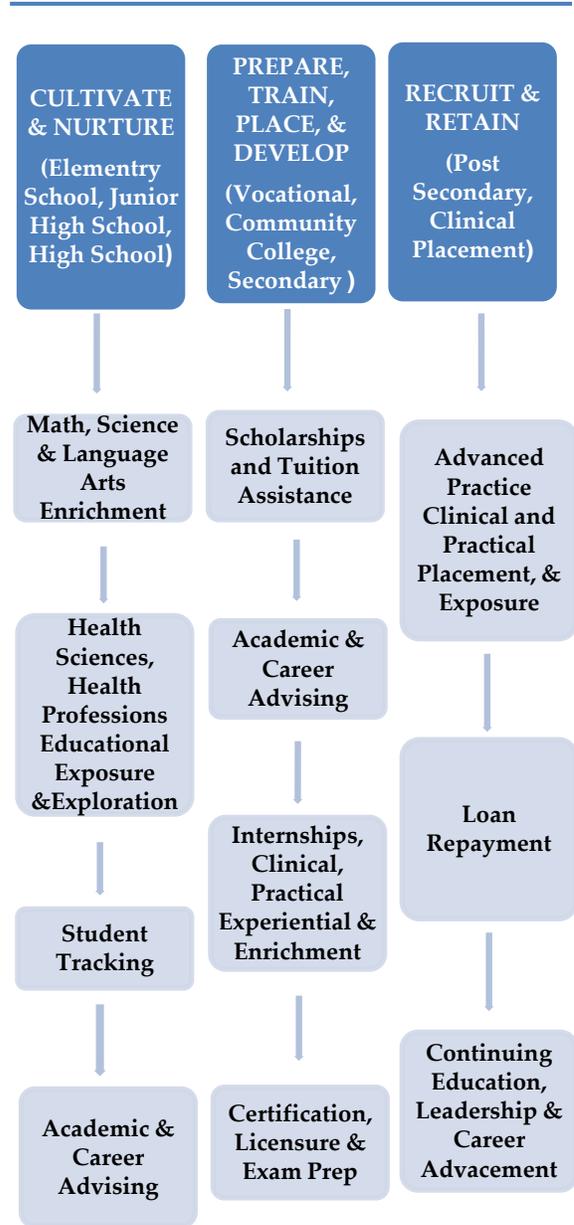
In 2010 five STRIDES communities were selected and participated in community assessment: Frasier, Delta, Cedaredge, Julesburg and Garfield County. Delta and Cedaredge engaged in individual community assessments that were combined into a single county action plan. Springfield, located in frontier Baca County, participated in a STRIDES community assessment and also completed a community action plan during 2010.

Educational Practices

Colorado’s health education and career pipeline is the vehicle through which the state will inspire, motivate and retain homegrown and out-of-state talent to adequately supply the public’s demand for primary care services well into the future. A proficient and effective health education and career pipeline must (Figure 4):

- Engage students early, at the K-12 level, through academic advising and early exposure and enrichment programs in preparation for achievement in the health sciences and primary care professions education and training programs.
- Deliver sufficient academic advising, didactic instruction, clinical and residency experiences at the post secondary education level in order to cultivate interest in rural and underserved practice and ensure certification, licensure, and competent primary care practice.
- Coordinate academic and financial supports and incentives necessary to move the future primary workforce through the pipeline and into rural and underserved practice.

Figure 3. Essential Elements of Colorado Health Education and Career Pipeline



Overview of Colorado's Health Education and Career Pipeline

The capability of Colorado's Health Education and Career Pipeline is represented by 1) organizations and their educational and workforce initiatives designed to enhance opportunities for entry into primary care careers including recruitment and retention efforts, 2) educational and academic institutions that prepare and train students for entry into certificate, degree and licensure programs required for primary care practice including advising and career guidance and 3) grant making and funding support from Colorado's community of philanthropic trusts and foundations, local government, state government and the federal government.

It is difficult to ascertain the exact number of organizations and initiatives supporting Colorado's health education and career pipeline. This is due to the number of programs funded at any given time in relation to the number of programs that have matured, met their programmatic objectives, have been defunded, are currently in start-up, or are community initiated. Lack of sustainability for health education and career pipeline initiatives is a major barrier to building momentum in primary care workforce development. As it takes six to twelve years to create a primary care health professional, it is difficult to measure the degree of impact on the

primary care workforce for pipeline programs that are short lived.

The Colorado Health Institute maintains a comprehensive and reliable accounting of the number of organizations supporting the state's health education and career pipeline. In 2008 there were 39 organizations, supporting 84 workforce initiatives. Each of these programs and initiatives were directly related to, or contained programming features identified as, essential components of Colorado's health education and career pipeline.^{li} Data for 2009 catalogues 26 organizations supporting 58 workforce initiatives.^{lii} A deeper examination of 2008 pipeline activity demonstrates the extent to which Colorado's health education and career pipeline is fragmented (Appendix 5) (Tables 12-14).

Colorado's health education and career pipeline is perceived as fragmented, with minimal coordination across community-based organizations and academic institutions at all levels. Such fragmentation has resulted in the following gaps:

1. Comprehensive and sustained outcome evaluation of the impact of these programs on the state's primary care workforce.
2. Current inventory of all health education and career pipeline activities.
3. Incorporation of evidence-based best practices into the design and delivery of all programs.

4. Over representation of specific types of pipeline activities and under representation of necessary pipeline activities such as those targeting workforce diversity, dislocated workers, career and academic advising, and counseling enhancements.
5. Regional disparities with respect to pipeline geographic focus areas.
6. Multiple web-based applications serving the state's health education and career pipeline.

There exists a significant pipeline gap with respect to the strength of initiatives that specifically focus on health career advising and guidance supports at the high school and undergraduate levels. At the high school level, academic advising that incorporates health sciences and health careers focus is a necessary component to cultivating and nurturing the state's future primary care professionals. Key informants noted that at the undergraduate level pre-health advisors are stretched thin with respect to the number of students served and mentored. Key informants also stressed that undergraduate pre-health advisors address student's needs in multiple capacities as professors, mentors, and case managers.

Health education and career pipeline activities that specifically focus on workforce diversity across all primary care professions are underrepresented. In

addition to racial/ethnic considerations associated with workforce diversity, thematic areas in diversity and cultural competency initiatives associated with gay, lesbian, bisexual, transgender are practically non-existent.

Table 12: Reported Pipeline Professions Capture-2008

Reported Professions Capture	Number of Known Pipeline Workforce Initiatives
All	23
Certified Nurse Midwife	1
Certified Nurse Aide	19
Licensed Practical Nurse	22
Registered Nurse	28
Advanced Practice Nurse	24
Physician Assistant	14
Physician	23
Pharmacist	11
Psychiatrist	4
Psychologist	5
Dentist	13
Dental Hygienist	8
Social Worker	9
Allied Health	22

(Source: Colorado Health Institute, Workforce Initiatives Inventory, 2008)

Table 13: Reported Pipeline Capture by Educational Site-2008

Reported Educational Location	Number of Known Pipeline Workforce Initiatives
Elementary	2
Middle School	10
High School	17
Community College	37
Vocational/Occupational Schools	15
Post Secondary (Undergraduate and Graduate)	35

Residency and Post Graduate	15
-----------------------------	----

(Source: Colorado Health Institute, Workforce Initiatives Inventory, 2008)

Table 14: Reported Pipeline Capture by Target Audience & Activity-2008

Reported Target Audience & Activity	Number of Known Pipeline Workforce Initiatives
Educators, Advisors, Faculty	6
Students	49
Professions Exposure and Exploration	17
Continuing Education, Career, Advancement and Leadership Development	17
Scholarships and Tuition Assistance	13
Loan Repayment Affiliation	7
Workforce-Industry Bridge	3
Portals and Web-based Applications	3
Meetings, Summits and Taskforces	3
Workforce Diversity and Cultural Competency	8
Data Collection	6
Other Pipeline Support	6

(Source: Colorado Health Institute, Workforce Initiatives Inventory, 2008)

Academic Skill Standards in Colorado

Programs and initiatives affiliated with the state’s health education and career pipeline incorporate the academic and health care industry skill standards for high school graduation and for entry into post secondary education, and for various credentials and licensure. Key informants were instrumental in providing detailed perspectives regarding the interplay of

academic and industry standards in educational and training program design from K-12 through post secondary education. Key informants also described existing mechanisms for accessing and disseminating information about workforce standards to schools and academic institutions.

In Colorado there are 183 school districts hosting 1,081 elementary schools, 563 middle schools and 454 high schools.^{liii} At the post secondary education levels the Colorado Department of Higher Education recognizes 13 two-year community colleges, 2 local district community colleges, 14 four-year colleges or universities, 3 area technical colleges, 103 private accredited institutions, and 316 in-state occupational schools.^{liv} When reviewed for primary care professions education and training programs, the number of secondary and post secondary institutions affiliated with the state’s health education and career pipeline does drop, however, the challenge of creating effective connections and dissemination routes about workforce and industry standards across a large and diverse community of academic institutions, programs, degree types, staff and students remains (Appendix 2).

In many states, there are standardized state-wide requirements for the conferment of a high school diploma. This ensures that high school graduates meet minimal skill standards. With respect to the primary care workforce, high school graduation

requirements for English, math, science, and foreign language are of particular importance. Presently there are forty-three (43) states that have high school graduation requirements, as defined by state statute and regulations for English. Forty-two states (42) have such requirements for math and science. Thirty-five states (35) have such requirements for physical and health and only three (3) states have requirements for foreign language.^{lv}

In Colorado, graduation requirements are set at the individual school district level and can differ greatly between each other. Article IX, Section 15 of the Colorado Constitution allows school district Boards of Education to have control of instruction in the public schools of their respective districts. Such local control provides flexibility and variability across the state with respect to high school graduation requirements for English, math, science, physical and health education and foreign language. Currently, the only mandated coursework across the state is a 0.5 unit course on “the civil government of the United States and the State of Colorado^{lvi}.”

Colorado is taking steps to ensure that high school students are college and workforce ready. Colorado’s Preschool to Postsecondary Alignment Act (SB08-212), also known as CAP4K, is a meaningful state investment to improve Colorado’s public education through alignment of preschool through post secondary expectations (Appendix 6). CAP4K encompasses

important milestones necessary to ensure Colorado youth are workforce ready upon high school graduation and prepared for success as they enter higher education.^{lvii} By December 15, 2011 CAP4K ensures that local graduation requirements meet or exceed minimum standards and basic core competencies and skills. By July 2011, the State Board of Education will adopt criteria that a district may use if it chooses to award postsecondary and workforce readiness endorsement on a high school diploma.^{lviii} As a compliment to CAP4K, SB09-256 was enacted into law with the requirement that by September 2011, all students in grades 9-12 will have access to a system within their high school to create and manage an individual career and academic plan (ICAP).

Key informants identified the vast landscape of training institutions, along with numerous existing dissemination routes for health care industry skill standards required for high school graduation, for entry into postsecondary education, and for various credentials and licensure as focus areas for pipeline improvement. Each agency or source identified in Table 15 hosts necessary and valuable information-specific academic and health care industry skill standards for high school graduation, for entry into postsecondary education, and for various credentials and licensure. Key informants viewed the prospect of implementation as a vehicle to establish coordination and

connections across numerous resources and their hosting entity.

Key informants also noted that students and academic advisors across all academic levels, parents, community members, certified and licensed health care providers, and employers seeking information regarding health sciences and education/training programs have multiple access points for entry into web-based applications containing the following features.

- Health career guides
- Health career engagement, planning and tracking resources
- Undergraduate health sciences programs
- Post secondary and graduate level health career training programs including residencies
- Financial aid
- Loan repayment
- Continuing education
- Educational standards
- Workforce and industry competency standards

Table 15. Agencies and Sources for Academic and Health Care Industry Skill Standards-Colorado

Agency or Source	Resource
Colorado Department of Education	Colorado P-12 Academic Standards Website
Primary Care Professions Education and Training Programs	Program Websites
Central Colorado Area Health Education Center	Colorado Health Careers Guide

Colorado Department of Labor and Employment in collaboration with Central Colorado Area Health Education Center	Health Care Career Readiness Sphere
Colorado Commission on Higher Education	CollegeInColorado Website
Colorado Department of Labor and Employment	E-Colorado Website
CollegeInvest (non-profit division of the Colorado Department of Higher Education)	CollegeInvest Website
Colorado Department of Regulatory Agencies and State Board of Examiners (for specific primary care professions credentialing and licensure information)	Web access to state practice acts for primary care professions.
Western Interstate Commission on Higher Education (WICHE)	Adult College Completion Website

Post Secondary Education & Licensure

A comprehensive listing of current primary care professions education and training institutions unique to this workforce planning effort and who are permitted to operate and confer degrees by the Colorado Department of Higher Education is provided in Appendix 2. Included in this current count are private accredited institutions and occupational schools hosting primary care education and training programs that are not specifically approved by the profession’s respective State Board or Examiners Board. These programs are hosted by institutions that are either based in Colorado or headquartered out-of-state with branch campuses, affiliations and/or online programs available to Colorado

residents. It is important to acknowledge the presence of such education and training programs as a component of primary care professions education and training in the state.

The actual training policies, models, or practices for the health care sector that are specific to these primary care professions education and training programs are a composite of the following:

1. The institution's regional accrediting organization.
2. The institution's unique health care professions accrediting organization
3. State Board or State Examiners requirements for institutional

accreditation required for certification and licensure as a practicing health care professional in Colorado and as codified in a State Practice Act for the specific primary care profession.

4. The institution's infusion of accreditation standards and State Practice Act requirements in didactic, clinical, and residency design.

Policy

The Colorado Health Professions Workforce Policy Collaborative was established in 2008 to, “better understand the complex nature of health workforce policy and to develop and support effective changes.”^{lix} As the Collaborative convenes policy leaders, health care providers, educational institutions, economic development and workforce planning authorities, implementation will utilize the Collaborative’s policy agendas for 2010 and 2011 as the foundation for the continued development of a comprehensive health workforce development strategy. Key informants were also instrumental in identifying additional key policy themes specific to the primary care professions which were examined as part of the planning process. The primary recommendation associated with this planning document is intended to complement the health professions policy infrastructure that the Collaborative has built through ongoing dialogue and policy development that is data driven, actionable, and coordinated.

Policy supporting primary care workforce development in Colorado considers three known impacts associated with a shortage of primary care providers, including: impact on health, impact on access to care, and impact on local economies. In 2010, the Colorado Health Professions Workforce Policy Collaborative reported that shortages of primary care providers acutely affect

Colorado’s rural counties. More than 1 million Coloradans live in a community with less than half of the primary health care providers needed to optimally deliver primary care services.^{lx} By 2010, over 50 of Colorado’s 64 counties were designated by the federal government in part or as a whole as a primary care Health Professional Shortage Area.^{lxi}

The *Recruitment and Retention* section of this state strategy considers the beneficial economic impact of primary care delivery. As noted, primary care practice is an important economic driver, particularly in rural communities. An economic impact study conducted by the National Center for Rural Works concluded that one primary care physician could generate up to \$1.5 million in revenue, \$0.9 million in payroll and create 23 jobs in both the physician clinic and hospital.^{lxii}

The National Center for Rural Health Works also describes the potential economic impact of rural residency programs in rural regions. In their 2007 analysis of the impact of rural residency in Bryan County Oklahoma, the community total employment of the rural residency program was 15 full- and part-time employees, with an estimated payroll including benefits of \$803,500. Secondary income of \$249,085 and total income impact of \$1,052,585 was observed. The secondary income is the income generated in other industry sectors

in the economy of a region due to rural residency program spending and the rural residency program employees' spending. The rural residency program generated \$376,777 in direct and secondary retail sales in the region, resulting in a 1% sales tax impact of \$3,768.^{lxiii}

The impacts on health that are directly associated with the delivery of primary care are well known. As the Colorado Health Professions Workforce Policy Collaborative reports, those with adequate access to primary care have been shown to realize a number of health and economic benefits including: 1) reduced all-cause mortality and morbidity due to cardiovascular and pulmonary disease; 2) less use of emergency departments, hospitals and diagnostic tests; 3) better detection of breast cancer and reduced incidence and mortality due to colon and cervical cancer; 4) lower medication use and care-related costs; and 5) reduced health disparities, particularly for areas with the highest income inequality, including improved vision, more complete immunization, better blood pressure control, and better oral health^{lxiv}.

The Collaborative's policy recommendations for 2010 and 2011 are a reflection of policy themes also expressed by other key informants and complement recommendations articulated in this state strategy.

Data Collection

The Colorado Department of Regulatory Agencies (DORA) collects primary care professional licensure information at the time of state licensure (paper) and renewal (electronic). DORA does not collect practice-related data such as whether the provider is actively practicing or maintaining current licensure for future use. Such information is necessary for data-driven and comprehensive workforce planning in the future. It will provide policy makers and the organizations supporting primary care workforce development with the necessary information to measure the success of primary care workforce interventions and policies. Enhanced data collection will also support the development of new primary care workforce initiatives as organizations reallocate funding from data collection to new programs and services.

DORA does report minimal licensure data for the primary care professions described in this planning document including: Certified Nurse Midwives, Certified Addictions Counselors I-III, Certified Nurse Aides, Dentists, Dental Hygienists, licensed Addictions Counselors, licensed Social Workers including Clinical Social Workers, licensed Practical Nurses, licensed Professional Counselors, licensed Psychologists, Marriage and Family Therapists, Nurse Practitioners, Pharmacists, Physical Therapists, Physicians, Physician's Assistants, and Registered Nurses. In the public domain,

organizations and citizens seeking licensure data in Colorado can access some licensure related demographics including: first name, middle name, last name, suffix, entity name, mailing address, city, state, county, zip, license type, license number, license first issue date, license expiration date, license status description, license renewal date and any authority, specialty, title, and degree information that is available.

Reimbursement

It is imperative that reimbursement to primary care providers remain a top priority in the state budgeting process. Unfortunately, reduced revenues at the federal and state level have made cuts to health care provider reimbursement an easy target for balancing the state budget. Reimbursement from public and private payers is the centerpiece of practice viability, particularly for sites providing primary care services to rural and underserved residents.

The Colorado Health Professions Workforce Policy Collaborative and key informants associated with this workforce planning process noted that reimbursement for primary care providers, including Physicians, Advanced Practice Nurses, Physician Assistants, Dentists, and Dental Hygienists is low. Physician Assistants and Advanced Practice Nurses are integral to the delivery of quality primary care services in rural and underserved communities. Colorado statute indicates that an insurance company shall not be precluded from

setting a different fee schedule for different services performed by different health professionals, but the same fee schedule shall be used for those health services that are substantially identical although performed by different professionals. The State of Colorado reimburses all licensed health care providers at the same rate for the same services provided under the Medicaid program however, the requirement for equal payment does not appear to be uniformly practiced among all private payers^{bv}.

Though reimbursement rates for Medicaid increase to 100% of Medicare in 2013-2014 in anticipation of the enrollment spike resulting from the Affordable Care Act, studies suggest that Medicaid reimbursement rates have only a modest effect on provider participation. Despite previous increases in reimbursement rates, the percentage of physicians who accept Medicaid patients has been on the decline for more than a decade. The care of Medicaid patients is increasingly concentrated among those physicians who practice in large groups, hospitals, and community health centers.

There are a number of reasons explaining this concentration, all of which have something to do with economy of scale regarding particularities of serving the Medicaid patient population. The large practices, hospitals, and community health centers that serve the largest share of Medicaid patients, and that are most willing

to accept new Medicaid patients, are often the practices which: 1) provide interpreter services (70%); 2) use non-physician staff to provide patient education and/or case management; 3) offer physician compensation based on fixed salary; 4) use health IT to coordinate cost-effective patient care; 5) are situated in lower-income areas, or are easily accessible via public transportation; 6) have systematized their billing procedures as well as the evaluation of patient eligibility for Medicaid and other forms of public insurance; and/or 7) have introduced other delivery system innovations that result in business efficiencies despite the common complaints about Medicaid most often cited by those physicians who are less, or unwilling, to serve Medicaid patients (i.e., low reimbursement rates, challenges in securing specialist care, administrative burden, and the chronic health needs and low compliance of the Medicaid population).

On account of these features, already in place, the large practices, hospitals, and community health centers that serve the largest share of Medicaid patients are best-positioned to accommodate an expanded patient-pool when the number of Medicaid enrollees increases dramatically in 2014. Even though some of these large practices may already be at or near capacity, their seasoned delivery systems and Medicaid-friendly business models position them well for the necessary magnitude of expansion.

Smaller group practices that presently serve a moderate share of Medicaid patients may be interested in increasing their share to accommodate the expanded enrollment brought about by health reform—and they are most likely to do so by adopting certain key elements of the model established by the larger practices: hiring non-physicians to efficiently manage a larger patient caseload, for example, and investing in health IT. At the same time, the emerging trend of hospital acquisition of primary care practices may play into this transformation, as the absorption of these smaller group practices into larger systems promises to replicate the economy of scale, enabling them to expand Medicaid service without loss of business efficiency.

Finally, research supported by the Kaiser Family Foundation suggests that those practices presently serving a small or zero share of Medicaid patients are least likely to play a role of any significance in serving the expanded Medicaid population. These low-share practices “practice in the highest-income zip code areas and are less likely than other PCPs to use health IT and to offer patient education for people with major chronic conditions.”^{lxvi}

Funding for Health Professions Education Programs

Funding for health professions education and training programs was the single most identified policy concern among key informants. As noted in the *Context and Background* and *Recruitment and Retention*

sections of this state strategy, budget cuts to institutions of higher education supporting primary care professions has been a regular mechanism for balancing the state budget in recent years. As recommended by the Colorado Health Professions Workforce Policy Collaborative, the Colorado General Assembly should look for new sources of revenue for health professions education funding, separate from general higher education funding. The current level of funding, and the process by which higher education funds are allocated for health professions, is not adequate to meet current or future workforce needs. Additional resources and funding to strengthen health professions career guidance and counseling from K-12 through post-secondary education was also a vocal theme among key informants.

Clinical Placement and Residency

As noted in the *Recruitment and Retention* section of this state strategy, clinical placement and residency is vital to rural and underserved practice. Key informants and the Colorado Health Professions Workforce Policy Collaborative express the desire to study and acquire capability for the statewide coordination of clinical placements. Several states, including Massachusetts, California, Oregon, Michigan, and Tennessee have existing models of coordination to observe and study. The Colorado Center for Nursing Excellence has experience in implementing aspects of the Oregon model into clinical

placements for nursing. Colorado can and should be a pioneer and national leader in coordinated clinical placement across the diverse scope of primary care professions and their education and training programs.

Key informants also expressed the need for Graduate Medical Education (GME) reform in physician residency. Funding for physician residencies, including family medicine residencies, is provided by the federal government through GME payments from Medicare. At present, federal statute caps those payments at certain numbers of residency slots per each facility that is qualified to provide resident training. Although there are some measures of flexibility allowed within these caps (limited exceptions for rural and primary care) many argue that they deny the state the ability to adapt to dynamic shifts in demand and changes in the local physician workforce^{lxvii}. Additional themes associated with GME reform include: 1) nationwide, regional disparities in the allocation of residency slots; 2) a state's inability to utilize open residency slots left vacant by neighboring states; and 3) funding expansions beyond the hospitals and health systems currently receiving GME funds.

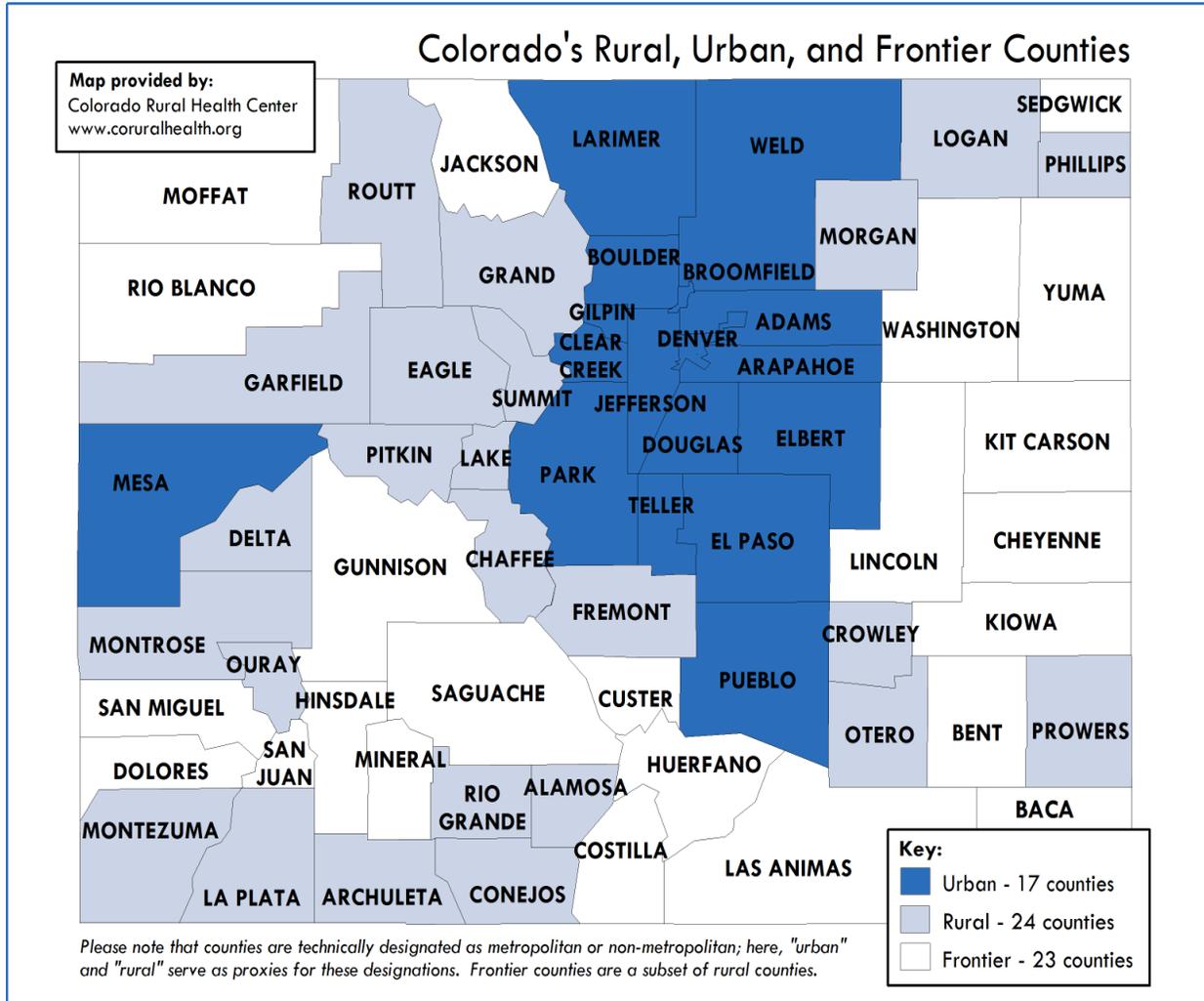
The Patient Protection and Affordable Care act authorizes the establishment of teaching health center development grants to establish or expand primary care residency training programs in health centers, which are community-based ambulatory patient care centers such as Federally Qualified

Health Centers and Rural Health Clinics. The Colorado Community Health Network (CCHN) and its affiliated, member system of Community Health Centers has taken the lead in the development of Educational Health Centers (EHCs) or Teaching Health Centers (THCs) focused on integrated family medicine residencies, physician assistant training, family nurse practitioner training, and other clinical support training (nursing, medical assistants, technicians, etc). Implementation can build momentum and action that is aligned with CCHN's call for further advocacy and policy development at the state and national level for improved funding structures and measurement tools for EHC/THCs.

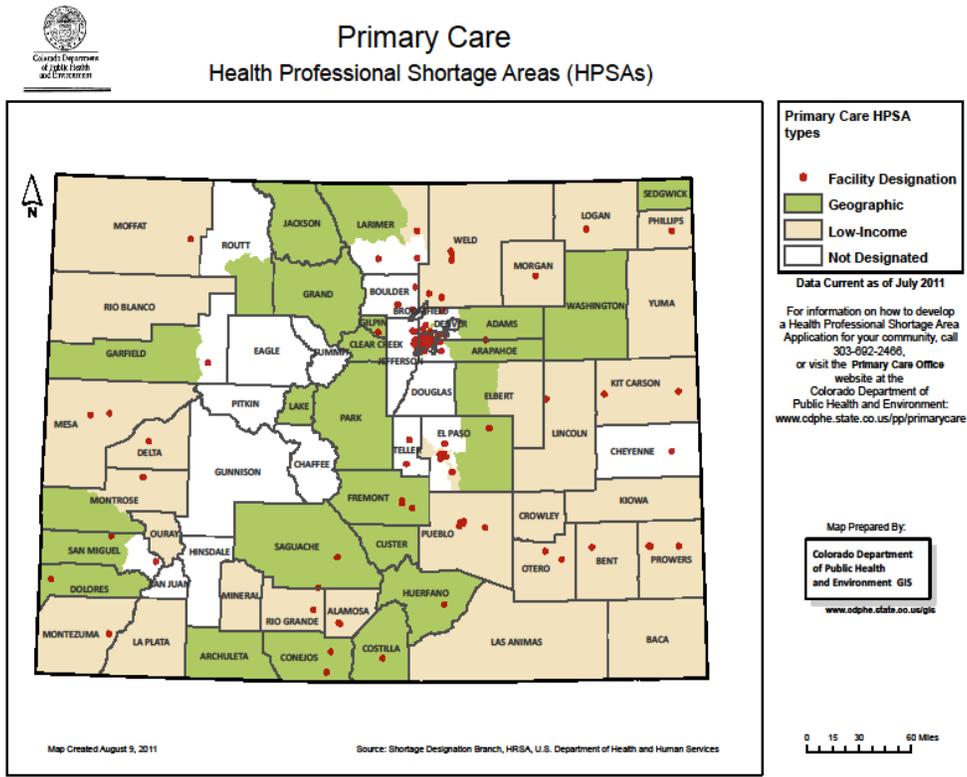
Appendix 1-Maps

(Note: Maps 5-9 sourced from the Annie E. Casey Foundation/Colorado Children's Campaign-Kids Count Data Center)

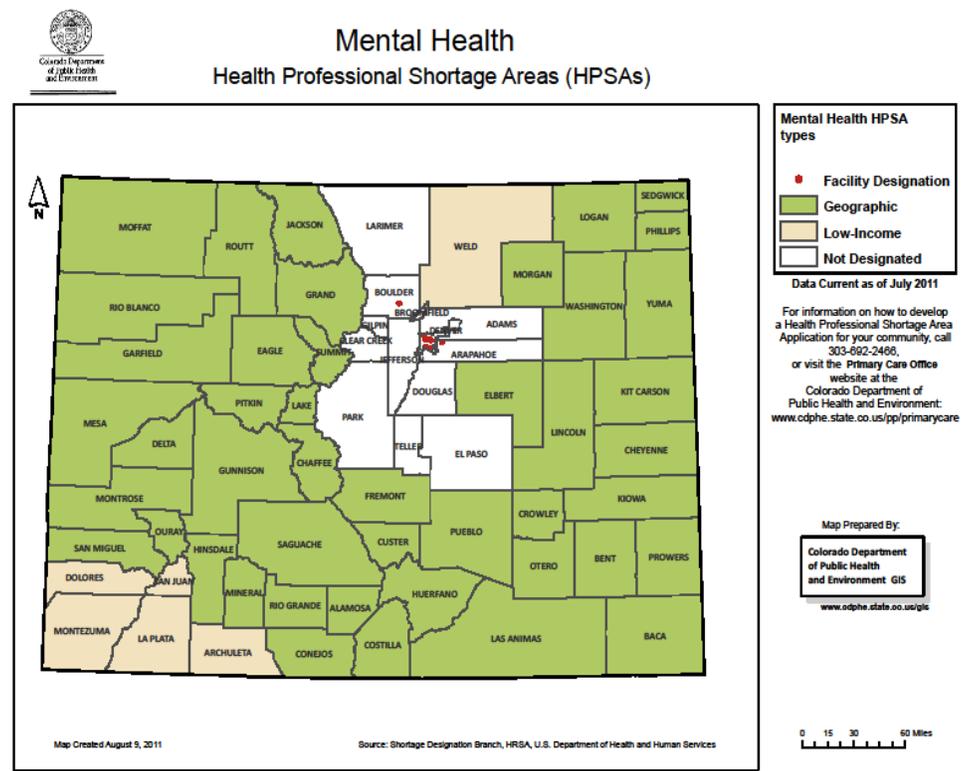
Map 1. Colorado's Rural, Urban and Frontier Counties



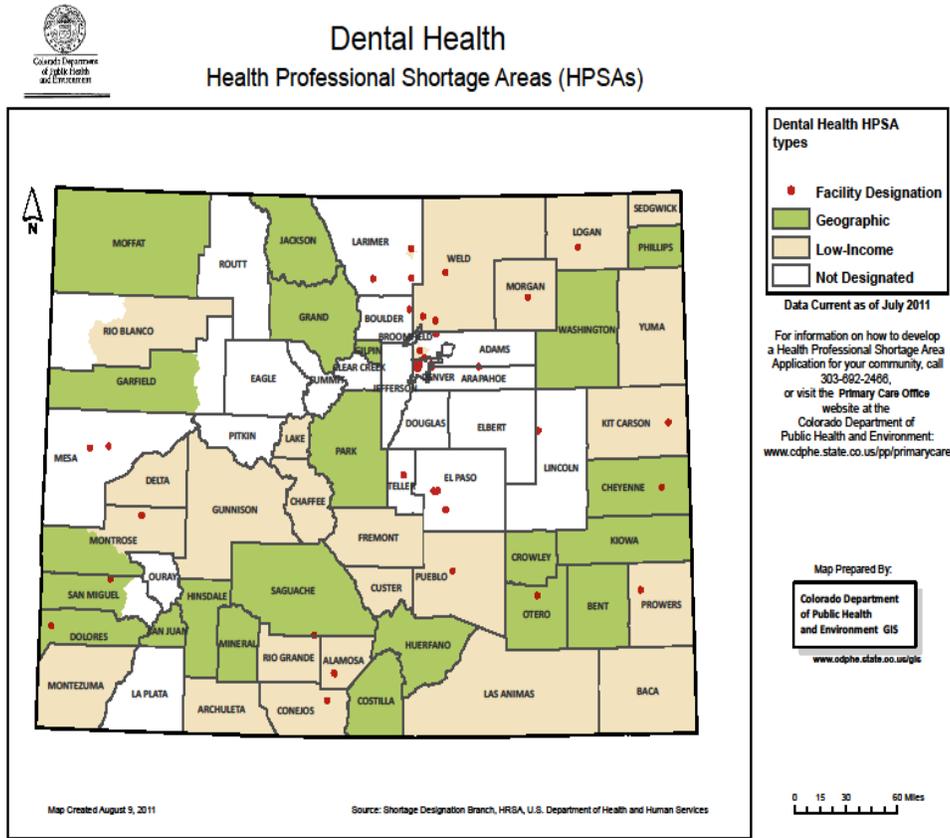
Map 2. Primary Care HPSA Designations, Colorado 2011



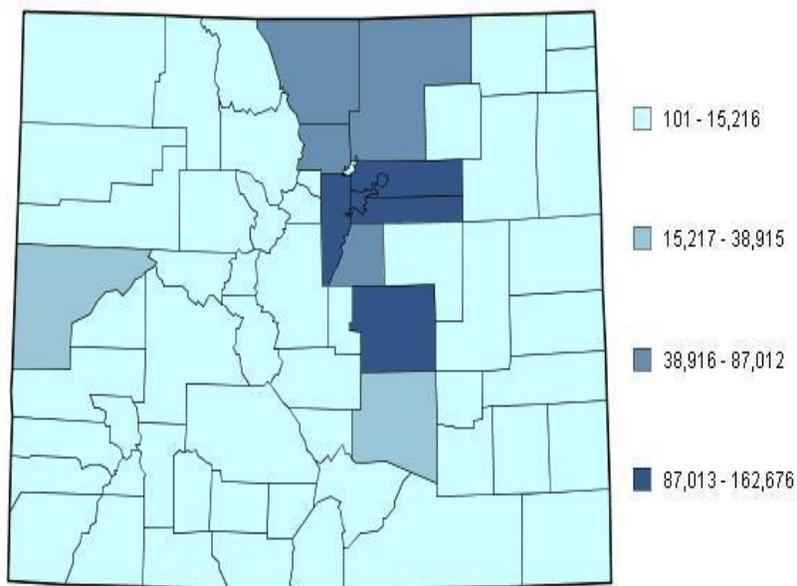
Map 3. Mental Health HPSA Designations, Colorado 2011



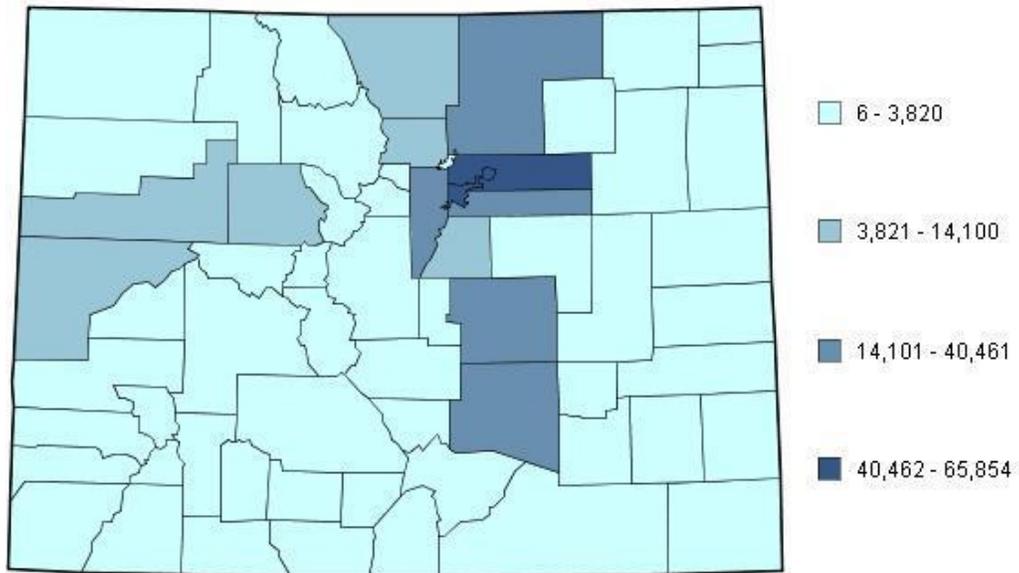
Map 4. Dental Health HPSA Designations, Colorado 2011



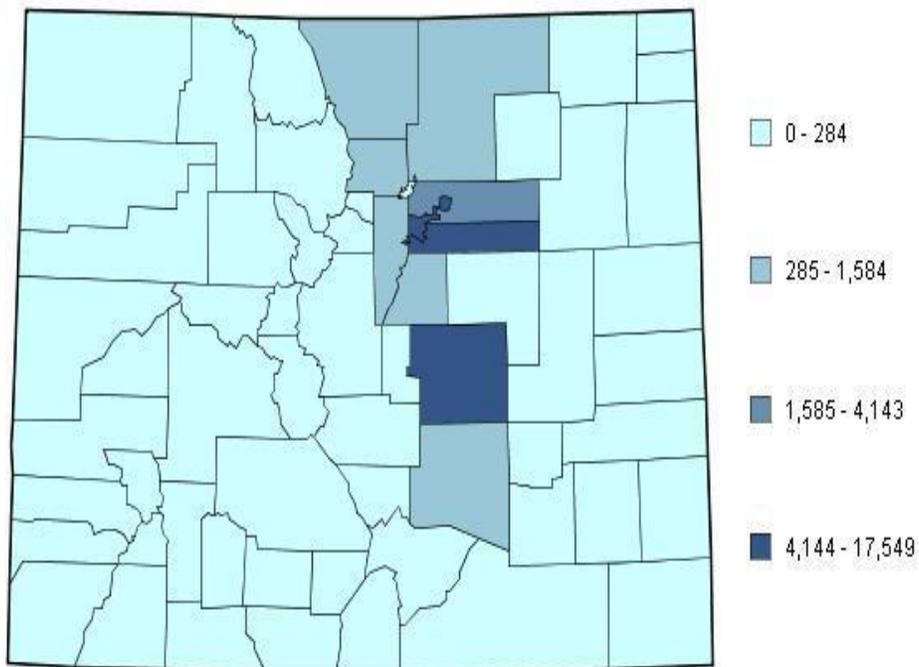
Map 5. Child Population by Race: Total Children Birth through 17 Years (Number)-2010



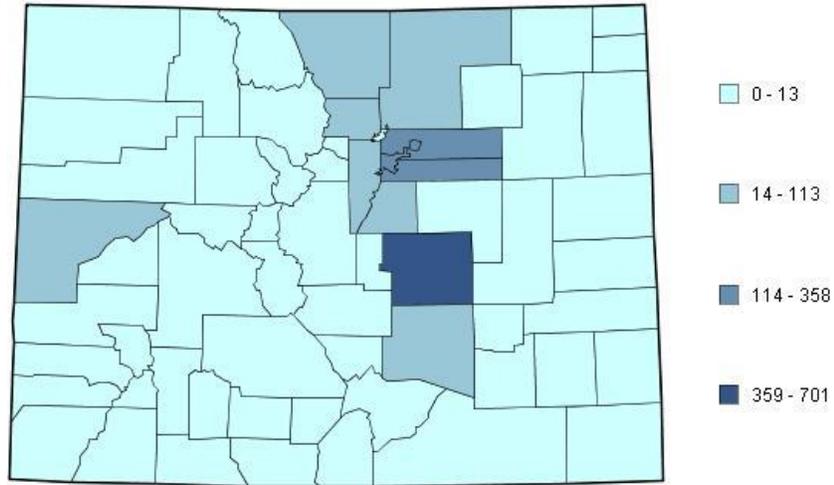
Map 6. Child Population by Hispanic Origin: Hispanic (Number)-2010



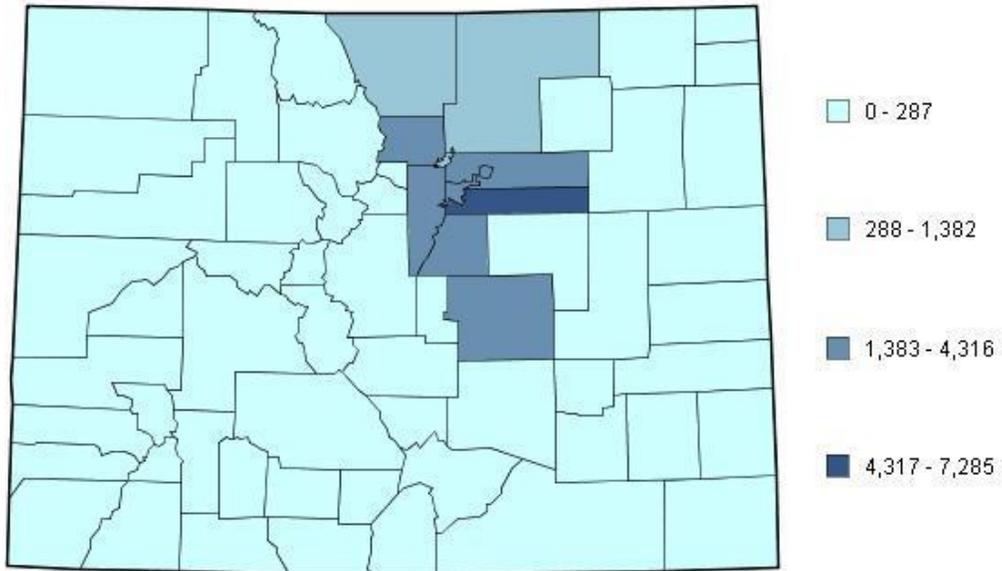
Map 7. Child Population by Race: Black Only (Number)-2010



Map 8. Child Population by Race: American Indian/Alaskan Native Only (Number)-2010



Map 9. Child Population by Race: Asian Only (Number)-2010



Appendix 2 Primary Care Professions Pathways & Education and Training Programs

Certified Nurse Aide (CNA) and Home Health Aide

Note: Colorado Department of Regulatory Agencies, Division of Registrations, 3 CCR 716-1, Chapter X-1.2.

1. "Nurse aide training program" is a course of study which is approved by the Colorado State Board of Nursing or the appropriate authority in another state or territory in the United States.

Program	City	County	Type
Academy of Medical and Health Sciences	Colorado Springs	El Paso	Independent
Academy of Medical Health and Sciences	Pueblo	Pueblo	Independent
AIMS Community College	Greeley	Weld	Community College
AIMS Community College-Fort Lupton	Fort Lupton	Weld	Community College
AIMS Community College-Loveland	Loveland	Larimer	Community College
Aims Community College-HSTE	Greeley	Weld	High School
Ann Rose School of Nursing Arts, Inc.	Westminster	Adams	Independent
Arapahoe Community College	Littleton	Arapahoe	Community College
Beo Nurse Aide Training Program	Colorado Springs	El Paso	Independent
Bollman Technical Education Center	Thornton	Adams	High School
Boulder Technical Education Center	Boulder	Boulder	High School
Brighton High School-HSTE	Brighton	Adams	High School
Career Development Center	Longmont	Boulder	High School
Caring Hands, Inc.	Estes Park	Larimer	Independent
Centennial Nurse Aide Training Program	Colorado Springs	El Paso	Independent
College of Eastern Utah	Cortez	Montezuma	Independent
College America-Denver	Denver	Denver	Independent
College America-Colorado Springs	Colorado Springs	El Paso	Independent
Colorado Mountain College-West Garfield	Rifle	Garfield	Community College
Colorado Mountain College Vail	Edwards	Eagle	Community College
Colorado Northwestern Community College	Craig	Moffat	Community College
Colorado State Veterans Nursing Home	Rifle	Garfield	Facility-Based
Community College of Denver	Denver	Denver	Community College
Community Health Institute	Denver	Denver	Independent
Delta Montrose Technical College Post Secondary	Delta	Delta	Technical College
Devonshire Acres Ltd	Sterling	Logan	Facility-Based
Emily Griffith Technical College-Extended Home Health Aide	Denver	Denver	Technical College
Emily Griffith Technical College-Home Health Aide	Denver	Denver	Technical College
Emily Griffith Technical College-Nurse Aide	Denver	Denver	Technical College
Estes Park Medical Center	Estes Park	Larimer	Facility-Based
Fairacres Manor	Greeley	Weld	Facility-Based
Florence High School-HSTE	Florence	Fremont	High School

Fred N. Thomas Career Education Center Middle College of Denver	Denver	Denver	High School
Front Range Community College Larimer- Post Secondary	Loveland	Larimer	Community College
Front Range Community College Larimer- Medical Careers Exploration	Fort Collins	Larimer	High School
Front Range Community College Longmont	Longmont	Boulder	Community College
Front Range Community College Westminster	Westminster	Adams	Community College
Front Range Nurse Aide Training Program	Colorado Springs	El Paso	Independent
Geriatric Education Center (formerly Columbine Health Systems)	Fort Collins	Larimer	Independent
Heritage Park Care Center	Carbondale	Garfield	Facility-Based
Hildebrand Care Center	Cañon City	Fremont	Facility-Based
Holly Nursing Care Center	Holly	Prowers	Facility-Based
Katelens Health Care Education	Walsenburg	Huerfano	Independent
Lamar Community College	Lamar	Prowers	Community College
Larchwood Inns	Grand Junction	Mesa	Facility-Based
Life Care Center of Longmont	Longmont	Boulder	Facility-Based
Littleton Public Schools Health Sciences Technology	Centennial	Arapahoe	High School
Morgan Community College-Burlington	Burlington	Kit Carson	Community College
Morgan Community College-Wray	Wray	Yuma	Community College
Morgan Community College-Post Secondary	Ft. Morgan	Morgan	Community College
Morgan Community College-HSTE	Ft. Morgan	Morgan	High School
National American University	Denver	Denver	Independent
National Jewish Health	Denver	Denver	Facility-Based
New Beginning Nursing Assistant Program	Denver	Denver	Independent
New Directions	Northglenn	Adams	Independent
Northeastern Junior College-Post Secondary	Sterling	Logan	Community College
Northeastern Junior College-HSTE	Sterling	Logan	High School
NTSOC Nurse Aide Training Program	Colorado Springs	El Paso	Independent
Otero Junior College	La Junta	Otero	Community College
Pickens Technical College-Post Secondary	Aurora	Arapahoe	Technical College
Pickens Technical College-HSTE	Aurora	Arapahoe	Technical College
Pikes Peak Community College-Post Secondary	Colorado Springs	El Paso	Community College
Pikes Peak Community College Area Vocational Program	Colorado Springs	El Paso	High School
Pikes Peak Community College Falcon Nurse Aide Training Program	Falcon	El Paso	High School
Pueblo Community College	Pueblo	Pueblo	Community College
Pueblo Community College-Fremont Campus	Cañon City	Fremont	Community College

Pueblo Community College-HSTE	Pueblo	Pueblo	High School
Red Rocks Community College	Lakewood	Jefferson	Community College
ReJUV Academy	Denver	Denver	Independent
Senior Living Community at Gunnison Valley Hospital	Gunnison	Gunnison	Facility-Based
South Denver School of Nursing Arts	Centennial	Arapahoe	Independent
Southwest Colorado Community College	Mancos	Montezuma	Community College
Simla Good Samaritan Center	Simla	Elbert	Facility-Based
Southeast Colorado Hospital & Long Term Care Ctr.	Springfield	Baca	Facility-Based
St. Joseph Hospital Foundation	Denver	Denver	Facility-Based
St. Lukes Ministry	Denver	Denver	Independent
St. Vincent Nurse Aid training Program	Leadville	Lake	Facility-Based
Stillwater Executive Institute	Denver	Denver	Independent
Stillwater Institute-Lakewood	Lakewood	Jefferson	Independent
Summit High School Health Sciences	Frisco	Summit	High School
Trinidad State Junior College-San Luis Educ Ctr. Valley Campus	Alamosa	Alamosa	Community College
Valley Inn	Mancos	Montezuma	Facility-Based
Warren Tech	Arvada	Jefferson	High School
Weisbrod Memorial County Hospital	Eads	Kiowa	Facility-Based
Western Colorado AHEC	Grand Junction	Mesa	Independent
Western Colorado Community College	Grand Junction	Mesa	Community College
Western Colorado Community College Med-Prep	Grand Junction	Mesa	High School
Westminster High School Health Studies	Westminster	Adams	High School
Wheat Ridge Regional Center	Wheat Ridge	Jefferson	Facility-Based
Yampa Valley Medical Center Doak Walker Care Center	Steamboat Springs	Routt	Facility-Based
Yuma Life Care Center	Yuma	Yuma	Facility-Based

Licensed Practical Nurse (LPN)

Note: Colorado Department of Regulatory Agencies, Division of Registrations, 3 CCR 716-1, Chapter 1-1.2,3.2 & Chapter 2-3.3

1. Approved Nursing Education Program (Approved Professional Nursing Education Program/Approved Practical Nursing Education Program): A course of study which implements the basic practical nursing curriculum prescribed by the Board.
2. A graduate of a Colorado approved Professional Nursing Education Program is eligible to take the NCLEX examination for professional or practical nursing.
3. A Nursing Education Program applying to grant a certificate in practical nursing must be located in an institution accredited by a regional accrediting agency or a national institutional accrediting agency.

Program	City	County	Type	Accreditation
Aims Community College LPN Exit Option as Part of Associate Degree Nursing Program	Greeley	Weld	Community College	ADN Program NLNAC Candidate
Arapahoe Community College LPN Exit Option as Part of Associate Degree Nursing Program	Littleton	Arapahoe	Community College	ADN Program NLNAC Accredited
Colorado Mesa University LPN Certificate	Grand Junction	Mesa	4-Year Public University	NLNAC Candidate
Colorado Mountain Junior College LPN Exit Option as Part of Associate Degree Nursing Program	Glenwood Springs	Garfield	Community College	ADN Program NLNAC Candidate
Colorado Northwestern Community College LPN Exit Option as Part of Associate Degree Nursing Program	Craig	Moffat	Community College	ADN Program NLNAC Candidate
Colorado State University-Pueblo LPN Exit Option as Part of Bachelor of Science In Nursing Program	Pueblo	Pueblo	Colorado 4-Year Public University	BSN Program NLNAC Accredited
Community College of Denver LPN Certificate	Denver	Denver	Community College	ADN Program NLNAC Candidate
Concorde Career College LPN Certificate	Aurora	Arapahoe	Private Occupational School Operating in Colorado	NLNAC Candidate
Delta Montrose Technical College LPN Certificate	Delta	Delta	Area Technical College	NLNAC Accredited
Emily Griffith Opportunity School LPN Certificate	Denver	Denver	Area Technical College	NLNAC Candidate
Front Range Community College-Boulder Arapahoe Campus LPN Certificate	Longmont	Denver	Community College	NLNAC Accredited
Front Range Community College-Larimer Campus LPN Exit Option as Part of Associate Degree Nursing Program	Ft. Collins	Larimer	Community College	ADN Program NLNAC Accredited

Front Range Community College-Westminster Campus LPN Exit Option as Part of Associate Degree Nursing Program	Westminster	Adams	Community College	ADN Program NLNAC Candidate
Lamar Community College LPN Exit Option as Part of Associate Degree Nursing Program	Lamar	Prowers	Community College	ADN Program NLNAC Candidate
Morgan Community College LPN Exit Option as Part of Associate Degree Nursing Program	Ft. Morgan	Morgan	Community College	AND Program NLNAC Accredited
Northeastern Junior College LPN Certificate	Sterling	Logan	Community College	NLNAC Candidate
Otero Junior College LPN Exit Option as Part of Associate Degree Nursing Program	La Junta	Otero	Community College	ADN Program NLNAC Accredited
Pickens Technical College LPN Certificate	Aurora	Arapahoe	Area Technical College	None Listed
Pikes Peak Community College-Rampart Range Campus LPN Exit Option as Part of Associate Degree Nursing Program	Colorado Springs	El Paso	Community College	ADN Program NLNAC Candidate
Pueblo Community College LPN Certificate	Pueblo	Pueblo	Community College	NLNAC Accredited
Pueblo Community College-Fremont Center LPN Exit Option as Part of Associate Degree Nursing Program	Cañon City	Fremont	Community College	NLNAC Accredited
Pueblo Community College-Southwest Center LPN Exit Option as Part of Associate Degree Nursing Program	Durango	La Plata	Community College	NLNAC Accredited
Trinidad State Junior College LPN Exit Option as Part of Associate Degree Nursing Program	Trinidad	Las Animas	Community College	ADN Program NLNAC Candidate

Trinidad State Junior College-Valley Campus LPN Exit Option as Part of Associate Degree Nursing Program	Alamosa	Alamosa	Community College	ADN Program NLNAC Candidate
--	---------	---------	-------------------	--------------------------------

Associate Degree Nursing (ADN)

Note: Colorado Department of Regulatory Agencies, Division of Registrations, 3 CCR 716-1, Chapter 1-1.2,3.1 & Chapter 2-3.2, 3.5

1. Approved Nursing Education Program (Approved Professional Nursing Education Program/Approved Practical Nursing Education Program): A course of study which implements the basic professional nursing curriculum prescribed by the Board.
2. A graduate of a Colorado approved Professional Nursing Education Program is eligible to take the NCLEX examination for professional or practical nursing.
3. A Nursing Education Program applying to grant a baccalaureate degree or an associate degree in nursing must be located in an institution accredited by a regional accrediting agency or a national institutional accrediting agency.
4. All Nursing Education Programs that have received Full Approval by January 1, 2006 must be accredited by a national nursing accrediting body recognized by the United States Department of Education by January 1, 2010 or must have achieved candidacy status leading to such accreditation and demonstrated satisfactory progression toward obtaining such accreditation.

Program	City	County	Type	Accreditation
Aims Community College	Greeley	Weld	Community College	NLNAC Candidate
Arapahoe Community College	Littleton	Arapahoe	Community College	NLNAC Accredited
College America	Denver	Denver	Private Occupational School Operating in Colorado	None Listed
Colorado Christian University Western Colorado Center	Grand Junction	Mesa	Private Accredited Institution Based in Colorado	NLNAC Candidate
Colorado Mountain Junior College-Roaring Fork Campus	Glenwood Springs	Garfield	Community College	NLNAC Candidate
Colorado Northwestern Community College	Craig	Moffat	Community College	NLNAC Candidate
Colorado Technical University-Pueblo Campus	Pueblo	Pueblo	Private Accredited Institution Based in Colorado	None Listed
Concorde Career College	Aurora	Arapahoe	Private Occupational School Operating in Colorado	None Listed
Denver School of Nursing	Denver	Denver	Private Accredited Institution Based in Colorado	NLNAC Candidate
Front Range Community College-Boulder Arapahoe Campus	Longmont	Larimer	Community College	NLNAC Accredited

Front Range Community College-Larimer Campus	Ft. Collins	Larimer	Community College	NLNAC Accredited
Front Range Community College Westminster Campus	Westminster	Adams	Community College	NLNAC Candidate
Lamar Community College	Lamar	Prowers	Community College	NLNAC Candidate
Morgan Community College	Ft. Morgan	Morgan	Community College	NLNAC Accredited
National American University	Denver	Denver	Private Accredited Institution Operating in Colorado	NLNAC Candidate
Northeastern Junior College	Sterling	Logan	Community College	NLNAC Candidate
Otero Junior College	La Junta	Otero	Community College	NLNAC Accredited
Pikes Peak Community College-Rampart Range Campus	Colorado Springs	El Paso	Community College	NLNAC Candidate
Pueblo Community College	Pueblo	Pueblo	Community College	NLNAC Accredited
Pueblo Community College-Fremont Campus	Cañon City	Fremont	Community College	NLNAC Accredited
Pueblo Community College-Southwest Center	Durango	La Plata	Community College	NLNAC Accredited
Trinidad State Junior College	Trinidad	Las Animas	Community College	NLNAC Candidate
Trinidad State Junior College-Valley Campus	Alamosa	Alamosa	Community College	NLNAC Candidate
Western Community College	Grand Junction	Mesa	Division of Colorado Mesa University-Colorado 4-year Public University	NLNAC Candidate

Bachelor of Science Nursing (BSN)

Note: Colorado Department of Regulatory Agencies, Division of Registrations, 3 CCR 716-1, Chapter 1-1.2,3.1,4.1 & Chapter 2-3.2, 3.5,

1. Approved Nursing Education Program (Approved Professional Nursing Education Program/Approved Practical Nursing Education Program): A course of study which implements the basic professional nursing curriculum prescribed by the Board.
2. A graduate of a Colorado approved Professional Nursing Education Program is eligible to take the NCLEX examination for professional or practical nursing.
3. Applicants licensed to practice professional nursing or practical nursing in another state or territory of the United States shall be eligible for licensure by endorsement in Colorado if the applicant has been previously licensed or is currently licensed in another state or territory from a traditional nursing education program approved by a Board of Nursing in a state or territory of the United States.
3. A Nursing Education Program applying to grant a baccalaureate degree or an associate degree in nursing must be located in an institution accredited by a regional accrediting agency or a national institutional accrediting agency.
4. All Nursing Education Programs that have received Full Approval by January 1, 2006 must be accredited by a national nursing accrediting body recognized by the United States Department of Education by January 1, 2010 or must have achieved candidacy status leading to such accreditation and demonstrated satisfactory progression toward obtaining such accreditation.

Program	City	County	Type	Accreditation
Adams State College 1. Traditional BSN 2. RN-BSN	Alamosa	Alamosa	Colorado 4-Year Public Institution	CCNE Accredited
Colorado Christian University 1. BSN Hybrid Format-Online/Classroom Learning	Northglenn	Adams	Private Accredited Institution Based in Colorado	CCNE Accredited
Colorado Mesa University 1. Traditional BSN 2. Online RN-BSN 3. LPN-BSN	Grand Junction	Mesa	Colorado Public 4-Year Institution	CCNE Accredited
Colorado State University Pueblo 1. Traditional BSN 2. LPN-BSN 3. RN-BSN 4. Degree Plus to BSN 5. RN-BSN Accelerated 6. Paramedic to BSN	Pueblo	Pueblo	Colorado Public 4-Year Institution	NLNAC Accredited
Denver School of Nursing 1. BSN Nursing Completion 2. Traditional BSN 3. RN-BSN	Denver	Denver	Private Accredited Institution Based in Colorado	NLNAC Candidate
Metropolitan State College of Denver 1. RN-BSN 2. BSN Accelerated	Denver	Denver	Colorado Public 4-Year Institution	NLNAC Accredited
School of Nursing-Platt College 1. Traditional BSN	Aurora	Arapahoe	Private Occupational School Based in Colorado	NLNAC Accredited

Regis University 1. Traditional BSN 2. BSN Accelerated 3. Choice BSN 4. RN-BSN Completion	Denver	Denver	Private Accredited Institution Based in Colorado	CCNE Accredited
University of Colorado Denver 1. Traditional BSN 2. RN-BSN Online 3. Integrated Nursing Pathway	Aurora	Arapahoe	Colorado Public 4-Year Institution	CCNE Accredited
University of Colorado Colorado Springs 1. Traditional BSN 2. BSN Accelerated 3. RN-BSN Online	Colorado Springs	El Paso	Colorado Public 4-Year Institution	CCNE Accredited
University of Northern Colorado 1. Traditional BSN 2. BSN Second Degree Program 3. RN-BSN Online	Greeley	Weld	Colorado Public 4-Year Institution	CCNE Accredited
University of Phoenix Online (campus specific) 1. Online/Onsite RN-BSN option 2. Online/Onsite LPN-BSN option	Lone Tree Ft. Collins Centennial Aurora Westminster Colorado Springs x 3 campuses	Douglas Larimer Arapahoe Adams El Paso	Private Accredited Institution Operating in Colorado	CCNE Accredited in AZ
The following BSN programs are registered as educational or occupational programs with the Colorado Department of Higher Education and are not approved by the Colorado State Board of Nursing. Some programs maintain affiliations in both Colorado and out-of-state.				
American Sentinel University 1. RN-BSN Online	Aurora	Arapahoe	Private Accredited Institution Based in Colorado	CCNE Accredited
Capella University 1. RN-BSN Online	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	CCNE Candidate in MN
College America 1. RN-BSN Online	Denver Colorado Springs	Denver El Paso	Private Occupational School Operating in Colorado	None Listed
Colorado Technical University 1. RN-BSN Online	Denver Pueblo Colorado Springs	Denver Pueblo El Paso	Private Accredited Institution Based in Colorado	CCNE Candidate

Florida Hospital College of Health Sciences 1. RN-BSN Online	Orlando, FL	N/A	Private Accredited Institution Operating in Colorado	NLNAC Accredited in FL
Grand Canyon University 1. RN-BSN Online	Phoenix, AZ	N/A	Private Accredited Institution Operating in Colorado	CCNE Accredited in AZ
National American University 1. RN-BSN Online	Denver	Denver	Private Accredited Institution Operating in Colorado	CCNE Candidate in SD
Pima Medical Institute 1. RN-BSN Online	Denver x2 Colorado Springs	Denver El Paso	Private Occupational School Operating in Colorado	None Listed
Walden University 1. BSN Completion Online	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	CCNE Accredited in MN
Western Governors University 1. RN-BSN Online	Salt Lake City, UT	N/A	Private Accredited Institution Operating in Colorado	CCNE Accredited in UT

Advanced Practice Nursing (MSN, DNP, PhD)

Note: Colorado Department of Regulatory Agencies, Division of Registrations 3 CCR 716-1, Chapter 21,1.1

1. Advanced Practice Nurse (APN): A master's prepared nurse holding a graduate degree in advance practice nursing who has completed a graduate or post-graduate program of study in an advanced practice Role and/or Population Focus, in an accredited advanced practice nursing program recognized and included on the Advanced Practice Registry (APR) by the Board. APN roles recognized by the Board are nurse practitioner (NP), certified registered nurse anesthetist (CRNA), certified nurse midwife (CNM) and clinical nurse specialist (CNS).

Program	City	County	Type	Accreditation
Colorado Mesa University 1. Master of Science-Nursing	Grand Junction	Mesa	Colorado Public 4-Year Institution	None Listed for Master's Program
Colorado State University Pueblo Master of Science in Nursing: 1. Adult Care Nurse Practitioner 2. Adult Acute Care Family Nurse Practitioner 3. Adult Psychiatric Mental Health Nurse Practitioner 4. Nurse Educator 5. Post Masters Certification	Pueblo	Pueblo	Colorado Public 4-Year Institution	None Listed for Master's Program

<p>Regis University Master of Science in Nursing:</p> <ol style="list-style-type: none"> 1. Leadership in Health Care Systems 2. Family Nurse Practitioner 3. Neonatal Nurse Practitioner 4. Masters Completion for Certified Nurse Practitioners 5. Masters in Nursing Articulation for Certified Nurse Practitioners 6. Post Masters Nursing Certificate Programs 	Denver	Denver	Private Accredited Institution Based in Colorado	CCNE Accredited
<p>University of Colorado Denver Master of Science in Nursing:</p> <ol style="list-style-type: none"> 1. Adult Clinical Nurse Specialist 2. Adult Nurse Practitioner 3. Family Nurse Practitioner 4. Family Psychiatric Mental Health Nurse Practitioner 5. Health Care Informatics 6. Pediatric Nurse Practitioner 7. Pediatric Nursing Leadership & Special Needs 8. Nurse Midwifery 9. Special Studies 10. Women’s Health 11. Nursing Leadership and Health Care Systems 12. Post Masters Certificates Program 	Aurora	Arapahoe	Colorado Public 4-Year Institution	CCNE Accredited
<p>University of Colorado Colorado Springs Master of Science in Nursing:</p> <ol style="list-style-type: none"> 1. Nurse Practitioner (Adult or Family) 2. Nursing Education 	Colorado Springs	El Paso	Colorado Public 4-Year Institution	CCNE Accredited

University of Northern Colorado: Master of Science in Nursing 1. Family Nurse Practitioner 2. Clinical Nurse Leader 3. Post Masters Certificate Programs	Greeley	Weld	Colorado Public 4-Year Institution	CCNE Accredited
The following MSN programs are registered as educational or occupational programs with the Colorado Department of Higher Education and may or may not be recognized by the Colorado State Board of Nursing. Some programs maintain affiliations in both Colorado and out-of-state.				
American Sentinel University Online RN-MSN Online MSN 1. Nurse Case Management Infection Prevention and Control 2. Nursing Education 3. Nursing Informatics 4. Nursing Management and Organizational Leadership	Aurora	Arapahoe	Private Accredited Institution Based in Colorado	CCNE Accredited
Aspen University Online RN-MSN Bridge Program Online MSN 1. Nursing Administration and Management 2. Nursing Education	Denver	Denver	Private Accredited Institution Based in Colorado	CCNE Accredited
Capella University Online MSN 1. Nurse Educator 2. Nurse Educator Bridge	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	CCNE Candidate MN
College America Online MSN 1. Nursing Administration 2. Nurse Education	Denver	Denver	Private Occupational School Operating in Colorado	None Listed for Master's Program
Grand Canyon University Online Bridge to MSN Online MSN 1. Health Care Informatics 2. Nursing Education 3. Nursing Leadership in Health Care Systems 4. Post Masters Certificate Nursing Education	Phoenix, AZ	N/A	Private Accredited Institution Operating in Colorado	CCNE Accredited in AZ

National American University Online MSN 1. Nursing Education	Denver	Denver	Private Accredited Institution Operating in Colorado	CCNE Candidate in SD
University of Phoenix (Campus Specific) Online/Onsite MSN 1. Business Administration and Health Care Management 2. Health Administration 3. Nursing and Health Care Education 4. Specialization in Informatics	Lone Tree Centennial Ft. Collins Aurora Westminster Colorado Springs x 3 campuses	Douglas Arapahoe Larimer Adams El Paso	Private Accredited Institution Operating in Colorado	CCNE Accredited in AZ
Walden University Online BSN-MSN and RN-MSN Education Tracks 1. Leadership and Management 2. Nursing Informatics	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	CCNE Accredited in MN
Western Governors University Online MSN and RN-MSN: 1. Education 2. Leadership and Management	Salt Lake City, UT	N/A	Private Accredited Institution Operating in Colorado	CCNE Accredited in UT

Doctor of Nursing (PhD)(DNP)

Colorado Mesa University Doctor of Nursing Practice 1. Family Nurse Practitioner	Grand Junction	Mesa	Colorado Public 4-Year Institution	
Regis University Online Doctor of Nursing Practice	Denver	Denver	Private Accredited Institution Based In Colorado	
University of Colorado Denver PhD Doctor of Nursing Practice	Aurora	Arapahoe	Colorado Public 4-Year Institution	
University of Colorado Colorado Springs Doctor of Nursing Practice	Colorado Springs	El Paso	Colorado Public 4-Year Institution	

University of Northern Colorado Online Post Master's Doctor of Nursing Practice Online PhD-Nursing Education	Greeley	Weld	Colorado Public 4-Year Institution
The following PhD and DNP programs are registered as educational or occupational programs with the Colorado Department of Higher Education and may or may not be recognized by the Colorado State Board of Nursing. Some programs maintain affiliations in both Colorado and out-of-state.			
American Sentinel University Online Doctor of Nursing Practice 1. Executive Leadership	Aurora	Arapahoe	Private Accredited Institution Based in Colorado
Capella University Online Doctor of Nursing Practice Online PhD Nursing Education	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado
Walden University Online Doctor of Nursing Practice	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado

Physician (MD)(DO) incl. Family Medicine, Pediatrics, Psychiatry, Clinical Pharmacology and Toxicology				
Program	City	County	Type	Accreditation
University of Colorado School of Medicine Medical Doctor (Allopathic) 1. Dept. of Family Medicine (incl. Rural Track) 2. Department of Pediatrics 3. Department of Psychiatry 4. Division of Clinical Pharmacology and Toxicology	Aurora	Arapahoe	Colorado Public 4-year Institution	LCME Accredited
Rocky Vista University of Osteopathic Medicine Doctor of Osteopathic Medicine 1. Pediatrics Coursework and Clinical Rotation 2. Psychiatry Clinical Rotation	Parker	Douglas	Private Accredited Institution Based in Colorado	AOAC Provisional Accreditation

Certificate and Master's of Physician Assistant Studies (MPAS)

Program	City	County	Type	Accreditation
University of Colorado Child Health Associate Physician Assistant Program Certificate and Professional Master's Degree (MPAS-Pediatrics) Specialized Tracks: 1. Rural 2. Urban Underserved 3. Global Health Track 4. LEADS (Leadership, Education, Advocacy, Development and Scholarship)	Aurora	Arapahoe	Colorado Public 4-Year Institution	ARC-PA Accredited
Red Rocks Community College 1. Certificate in PA Studies 2. Masters Degree Option (partnership with St. Francis University)	Lakewood	Jefferson	Community College	ARC-PA Accredited

Dentist (DDS) and Dental Hygienist (AAS-Dental Hygiene)

Program	City	County	Type	Accreditation
University of Colorado School of Dental Medicine Doctor of Dental Surgery	Aurora	Arapahoe	Colorado Public 4-Year Institution	CODA Accredited
Colorado Northwestern Community College AAS-Dental Hygiene	Rangely	Rio Blanco	Community College	CODA Accredited
Community College of Denver AAS-Dental Hygiene	Denver	Denver	Community College	CODA Accredited
Pueblo Community College AAS-Dental Hygiene	Pueblo	Pueblo	Community College	CODA Accredited

Doctor of Physical Therapy (DPT)				
Program	City	County	Type	Accreditation
Regis University Doctor of Physical Therapy	Denver	Denver	Private Accredited Institution Based in Colorado	CAPTE Accredited
University of Colorado School of Medicine Physical Therapy Program Doctor of Physical Therapy	Aurora	Arapahoe	Colorado Public 4-Year Institution	CAPTE Accredited

Doctor of Pharmacy (Pharm.D) (Ph.D)				
Program	City	County	Type	Accreditation
Regis University Doctor of Pharmacy	Denver	Denver	Private Accredited Institution Based in Colorado	ACPE Accredited
University of Colorado School of Pharmacy Doctor of Pharmacy Non Traditional Pharm.D PhD (See University of Colorado School of Medicine, Division of Clinical Pharmacology and Toxicology)	Aurora	Arapahoe	Colorado Public 4-Year Institution	ACPE Accredited

Associate of Psychology (A.A.)(A.S.)				
Program	City	County	Type	
Arapahoe Community College A.A.-Psychology Plan of Study	Littleton	Arapahoe	Community College	
Community College of Aurora A.A.-Psychology Plan of Study	Aurora	Arapahoe	Community College	
Community College of Denver A.A.-Psychology Plan of Study	Denver	Denver	Community College	
Front Range Community College A.A.-Psychology Plan of Study	Longmont Fort Collins Westminster	Boulder Larimer Adams	Community College	

Northeastern Community College A.A.-Psychology Plan of Study	Sterling	Logan	Community College
Otero Junior College A.A.-Psychology Plan of Study	La Junta	Otero	Community College
Pikes Peak Community College A.A.-Psychology Plan of Study	Colorado Springs	El Paso	Community College
Pueblo Community College A.A.-Psychology Plan of Study	Pueblo	Pueblo	Community College
Red Rocks Community College A.A.-Psychology Plan of Study	Lakewood	Jefferson	Community College
Trinidad State Junior College A.A.-Psychology Plan of Study	Trinidad	Las Animas	Community College
Troy University Online A.S.-Psychology Concentration	Troy, AL	N/A	Private Accredited Institution Operating in Colorado
University of Phoenix Online A.A.-Psychology	Lone Tree Ft. Collins Centennial Aurora Westminster Colorado Springs x 3 campuses	Douglas Larimer Arapahoe Adams El Paso	Private Accredited Institution Operating in Colorado

Bachelor's of Psychology (B.A.,B.S.)			
Program	City	County	Type
Adams State University B.A.-Psychology	Alamosa	Alamosa	Colorado Public 4-Year University
Argosy University Online/Onsite B.A. Psychology 1. Substance Abuse 2. Human Services	Denver	Denver	Private Accredited Institution Operating in Colorado

Aspen University Online B.A.-Psychology & Substance Abuse Counseling	Denver	Denver	Private Accredited Institution Based in Colorado
Capella University Online B.S.-Psychology	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado
Colorado Christian University Online/Onsite B.A.- Psychology	Lakewood	Jefferson	Private Accredited Institution Based in Colorado
Colorado College B.S.-Psychology	Colorado Springs	El Paso	Private Accredited Institution Based in Colorado
Colorado State University Fort Collins B.S.-Psychology	Ft. Collins	Larimer	Colorado Public 4-Year Institution
Colorado State University Pueblo B.A. or B.S.-Psychology	Pueblo	Pueblo	Colorado Public 4-year Institution
Colorado Technical University Online B.S.-Psychology	Colorado Springs Denver Pueblo	El Paso Denver Pueblo	Private Accredited Institution Based in Colorado
Columbia College Online B.A.-Psychology	Columbia, MO	N/A	Private Accredited Institution Operating in Colorado
Denver University B.A. or B.S.-Psychology	Denver	Denver	Private Accredited Institution Based in Colorado
Fort Lewis College B.A.-Psychology	Durango	La Plata	Colorado Public 4-Year Institution
Grand Canyon University Online B.S.-Psychology	Phoenix, AZ	N/A	Private Accredited Institution Operating in Colorado
Lesley University Online B.A.-Psychology	Cambridge, MA		Private Accredited Institution Operating in Colorado
Colorado Mesa University B.A.-Psychology 1. Counseling Psychology	Grand Junction	Mesa	Colorado Public 4-Year Institution
Metropolitan State University Denver B.A.-Psychology	Denver	Denver	Colorado Public 4-Year Institution
Nova Southeastern University Online B.A.-Psychology	Ft. Lauderdale, FL	N/A	Private Accredited Institution Operating in Colorado
Regis University B.A.-Psychology	Denver	Denver	Private Accredited Institution Based in Colorado
Troy University Online B.S.-Psychology	Troy, AL	N/A	Private Accredited Institution Operating in Colorado
University of Colorado Boulder B.A.-Psychology	Boulder	Boulder	Colorado Public 4-Year Institution

University of Colorado Colorado Springs B.A.-Psychology	Colorado Springs	El Paso	Colorado Public 4-Year Institution
University of Colorado Denver B.A. or B.S.-Psychology	Denver	Denver	Colorado Public 4-Year Institution
University of Northern Colorado B.A. Psychology	Greeley	Weld	Colorado Public 4-Year Institution
University of Phoenix Online/Onsite B.S.- Psychology	Lone Tree Ft. Collins Centennial Aurora Westminster Colorado Springs x 3 campuses	Douglas Larimer Arapahoe Adams El Paso	Private Accredited Institution Operating in Colorado
Walden University Online B.S.-Psychology	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado
Western State College B.A.-Psychology	Gunnison	Gunnison	Colorado Public 4-Year Institution

Master's of Psychology (M.A.,M.S.)			
Program	City	County	Type
Argosy University M.A.-Psychology	Denver	Denver	Private Accredited Institution Operating in Colorado
Aspen University Online M.A.-Psychology and Addiction Counseling (NAADAC Approved Education Provider for Addiction Counseling)	Denver	Denver	Private Accredited Institution Based in Colorado
Capella University Online M.S.-Psychology 1. Clinical Psychology 2. Counseling Psychology 3. General Psychology 4. School Psychology	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado
Denver University M.A.-Psychology	Denver	Denver	Private Accredited Institution Based in Colorado
Grand Canyon University Online M.S.-Psychology	Phoenix, AZ	N/A	Private Accredited Institution Operating in Colorado

Regis University M.A.-Applied Psychology	Denver	Denver	Private Accredited Institution Based in Colorado
University of Colorado Colorado Springs M.A.-Psychology 1. Child and Adolescent 2. Geropsychology 3. Cognitive 4. Developmental	Colorado Springs	El Paso	Colorado Public 4-Year Institution
University of Colorado Boulder Concurrent B.A./M.A.-Psychology	Boulder	Boulder	Colorado Public 4-Year Institution
University of Colorado Denver M.A.-Psychology 1. Clinical Psychology	Denver	Denver	Colorado Public 4-Year Institution
University of Northern Colorado M.A.-Psychology (Completed as part of PhD Program)	Greeley	Weld	Colorado Public 4-Year Institution
University of Phoenix Online M.S.-Psychology	Lone Tree Centennial Ft. Collins Aurora Westminster Colorado Springs x 3	Douglas Larimer Arapahoe Adams El Paso	Private Accredited Institution Operating in Colorado
University of the Rockies M.A.-Psychology	Colorado Springs	El Paso	Private Accredited Institution Based in Colorado
Walden University Online M.S.-Psychology, M.S. Clinical Psychology	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado

Doctor of Psychology (Ph.D, Psy.D)

Note: Rule 17 of Colorado State Board of Psychologist Examiners-Education and Training Requirements:

1. The applicant obtained a doctoral degree from a program that was accredited by the American Psychological Association
2. The applicant received a doctoral degree from a graduating training program, at the time she/he was enrolled and received her/his degree, fulfilled the equivalency degree requirements used to define a psychology graduate training program.

Program	City	County	Type	Accreditation
Colorado State University Fort Collins PhD-Psychology 1. Applied Social 2. Health 3. Environmental Psychology 4. Occupational Health Psychology 5. Cognitive Psychology 6. Counseling Psychology 7. Cognitive Neuroscience 8. Industrial Organizational Psychology	Ft. Collins	Larimer	Colorado Public 4-Year Institution	APA Accredited
Denver University PhD-Psychology 1. Affective/Social 2. Cognitive 3. Clinical Child 4. Developmental 5. Cognitive Neuroscience	Denver	Denver	Private Accredited Institution Based in Colorado	APA Accredited
University of Colorado Boulder PhD-Psychology 1. Clinical 2. Cognitive 3. Social/Neuroscience	Boulder	Boulder	Colorado Public 4-Year Institution	APA Accredited
University of Colorado Colorado Springs PhD-Clinical Psychology 1. Geropsychology	Colorado Springs	El Paso	Colorado Public 4-Year Institution	APA Accredited
University of Northern Colorado PhD-Psychology 1. Counseling 2. School Psychology	Greely	Weld	Colorado Public 4-Year Institution	APA Accredited

The following Doctor of Psychology programs are registered as educational or occupational programs with the Colorado Department of Higher Education and may or may not be recognized by the Colorado State Board of Psychologist Examiners. Some programs maintain affiliations in both Colorado and out-of-state.

Argosy University EdD-Counseling Psychology	Denver	Denver	Private Accredited Institution Operating in Colorado	None Listed
Capella University Online PhD-Psychology 1. Addiction 2. Educational 3. General Psychology Online PsyD 1. Clinical Psychology	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	None Listed
Grand Canyon University Online PhD-General Psychology 1. Cognition and Instruction 2. Industrial- Organizational	Phoenix, AZ	N/A	Private Accredited Institution Operating in Colorado	None Listed
University of Phoenix Online PhD-Psychology 1. Industrial-Organizational	Lone Tree Ft. Collins Centennial Aurora Westminster Colorado Springs x 3	Douglas Larimer Arapahoe Adams El Paso	Private Accredited Institution Operating in Colorado	None Listed
University of the Rockies PsyD 1. Clinical Psychology 2. Health and Wellness Psychology	Colorado Springs	El Paso	Private Accredited Institution Based in Colorado	None Listed
Walden University Online PhD-Psychology 1. Clinical 2. Counseling 3. General 4. Health 5. Organizational	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	None Listed

Marriage & Family Therapist (Post-Master's Certificate, Master's, Doctorate)

Note: Rule 17 of Colorado State Board of Marriage and Family Therapist Examiners-Education and Training Requirements:

1. The applicant obtained a Master's or Doctoral degree from a program that was approved by the Commission on Accreditation for Marriage and Family Therapy Education
2. The applicant received a Master's or Doctoral degree from a graduate training program that, at the time she/he was enrolled and received her/his degree, fulfilled the equivalency degree requirements used to define a marriage and family therapy graduate training program.

Program	City	County	Type	Accreditation
Colorado School for Family Therapy Post Masters Certificate in Marriage & Family Therapy	Aurora	Arapahoe	Private Occupational Institution Based in Colorado	AAMFT Accredited
Colorado State University Fort Collins M.S.-Human Development & Family Studies 1. Marriage & Family Therapy	Ft. Collins	Larimer	Colorado Public 4-Year Institution	AAMFT Accredited
Denver Family Institute Post Masters Certificate in Marriage & Family Therapy	Denver	Denver	Not Listed-Colorado Department of Higher Education	AAMFT Accredited

The following Marriage and Family Therapy programs are registered as educational or occupational programs with the Colorado Department of Higher Education and may or may not be recognized by the Colorado State Board of Marriage & Family Therapist Examiners. Some programs maintain affiliations in both Colorado and out-of-state.

Argosy University M.A.-Marriage & Family Therapy Doctorate-Marriage & Family Therapy	Denver	Denver	Private Accredited Institution Operating in Colorado	None Listed
Capella University Online Certificate 1. Contemporary Theory in Couple & Family Systems 2. Online M.S.-Marriage & Family Therapy	Minnesota, MN	N/A	Private Accredited Institution Operating in Colorado	CACREP Accredited in MN
Grand Canyon University Online M.S.-Marriage & Family Therapy	Phoenix, AZ	N/A	Private Accredited Institution Operating in Colorado	None Listed

Regis University M.A.-Marriage & Family Therapy	Denver	Denver	Private Accredited Institution Based in Colorado	None Listed
University of Phoenix M.S.-Marriage, Family & Child Therapy	Lone Tree Centennial Aurora Westminster Colorado Springs X 3	Douglas Arapahoe Adams El Paso	Private Accredited Institution Operating in Colorado	None Listed

Social Worker (BSW, MSW, PhD)

Note: Rule 17 of Colorado State Board of Social Work Examiners-Education and Training Requirements:
The applicant obtained a masters degree in social work from a program that was approved by the Council on Social Work Education (CSWE) or a doctoral degree in social work from a doctoral program within a social work education program accredited by the Council on Social Work Education (CSWE).

Program	City	County	Type	Accreditation
Colorado State University Fort Collins Bachelors-Social Work Master's-Social Work Ph.D Program	Ft. Collins	Larimer	Colorado 4-Year Public Institution	CSWE Accredited
Colorado State University Pueblo Bachelors-Social Work	Pueblo	Pueblo	Colorado 4-Year Public Institution	CSWE Accredited
Denver University Master's-Social Work Ph.D Program	Denver	Denver	Private Accredited Institution Based in Colorado	CSWE Accredited
Metropolitan State University Denver Bachelors-Social Work Master's-Social Work	Denver	Denver	Colorado 4-Year Public Institution	CSWE Accredited

The following Social Work programs are registered as educational or occupational programs with the Colorado Department of Higher Education and may or may not be recognized by the Colorado State Board of Social Work Examiners. Some programs maintain affiliations in both Colorado and out-of-state.

Capella University Online Doctorate- General Social Work	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	None Listed
Newman University Master's-Social Work	Colorado Springs	El Paso	Private Accredited Institution Operating in Colorado	CSWE Accredited in KS
Walden University Online PhD-Human Services 1. Clinical Social Work	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	None Listed

Counseling-Variou s Disciplines (Certificates, Bachelor's, Master's, Doctorate)

Note: Rule 17 of Colorado State Board of Licensed Professional Examiners-Education and Training Requirements:

1. The applicant obtained a master's or doctoral degree from a program that was approved by the Council for Accreditation of Counseling and Related Educational Programs (CACREP).
2. The applicant received a master's or doctoral degree from a graduate training program that, at the time she/he was enrolled and received her/his degree, fulfilled the equivalency degree requirements used to define a professional counseling graduate training program.
3. Certification as an addiction counselor can be obtained by those individuals who possess a high school diploma or the equivalent, or a bachelor's, master's or doctorate degree in the behavioral health sciences as determined and approved by the Department. Licensure as an addiction counselor may be obtained by those individuals who possess a master's degree or higher in the behavioral health sciences as determined and approved by the Department.

Program	City	County	Type	Accreditation
Adams State College M.A.-Clinical Mental Health Counseling	Alamosa	Alamos	Colorado Public 4-Year Institution	CACREP Accredited
American Pathways University B.A.-Human Services 1. Concentration in Addiction Counseling	Denver	Denver	Private Accredited Institution Based in Denver	CACREP Accredited
Argosy University M.A.-Clinical Mental Health Counseling	Denver	Denver	Private Accredited Institution Operating In Colorado	None Listed
Capella University (Online) M.S.-General Addiction Counseling M.S.-General Mental Health Counseling Certificate-Contemporary Theory in Mental Health Services	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	Mental Health Counseling is CACREP Accredited in MN
Colorado Christian University M.A.-Counseling	Lakewood	Jefferson	Private Accredited Institution Based in Colorado	None Listed

<p>Colorado School of Family Therapy Post Graduate Certifications and Credentialing-Certified Addictions Counselor Program</p>	Aurora	Arapahoe	Private Accredited Institution Based in Colorado	None Listed
<p>Grand Canyon University Online B.S.-Counseling 1. Emphasis in Addiction, Chemical Dependency and Substance Abuse Online M.S.-Addiction Counseling Online M.S.-Professional Counseling Online Certificate of Completion in Advanced Graduate Studies in Addiction Counseling</p>	Phoenix, AZ	N/A	Private Accredited Institution Operating in Colorado	None Listed
<p>Metropolitan State University Denver B.S.-Human Services 1. Drug and Alcohol Counseling Certificate Programs Addiction Studies 1. Counselor training program drugs, alcohol and addictive behavior counseling 2. Counselor training program domestic violence counseling</p>	Denver	Denver	Colorado Public 4-Year Institution	None Listed

Grand Canyon University Online B.S.-Counseling 1. Emphasis in Addiction, Chemical Dependency and Substance Abuse Online M.S.-Addiction Counseling Online M.S-Professional Counseling Online Certificate of Completion in Advanced Graduate Studies in Addiction Counseling	Phoenix, AZ	N/A	Private Accredited Institution Operating in Colorado	None Listed
Nova Southeastern University Online M.S. Counseling 1. Mental Health Counseling 2. Substance Abuse Counseling 3. Substance Abuse Counseling and Education 4. Applied Behavior Analysis 5. Advanced Applied Behavior Analysis	Fort Lauderdale, FL	N/A	Private Accredited Institution Operation in Colorado	None Listed
Pikes Peak Community College Certificate Certified Addiction Counseling (Pending State Approval)	Colorado Springs	El Paso	Community College	None Listed
University of Colorado Denver M.A.-Couple and Family Counseling M.A.-Clinical Mental Health Counseling	Denver	Denver	Colorado Public 4-Year Institution	CACREP Accredited
University of Northern Colorado M.A. Clinical Counseling M.A. Clinical Counseling 1. Couples and Family	Greeley	Weld	Colorado Public 4-Year Institution	CACREP Accredited

University of Colorado Colorado Springs M.A.-Counseling and Human Services 1. Clinical Mental Health Counseling	Colorado Springs	El Paso	Colorado Public 4-Year Institution	CACREP Accredited
Trinidad State Junior College- Valley Campus A.S. or Certificate-Addictions Counseling	Alamosa	Alamos	Community College	None Listed
University of Phoenix Onsite M.S. Human Services 1. Mental Health Counseling	Lone Tree Centennial Aurora Westminster Colorado Springs x 3	Douglas Arapahoe Adams El Paso	Private Accredited Institution Operating in Colorado	CACREP Accredited in AZ
Walden University Online M.S-Marriage, Couple & Family Counseling Online M.S-Mental Health Counseling Online PhD-Counseling	Minneapolis, MN	N/A	Private Accredited Institution Operating in Colorado	Mental Health Counseling CACREP Accredited

Appendix 3 Primary Care Provider Loan Repayment Options-Colorado, 2011

Program	Award Characteristics	Facts and Figures	Eligible Health Professions	Administration and Funding
Colorado Health Service Corps (CHSC)	<p>Nontaxable awards may be made up to \$35,000 for physicians and dentists; up to \$20,000 for physician's assistants, nurse practitioners, and mental health providers; and up to \$7,500 for dental hygienists for each year of service.</p> <p>Certain physicians who work for a federally qualified health center, rural health clinic, community clinic, or who are graduates of the Rose or Swedish Family Medicine Residency programs may be eligible for awards of up to \$50,000 per year. All contracts are for two to three years,</p>	<p>A state, federal, private partnership that seeks to improve access to health professionals in underserved Colorado communities by repaying the educational loans of providers who agree to practice in areas with a health professional shortage.</p> <p>In March 2011 the Colorado Health Service Corps, administered by the Primary Care Office at the Colorado Department of Public Health and Environment, awarded a total of nearly \$2.5 million in loan repayment funds to 37 health care professionals serving Colorado's medically underserved.</p>	<p>Certified Nurse-Midwives</p> <p>Clinical or Counseling Psychologists (Ph.D., Psy.D. or equivalent)</p> <p>Dentists (general and pediatric practice) and Registered Dental Hygienists</p> <p>Doctors of Osteopathic or Allopathic Medicine (Family Medicine, Geriatrics, General Internal Medicine, General Psychiatry, General Child Psychiatry, General Pediatrics, and General Obstetrics/Gynecology)</p> <p>Licensed Clinical Social Workers (master's or doctoral degree in social work) and Licensed Professional Counselors (master's or doctoral degree with a major study in counseling)</p> <p>Marriage and Family Therapists (master's or doctoral degree with a major study in marriage and family therapy)</p> <p>Primary Care Certified Nurse Practitioners</p> <p>Primary Care Physician Assistants</p> <p>Psychiatric Nurse Specialists</p>	<p>The Primary Care Office at the Colorado Department of Public Health and Environment (CDPHE) administers the program. Award decisions are delegated to the Colorado Health Service Corps Advisory Council</p> <p>The program is jointly funded by The Colorado Health Foundation, the Colorado Trust, the CompreCare Foundation, the Health Resources and Services Administration, the American Recovery and Reinvestment Act, and the state of Colorado</p>

Program	Award Characteristics	Facts and Figures	Eligible Health Professions	Administration and Funding
Expanded Dental Loan Option of the Colorado Health Service Corps	Based on the monthly average of underserved patients (Medicaid, CHP+, uninsured-sliding fee scale or pro-bono) receiving services awards range from \$10,000 to \$25,000 for Dentists and \$3,000 to 6,000 for Dental Hygienists	In FY2009-10, under the previous iteration of the State Dental Loan Repayment Program, recipients of dental loan repayment included 18 Level I dentists (40 underserved patients/month), two Level II dentists (20 underserved patients/month), five Level III dentists (10 underserved patients/month), five Level I hygienists (20 underserved patients/month) and one Level II hygienist (10 underserved patients/month).	Dentists (DDS) Dental Hygienists (RDH)	In 2011 the Dental Loan Repayment Program (DLRP) was transferred from CDPHE's Oral Health Unit to the Primary Care Office. The program is funded through a combination of State appropriation and Federal grant funds..
National Health Service Corps (NHSC)	To be eligible for up to \$60,000 in an initial loan repayment award Corps members are required to practice full-time for at least two years or part-time for four years at an NHSC-approved site. An award of \$30,000 is available for two years of half-time service. Approved sites are located across the country in Health Professional Shortage Areas (HPSAs). For a two to four year commitment, in an underserved community the NHSC awards scholarships each	In July of 2011 there were 264 NHSC participants in Colorado including 256 loan repayment participants and 8 scholarship participants. In July of 2011 there were a total of 123 sites hosting NHSC members including FQHCs, FQHC Look-Alikes, Correctional Facilities, Rural Health Clinics, Hospital Affiliated Primary Care Outpatient Clinics and Private Practice Clinics (solo/group).	Loan Repayment: Physician (MD or DO) Dentist (general or pediatric) and Dental Hygienist Psychiatrist Nurse Practitioner (primary care) Certified Nurse Midwife Physician Assistant Psychologist (health service) Licensed Clinical Social Worker Psychiatric Nurse Specialist Marriage and Family	The Health Resources and Services Administration administers the program. The Primary Care Office of the CDPHE manages certain aspects of eligibility and placement.

	<p>year to students pursuing careers in primary care. The scholarship includes payment for tuition, required fees, and other reasonable educational costs.</p>		<p>Therapist</p> <p>Licensed Professional Counselor</p> <p>Scholarship: Medicine (MD or DO)</p> <p>Dentistry (DDS or DMD)</p> <p>Nurse practitioner</p> <p>Certified nurse-midwife</p> <p>Physician assistant (in primary care)</p>	
<p>Colorado Rural Outreach Program (CROP)</p>	<p>The purpose of the Colorado Rural Outreach Program (CROP) is to strengthen the ability of Colorado’s rural communities, to recruit and retain health care professionals. CROP Grants are used to recruit new health care professionals or retain the ones already on staff by repaying portions of the health care professional’s educational loans, or by giving a retention bonus if all educational loans are paid off.</p> <p>Any amount up to \$10,000 dollars can be matched by CROP (making the total amount awarded to the health care professional \$20,000 dollars).</p>	<p>In the Spring of 2011 nine (9) health care providers received CROP support. The following rural counties also benefited: Garfield, Alamosa, Archuleta, Yuma, Grand, Dolores, Morgan and Otero.</p>	<p>A majority of health care professionals are eligible including but not limited to physicians, nurse practitioners, physician assistants, nurses, providers of mental health services, providers of dental health services, allied health professionals, physical therapists and pharmacists.</p>	<p>CROP is administered by the Colorado Rural Health Center is supported by grants from various foundations and private donations.</p>

<p>Nursing Education Loan Repayment Program</p>	<p>Alleviates the critical shortage of registered nurses currently experienced by certain types of non-profit health care facilities by helping nurses work at them to repay their student loans. In exchange for the initial two years service commitment, participants receive 60 percent of their qualifying nursing education loan balance. For an optional third year of service participants receive 25 percent of their original total qualifying nursing education loan balance.</p> <p>Non profit facilities are eligible including: hospitals, FQHCs and FQHC Look-Alikes, Indian Health Service Health Centers, Native Hawaiian Health Centres, Rural Health Clinics, Nursing Homes, State or Local Public Health or Human Services Departments, Hospice Programs, Home Health Agencies, Skilled Nursing Facilities, Ambulatory Surgical Centers.</p>	<p>Last year, NELRP received 6,978 eligible applications and made 954 initial awards and 135 continuation awards to RNs working at Critical Shortage Facilities. Total obligated funds last year = \$56,961,802.49</p>	<p>A registered nurse who has completed training (diploma, associate, baccalaureate or graduate), is licensed and employed full time (at least 32 hours per week) at an eligible non-profit facility or be employed as a full-time nurse faculty member at a public or private nonprofit school of nursing.</p>	<p>The Health Resources and Services Administration administers the program.</p>
--	--	--	---	--

(Sources: U.S. Department of Health and Human Resources, Health Resources and Services Administration and the Colorado Department of Public Health and Environment, Primary Care Office, Colorado Rural Health Center, 2011)

Appendix 4 Colorado In-State Primary Care Professions Educational and Training Programs Clinical and Residency Overview

(Note: Only programs based in Colorado are listed below. As Board's Practice Acts govern the number of clinical and residency hours required for licensure it is up to the respective State or Examiners Board to determine if "equivalency standards" have been met for programs not meeting national accreditation requirements, or for those programs that retain appropriate national accreditation out-of-state.)

Nursing Professions

Chapter II-Rules and Regulations for Approval of Nursing Education Programs (3 CCR 716-1) describe clinical training requirements for practical nursing (LPN) and professional (RN-ADN/BSN) nursing programs.

1. Clinical Experience consists of faculty planned, guided, and supervised learning activities designed to assist students to meet course objectives in a clinical setting. Clinical experience is obtained concurrently with theory and applies nursing knowledge and skills in the direct care of patients or clients. This experience requires direct supervision by faculty, Associate Nursing Instructional Personnel (ANIP), or a preceptor who is physically present or immediately accessible, and must be completed prior to graduation.
2. Provide clinical experience and/or clinical simulation laboratory to prepare the student for the safe practice of nursing. This experience must be concurrent with theory and include:
 - a. For practical nursing education programs, a minimum of four hundred (400) clinical hours.
 - b. For professional nursing education programs, a minimum of seven hundred fifty (750) clinical hours.

Clinical hours associated with the Advance Practice Nursing (APN) are not specifically stated. Institutions providing APN education and training must be accredited by a Colorado State Board of Nursing approved accrediting body. Standards and competencies associated with an approved accrediting body influence the scope of clinic experiences required for APN practice. Under 3 CCR 716-1, Chapter XIV

1. Accrediting Body: Any organization that establishes and maintains standards for professional nursing programs and recognizes those programs that meet these standards

and is recognized by the U.S. Department of Education (USDE) and/or the Council for Higher Education Accreditation (CHEA), including the Commission on Collegiate Nursing Education (CCNE), National League for Nursing Accrediting Commission (NLNAC), Council on Accreditation of Nurse Anesthesia Education Programs (COA), Accreditation Council for Midwifery Education (formerly the Division of Accreditation) of the American College of Nurse Midwives, and the National Association of Nurse Practitioners in Women’s Health Council on Accreditation.

2. **Advanced Practice Nurse (APN):** A master’s prepared nurse holding a graduate degree in advanced practice nursing who has completed a graduate or post-graduate program of study in an advanced practice role and/or population focus, in an accredited advanced practice nursing program and has been recognized and included on the Advanced Practice Registry (APR) by the Board. APN roles recognized by the Board are nurse practitioner (NP), certified registered nurse anesthetist (CRNA), certified nurse midwife (CNM) and clinical nurse specialist (CNS). A nurse seeking recognition as an APN must be academically prepared for the expanded scope of practice described as Advanced Practice Nursing.

Colorado State Board of Nursing Approved Licensed Practical Nurse (LPN) Programs				
Program	City	County	Type	Accreditation
Aims Community College LPN Exit Option as Part of Associate Degree Nursing Program	Greeley	Weld	Community College	ADN Program NLNAC Candidate
Arapahoe Community College LPN Exit Option as Part of Associate Degree Nursing Program	Littleton	Arapahoe	Community College	ADN Program NLNAC Accredited
Colorado Mesa University LPN Certificate	Grand Junction	Mesa	4-Year Public University	NLNAC Candidate
Colorado Mountain Junior College LPN Exit Option as Part of Associate Degree Nursing Program	Glenwood Springs	Garfield	Community College	ADN Program NLNAC Candidate
Colorado Northwestern Community College LPN Exit Option as Part of Associate Degree Nursing Program	Craig	Moffat	Community College	ADN Program NLNAC Candidate

Colorado State University-Pueblo LPN Exit Option as Part of Bachelor of Science In Nursing Program	Pueblo	Pueblo	Colorado 4-Year Public University	BSN Program NLNAC Accredited
Community College of Denver LPN Certificate	Denver	Denver	Community College	ADN Program NLNAC Candidate
Concorde Career College LPN Certificate	Aurora	Arapahoe	Private Occupational School Operating in Colorado	NLNAC Candidate
Delta Montrose Technical College LPN Certificate	Delta	Delta	Area Technical College	NLNAC Accredited
Emily Griffith Opportunity School LPN Certificate	Denver	Denver	Area Technical College	NLNAC Candidate
Front Range Community College-Boulder Arapahoe Campus LPN Certificate	Longmont	Denver	Community College	NLNAC Accredited
Front Range Community College-Larimer Campus LPN Exit Option as Part of Associate Degree Nursing Program	Ft. Collins	Larimer	Community College	ADN Program NLNAC Accredited
Front Range Community College-Westminster Campus LPN Exit Option as Part of Associate Degree Nursing Program	Westminster	Adams	Community College	ADN Program NLNAC Candidate
Lamar Community College LPN Exit Option as Part of Associate Degree Nursing Program	Lamar	Prowers	Community College	ADN Program NLNAC Candidate
Morgan Community College LPN Exit Option as Part of Associate Degree Nursing Program	Ft. Morgan	Morgan	Community College	AND Program NLNAC Accredited
Northeastern Junior College LPN Certificate	Sterling	Logan	Community College	NLNAC Candidate
Otero Junior College LPN Exit Option as Part of Associate Degree Nursing Program	La Junta	Otero	Community College	ADN Program NLNAC Accredited

Pickens Technical College LPN Certificate	Aurora	Arapahoe	Area Technical College	None Listed
Pikes Peak Community College-Rampart Range Campus LPN Exit Option as Part of Associate Degree Nursing Program	Colorado Springs	El Paso	Community College	ADN Program NLNAC Candidate
Pueblo Community College LPN Certificate	Pueblo	Pueblo	Community College	NLNAC Accredited
Pickens Technical College LPN Certificate	Aurora	Arapahoe	Area Technical College	None Listed
Pueblo Community College-Fremont Center LPN Exit Option as Part of Associate Degree Nursing Program	Cañon City	Fremont	Community College	NLNAC Accredited
Pueblo Community College-Southwest Center LPN Exit Option as Part of Associate Degree Nursing Program	Durango	La Plata	Community College	NLNAC Accredited
Trinidad State Junior College LPN Exit Option as Part of Associate Degree Nursing Program	Trinidad	Las Animas	Community College	ADN Program NLNAC Candidate
Trinidad State Junior College-Valley Campus LPN Exit Option as Part of Associate Degree Nursing Program	Alamosa	Alamosa	Community College	ADN Program NLNAC Candidate

Colorado State Board of Nursing Approved Associate Degree Nursing (ADN) Programs				
Program	City	County	Type	Accreditation
Aims Community College	Greeley	Weld	Community College	NLNAC Candidate
Arapahoe Community College	Littleton	Arapahoe	Community College	NLNAC Accredited
College America	Denver	Denver	Private Occupational School Operating in Colorado	None Listed
Colorado Christian University Western Colorado Center	Grand Junction	Mesa	Private Accredited Institution Based in Colorado	NLNAC Candidate
Colorado Mountain Junior College-Roaring Fork Campus	Glenwood Springs	Garfield	Community College	NLNAC Candidate
Colorado Northwestern Community College	Craig	Moffat	Community College	NLNAC Candidate
Colorado Technical University-Pueblo Campus	Pueblo	Pueblo	Private Accredited Institution Based in Colorado	None Listed
Concorde Career College	Aurora	Arapahoe	Private Occupational School Operating in Colorado	None Listed
Denver School of Nursing	Denver	Denver	Private Accredited Institution Based in Colorado	NLNAC Candidate
Front Range Community College-Boulder Arapahoe Campus	Longmont	Larimer	Community College	NLNAC Accredited
Front Range Community College-Larimer Campus	Ft. Collins	Larimer	Community College	NLNAC Accredited
Front Range Community College Westminster Campus	Westminster	Adams	Community College	NLNAC Candidate
Lamar Community College	Lamar	Prowers	Community College	NLNAC Candidate
Morgan Community College	Ft. Morgan	Morgan	Community College	NLNAC Accredited
National American University	Denver	Denver	Private Accredited Institution Operating in Colorado	NLNAC Candidate
Northeastern Junior College	Sterling	Logan	Community College	NLNAC Candidate
Otero Junior College	La Junta	Otero	Community College	NLNAC Accredited
Pikes Peak Community College-Rampart Range Campus	Colorado Springs	El Paso	Community College	NLNAC Candidate

Pueblo Community College	Pueblo	Pueblo	Community College	NLNAC Accredited
Pueblo Community College-Fremont Campus	Cañon City	Fremont	Community College	NLNAC Accredited
Pueblo Community College-Southwest Center	Durango	La Plata	Community College	NLNAC Accredited
Trinidad State Junior College	Trinidad	Las Animas	Community College	NLNAC Candidate
Trinidad State Junior College-Valley Campus	Alamosa	Alamosa	Community College	NLNAC Candidate
Western Community College	Grand Junction	Mesa	Division of Colorado Mesa University-Colorado 4-year Public University	NLNAC Candidate

Colorado State Board of Nursing Approved Bachelor of Science Nursing (BSN) Programs				
Program	City	County	Type	Accreditation
Adams State College 1. Traditional BSN 2. RN-BSN	Alamosa	Alamosa	Colorado 4-Year Public Institution	CCNE Accredited
Colorado Christian University 1. BSN Hybrid Format-Online/Classroom Learning	Northglenn	Adams	Private Accredited Institution Based in Colorado	CCNE Accredited
Colorado Mesa University 1. Traditional BSN 2. Online RN-BSN 3. LPN-BSN	Grand Junction	Mesa	Colorado Public 4-Year Institution	CCNE Accredited
Colorado State University Pueblo 1. Traditional BSN 2. LPN-BSN 3. RN-BSN 4. Degree Plus to BSN 5. RN-BSN Accelerated 6. Paramedic to BSN	Pueblo	Pueblo	Colorado Public 4-Year Institution	NLNAC Accredited
Denver School of Nursing 1. BSN Nursing Completion 2. Traditional BSN 3. RN-BSN	Denver	Denver	Private Accredited Institution Based in Colorado	NLNAC Candidate

Metropolitan State College of Denver 1. RN-BSN 2. BSN Accelerated	Denver	Denver	Colorado Public 4-Year Institution	NLNAC Accredited
School of Nursing-Platt College 1. Traditional BSN	Aurora	Arapahoe	Private Occupational School Based in Colorado	NLNAC Accredited
Regis University 1. Traditional BSN 2. BSN Accelerated 3. Choice BSN 4. RN-BSN Completion	Denver	Denver	Private Accredited Institution Based in Colorado	CCNE Accredited
University of Colorado Denver 1. Traditional BSN 2. RN-BSN Online 3. Integrated Nursing Pathway	Aurora	Arapahoe	Colorado Public 4-Year Institution	CCNE Accredited
University of Colorado Colorado Springs 1. Traditional BSN 2. BSN Accelerated 3. RN-BSN Online	Colorado Springs	El Paso	Colorado Public 4-Year Institution	CCNE Accredited
University of Northern Colorado 1. Traditional BSN 2. BSN Second Degree Program 3. RN-BSN Online	Greeley	Weld	Colorado Public 4-Year Institution	CCNE Accredited
University of Phoenix Online (campus specific) 1. Online/Onsite RN-BSN option 2. Online/Onsite LPN-BSN option	Lone Tree Ft. Collins Centennial Aurora Westminster Colorado Springs x 3 campuses	Douglas Larimer Arapahoe Adams El Paso	Private Accredited Institution Operating in Colorado	CCNE Accredited in AZ

Colorado State Board of Nursing Approved Master of Science in Nursing (MSN) including Advance Practice Nursing

Program	City	County	Type	Accreditation
Colorado Mesa University 1. Master of Science-Nursing	Grand Junction	Mesa	Colorado Public 4-Year Institution	None Listed for Master's Program
Colorado State University Pueblo Master of Science in Nursing: 1. Adult Care Nurse Practitioner 2. Adult Acute Care Family Nurse Practitioner 3. Adult Psychiatric Mental Health Nurse Practitioner 4. Nurse Educator 5. Post Masters Certification	Pueblo	Pueblo	Colorado Public 4-Year Institution	None Listed for Master's Program
Regis University Master of Science in Nursing: 1. Leadership in Health Care Systems 2. Family Nurse Practitioner 3. Neonatal Nurse Practitioner 4. Masters Completion for Certified Nurse Practitioners 5. Masters in Nursing Articulation for Certified Nurse Practitioners 6. Post Masters Nursing Certificate Programs	Denver	Denver	Private Accredited Institution Based in Colorado	CCNE Accredited

University of Colorado Denver Master of Science in Nursing: 1. Adult Clinical Nurse Specialist 2. Adult Nurse Practitioner 3. Family Nurse Practitioner 4. Family Psychiatric Mental Health Nurse Practitioner 5. Health Care Informatics 6. Pediatric Nurse Practitioner 7. Pediatric Nursing Leadership & Special Needs 8. Nurse Midwifery 9. Special Studies 10. Women’s Health 11. Nursing Leadership and Health Care Systems 12. Post Masters Certificates Program	Aurora	Arapahoe	Colorado Public 4-Year Institution	CCNE Accredited
University of Colorado Colorado Springs Master of Science in Nursing: 1. Nurse Practitioner (Adult or Family) 2. Nursing Education	Colorado Springs	El Paso	Colorado Public 4-Year Institution	CCNE Accredited
University of Northern Colorado: Master of Science in Nursing 1. Family Nurse Practitioner 2. Clinical Nurse Leader 3. Post Maters Certificate Programs	Greeley	Weld	Colorado Public 4-Year Institution	CCNE Accredited

Physicians (MD, OD)

Section 12-36-107 of the Colorado Medical Practice Act stipulates that an applicant seeking licensure to practice medicine in the state of Colorado must:

1. Pass examinations conducted by the national board of medical examiners, the national board of examiners for osteopathic physicians and surgeons, the federation of state medical boards, or any successor to said organizations, as approved by the board.

- a. The Colorado Medical Board recognizes examinations provided by The United States Medical Licensing Examination (“USMLE”) and The Comprehensive Osteopathic Medical Licensing Examination–USA (“COMLEX-USA”), as approved examinations
- b. To be eligible to sit for the USMLE Step 3 or COMLEX-USA Level 3, an applicant must be serving in or have completed one year of postgraduate training in a program of graduate medical education accredited by the Accreditation Council for Graduate Medical Education (ACGME) of the American Medical Association or the American Osteopathic Association.

Students graduating from the MD or OD program in Colorado apply for placement in a Graduate Medical Education (GME) program, which offers practical training for residents and fellows. The University of Colorado School of Medicine and its affiliated hospitals provide Graduate Medical Education training in 78 ACGME accredited resident and fellowship programs and 64 fellowship programs holding other accreditations or where accreditation is not available. "Residents" includes all interns, residents, and fellows in GME training programs.

In Colorado there are nine Family Medicine Residencies. Programs are three years in duration which means the physician graduate would be eligible to sit for their respective MD or OD examination upon completion of the first year of residency. In its *Strategic Plan and Budget Request: FY2011-2012* the Commission on Family Medicine notes that in FY2009-10 all 65 first year family medicine residency slots were filled with 89 percent being from graduates of 40 medical schools located out-of-state. Sixty-eight percent of graduating residents are now working in the state. Fifteen out of forty-three 2010 family medicine residency graduates chose a rural community or underserved community for practice.

In its strategic plan the Commission notes that there are seven family medicine residency affiliated rural and underserved training sites. These sites are located in Buena Vista, Cañon City, Julesburg, Yuma, Plan de Salud Community Health Center and Valley-Wide Community Health Center. The latter two sites have multiple clinics. Valley-wide serves the San Luis Valley and La Junta area. Plan de Salud covers the underserved communities north of metro-Denver from Fort Morgan, Fort Lupton, Commerce City, Frederick and Longmont.

Colorado’s nine family medicine residences include:

1. Exempla St. Joseph Family Medicine Residency-Denver, CO
2. Ft. Collins Family Medicine Residency at Poudre Valley Hospital-Fort Collins, CO
3. Northern Colorado Family Medicine Residency-Greeley, CO
4. Rose Family Medicine Residency-Denver, CO
5. Southern Colorado Family Medicine Residency-Pueblo, CO

6. St. Anthony's Family Medicine Residency-Westminster, CO
7. St. Mary's Family Medicine Residency-Grand Junction, CO
8. Swedish Family Residency-Littleton, CO
9. University of Colorado Family Medicine Residency-Aurora, CO

Colorado Medical Board Approved Physician (MD)(DO) incl. Family Medicine, Pediatrics and Psychiatry Programs				
Program	City	County	Type	Accreditation
University of Colorado School of Medicine Medical Doctor (Allopathic) <ol style="list-style-type: none"> 1. Department of Family Medicine (incl. Rural Track) 2. Department of Pediatrics 3. Department of Psychiatry 	Aurora	Arapahoe	Colorado Public 4-Year Institution	LCME Accredited
Rocky Vista University of Osteopathic Medicine Doctor of Osteopathic Medicine	Parker	Douglas	Private Accredited Institution Based in Colorado	AOAC Provisional Accreditation

Physicians Assistant

Under Rule 400 (3 CCR713-7) the Colorado Medical Board states that qualifications for licensure as a practicing Physicians Assistant in Colorado includes proof of satisfactory passage of the national certifying examination administered by the National Commission on Certification of Physician Assistants.

Colorado Medical Board Approved Certificate and Master's of Physician Assistant Studies Programs				
Program	City	County	Type	Accreditation
University of Colorado Child Health Associate Physicians Assistant Program Master's Degree (MPAS) Specialized Tracks: <ol style="list-style-type: none"> 1. Rural 2. Urban Underserved 3. Global Health Track 4. LEADS (Leadership, Education, Advocacy, Development and Scholarship) 	Aurora	Arapahoe	Colorado Public 4-Year Institution	ARC-PA Accredited

Red Rocks Community College 1. Certificate in PA Studies 2. Masters Degree Option (partnership with St. Francis University)	Lakewood	Jefferson	Community College	ARC-PA Accredited
---	----------	-----------	-------------------	-------------------

Dentists and Dental Hygienists

Under the Colorado Board of Dental Examiners Rules and Regulations, *Rule III-Licensure of Dentists and Dental Hygienists*, general licensing requirements include evidence of graduation with a DDS or DMD degree or academic program of Dental Hygiene from an accredited dental school or college which, at the time of the applicant’s graduation, was accredited by the American Dental Association Commission on Dental Accreditation. Accreditation standards associated with American Dental Association Commission on Dental Accreditation include clinical training standards and competencies required for institutions hosting DDS, DMD and Dental Hygiene programs.

Colorado Board of Dental Examiners Approved Dentist (DDS) and Dental Hygienist (RDH) Programs				
Program	City	County	Type	Accreditation
University of Colorado School of Dental Medicine Doctor of Dental Surgery	Aurora	Arapahoe	Colorado Public 4-Year Institution	CODA Accredited
Colorado Northwestern Community College AAS-Dental Hygiene	Rangely	Rio Blanco	Community College	CODA Accredited
Community College of Denver AAS-Dental Hygiene	Denver	Denver	Community College	CODA Accredited
Pueblo Community College AAS-Dental Hygiene	Pueblo	Pubelo	Community College	CODA Accredited

Physical Therapists

The Colorado Physical Therapy Act describes requirements for licensure as a practicing Physical Therapist in Colorado. Section 12-41-107 of the Colorado Physical Therapy Act states that every applicant for a license by examination shall successfully complete a physical therapy program which is accredited by a nationally recognized accrediting agency. Accreditation standards associated with Commission on Accreditation in Physical Therapy Education include clinical training standards and competencies required for institutions hosting Physical Therapy programs.

Director Approved Physical Therapy (DPT) Programs				
Program	City	County	Type	Accreditation
Regis University Doctor of Physical Therapy	Denver	Denver	Private Accredited Institution Based in Colorado	CAPTE Accredited
University of Colorado School of Medicine Physical Therapy Program Doctor of Physical Therapy	Aurora	Arapahoe	Colorado Public 4-Year Institution	CAPTE Accredited

Pharmacists

Colorado Revised Statute Section 12-22-116 describes requirements for licensure as a practicing Pharmacist in Colorado. Under this section, an applicant for licensure must graduate from a school of pharmacy approved by the Colorado State Board of Pharmacy. Furthermore, an applicant for licensure must complete an internship as prescribed by the Board. "Intern" means a person who is attending, or who is in good standing with, an accredited school of pharmacy, who has graduated from an accredited school of pharmacy and is completing an internship to satisfy board requirements for licensure. Accreditation standards associated with Accreditation Council for Pharmacy Education include clinical training standards and competencies required for institutions hosting pharmacy programs.

Colorado State Board of Pharmacy Doctor of Pharmacy (Pharm.D) (Ph.D) Approved Programs				
Program	City	County	Type	Accreditation
Regis University Doctor of Pharmacy	Denver	Denver	Private Accredited Institution Based in Colorado	ACPE Accredited
University of Colorado School of Pharmacy Doctor of Pharmacy Non Traditional Pharm.D PhD	Aurora	Arapahoe	Colorado Public 4-Year Institution	ACPE Accredited

Psychologists

The Colorado State Board of Psychologist Examiners (3 CCR-721-1, Rule 17) describes requirements for licensure as a practicing psychologist in Colorado and for programs hosting degree programs in psychology. Under Rule 17 the applicant for licensure must obtain a doctoral degree from a program that was accredited by the American Psychological Association (APA). The program must include supervised practicum and internship appropriate to the practice of psychology.

1. The minimum practicum experience is 400 hours, of which at least 150 hours must have been in direct service experience and at least 75 hours in formally scheduled supervision.
2. To be acceptable, internships in clinical psychology must have at least a full-time experience, either for one calendar year or for two years of half-time experience and must encompass at least 1,500 experience hours. To be acceptable, internships must be accredited by the American Psychological Association (APA) or be substantially equivalent when compared with the guidelines and principles for accreditation of internships published by the APA.

Colorado State Board of Psychologist Examiners Approved Doctor of Psychology (Ph.D, Psy.D)				
Program	City	County	Type	Accreditation
Colorado State University Fort Collins PhD-Psychology 1. Applied Social 2. Health 3. Environmental Psychology 4. Occupational Health Psychology 5. Cognitive Psychology 6. Counseling Psychology 7. Cognitive Neuroscience 8. Industrial Organizational Psychology	Ft. Collins	Larimer	Colorado Public 4-Year Institution	APA Accredited
Denver University PhD-Psychology 1. Affective/Social 2. Cognitive 3. Clinical Child 4. Developmental 5. Cognitive Neuroscience	Denver	Denver	Private Accredited Institution Based in Colorado	APA Accredited

University of Colorado Boulder PhD-Psychology 1. Clinical 2. Cognitive 3. Social/Neuroscience	Boulder	Boulder	Colorado Public 4-Year Institution	APA Accredited
University of Colorado Colorado Springs PhD-Clinical Psychology 1. Geropsychology	Colorado Springs	El Paso	Colorado Public 4-Year Institution	APA Accredited
University of Northern Colorado PhD-Psychology 1. Counseling 2. School Psychology	Greely	Weld	Colorado Public 4-Year Institution	APA Accredited

Marriage and Family Therapists

The Colorado State Board of Marriage and Family Therapist Examiners (4 CCR 736-1, Rule 17) describes requirements for licensure as a practicing Marriage and Family Therapist in Colorado and for programs hosting degree programs in Marriage and Family Therapy. Under Rule 17 the applicant for licensure must receive a master's or doctoral degree from a program that was approved by the Commission on Accreditation for Marriage and Family Therapy. If the master's or doctoral degree was awarded in 1979 or after, the applicant must prove that she/he completed a minimum of 300 hours of supervised practicum or internship, or a combination of the two, in the principles and practice of marriage and family therapy. The practicum or internship must include at least 15 hours per week, of which approximately 8-10 hours are spent in face-to-face contact with individuals, couples, and families for the purpose of assessment, diagnosis, and intervention.

Colorado State Board of Marriage and Family Therapist Approved Marriage & Family Therapist (Post-Masters Certificate, Master's, Doctorate) Programs				
Program	City	County	Type	Accreditation
Colorado School for Family Therapy Post Masters Certificate in Marriage & Family Therapy	Aurora	Arapahoe	Private Occupational Institution Based in Colorado	AAMFT Accredited
Colorado State University Fort Collins M.S.-Human Development & Family Studies 1. Marriage & Family Therapy	Ft. Collins	Larimer	Colorado Public 4-Year Institution	AAMFT Accredited

Denver Family Institute Post Masters Certificate in Marriage & Family Therapy	Denver	Denver	Not Listed-Colorado Department of Higher Education	AAMFT Accredited
---	--------	--------	--	------------------

Social Workers

The Colorado State Board of Social Work Examiners (4 CCR 736-1, Rule 17) describes requirements for licensure as a practicing Social Worker in Colorado and for programs hosting degree programs in Social Work. Under Rule 17, the applicant for licensure must obtain a masters degree in social work from a program that was approved by the Council on Social Work Education (CSWE) or a doctoral degree in social work from a doctoral program within a social work education program accredited by the Council on Social Work Education (CSWE). Applicants must receive a minimum of 96 hours of supervision, at least 48 of which must be face-to-face individual supervision.

Colorado State Board of Social Work Examiners Approved Social Worker Programs (MSW, PH.D)				
Program	City	County	Type	Accreditation
Colorado State University Fort Collins Bachelors-Social Work Master’s-Social Work Ph.D Program	Ft. Collins	Larimer	Colorado 4-Year Public Institution	CSWE Accredited
Colorado State University Pueblo Bachelors-Social Work	Pueblo	Pueblo	Colorado 4-Year Public Institution	CSWE Accredited
Denver University Master’s-Social Work Ph.D Program	Denver	Denver	Private Accredited Institution Based in Colorado	CSWE Accredited
Metropolitan State University Denver Bachelors-Social Work Master’s-Social Work	Denver	Denver	Colorado 4-Year Public Institution	CSWE Accredited

Counselors

The Colorado State Board of Licensed Professional Counselor Examiners (4 CCR 737-1, Rule 17) describes requirements for licensure as a practicing Counselor in Colorado and for programs hosting degree programs in counseling. Under Rule 17, the applicant for licensure must obtain a master's or doctoral degree from a program that was approved by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). For a master's or doctoral degree, the curriculum must encompass a minimum of 48 semester hours or 72 quarter hours of graduate study (for the master's degree) or a minimum of 96 semester hours or 144 quarter

hours of graduate study (for the doctoral degree) and supervised field experience of not fewer than 700 hours that is counseling in nature.

Colorado State Board of Licensed Professional Counselor Examiners Approved Counseling Programs (Various Disciplines, Master's, Doctorate)				
Program	City	County	Type	Accreditation
Adams State College M.A.-Clinical Mental Health Counseling	Alamosa	Alamos	Colorado Public 4-Year Institution	CACREP Accredited
University of Colorado Denver M.A.-Couple and Family Counseling M.A.-Clinical Mental Health Counseling	Denver	Denver	Colorado Public 4-Year Institution	CACREP Accredited
University of Northern Colorado M.A. Clinical Counseling M.A. Clinical Counseling 1. Couples and Family	Greeley	Weld	Colorado Public 4-Year Institution	CACREP Accredited
University of Colorado Colorado Springs M.A.-Counseling and Human Services 1. Clinical Mental Health Counseling	Colorado Springs	El Paso	Colorado Public 4-Year Institution	CACREP Accredited

Appendix 5 Rural, Statewide and Urban Workforce Initiatives Supporting Colorado's Health Education and Career Pipeline, 2010

Organization	Number of Workforce Initiatives	Name	Stated Reach
Adams County Education Consortium	4	Adams County Commissioners' Career Expo	Urban
		Experience 9 to 5	
		Health care Pathways	
		Workforce Connect	
Colorado Area Health Education System	8	9 Health Fair in the Classroom	Urban w/ Rural Capture
		AHEC SHCI	
		Aurora LIGHTS Saturday Academy	
		Aurora LIGHTS Summer Institute	
		Clinical Connections	
		RN and LPN Online Refresher Course	
		Youth for Health Explorer Post #246	
		Workforce Investment Strategy-CREATE Health	
Colorado Center for Nursing Excellence	5	Colorado Consortium for Nursing Leadership Development	Statewide
		Colorado Nursing Clinical Placement Matching System	
		Faculty Development Initiative	
		Nursing Faculty Recruitment and Retention Initiative	
		Work, Education, Life-Long Learning Simulation (WELLS) Center	

Colorado Community Health Network	4	Incentive Program Development	Urban w/ Frontier and Rural Capture
		Job Fairs	
		Navigator Program	
		Residency Presentations	
Colorado Dental Association	2	CDA Dental Workforce Task Force	Urban w/Rural Capture
		Explorers Program	
Colorado Department of Public Health and Environment Oral Health Unit	2	Dental Loan Repayment Program	Statewide
		Colorado Oral Health Workforce Project for the Underserved	
Colorado Department of Public Health and Environment EMTS Section	1	Emergency Medical and Trauma Services Grant Program	Statewide
Colorado Rural Health Center	2	Colorado Provider Recruitment Program	Frontier and Rural focus with Urban Capture
		Colorado Rural Outreach Program	
Commission on Family Medicine	1	Recruitment and Retention of Family Medicine Residents	Statewide
Community Health Association of Mountain/Plains States	3	Distance Learning Program	Frontier and Rural focus with Urban Capture
		Online Job Opportunities Bank	
		Region VIII Health Center Salary, Benefits, Turnover and Vacancy Survey	
Delta County Memorial Hospital	1	Health Professions Initiatives	Rural Focus with Urban Capture
Denver Health Foundation	2	Carol Prishtaschew Scholarship in Nursing	Urban
		Dollars for Scholars	
National Association of Social Workers Colorado Chapter	1	Membership Services	Statewide
Northern Front Range Health Care Consortium	1	Northern Front Range Health Care Consortium	Urban w/ Rural Capture

Office of Health Disparities-Colorado Department of Public Health and Environment	1	Recruiting and Retaining Youth of Color in the Health Professions Task Force	Urban
University of Colorado School of Medicine- Department of Family Medicine	1	Rural Track	Rural
Southeast Colorado Area Health Education Center	1	Pipeline Development	Rural-Frontier

Appendix 6 Colorado CAP4K Post Secondary and Workforce Readiness Description

Adopted June 30, 2009 by the State Board of Education and the Colorado Commission on Higher Education

Focus Area	Knowledge Skills and Behaviors Essential for High School Graduates to Enter College and the Workforce and to Compete in the Global Economy
Literacy	<ul style="list-style-type: none"> • Read fiction and non-fiction, understanding conclusions reached and points of view expressed. • Write clearly and coherently for a variety of purposes and audiences. • Use logic and rhetoric to analyze and critique ideas. • Access and use primary and secondary sources to explain questions being researched. • Employ standard English language properly and fluently in reading, writing, listening, and speaking.
Mathematical Sciences	<ul style="list-style-type: none"> • Think critically, analyze evidence, read graphs, understand logical arguments, detect logical fallacies, test conjectures, evaluate risks, and appreciate the role mathematics plays in the modern world, i.e., be quantitatively literate. • Understand and apply algebraic and geometric concepts and techniques. • Use concepts and techniques of probability and statistics. • Apply knowledge of mathematics to problem solve, analyze issues, and make critical decisions that arise in everyday life.
Science	<ul style="list-style-type: none"> • Think scientifically and apply the scientific method to complex systems and phenomena. • Use theoretical principles within a scientific field and relevant empirical evidence to make and draw conclusions. • Recognize that scientific conclusions are subject to interpretation and can be challenged. • Understand the core scientific concepts, principles, laws, and vocabulary, and how scientific knowledge is extended, refined, and revised over time.

<p>Social Studies and Social Sciences</p>	<ul style="list-style-type: none"> • Identify and describe historical, social, cultural, political, geographical, and economic concepts. • Interpret sources, and evaluate evidence and competing ideas. • Build conceptual frameworks based on an understanding of themes and the overall flow of events. • Understand how government works in the United States and in other countries, the varying roles individuals may play in society, and the nature of civic responsibility. • Interpret information from a global and multicultural perspective.
<p>Arts and Humanities</p>	<ul style="list-style-type: none"> • Understand and appreciate how the arts and humanities (expressions of culture and identity through language, movement, sound, and visual representation) contribute to and shape culture and our understanding of culture. • Understand how the arts and literature are used as instruments of social and political thought. • Identify leading innovators in the arts and humanities and the contributions they have made to their respective art forms.
<p>Critical Thinking and Problem Solving</p>	<ul style="list-style-type: none"> • Apply logical reasoning and analytical skills. • Conduct research using acceptable research methods. • Understand different research approaches. • Collect and analyze quantitative and qualitative data and research. • Evaluate the credibility and relevance of information, ideas, and arguments. • Discern bias, pose questions, marshal evidence, and present solutions.
<p>Use of Information and Information Technology</p>	<ul style="list-style-type: none"> • Select, integrate, and apply appropriate technology to access and evaluate new information. • Understand the ethical uses of information. • Provide citations for resources.
<p>Creation and Innovation</p>	<ul style="list-style-type: none"> • Demonstrate intellectual curiosity. • Generate, evaluate, and implement new ideas and novel approaches. • Develop new connections where none previously existed.
<p>Global and Cultural Awareness</p>	<ul style="list-style-type: none"> • Appreciate the arts, culture, and humanities • Interact effectively with and respect the diversity of different individuals, groups, and cultures • Recognize the interdependent nature of our world • Understand how communicating in another language can improve learning in other disciplines and expand professional, personal, and social opportunities

Civic Responsibility	<ul style="list-style-type: none"> • Recognize the value of civic engagement and its role in a healthy democracy and civil society. • Be involved in the community and participate in its political life. • Balance personal freedom with the interests of a community.
Work Ethic	<ul style="list-style-type: none"> • Plan and prioritize goals. • Manage time effectively. • Take initiative, and follow through. • Learn from instruction and criticism. • Take responsibility for completion of work. • Act with maturity, civility, and politeness. • Demonstrate flexibility and adaptability.
Personal Responsibility	<ul style="list-style-type: none"> • Balance self-advocacy with the consideration of others • Possess financial literacy and awareness of consumer economics. • Behave honestly and ethically. • Take responsibility for actions. • Understand the relevance of learning to postsecondary and workforce readiness. • Demonstrate awareness of and evaluate career options. • Attend to personal health and wellness.
Communication	<ul style="list-style-type: none"> • Read, write, listen and speak effectively. • Construct clear, coherent, and persuasive arguments. • Communicate and interact effectively with people who have different primary languages.
Collaboration	<ul style="list-style-type: none"> • Work effectively with others. • Acknowledge authority and take direction. • Cooperate for a common purpose. • Use teamwork and leadership skills effectively.

Acknowledgements

The enthusiasm, dedication and vision necessary to inform Colorado’s State Health Care Workforce Development Plan was supplied by the many organizations and experts whose daily and life’s work seek to empower the interests of Colorado’s primary care workforce. Without their participation this planning effort could not succeed.

U.S. Department of Health Resources and Services Administration, Bureau of Health Professions, Office of Workforce Policy and Performance Management

Colorado Coalition for the Medically Underserved

Colorado Commission on Family Medicine

Adams County Education Consortium

Colorado Community Health Network
Colorado Dental Association

CDPHE Center for Healthy Families and Communities, Children and Youth, School-based Health Center Program

Colorado Department of Labor and Employment

CDPHE Office of Health Disparity

Colorado Department of Higher Education

CDPHE Primary Care Office

Colorado Health Care Professions Policy Collaborative

Children’s Hospital Colorado

Colorado Health Institute

ClinicNET

Colorado Medical Society

Colorado Academy of Family Physicians

Colorado Nurses Association

Colorado Area Health Education System

Colorado Rural Health Center-State Office of Rural Health

Colorado Behavioral Health Council

Colorado Community College System

Colorado Rural Recruitment and Retention Network

Colorado Center for Nursing Excellence

Community Health Association of the Mountain Plans States

Center for Research Strategies

Denver School of Nursing

Denver Area Health Care Recruiters
Association

Engaged Public

Kaiser Permanente-Colorado

Jon Fox MD Hugo, CO.

Mesa State College Nursing Program
Red Rocks Community College Physicians
Assistant Program

Regis University School of Physical Therapy

Regis University, Loretto Heights School of
Nursing

Rocky Vista University College of
Osteopathic Medicine

State of Colorado-Office of the Governor

The Colorado Health Foundation

The Colorado Trust

University of Colorado Anschutz Medical
Campus-Office of the Chancellor

University of Colorado College of Nursing

University of Colorado College of Liberal
Arts and Sciences

University of Colorado School Medicine,
Department of Family Medicine

University of Colorado School of Medicine,
Department of Clinical Pharmacology and
Toxicology

University of Colorado School of Medicine,
Physicians Assistant Program

University of Colorado School of Dental
Medicine

Western Interstate Commission for Higher
Education

Authors

Richard Marquez, MPH
Workforce Planner
Colorado Department of Public Health and Environment
Primary Care Office

Katie Koivisto, MSW
Workforce Planner
Colorado Department of Public Health and Environment
Primary Care Office

With Contribution From:

Vincent Atchity, PhD
Workforce Planner
Colorado Department of Public Health and Environment
Primary Care Office

With Assistance From:

Stephen Holloway, Director, Primary Care Office; Amber Galloway Stephens, Workforce Programs Manager, Primary Care Office; Brooke Wagenseller, Contracts Monitor & Public Information Liaison, Primary Care Office; Fabian Valle, Director of Workforce Programs, Colorado Rural Health Center; Robyn Purvin, Program Assistant, Colorado, the Colorado Health Professions Workforce Policy Collaborative, the Collaborative Leadership Team, the U.S. Department of Health and Human Services Health Resources and Services Administration.

Endnotes

-
- ⁱ Concerning the Creation of the Health Care Reform Committee for the Purpose of Studying Health Care Reform Issues and Making Transfers of Funds Therefor. SB06-298. CO General Assembly, Regular Session. (2006).
- ⁱⁱ Blue Ribbon Commission for Health Care Reform. (2008). Final Report to the Colorado General Assembly. Accessed on January 28, 2011 from <http://www.colorado.gov/cs/Satellite/BlueRibbon/RIBB/1207055681539>.
- ⁱⁱⁱ Concerning Medical Homes for Children, and Making an Appropriation Therefor. SB07-130. CO General Assembly, Regular Session. (2007).
- ^{iv} Colorado Department of Health Care Policy and Finance. (2009). Colorado Medical Home. Accessed on January 28, 2011 from <http://www.healthcolorado.net/list-pdfs/Attachment%20E%20Fact%20Sheet.pdf>.
- ^v State of Colorado Office of the Governor. (2008). Executive Order D 005 08 Establishing the Center for Improving Value in Health Care.
- ^{vi} Colorado Department of Health Care Policy and Financing (2011). Hospital Provider Fee Oversight and Advisory Board, Colorado Health Care Affordability Act Annual Report. Accessed on February 1, 2011 from <http://www.colorado.gov/cs/Satellite/HCPF/HCPF/1246453720972>.
- ^{vii} Concerning a Hospital Provider Fee, and in Connection Therewith, Authorizing the Department of Health Care Policy and Financing to Charge and Collect a Hospital Provider Fee, Specifying the Allowable Uses of the Fees, Requiring a Post-Enactment Review of the Implementation of this Act and Making an Appropriation in Connection Therewith. SB09-1293. Colorado General Assembly, Regular Session. (2009).
- ^{viii} Colorado Department of Health Care Policy and Financing (2011). Hospital Provider Fee Oversight and Advisory Board, Colorado Health Care Affordability Act Annual Report. Accessed on February 1, 2011 from <http://www.colorado.gov/cs/Satellite/HCPF/HCPF/1246453720972>.
- ^{ix} Colorado Department of Health Care Policy and Finance. (2009). Colorado Health Care Affordability Act Factsheet. Accessed on February 11, 2011 from <http://www.colorado.gov/cs/Satellite/HCPF/HCPF/1246453720972>.
- ^x Center for Improving Value in Health Care. (2011). Report to the Governor and the General Assembly from the All Payer Claims Dataset Advisory Committee and the All Payer Claims Dataset Administrator. Accessed on February 11, 2011 from <http://www.civhc.org/CIVHC-Initiatives/Data-and-Transparency/All-Payer-Claims-Database-Activities.aspx>.
- ^{xi} State of Colorado. (2011). Capital Health Reform in Colorado: Frequently Asked Questions. Accessed on February 11, 2011 from <http://www.colorado.gov/cs/Satellite/GovernorsHealthReform/GOVR/1251573982023>.
- ^{xii} State of Colorado. (2011). Capital Health Reform in Colorado: Frequently Asked Questions. Accessed on February 11, 2011 from: <http://www.colorado.gov/cs/Satellite/GovernorsHealthReform/GOVR/1251573982023>.
- ^{xiii} U.S. Department of Health and Human Services. (2011). The Affordable Care Act: Immediate Benefits for Colorado. Accessed on February 11, 2011 from <http://www.healthreform.gov/reports/statehealthreform/colorado.html>.
- ^{xiv} U.S. Department of Health and Human Services. (2011). The Affordable Care Act: Immediate Benefits for Colorado. Accessed on February 11, 2011 from <http://www.healthreform.gov/reports/statehealthreform/colorado.html>.

-
- ^{xv} Goodland, M. (2011, February 2). Guv Slashes 2011-12 Budget, Dems Outraged. The Colorado Statesman. Accessed on March 3, 2011 from <http://www.coloradostatesman.com/content/992587-guv-slashes-2011-12-budget-dems-outraged>.
- ^{xvi} Center on Budget and Policy Priorities. (2011). States Continue to Feel Recession's Impacts. Accessed on March 3, 2011 from <http://www.cbpp.org/cms/?fa=view&id=711>.
- ^{xvii} National Conference of State Legislatures. (2011). State Measures to Close Budget Gaps. Accessed on March 3, 2011 from <http://www.ncsl.org/Default.aspx?TabId=20000>.
- ^{xviii} Goodland, M. (2011, April 8). Making the 2011 Budget. The Colorado Statesman. Accessed April 20, 2011 from <http://www.coloradostatesman.com/search/node/Making%20the%202011%20Budget>.
- ^{xix} National Conference of State Legislatures. (2011). State Measures to Close Budget Gaps. Accessed on April 20, 2011 from <http://www.ncsl.org/Default.aspx?TabId=20000>.
- ^{xx} State of Colorado Commission on Higher Education. (2011). Fiscal Year 2011-12 Budget Resolution. Accessed on August 1, 2011 from http://highered.colorado.gov/CCHE/Meetings/2011/mar/mar11_minutes.pdf.
- ^{xxi} State of Colorado Commission on Higher Education. (2011). Fiscal Year 2011-12 Budget Resolution. Accessed on June 20, 2011 from http://highered.colorado.gov/CCHE/Meetings/2011/mar/mar11_minutes.pdf.
- ^{xxii} State of Colorado Joint Budget Committee. (2011). Appropriations Report Fiscal Year 2011-12. Accessed on August 1, 2011 from http://www.state.co.us/gov_dir/leg_dir/jbc/FY11-12apprept.pdf.
- ^{xxiii} U.S. Census Bureau. (2011). 2010 Census Urban and Rural Classification and Urban Area Criteria. Accessed on August 2, 2011 from <http://www.census.gov/geo/www/ua/2010urbanruralclass.html>.
- ^{xxiv} Rural Assistance Center. Center for Rural Health, University of North Dakota School of Medicine and Health Sciences. (2011). Frontier FAQs. Accessed on May 5, 2011 from http://www.raconline.org/info_guides/frontier/frontierfaq.php.
- ^{xxv} Colorado State Demography Office. (2011). 2010 Population and Percent Change Colorado Counties- Total Population. Accessed on February 11, 2011 from: <http://dola.colorado.gov/dlg/demog/2010censusdata.html>.
- ^{xxvi} Colorado Department of Public Health and Environment, Primary Care Office. (2011). Primary Care Office. Accessed on March 5, 2011 from: <http://www.cdphe.state.co.us/pp/primarycare/index.html>.
- ^{xxvii} Colorado Rural Health Center, State Office of Rural Health (2011). Snapshot of Rural Health in Colorado-2011 Edition. Accessed on July 12, 2011 from: www.coruralhealth.org.
- ^{xxviii} Colorado State Demography Office. (2010). Population Forecasts by Race and Ethnicity. Accessed on January 22, 2011 from: <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=DOLA-Main%2FCBONLayout&cid=1251593300475&pagenam=CBNWrapper>.
- ^{xxix} Colorado Rural Health Center (2011). Colorado Health Professions Workforce Policy Collaborative. Accessed on January 28, 2011 from <http://www.coruralhealth.org/programs/collaborative/index.htm>.
- ^{xxx} Colorado Department of Labor and Employment (2011). Labor Market Information. Available at: <http://lmgateway.coworkforce.com/lmgateway/analyzer/startanalyzer.asp>. Accessed on March 3, 2011.
- ^{xxxi} Colorado Department of Regulatory Agencies (2011). Licensing-requirements. Accessed on January 12, 2011 from <http://www.dora.state.co.us/Licensing.htm>.
- ^{xxxii} The Colorado Health Institute (2011). About CHI. Accessed on February 24, 2011 from <http://www.coloradohealthinstitute.org/About.aspx>.
- ^{xxxiii} A Bill for an Act Concerning the Collection of Health Care Workforce Data from Health Care Professionals. HB 11-1152. The sixty-eighth General Assembly, First Regular Session. 2011.
- ^{xxxiv} The Colorado Health Institute (2010). Regional Health Profiles. Accessed on May 30, 2011 from <http://www.coloradohealthinstitute.org/Publications/2010/04/Regional-profiles.aspx>.

-
- ^{xxxv} Center for Research Strategies (2010). Primary Care in Colorado: A Discussion of Major Trends and Issues.
- ^{xxxvi} Center for Research Strategies (2010). Primary Care in Colorado: A Discussion of Major Trends and Issues.
- ^{xxxvii} Colorado Department of Public Health and Environment (2005). Colorado Health Watch. Accessed on May 30, 2011 from <http://www.cdphe.state.co.us/hs/pubs/HW2005f.pdf>.
- ^{xxxviii} United States Census Bureau. Health Insurance. Accessed on May 30, 2011 from <http://www.census.gov/hhes/www/hlthins/hlthins.html>.
- ^{xxxix} Goodland, M. (2010, March 19). The Higher Education Conundrum Continues. Colorado Statesman. Accessed on May 30, 2012 from <http://www.coloradostatesman.com/content/991689-the-higher-education-conundrum-continues>.
- ^{xl} National Center for Higher Education Management Systems. (2011). State and Local Support for Higher Education Operating Expenses Per \$1,000 of Personal Income. Accessed on February 15, 2011 from <http://www.higheredinfo.org/dbrowser/index.php?submeasure=82&year=2008&level=nation&mode=graph&state=0>.
- ^{xli} Holloway, S., Galloway, A., Koivisto, K. (2009). State Health Care Professional Loan Repayment Program Health Care Community Board Report to the Governor and Legislature. State of Colorado Department of Public Health and Environment, Prevention Services Division-Primary Care Office. Accessed on March 3, 2011 from <http://www.cdphe.state.co.us/pp/primarycare/chsc/report.pdf>.
- ^{xlii} Holloway, S., Galloway, A., Koivisto, K. (2009). State Health Care Professional Loan Repayment Program Health Care Community Board Report to the Governor and Legislature. State of Colorado Department of Public Health and Environment, Prevention Services Division-Primary Care Office. Accessed on March 3, 2011 from <http://www.cdphe.state.co.us/pp/primarycare/chsc/report.pdf>.
- ^{xliii} Renner, D., Westfall, J., Wilroy, L.A., Ginde, A., (2009). The Influence of Loan Repayment on Rural Healthcare Provider Recruitment and Retention. Department of Emergency Medicine, University of Colorado School of Medicine, Department of Family Medicine, University of Colorado School of Medicine, Colorado Rural Health Center. Aurora, CO.
- ^{xliiv} Holloway, S., Galloway, A., Koivisto, K. (2009). State Health Care Professional Loan Repayment Program Health Care Community Board Report to the Governor and Legislature. State of Colorado Department of Public Health and Environment, Prevention Services Division-Primary Care Office. Accessed on March 3, 2011 from <http://www.cdphe.state.co.us/pp/primarycare/chsc/report.pdf>.
- ^{xlv} Holloway, S., Galloway, A., Koivisto, K. (2009). State Health Care Professional Loan Repayment Program Health Care Community Board Report to the Governor and Legislature. State of Colorado Department of Public Health and Environment, Prevention Services Division-Primary Care Office. Accessed on March 3, 2011 from <http://www.cdphe.state.co.us/pp/primarycare/chsc/report.pdf>.
- ^{xlvi} Sirota, E. (2010). Clinical Placements: The Key to Growing Colorado's Health Care Workforce. Prepared for the Colorado Health Professions Workforce Policy Collaborative.
- ^{xlvii} The Colorado Trust. (2009). Solving Colorado's Shortage of Health Professionals. Accessed on April 10, 2011 from: http://www.coloradotrust.org/attachments/0000/9355/COT_HealthProf09_web2.pdf.
- ^{xlviii} Colorado Health Professions Workforce Policy Collaborative. (2010). Final Recommendations from the Colorado Health Profession Workforce Policy Collaborative. Accessed on January 28, 2011 from <http://www.coloradotrust.org/attachments/0000/9807/ColoradoHealthProfessionsWorkforcePolicyAgenda12-15-09.pdf>.
- ^{xlix} Holloway, S., Galloway, A., Koivisto, K. (2009). State Health Care Professional Loan Repayment Program Health Care Community Board Report to the Governor and Legislature. State of Colorado Department of Public Health and Environment, Prevention Services Division-Primary Care Office. Accessed on March 3, 2011 from <http://www.cdphe.state.co.us/pp/primarycare/chsc/report.pdf>.

-
- ⁱ Colorado Rural Health Center (2011). Colorado STRIDES Program Overview. Colorado Rural Health Center-State Office of Rural Health. Aurora, CO.
- ⁱⁱ Colorado Health Institute. (2008). Colorado Health Professions Workforce Initiatives Inventory. Accessed on January 28, 2011 from http://www.coloradohealthinstitute.org/~media/Documents/workforce/inventory/comprehensive_inventory.ash
- ⁱⁱⁱ Colorado Health Institute. (2009). Colorado Health Professions Workforce Initiatives Inventory. Accessed on January 28, 2011 from <http://www.coloradohealthinstitute.org/Health-Workforce-Inventory.aspx?edu=0&Sort=Title&Page=all>.
- ⁱⁱⁱⁱ Colorado Department of Education. (2011). SchoolVIEW Data Center. Accessed on Marcy 10, 2011 from https://edx.cde.state.co.us/SchoolView/DataCenter/reports.jspx?_afrLoop=239841470705160&_afrWindowMode=0&_adf.ctrl-state=4lzh1fspb_4.
- ^{iv} Colorado Department of Higher Education. (2011). Directory of Colleges and Universities. Accessed on January 28, 2011 from <http://highered.colorado.gov/Academics/Colleges/default.html>.
- ^{lv} Education Commission of the States. (2010). E State Notes-Standards High School Graduation Requirements. Accessed on May 5, 2011 from: <http://mb2.ecs.org/reports/Report.aspx?id=735>.
- ^{lvi} Education Commission of the States (2011). Standard High School Graduation Requirements (50 States). Accessed on May 10, 2011 from <http://mb2.ecs.org/reports/Report.aspx?id=735>.
- ^{lvii} Colorado Department of Education (2011). Colorado P-12 Academic Standards, Unit of Academic Standards. Accessed on January 28, 2011 from <http://www.cde.state.co.us/scripts/allstandards/COStandards.asp>.
- ^{lviii} Colorado Department of Education. (2011). Preschool to Post Secondary Education Alignment Act Colorado Achievement Plan for Kids (CAP4K). Accessed on January 28, 2011 from <http://www.cde.state.co.us/cdegen/SB212.htm>.
- ^{lix} Colorado Health Professions Workforce Policy Collaborative. (2011). Public Policy Agenda 2011. Accessed on January 28, 2011 from <http://www.coruralhealth.org/programs/collaborative/documents/PolicyAgenda2011.pdf>
- ^{lx} Colorado Department of Public Health and Environment. (2011). Primary Care office. Accessed on January 28, 2011 from <http://www.cdph.state.co.us/pp/primarycare/index.html>.
- ^{lxi} Colorado Health Professions Workforce Policy Collaborative. (2010). Public Policy Agenda 2010. Accessed on January 28, 2011 from <http://www.coruralhealth.org/programs/collaborative/documents/PolicyAgenda2011.pdf>.
- ^{lxii} Eilrich, F., Doeksen, G., & St. Clair, C. (2007). The Economic Impact of a Rural Primary Care Physician and the Potential Dollars Lost to Out-Migrating Health Services. National Center for Rural Health Works. Oklahoma State University. Norman, OK. Accessed on June 4, 2011 from http://www.ruralhealthworks.org/downloads/Economic/Physician_Dollars_Jan_2007.pdf
- ^{lxiii} ^{lxiii} Eilrich, F., Doeksen, G., & Hartman, S. (2007). The Economic Impact of the Rural Residency Program at the Medical Center of Southeastern Oklahoma on the Economy of Durant, Bryan County, Oklahoma. National Center for Rural Health Works. Oklahoma State University. Norman, OK. Accessed from: http://www.ruralhealthworks.org/downloads/Economic/Rural_Residency_Econ_Impact_Bryan_Co_OK.pdf.
- ^{lxiv} Colorado Health Professions Workforce Policy Collaborative. (2010). Public Policy Agenda 2010. Accessed on May 5, 2011 from <http://www.coruralhealth.org/programs/collaborative/documents/PolicyAgenda2011.pdf>.

^{lxv} Colorado Health Professions Workforce Policy Collaborative. (2011). Public Policy Agenda 2011. Accessed on May 5, 2011 from

<http://www.coruralhealth.org/programs/collaborative/documents/PolicyAgenda2011.pdf>.

^{lxvi} Sommers, Anna; Julia Paradise, and Carolyn Miller. (2011). Physician Willingness and Resources to Serve More Medicaid Patients: Perspectives from Primary Care Physicians. Kaiser Commission on Medicaid and the Uninsured. Accessed on July 10, 2012 from

<http://www.kff.org/medicaid/upload/8178.pd>.

^{lxvii} Colorado Health Professions Workforce Policy Collaborative. (2010). Public Policy Agenda 2010. Accessed on May 5, 2011 from

<http://www.coruralhealth.org/programs/collaborative/documents/PolicyAgenda2011.pdf>.