



Colorado's Future Healthcare Workforce and the Role of Advanced Practice Registered Nurses

*How is the health workforce changing?
Will we face a workforce shortage?
Who are Advanced Practice Registered
Nurses? What issues are they facing?
Why should you care?*



COLORADOCENTER
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The Colorado Health Foundation™

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EXECUTIVE SUMMARY

This report is divided into two sections. The first section explores the changing nature of Colorado's healthcare provider workforce and related supply/demand issues. The conclusion of this section indicates that Colorado will need 1,100 new physicians, advanced practice registered nurses and physician assistants each year for the coming decade. Colorado institutions only graduate 550 of these professionals annually. The demand for healthcare providers is driven by four major factors:

1. Annual population growth of an average of 95,000 new Colorado residents;
2. Annual retirements of between 700-800 of current healthcare providers;
3. Healthcare needs created by 35,000 additional 65+ Coloradans per year;
- and 4. The multiple and complex impacts of health reform.

Advanced Practice Registered Nurses (APRNs) represent only one of many examples of Colorado's growing primary care provider shortage. Unfortunately, not all graduates of Colorado's APRN schools remain in state to practice. The result is that nearly 100% of new graduates that stay in Colorado will be needed just to replace Colorado's currently employed APRNs that will soon retire. What about the demand created by population growth, health reform, an aging population and a growing shortage of primary care physicians? Why not just increase Colorado's capacity to educate APRNs, rather than forcing employers to turn to the national healthcare workforce labor market?

With this context as background, the second section provides a profile of Colorado's 4,600 APRNs, their specific demand/supply issues and the workforce and practice barriers they are facing.

Most notable among these practice barriers is Colorado's highly restrictive regulations related to APRN Independent Prescriptive Authority. This barrier has been the focus of extensive work over the past year, and is the subject of a set of November 2014 recommendations by the Nurse-Physician Advisory Task Force for Colorado Healthcare (NPATCH). For more detail, see Section IX.

This report draws on data at the county, state and federal levels to create an understanding of Colorado's current and future healthcare workforce, and how APNs can and must play an increasing role in meeting Coloradan's need for access to care. The report makes extensive use of county-level Colorado maps and data graphs. A detailed description of each map and graph is in Appendix 2.

The Board and Staff of the Colorado Center for Nursing Excellence hope that you find the information in this report to be useful in understanding Colorado's current and emerging healthcare provider workforce issues and their impact on Colorado residents.

Why Should I Care?

Nurse Practitioners and other Advanced Practice Registered Nurses are an essential element of providing healthcare in Colorado. Given health reform, population growth, and workforce retirements, all indications are that their importance will only increase in the future.



I. Does Colorado Have a Healthcare Provider Workforce Shortage?

The short answer to this question is: “It depends on where you live, what type of healthcare you need, the age of your primary care provider and your insurance source/ability to pay.” For many Coloradans in many parts of the state, the answer is “Yes, we already face a healthcare provider shortage”.

1. Overview of Colorado’s Healthcare Workforce. As of 2014, Colorado had 295,000 employees in the Health Care and Social Assistance employment sector, projected to add 9,300 new jobs each year. Thirty percent (85,000) of these employees are composed of five types of licensed professionals: Advanced Practice Nurses, Dentists, Physicians, Physician Assistants and Registered Nurses.¹ At the same time, Colorado’s population is projected to increase by 95,000 each year until 2030, and the state’s over 65 population will increase annually by 35,000.

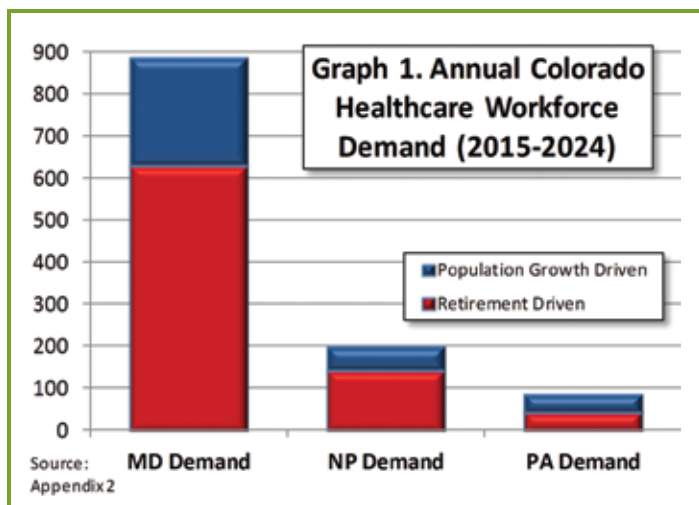
2. Primary Care Health Providers. The healthcare workforce in shortest supply are those that provide primary care. These primary care providers (PCPs) include physicians (MDs), advanced practice registered nurses (APRNs) and physician assistants (PAs). According to the Colorado Health Institute, Colorado has 2,182 primary care MDs (51% of total PCPs), 1,760 primary care APRNs (32%) and 916 primary care PAs (17%).² PCPs are about 25% of the total number of MDs, APRNs and PAs.

3. Workforce Distribution. Colorado’s healthcare workforce is distributed throughout the state disproportionately. While there are on average 360 residents for every MD for Colorado, that average disguises significant variation. Denver County has only 195 residents for every physician. In contrast, 20 rural counties have over 1,000 residents for every physician. Within the current system a Medicaid patient has added difficulty accessing a provider, due to a lower number of providers who accept Medicaid payments.³

3. Aging Health Care Providers. One of the realities of Colorado’s health care workforce is that 40% of physicians and APRNs are over 55 and 26% are over 60. In some counties this retirement exposure is extreme. For example, over 75% of the physicians in 10 counties and 50 to 75% of the physicians in 20 additional

counties are over the age of 55. Over 50% of NPs in 32 counties are over the age of 55. People who live in those counties will have significant difficulty in replacing their retiring PCPs.

Based on the analysis detailed in pages 8-11, Graph 1 illustrates the projected annual demand for new MDs, APRNs and PAs over the next decade. Workforce demand is driven primarily by population growth, an aging population and healthcare workforce retirements and secondarily by the emerging impact of health reform. This demand of 1,100 MDs, APRNs and PAs is far more than the 550 annual graduates of Colorado’s professional schools.

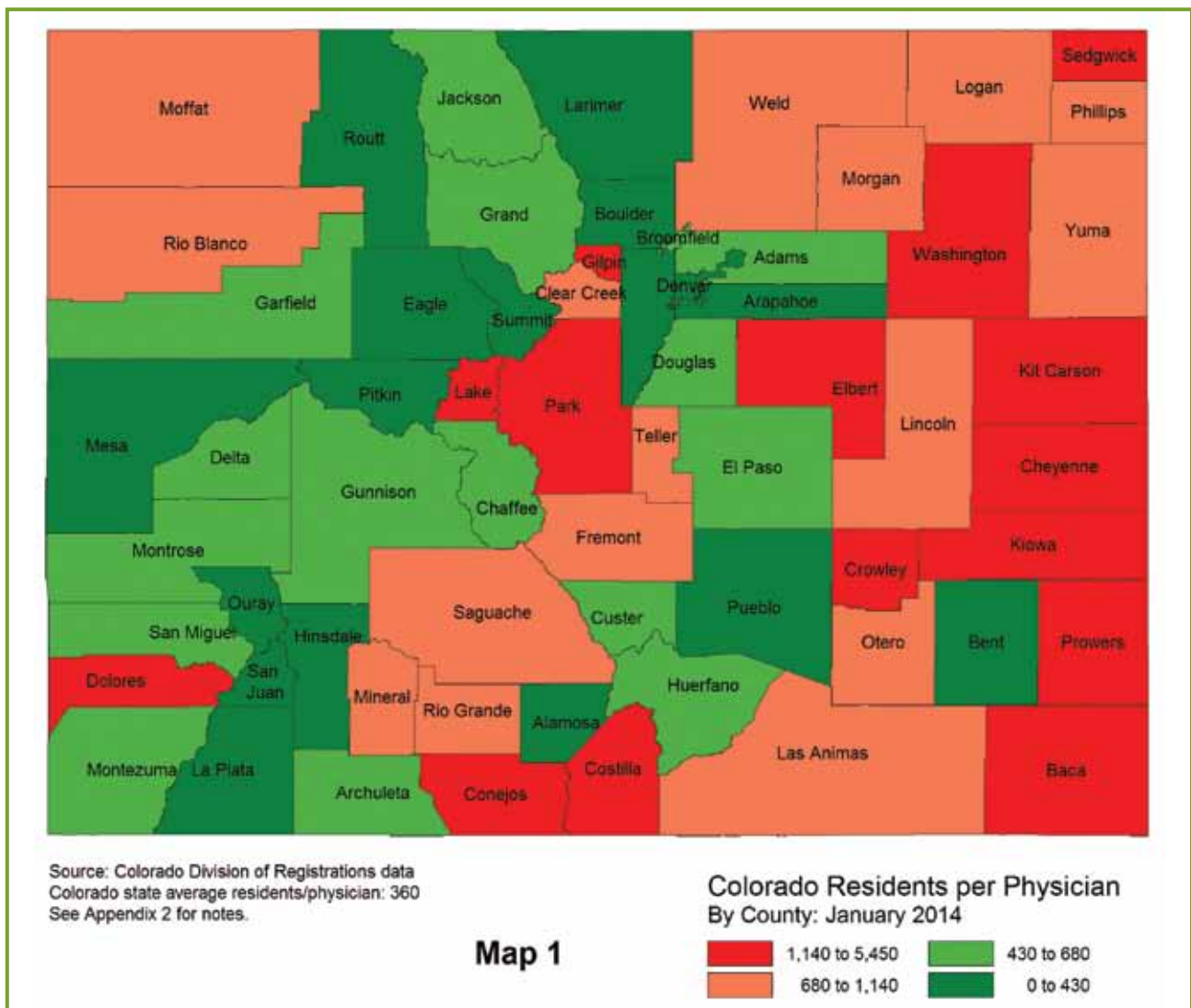


Having sufficient providers for the entire state is not the only issue. The question is whether each community will be able to recruit sufficient providers, and whether or not individuals will be able to access those providers in a timely and affordable manner.

Primary Care Provider Shortage

The 2015-2024 annual demand for 1,100 MDs, APRNs and PAs is far more than the 550 annual graduates of Colorado’s professional schools.

II. Colorado's Uneven Distribution of and Access to Healthcare Providers



Colorado's primary healthcare providers are not distributed in the same way as the general population. That fact significantly affects Coloradan's ability to access healthcare services.

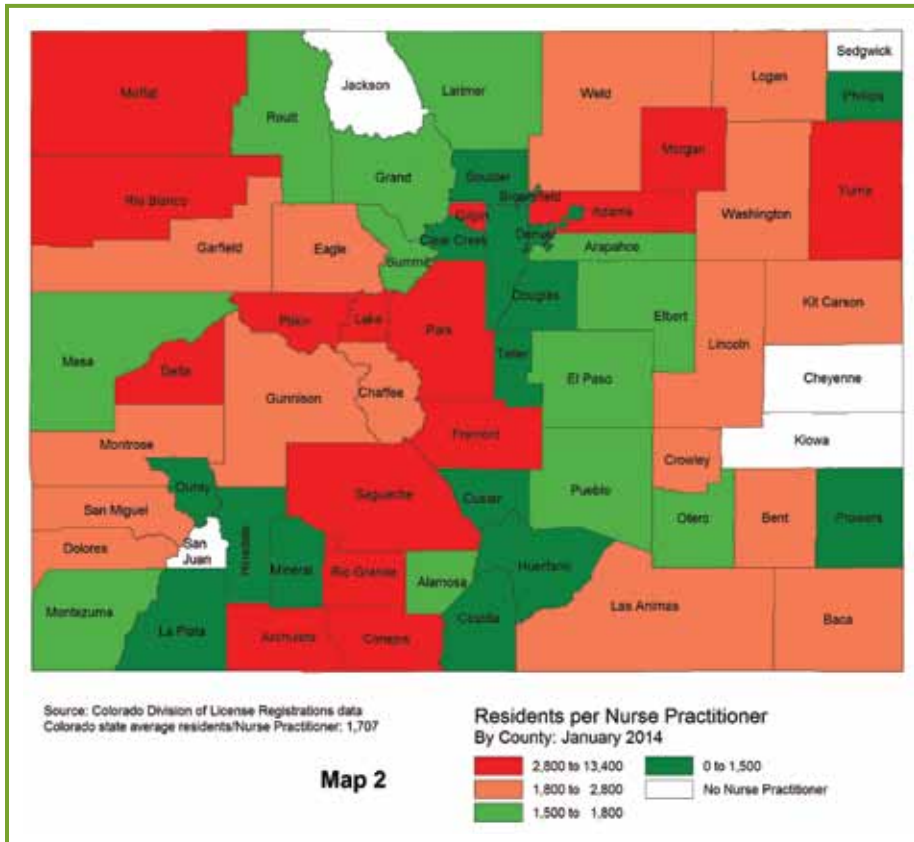
Lack of healthcare access has an immediate health impact, but also impacts healthcare cost, frequency of access and speciality services available. Many would suggest that a shortage of healthcare workforce ultimately impacts the economic viability of a community.

The first step in understanding this issue is to start with an analysis of the distribution of Colorado's 12,800 physicians, followed by an analysis of APRNs and physician assistants. Denver County, for instance, has 12% of the state's population

but 23% of its physicians. Weld County, in contrast, has 5% of the state's population but only 2% of its physicians.⁴

To better understand the day-to-day impact of this issue, it is useful to examine how many residents live in each county for each physician. On average for Colorado, there are 360 residents for each physician. But, as noted previously, averages can be deceiving.

As Map 1 illustrates, individual counties range from 195 residents per physician in Denver County to between 1,000 and 5,000 residents per physician for many of Colorado's rural counties.



CHC PCPs were MDs; by 2013 that had dropped to 48%.

Map 2 indicates the distribution of Colorado's APRN workforce; indicating the same access-to-care issue as with physicians, especially for rural communities.

Map 3 illustrates the distribution of and access to the combined healthcare workforce of physicians, APRNs and physician assistants.

Clearly, residents of many Colorado counties have a long wait and a much longer drive to access healthcare services.

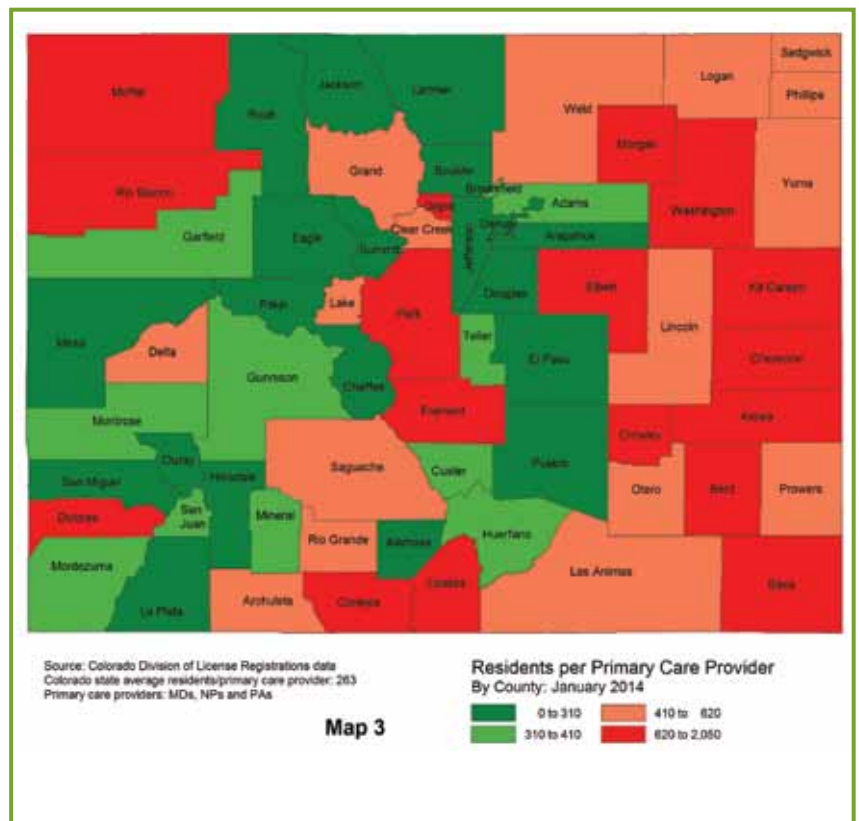
For them, Colorado's healthcare workforce shortage has already arrived.

Fourteen of Colorado's rural counties with a combined population of over 50,000 residents each have only 1 or 2 physicians. For these counties, there are over 2,100 residents per physician.

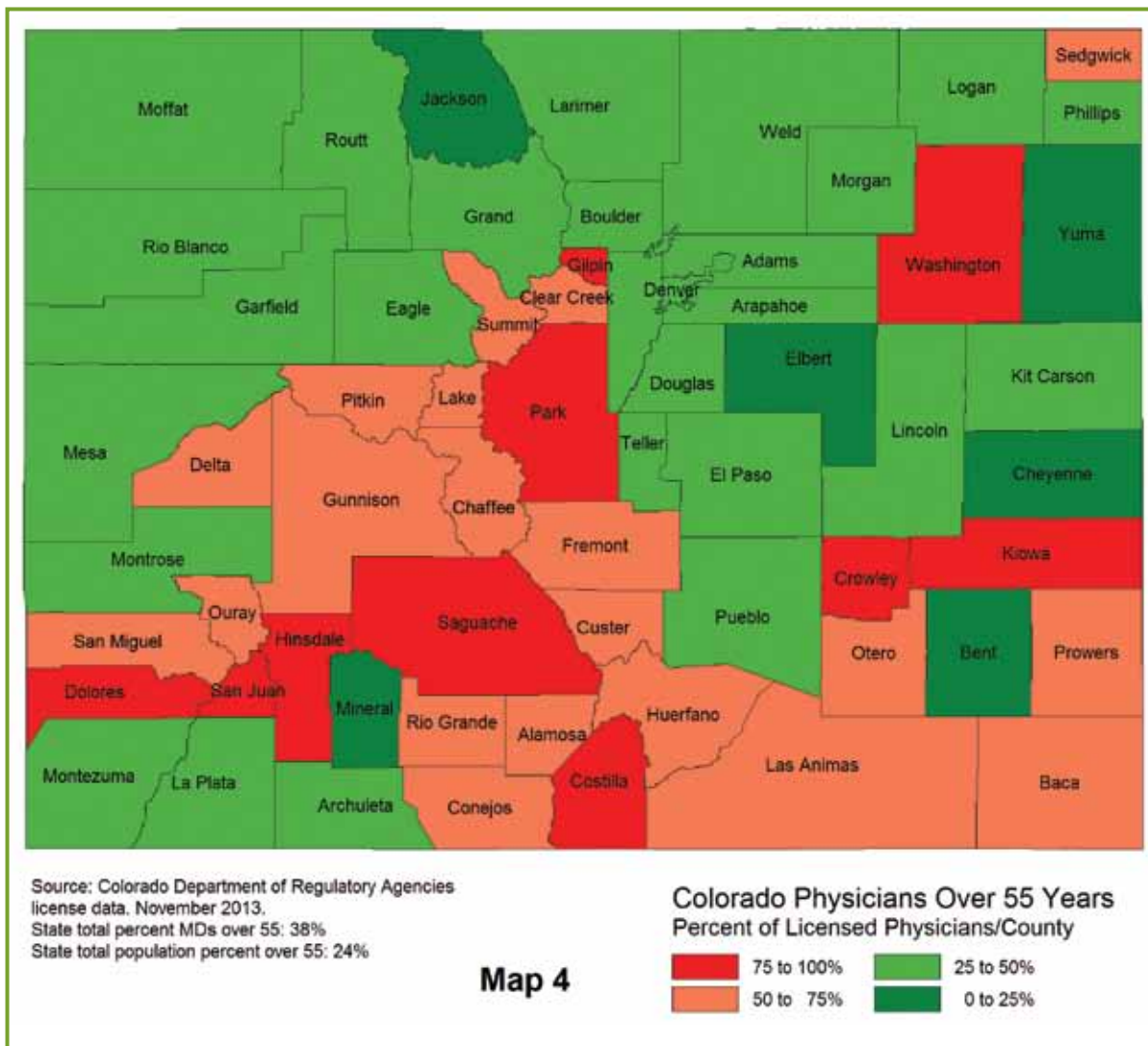
One way to compensate for the shortage of physicians is to increase the supply of APRNs and PAs. To a degree, this is already being done throughout Colorado, with 3,142 NPs and 2,411 PAs.

As one example of this process of increase in other types of primary care providers, for the 14 rural counties cited above the existing 20 physicians are being augmented by 18 nurse practitioners and 10 physician assistants.

This is not just a rural phenomena. The last decade has seen a steady rise in the number of APRNs and physician assistants in Colorado's community health clinics (CHCs), focused on underserved populations. In 2006, 54% of



III. The Impact of Healthcare Provider Retirement on Access to Healthcare



If the uneven geographic distribution of health care providers was not already enough of a problem for Colorado residents and access to care, it gets worse. As indicated by Map 4, Map 5 and Graph 2, a very significant portion of Colorado’s healthcare providers are rapidly approaching retirement, a process which will further exacerbate healthcare access issues.

More specifically, of Colorado’s roughly 18,000 physicians and APRNs, nearly 7,200 or 40% are over 55 years old. Nearly 4,700 (26%) are over the age of 60, and 2,600 (13%) are already over 65. The data and these maps clearly indicate that the rural retirement impact will be the most serious.

Assuming that 20% of Colorado’s over-60 MDs and APRNs retire each year for the next five years (i.e., retirement at 65), that means that at least 700 will retire each year. That’s significantly more than Colorado’s annual graduating class of MDs (300) and APRNs (200). Additionally, historical data indicates that only 44% of new MDs stay in-state and practice primary care.⁵ National data indicates that only 52% of APRNs and 43% of PAs practice primary care.

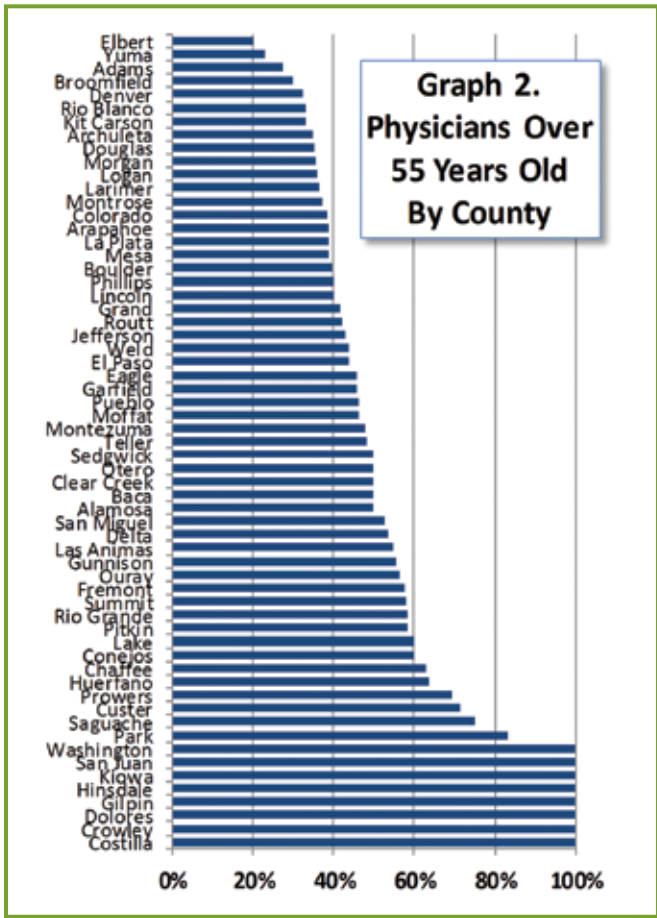
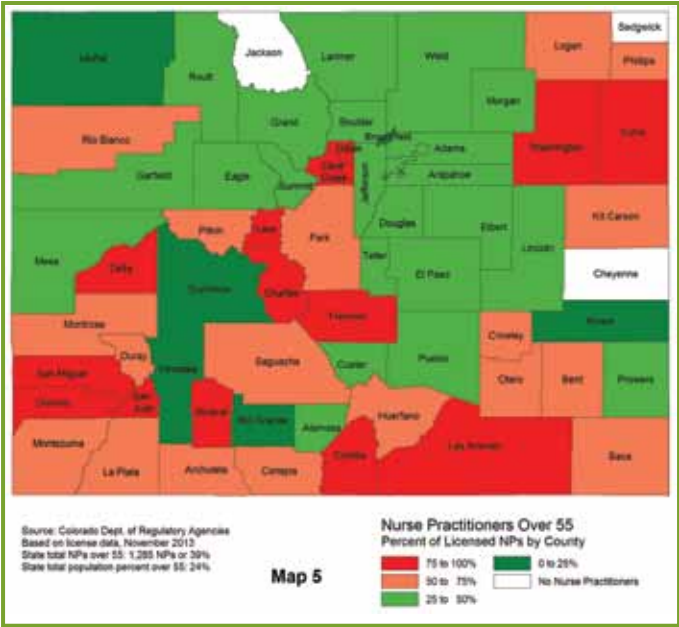
Further complicating matters, it is likely that the percent of retiring physicians in primary care will not be matched by the makeup of the new graduates. National trends indicate that more new physicians are opting for specialty care over primary care.

Graph 2 provides county level detail for the physician retirement issue. Ten counties have 75 to 100% of their physicians over the age of 55; an additional 20 counties have between 50 and 75% of their physicians over the age of 55. (Appendix II for detail).

One response to the physician retirement issue is to expand the capacity of Colorado’s APRNs to help to fill the gap that will be created by Colorado’s retiring physicians.

Unfortunately, as the “Nurse Practitioners Over 55” map indicates, the current APRN workforce population faces many of the same retirement challenges as does the physician workforce. This argues for significantly increasing Colorado’s APRN education capacity beyond its current 200-per year capacity.

As with physicians, 14 counties have 75 to 100% of their APRNs over the age of 55; and additional 18 counties have between 50 and 75% of their APRNs over 55. Overall, 26% of APRNs are over 60.



Against the backdrop of a rapidly retiring healthcare workforce, it is important to remember the issue of population growth. Colorado is projected by the State Office of Demography to grow an average of 95,000 residents per year for the next decade.

Colorado has one physician (primary care as well as specialty) for every 360 residents and one nurse practitioner per 1700 residents. **Assuming no changes in these provider-to-resident ratios, just to meet population growth will require 250 new MDs, 60 new APRNs and 40 new PAs each year for the coming decade.**

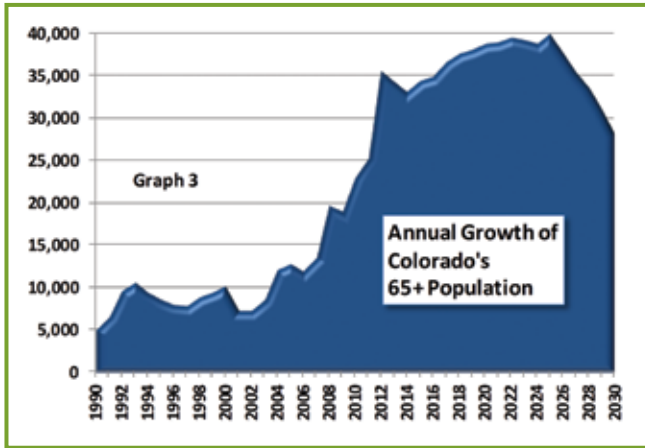
The 350 net addition of PCPs is a conservative projection. Most analysts would indicate that with the impact of health reform and for a state that is rapidly aging, Colorado’s per capita healthcare utilization rates will increase significantly over the coming decade.

In summary, Colorado faces a special challenge due to a rapidly retiring healthcare workforce. Combining the population-driven increase of 350 to the 750 that will be retiring, that generates an annual need for at least 1,100 new physicians, APRNs and physician assistants.

At a time when most if not all other states will be facing similar healthcare workforce provider shortages, where will these 1,100 come from?



IV. The Impact of Colorado's Aging Population On The Demand for Primary Care Providers



One of the striking but often little noticed aspects of Colorado's population is the degree to which it will rapidly age over the next 10 to 15 years. Given that demand for healthcare services increases by up to 400% with age, this demographic reality is a powerful driver affecting the need for a future healthcare workforce.

As indicated by Graph 3, from 1990 to 2006, the state's 65+ population grew between 7,000 and 12,000 per year. After 2008 this annual growth steadily increases by 300% to over 35,000 per year by 2017 and stays well above 35,000 until 2026. Thirteen percent of the state's population was over 65 in 2014; by 2030 it will be 18%.

HRSA has done extensive work to understand how demand for primary care providers (PCPs) changes as the population ages (see

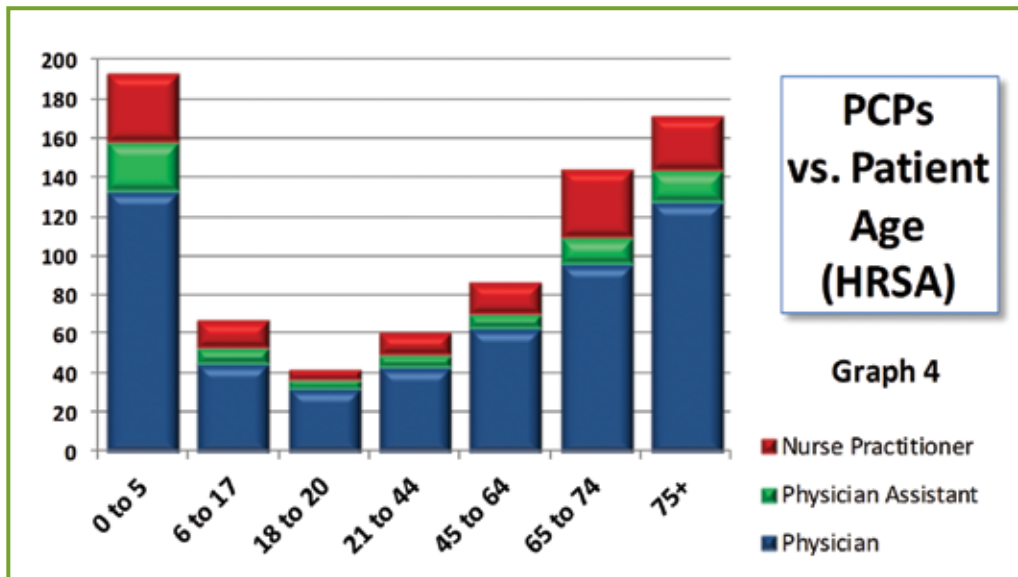
Graph 4 and Appendix 2). (Note: this page's analysis focuses only on PCPs, not including specialty care providers).

The total US population on average has 98 primary care providers actively engaged in patient care per 100,000 population. However, this primary care provider-per-person ratio varies from a low of 41 PCPs per 100,000 persons age 18 to 20 years to 145 PCPs for persons 65-74 years in age and 165 PCPs per 100,000 for persons over 75+ years. That is over a 400% increase in the demand for healthcare from younger to older populations.

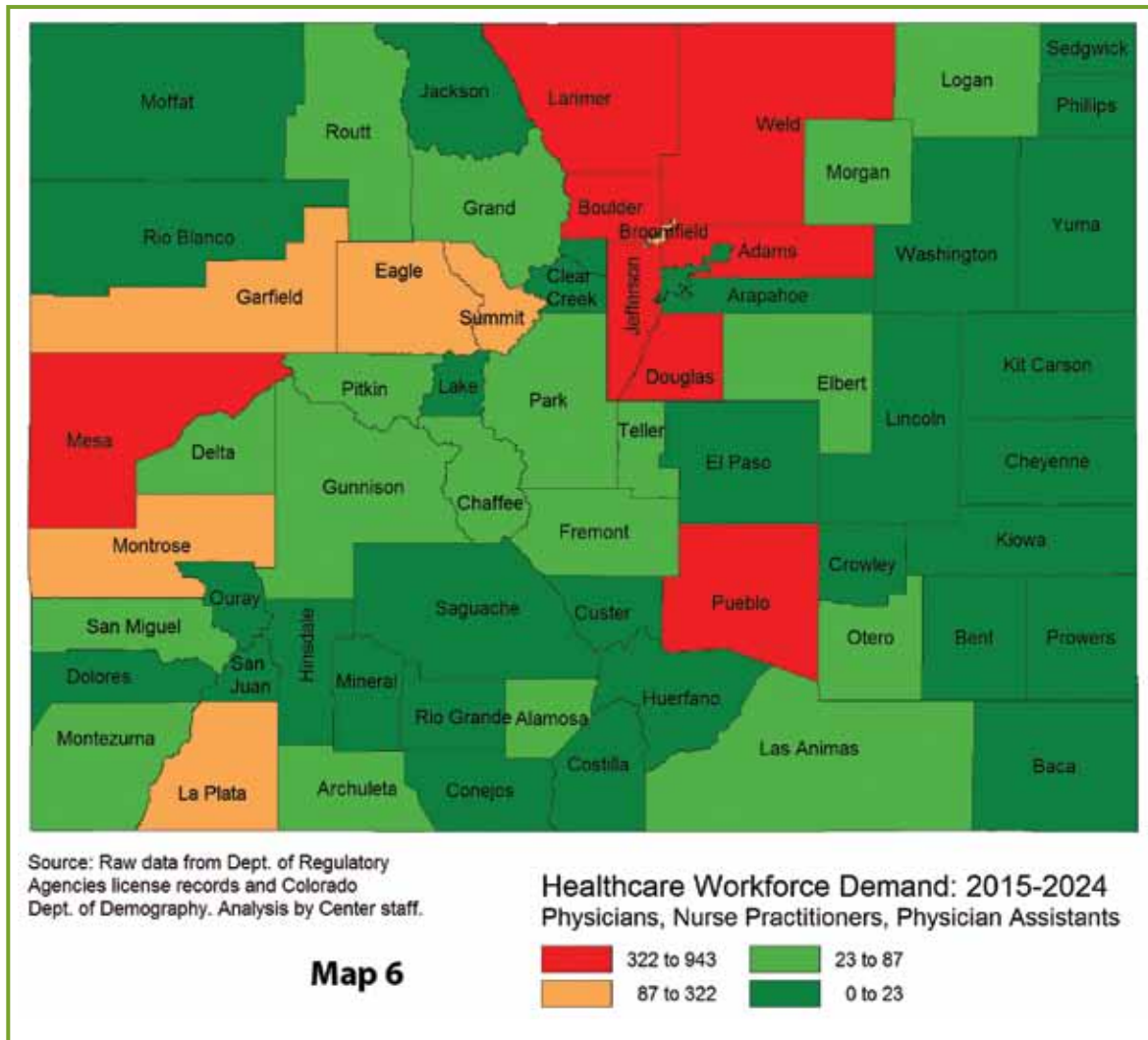
As a result, with Colorado's rapidly aging demographic profile, there are unavoidable and very significant changes in the nature and volume of healthcare demand that drive future healthcare workforce need.

By combining Colorado population projections with the HRSA PCP analyses, Table 1 estimates the impact of an aging population on the character of future PCP demand. Between 2015 and 2030, just the impact of Colorado's aging and growing population will create a need for 1,260 new PCP physicians, 341 APRNs and 176 PAs.

Note: this specific projection is only for primary care and does not include other healthcare providers. PCPs comprise only 25% of the total MD, APRN and PA workforce. If sufficient primary care physicians are not available, then healthcare organizations may use a different combination of NPs, APRNs and other healthcare professionals. (See Appendix II for more graph detail).



V. 2014 to 2024 Workforce Demand: Physicians, Advanced Practice Registered Nurses and Physician Assistants

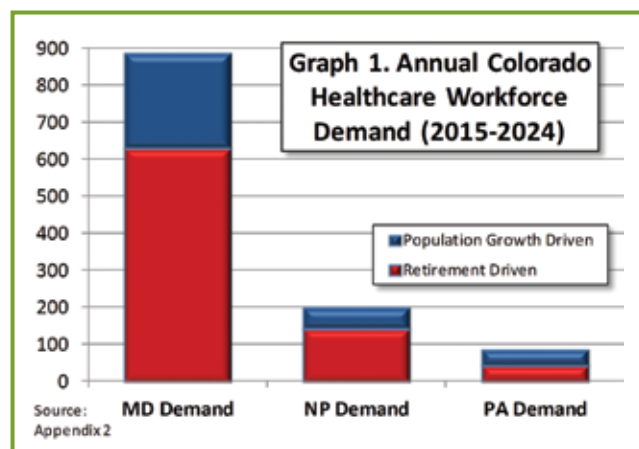


Map 6 illustrates the combined MD, APRN and PA population- and retirement-driven workforce demand by county between 2015 and 2024. Graph 1 illustrates the total Colorado state annual demand by provider type, an average of 1,100 individuals each year over the next decade.

Workforce demand is driven by four factors: population growth, retirements, the healthcare needs of a rapidly aging state population and the impact of health reform. This analysis works to incorporate the first three factors. It is too soon to understand the multi-dimensional impact of health reform.

The projection's core assumptions are that the ratio between providers and population remains the same (e.g., 360 residents per physician and 1,700 per nurse practitioner) and that on

average healthcare providers retire at the age of 65. Should there be insufficient physicians or should these ratios increase, APRN and PA workforce demand will increase.



VI. Colorado's APRN Workforce: Status & Future Demand

A. Four Types of APRNs

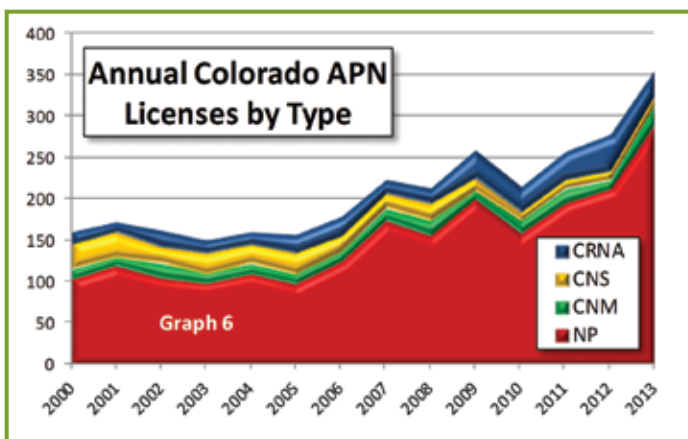
Category	Count (Percentage)
Nurse Practitioners	3,237 (71%)
Certified Nurse Specialists	606 (13%)
Certified Registered Nurse Anesthetist	435 (9%)
Certified Nurse Midwife	312 (7%)
Total	4,590

Although most discussions of Advanced Practice Registered Nurses (APRNs) tend to focus on Nurse Practitioners (NPs), as Table 2 indicates, there are three other types of licensed Colorado APRNs. These are Certified Nurse Specialist, Certified Registered Nurse Anesthetist and Certified Nurse Midwife. (See Appendix 1 for detail.) There are 3,237 licensed, active NPs in Colorado, comprising 71% of total Colorado APRNs.

All APRNs must complete master's level graduate training from a school of nursing, receive national certification in their speciality and obtain a Colorado APRN license. There are six nursing schools in Colorado that award APRN degrees: Colorado Mesa University, Colorado State University - Pueblo, Regis University, University of Colorado at Denver and at Colorado Springs, and the University of Northern Colorado. These six schools graduate an average of 200 nurse practitioners and an additional 50 other types of APRNs per year.

B. Volume and License Type Trends

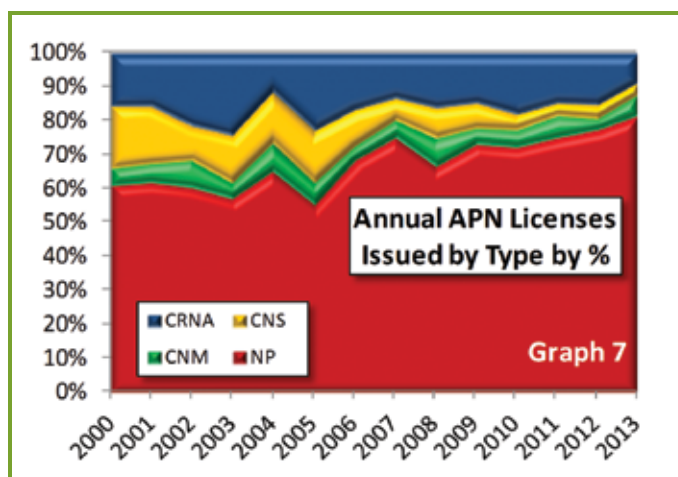
There is no explicit current or historical measure of the workforce and employment demand for APRNs in Colorado. However, given



that it is not possible to practice without a state license, APRN license data from the Colorado Board of Nursing would seem to be a useful surrogate indicator for APRN workforce demand.

As indicated by Graph 6, the growth in annual volume of new APRN licenses issued has been uneven. The APRN license volume was largely flat from 2000 to 2006, and since 2006 has increased in volume to rise significantly above the 2000 level.

Averaging out this uneven year to year pattern, there has been a 23% increase in APRN licenses from 2000 to 2013. The overall growth rate is consistent with Colorado's total population increase of 25% over the same time period.

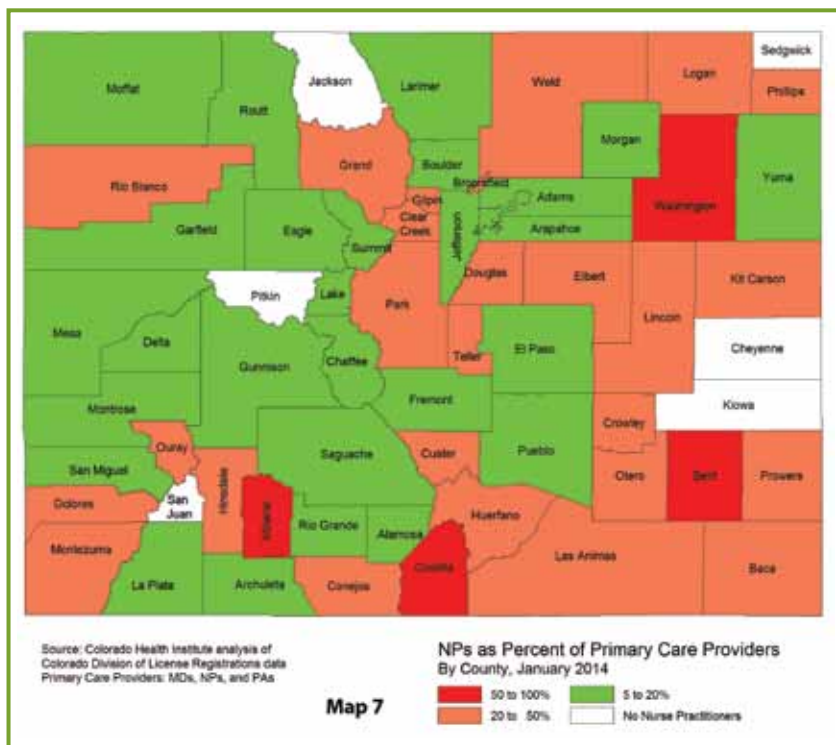


What has changed significantly between 2000 and 2013 is the mix of APRN license types that are issued annually, as indicated by Graph 7. In 2000, 61% of the APRN licenses issued were for nurse practitioners; by 2013, that percent had increased markedly to 81%.

The most noticeable reduction has been in CNS licenses, down from 18% in 2000 to 4% in 2013. The increase in NP licenses is consistent with a growing focus on and demand for primary care health services, and the increased capacity and reliance on nurse practitioners throughout Colorado. The reason behind the relative drop in CNS licenses is unknown.

C. Colorado NPs and Rural Access to Healthcare

Although Colorado's 3,150 NPs are only 15% of the total statewide licensed PCPs, a geographic analysis once again indicates that



but by 2013 that number dropped to 55%.⁶ Many attribute this out-migration of new graduate NPs to Colorado's highly restrictive prescriptive authority regulations, but there may be other factors as well. Assuming education capacity stays the same and that 60% of new NP graduates stay in state, that creates an annual supply of 125 new NPs.

On the demand side, 140 NPs will retire each year (assuming retirement at 65), and population growth will require 60 NPs per year (keeping the NP to population ratio constant). That 'base case' suggests an annual demand of at least 200 NPs, or 75 more than the number of new NP graduates that stay in Colorado. If there are changes in the mix of MD/NP/PA providers or in the required population to NP ratio, that will increase NP demand.

statewide averages are misleading. For example, while Denver County's 492 NPs only comprise 11% of its 4,318 PCPs, the 31 NPs in the five southeast counties represent 31% of those county's 100 primary care providers.

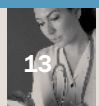
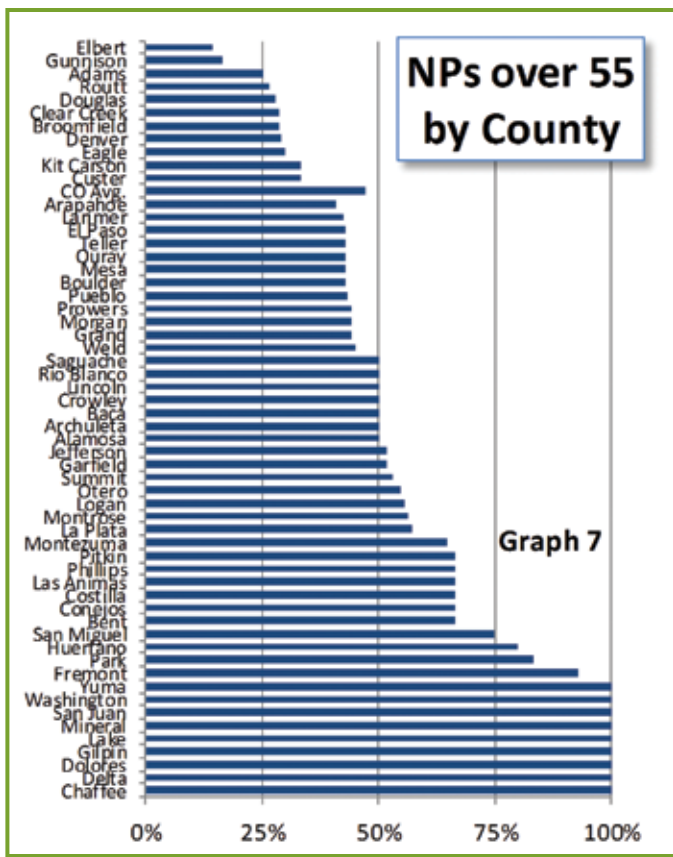
Map 6 illustrates on a county-by-county basis what percent of total PCPs (MDs, NPs, and PAs) in each county are nurse practitioners. More specifically, for the four rural counties in red, 75% or more of the PCPs are nurse practitioners. For an additional 18 counties in orange, their 125 NPs comprise 33% of licensed PCPs.

While it is good news that NPs are available to their communities to provide healthcare, the complication is that many NPs are close to retirement, as indicated by Graph 7 to the right and Map 5 on page 9. This creates a serious healthcare access exposure for these counties.

Nineteen counties (and 145,000 residents) depend on their 90 NPs for 30 to 75% of their PCP workforce. Of these 90 NPs, 50% are older than 55, 31% are over 60 and 18% are already over 65 years old. Given that educating, training and recruiting an experienced NP takes at least four years if not more, the NP retirement replacement "pipeline" issue is a serious one for these and many other counties.

D. Future NP Supply vs. Demand

Colorado's six APRN schools awarded 207 NP degrees in 2013. In 2010, 78% of Colorado NP graduates stayed in state to practice,





VII. THE ECONOMIC & COMPETITIVE CASE FOR APRNS

Substantial and very detailed research has been done on the economic and competitive healthcare system benefits of increased use of APRNs in responding to the healthcare challenges of the 21st century. In summary, APRNs can be educated more quickly and less expensively than physicians, they are less costly in terms of delivering healthcare, they tend to be much more focused on primary care delivery than speciality practices, and their presence increases the efficiency and competitiveness of the healthcare system.

None of this means that APRNs are in any way 'better' than physicians, but rather that they can be more cost-effective and often more available for many healthcare delivery situations, especially rural and underserved. Despite their strong presence in primary care, APRNs can be educated to practice in a variety of settings in addition to primary care. These include ambulatory care, acute care, long-term care, and the emergency department, and to provide specialty care in neonatology, oncology, cardiovascular medicine, orthopedics, urology, and gerontology.

APRNs and Healthcare Cost Reduction. Visits to APRNs are considerably less expensive than visits to MDs. According to data from the federal Medical Expenditure Panel Survey (MEPS), the average cost of an APRN visit is 20 to 35% lower than the average cost of an office-based visit with a physician.⁷ A 2009 RAND study of healthcare cost control strategies in Massachusetts calculated the savings attributable to increased use of APRNs, using the cost difference between an average MD visit and an average APRN visit. Using the Massachusetts-specific MEPS data, RAND estimated that APRN visits are 35% less expensive than physician visits, a difference of \$72 per visit. The report projected that Massachusetts could save \$400 to \$800 million per year through greater use of APRNs and PAs.⁸

A 2012 report on the impact of increased utilization of APRNs in Texas indicated that "A number of studies conclude that greater utilization of APRNs can both improve patient outcomes and reduce overall health care costs. In 2020, The Perryman Group estimates that the total annual reduction in healthcare expenses for the state of Texas would include almost \$24 billion in total expenditures and \$12 billion in increased output. Aggregate state and local fiscal revenue gains would be \$723 million and \$322 million per annum, respectively."⁹

A 2010 analysis by the Florida Legislature estimating the financial impact of increased use of APRNs in healthcare delivery concluded that increased APRN use would save \$7 to \$44 million in health expense, depending on assumptions and the rate at which APRN use increased. Florida used three methods to estimate the potential cost savings from greater use of APRNs and PAs in primary care based on

National Research ...

"The RAND report projected that Massachusetts could save \$400 to \$800 million per year through greater use of APRNs and PAs."

"For these reasons, the FTC staff has consistently urged state legislators to avoid imposing restrictions on APRN scope of practice."



differences in the reimbursement rates for their services compared to those of physicians. Insurance companies and the Medicaid and Medicare programs often realize cost savings by reimbursing services provided by ARNPs and PAs at a lower rate than services provided by physicians. For example, Florida's Medicaid program pays an average of \$40 for primary care office visits with APRNs or PAs, compared to \$49 for office visits with physicians.¹⁰

To be clear, this cost savings does not indicate any reduction in quality. A random assignment study of APRNs providing follow-up and ongoing primary care after an emergency department or urgent care visit found no significant differences in health status or service utilization after either 6 months or 1 year when comparing patients seen by a physician or an APRN.¹¹

The authors concluded: "This study indicated that in an ambulatory care situation in which patients are randomly assigned to either NPs or physicians, and where NPs had the same authority, responsibilities, productivity, and administrative requirements, and patient population as primary care physicians, patients' outcomes were comparable".¹² In addition, two reviews of published studies concluded that APRNs provide quality of care comparable to physicians.¹³ A 2012 report by the National Governor's Association came to the same conclusions.¹⁴

The best source of data on adverse quality events is HRSA's National Practitioner Data Bank. According to that data, from 2000 to 2013, APRNs had a 0.17% chance of having an annual adverse quality event, vs. 2.2% for MDs, 1.7% for Dentists, 0.5% for PAs and 0.4% for RNs.¹⁵

APRNs and Competitive Barriers.

In March 2014, the Federal Trade Commission (FTC) issued a paper titled "Competition and the Regulation of Advanced Practice Nurses".¹⁶ This report concluded:

"Competition in health care markets benefits consumers by helping to control costs and prices, improve quality of care, promote innovative products, services, and service delivery models, and expand access to health care services and goods. ... to ignore competitive concerns in health policy can impede quality competition, raise prices, or diminish access to health care – all of which carry their own health and safety risks."

"Physician supervision requirements may raise competition concerns because they effectively give one group of health

care professionals the ability to restrict access to the market by another, competing group of health care professionals, thereby denying health care consumers the benefits of greater competition."

"For these reasons, the FTC staff has consistently urged state legislators to avoid imposing restrictions on APRN scope of practice unless those restrictions are necessary to address well-founded patient safety concerns."

"Competition can work to favor, rather than undermine, health care quality, which means that policy makers do not necessarily have to choose between protecting consumers and promoting competition: increased consumer protection and increased competition can occur at the same time. We urge legislators and policy makers to apply the following analytical framework:"

- **Will the regulation significantly impede competition by, for example, making it more costly or difficult for the regulated group of professionals to enter into competition, or expand their practices, or by otherwise increasing the cost of health care services or reducing their availability?**
- **Are there any significant and non-speculative consumer health and safety needs that restrictions are supposed to meet?**
- **Do regulations actually provide the intended benefits – such as improvements in health care outcomes or a reduced risk of harm from poor-quality services – or are there good grounds to think they are likely to provide those benefits?**
- **When consumer benefits are slight, insubstantial, or highly speculative, a regulation that imposes non-trivial impediments to competition is not justified.**
- **If pertinent consumer harms have occurred, or risks are found to be substantial, is the regulation likely to redress those risks?**
- **Are the regulations narrowly tailored to serve the state's policy priorities? When particular regulatory restrictions address well-founded consumer protection concerns but – at the same time – appear likely to harm competition, consider whether the regulations are narrowly tailored to address those concerns without undue harm to competition, or whether less restrictive alternatives are available.**





VIII. APRN WORKFORCE CHALLENGES AND BARRIERS TO PRACTICE

As a result of a range of historical and regulatory factors, Colorado's APRN workforce faces barriers and issues that prevent them from providing the level of healthcare services of which they are capable. Some of these workforce issues are 'education pipeline' barriers that restrict the number of APRNs that Colorado schools can produce. Other barriers are clinical practice barriers that prevent APRNs from practicing to the full scope of their practice. These barriers are described below.

Barrier 1: Overall APRN Supply Shortage. Overall, the demand for APRNs is greater than the current and anticipated future supply, and this issue is being intensified by increased healthcare enrollments and primary care workforce retirements. 40% of Colorado's 4,700 APRNs are over the age of 55. Assuming a retirement age of 65, that implies that employers will need to hire 160 to 180 APRNs just to preserve the state's existing APRN healthcare provider capacity.¹⁷

Given that not all graduates of Colorado's APRN schools remain in Colorado to practice, the result is that nearly 100% of Colorado's new APRN graduates will be needed just to replace retirements. However, a significant number of additional APRNs will be needed to support population growth, an aging population and increased healthcare system enrollment.

As discussed previously, this additional growth in required healthcare services will easily create a demand for an additional 50 APRNs per year, far outstripping the state's capacity to educate new APRNs. That will firmly place healthcare employers into the national APRN labor market, competing against every other state in the nation for a scarce resource. **Would it not be smarter and more cost-effective to increase Colorado's capacity to educate and retain our own APRNs?**

Barrier 2: Highly Restrictive APRN Prescriptive Authority Regulations. Colorado is one of 20 states that allow APRNs to have Independent Prescriptive Authority (RXN) authority. RXN capacity allows APRNs to deliver a larger and more complete scope of healthcare services, which is important everywhere but especially in underserved and rural communities. However, Colorado will not award this authority without an APRN completing 3,600 hours of physician supervision. This is the most restrictive RXN regulatory requirement in the nation; at least eleven states require zero supervised hours (AK, AZ, HI, IA, ID, MD, MT, ND, WA, WI, WY). Oregon requires only 150 hours and New Mexico requires 400 hours.¹⁸

An increasing number of Colorado physicians and healthcare employers are unwilling to absorb the implicit cost and loss of physician productivity necessary

APRN Student Survey:

"Due to the prescriptive authority supervision requirement, it is very likely that I will leave the state to practice as an APRN."

(66% of responding Colorado APRN students in a 2014 survey.)

to provide 3,600 hours of the supervision Colorado requires. Accordingly, they are not hiring (or even interviewing) new APRNs who do not already have a minimum of provisional RXN authority. 19

As one new APRN graduate noted about this Catch-22, “How can I get the RXN authority that employers require if they will not provide the supervision hours that Colorado requires to receive the RXN status employers are looking for?” In many rural communities, supervising physicians are simply not available to provide supervision. The predictable result is that new Colorado APRN graduates are unable to find employment as APRNs, and they have become unwilling migrants to the many other states with more attractive APRN regulations.

A November 2013 survey of 85 APRN students indicated that 66% agreed strongly or moderately with the following statement: “Due to the prescriptive authority supervision requirement, it is very likely that I will leave the state to practice as an APRN.” A January 2014 survey of 111 employed APRNs indicated that 46% of respondents agreed with the statement “If I had it to do over again, I would move to a state with a much less restrictive process to receive prescriptive authority”.

[From a healthcare CEO on the APRN RXN issue]. “As the CEO of a health organization that serves 5 counties, the current physician supervision requirements make it nearly impossible for organizations to hire new APRNs. We hire APRNs but will only consider those who have their prescriptive authority. In recruiting NPs, the issue of Colorado’s requirements is the first topic of conversation to ensure that we aren’t wasting the candidate’s time. I have talked to several candidates in the last 6 months who left the state for this reason. Large healthcare systems and providers are not often able to support a NP towards getting this authority; it is administratively burdensome and costly to the organization.”

[From the recent APRN graduate]. “I am a Colorado native, and RN in Colorado for 6 years. I graduated from Regis with an FNP in May 2013. I was unable to find work in Colorado, and in order to find work as an NP, relocated to a state without this restriction. I now practice in Las Vegas. I am not alone; many of my classmates are not working as APRNs in Colorado. The others who stayed in Colorado are still working

as RNs. Those of us working as APRNs, for the most part, have relocated from Colorado to other states.”

[From a recent APRN graduate]. “I am unable to get hired as a ‘New Grad’ APRN. All places want experience and prescriptive authority. It is so frustrating to have 17 years as an RN and a MSN with Family Nurse Practitioner specialty and no one will even give me a chance. At this point school was a total waste of time and money...or else I will be moving.”

Barrier 3: A Shortage of APRN Student Clinical

Placements. APRN students have to complete an extensive program of clinical placements as part of their education. Unfortunately, for a host of reasons, healthcare providers are increasingly unwilling to take APRN students into their facilities and support their educational requirements. The result is a growing bottleneck on the capacity of Colorado’s six schools of nursing to educate new generations of APRNs.

Barrier 4: An Inability of APRNs to Receive Payment from Insurance Companies.

For an APRN to practice independently, they have to be able to access the healthcare insurance payment system, often called being “empaneled”. For many APRNs, they are not able to bill insurance companies for their services, thus effectively being prevented from delivering healthcare services.

As indicated by the 2012 Colorado Health Institute “Profile of Colorado’s Advanced Practice Nurse Workforce” report, 41% of APRNs were never able to bill for services under their own license. “Among factors affecting nursing practice that respondents were questioned on, the ability to bill for services under their own license and to be appropriately reimbursed were the most problematic factors for APRNs specializing in primary care. These findings support anecdotal reports that APRNs struggle to be recognized and reimbursed by insurance companies when not operating under a physician.”

From a practicing APRN, “I am trying to open an independent practice. Here are two key barriers: Insurance companies (Cigna, Aetna, Humana) are not empaneling independent NPs and I am being forced to hire a physician to cosign orders for durable medical equipment, oxygen, home health care and rehab.”





IX. ONE RESPONSE: NPATCH RECOMMENDATIONS ON APRN PRESCRIPTIVE AUTHORITY

Starting in late 2013, a broad coalition of groups and individuals, working in collaboration with Colorado's Nurse-Physician Advisory Task Force for Colorado Healthcare (NPATCH), began a process of reviewing Colorado's requirement that an APRN complete 3,600 hours of supervised practice before they would be granted Independent Prescriptive (RXN) Authority. As discussed previously, Colorado has the most restrictive RXN requirement in the nation. See section VIII and the November 2014 NPATCH report for more detail.

Excerpts from the November 2014 NPATCH Report Narrative

"APRNs are key to serving the changing needs and growing demands of Colorado health care consumers. The educational standards for APRNs are nationally standardized and include the requirement to graduate from a nationally accredited institution and passing a national certification examination, making APRNs capable to play a larger role in providing services.

"APRNs are important providers of primary and other health care in Colorado and engage in diagnosing disorders, prescribing treatments and medications, and providing primary care services in hospitals, clinics, community health centers, nursing facilities, and schools. They collaborate with physicians, other mental health professionals, pharmacists, dentists and other important healthcare practitioners."

NPATCH Policy Findings

1. There is no evidence substantiating that 3,600 hours of training and a longer transition to practice are necessary for prescriptive authority are a necessary requirement to protect patients.
2. A review of statutory requirements highlights the 3,600 hour model is extensive and creates administrative burdens for preceptors and mentors. The NPATCH agreed that barriers continue to exist in the identification of and availability of experienced physicians to participate in active collaboration. In addition, Colorado is an outlier among states that allow for independent prescriptive authority. There is at least some evidence that new APRNs are finding surrounding states more attractive given the lower regulatory requirements and ease of finding employment opportunities.
3. Currently, the State Board of Nursing requires that out of state APRNs, even those with prescriptive authority in other states, must meet the same hour

NPATCH Report ...

"APRNs are key to serving the changing needs and growing demands of Colorado health care consumers."

"There is no evidence substantiating that 3,600 hours of training and a longer transition to practice are necessary for prescriptive authority that protects patients."



requirements for equivalence in preceptorship and mentorship as Colorado APRNs seeking initial prescriptive authority. With Colorado requirements being significantly higher than other states that allow APRNs to obtain prescriptive authority, it seems likely that Colorado's ability to attract highly qualified APRNs will continue to be difficult.

Five NPATCH Policy Recommendations

1. Upon acceptance into the advanced practice registry, APRNs seeking prescriptive authority should be eligible for provisional prescriptive authority.

2. Requirements should be amended so that in order to transition from provisional to full prescriptive authority, within 3 years of achieving the designation as advanced practice nurse with provisional prescriptive authority, the advanced practice nurse with provisional prescriptive authority shall complete:

Either 6 months full-time or 1000 practice hours involving active collaboration on a representative sample of typical cases;

This active collaboration will be with an unrestricted prescriber lawfully practicing in Colorado in a corresponding population focus, i.e. either with an experienced physician or experienced advanced practice nurse with prescriptive authority; and

Collaboration should occur through synchronous communication.

3. The Board of Nursing should review and amend, to the extent of its authority, its current waiver process in Chapter 15 of the Board of Nursing Rules toward eliminating barriers and clarifying processes to align with other recommendations made by the NPATCH.

4. DORA should engage professional regulatory boards and other stakeholders to improve education and outreach regarding the requirements for APRNs to obtain prescriptive authority.

5. DORA should further examine the barrier of liability for experienced providers wishing to assist an APRN in meeting

prescriptive authority requirements. We recommend DORA identify appropriate liability levels for APRNs practicing in a private setting, which may vary from the requirements for APRNs practicing in a team-based environment.

NPATCH Report Conclusion

“Colorado’s healthcare needs are evolving. The role of the primary care provider is central to accessing quality care in both urban and rural contexts. The NPATCH finds APRNs are poised to play a vital role in filling the increasing demands for primary care.”

“The recommendations made in this report create a framework that verifies APRNs are educated, trained and robustly prepared to deliver safe and effective treatment to Colorado patients. The NPATCH recommendations alleviate regulatory barriers to allow the state’s qualified providers to train new practitioners and deliver care.” (See Appendix IV for a list of NPATCH Stakeholders).

Coalition to Improve Access to Healthcare in Colorado

Starting in December 2013, significant grass-roots and institutional stakeholder input helped to create the context for and support the ensuing NPATCH discussions. The Coalition to Improve Access to Healthcare in Colorado included not only nursing groups but also a variety of healthcare advocacy organizations, funders, and many other groups concerned with access to care in Colorado.

APRNs are broadly seen by many healthcare, community, policy and non-nursing organizations concerned with access to care as a positive solution to provide quality healthcare to many who do not currently have a provider. Coalition building among stakeholders is an important part of building an integrated care model throughout Colorado. The response from the many members of this Coalition indicates the hope and expectation that APRNs will serve as an important member of that model.

Access to care for many Coloradans continues to be a challenge. Supporting the growth and increasing effectiveness of the APRN community in the state could help solve that problem. (See the Appendix IV for a listing of Coalition members).





X. CONCLUSION

The expanding base of the insured population in the United States sets a clear need for more available providers. Inadequate numbers of physicians exist to meet the healthcare needs of the population. Extensive evidence indicates that many emerging and chronic care issues can be safely and effectively managed by APRNs.

It is important therefore, to facilitate more APRNs practicing in the communities where the need is greatest, including underserved urban and rural populations. Several possible solutions are proposed which would facilitate APRNs in filling the growing healthcare provider gap which exists across Colorado communities.

1. Eliminate barriers to practice currently set through statute and regulations.
 - Change current statutes to allow APRNs to practice to the full extent of their education and experience.
 - Adopt the recommendations put forth by NPATCH to decrease the barriers to transition to full practice authority and independent prescriptive authority for APRNs in Colorado.
2. Build partnerships among health care providers in rural and frontier communities to begin creating “Grow Your Own” initiatives and recruitment designs to bring providers to those areas.
 - Providers from a given community, especially in rural areas, are more likely to stay in that community if they have community ties.
 - Collaborative, shared effort initiatives to recruit providers to the areas of the state most in need of providers will allow organizations to collaborate in accessing new providers as opposed to the current air of competition in bringing in new providers.
3. Create more opportunities for APRN nursing student clinical placements across the state in nontraditional healthcare settings, and especially in rural areas. Provide clinical placements in clinical specialty areas not often utilized such as forensics.
4. Change the level of simulation hours allowed for APRN certification (currently zero). Research shows that the use of simulation for students allows educators to create a given scenario that will allow students to learn to manage a given illness. Students who receive a higher amount of simulation have shown equal competency in management of a variety of complications to students who have limited simulation.

Exporting Our Talent?

“Leaving Colorado is definitely an option due to the limited APRN opportunities in Colorado. The discussion among my NP classmates is where we will be able to work and most are open to leaving Colorado.”
(2014 APN Student)





APPENDICES

APPENDIX I. ADVANCED PRACTICE NURSE CERTIFICATIONS

[The following information on APRN roles and certifications is taken from the Consensus Model for APRN Regulation: Licensure, Accreditation, Certification & Education, July 7, 2008, from the National Council of State Boards of Nursing.]

The definition of an advanced practice registered nurse (APRN), delineated in this document, includes language that addresses responsibility and accountability for health promotion and the assessment, diagnosis, and management of patient problems, which includes the use and prescription of pharmacologic and non-pharmacologic interventions.

The title Advanced Practice Registered Nurse is the licensing title to be used for the subset of nurses prepared with advanced, graduate-level nursing knowledge to provide direct patient care in four roles: certified registered nurse anesthetist, certified nurse-midwife, clinical nurse specialist, and certified nurse practitioner. Licensure and scope of practice are based on graduate education in one of the four roles and in a defined population. The definition of an APRN is a nurse:

1. Who has completed an accredited graduate-level education program preparing him/her for one of the four recognized APRN roles;
2. Who has passed a national certification examination that measures APRN, role and population-focused competencies and who maintains continued competence as evidenced by recertification in the role and population through the national certification program;
3. Who has acquired advanced clinical knowledge and skills preparing him/her to provide direct care to patients, as well as a component of indirect care; however, the defining factor for all APRNs is that a significant component of the education and practice focuses on direct care of individuals;
4. Whose practice builds on the competencies of registered nurses (RNs) by demonstrating a greater depth and breadth of knowledge, a greater synthesis of data, increased complexity of skills and interventions, and greater role autonomy;
5. Who is educationally prepared to assume responsibility and accountability for health promotion and/or maintenance as well

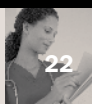
as the assessment, diagnosis, and management of patient problems, which includes the use and prescription of pharmacologic and non-pharmacologic interventions;

6. Who has clinical experience of sufficient depth and breadth to reflect the intended license; and
7. Who has obtained a license to practice as an APRN in one of the four APRN roles: certified registered nurse anesthetist (CRNA), certified nurse-midwife (CNM), clinical nurse specialist (CNS), or certified nurse practitioner (CNP).

Advanced practice registered nurses are licensed independent practitioners who are expected to practice within standards established or recognized by a licensing body. Each APRN is accountable to patients, the nursing profession, and the licensing board to comply with the requirements of the state nurse practice act and the quality of advanced nursing care rendered; for recognizing limits of knowledge and experience, planning for the management of situations beyond the APRN's expertise; and for consulting with or referring patients to other health care providers as appropriate.

All APRNs are educationally prepared to provide a scope of services across the health wellness-illness continuum to at least one population focus as defined by nationally recognized role and population-focused competencies; however, the emphasis and implementation within each APRN role varies.

The services or care provided by APRNs is not defined or limited by setting but rather by patient care needs. The continuum encompasses the range of health states from homeostasis (or wellness) to a disruption in the state of health in which basic needs are not met or maintained (illness), with health problems of varying acuity occurring along the continuum that must be prevented or resolved to maintain wellness or an optimal level of functioning (WHO, 2006). Although all APRNs are educationally prepared to provide care to patients across the health wellness-illness continuum, the emphasis and how implemented within each APRN role varies.



The Certified Registered Nurse Anesthetist

The Certified Registered Nurse Anesthetist is prepared to provide the full spectrum of patients' anesthesia care and anesthesia-related care for individuals across the lifespan, whose health status may range from healthy through all recognized levels of acuity, including persons with immediate, severe, or life-threatening illnesses or injury.

This care is provided in diverse settings, including hospital surgical suites and obstetrical delivery rooms; critical access hospitals; acute care; pain management centers; ambulatory surgical centers; and the offices of dentists, podiatrists, ophthalmologists, and plastic surgeons.

The Certified Nurse-Midwife

The certified nurse-midwife provides a full range of primary health care services to women throughout the lifespan, including gynecologic care, family planning services, preconception care, prenatal and postpartum care, childbirth, and care of the newborn. The practice includes treating the male partner of their female clients for sexually transmitted disease and reproductive health.

This care is provided in diverse settings, which may include home, hospital, birth center, and a variety of ambulatory care settings including private offices and community and public health clinics.

The Clinical Nurse Specialist

The CNS has a unique APRN role to integrate care across the continuum and through three spheres of influence: patient, nurse, system. The three spheres are overlapping and interrelated but each sphere possesses a distinctive focus. In each of the spheres of influence, the primary goal of the CNS is continuous improvement of patient outcomes and nursing care.

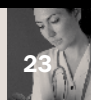
Key elements of CNS practice are to create environments through mentoring and system changes that empower nurses to develop caring, evidence-based practices to alleviate patient distress, facilitate ethical decision-making, and respond to diversity. The CNS is responsible and accountable for diagnosis and treatment of health/illness states, disease management, health promotion, and prevention of illness and risk behaviors among individuals, families, groups, and communities.

The Certified Nurse Practitioner

For the certified nurse practitioner (CNP), care along the wellness-illness continuum is a dynamic process in which direct primary and acute care is provided across settings. CNPs are members of the health delivery system, practicing autonomously in areas as diverse as family practice, pediatrics, internal medicine, geriatrics, and women's health care. CNPs are prepared to diagnose and treat patients with undifferentiated symptoms as well as those with established diagnoses.

Both primary and acute care CNPs provide initial, ongoing, and comprehensive care, includes taking comprehensive histories, providing physical examinations and other health assessment and screening activities, and diagnosing, treating, and managing patients with acute and chronic illnesses and diseases. This includes ordering, performing, supervising, and interpreting laboratory and imaging studies; prescribing medication and durable medical equipment; and making appropriate referrals for patients and families.

Clinical CNP care includes health promotion, disease prevention, health education, and counseling as well as the diagnosis and management of acute and chronic diseases. Certified nurse practitioners are prepared to practice as primary care CNPs and acute care CNPs, which have separate national consensus-based competencies and separate certification processes.



APPENDIX II. DETAIL, DATA AND ANALYSIS FOR REPORT GRAPHS AND MAPS

Graph 1. This graph projects the annual MD, APRN and PA workforce demand through 2024. This projection is based on population growth and the need to replace retiring healthcare professionals. Based on Department of Demography data, the state will grow between 92,000 and 101,000 per year from 2015 through 2024. The projection keeps the ratio of provider per residents constant over the decade at 360 residents per every MD, 1700 residents per every APRN and 2200 residents for every PA generates the population-growth projections. For the retirement replacement demand, Department of Regulatory Affairs license data gives the age of each MD/APRN/PA licensee, which defines the number of providers that become 65 each year, and their retirement replacement is then computed. Potential shifts in provider demand and utilization rates due to health reform or an aging population are not factored in.

Map 1. This map illustrates the number of residents per physician per county. Physician data is from the Dept. of Regulatory Agencies; population data is from the Department of Demography.

Map 2. This map illustrates the number of residents per nurse practitioner per county. NP data is from the Dept. of Regulatory Agencies; population data is from the Department of Demography.

Map 3. This map illustrates the number of residents per total number of primary care providers (MD, NP, PA) per county. PCP data is from the Dept. of Regulatory Agencies license data; population data is from the Colorado Department of Demography.

Graph 2. This graph lists the percent of physicians that are over the age of 55 by county. Physician age data is from the Dept. of Regulatory Agencies license data.

Graph 3. Drawing on data from the Colorado Office Of Demography, this chart indicates the annual growth in the 65+ population for Colorado.

Graph 4. This graph draws on HRSA research to indicate how the demand for PCP care changes with age for each 100,000 residents. For example: for each 100,000 individuals age 21-44,

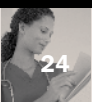
there is a need for 60 FTE primary care providers. In contrast, for 100,000 individuals over 75 years, the need is 170 FTE PCPs. See “Projecting the Supply and Demand for Primary Care Practitioners Through 2020” HRSA, November 2013 for this graph’s source data. In general, it indicates that as age increases, the utilization of primary care health services increases significantly.

Table 1. This table takes the HRSA PCP ratios supporting Graph 4 and matches that up with Colorado’s projected population growth by age from 2015 to 2030. Projected population age cohort growth comes from the Office of Demography. The size of the population in each of the seven HRSA age cohorts is multiplied by the respective ratio of FTE PCPs for that age group, and the growth for PCP demand for each cohort is projected and then summed across the total Colorado population by year.

Map 5. Building on the same analysis as detailed in Graph 1, this map illustrates the total number MDs/NPs/PAs that will be needed by county between 2014 and 2024. As noted, the total statewide ten-year demand for new MDs/NPs/PAs due to population growth and retirement replacement is projected to be 10,125 or an average of 1,012 per year. The core assumptions are that the ratio of providers to population will remain the same over the decade and that providers will retire, on average, at 65 years.

Table 2. License data from the Dept. of Regulatory Agencies.

Graphs 5 & 6. License data from the Dept. of Regulatory Agencies.



APPENDIX III. VOICES OF COLORADO APRNS: SURVEY RESPONSES

The following quotes are from Colorado APRNs and APRN students, responding to a range of surveys since November 2013. Over 1,000 responses were received.

1. "I am one of the new graduate FNP's that decided to move my practice to New Mexico primarily based upon RXN restriction. This requirement has impacted rural Colorado in a very profound way. As a National Health Service Corp. member, I am committed to serving high need populations and rural communities. As physician supervision is extremely difficult to obtain in some rural areas of Colorado, new graduate NPs such as myself were faced with limited opportunities to serve these communities in need. Sadly, residents of many rural areas, must now commute upwards of four hours for OB/Gyn and prenatal care. Is this really what Colorado wants?"

2. "I think this 3600-hour requirement is the worst idea ever and had I known this, I wouldn't have continued my education. I left a great job as an RN. I have been out of school since May and can't get a job due to this 'requirement'. This is a huge disservice as a practitioner but also as a patient. There is already a shortage of providers and now the State of Colorado is causing more. I have been an RN for 17 years and am a native of Colorado. I just turned down a job in Nebraska. I am beyond upset. I have student loans coming due and no APRN job. Getting my Master's Degree and FNP was a huge mistake. A lot of hard work and money, for nothing."

3. "I have been a Registered Nurse since 1977, and returned to school in 2010 to become a Nurse Practitioner. Once I graduated in May 2012, I was hopeful over 30 years of nursing experience would assist me in obtaining a position as a new NP. I was wrong. It took me a full year to find a physician willing to commit to two years of mentoring in order for me to obtain my independent prescriptive authority. It was the single factor given to me after countless interviews as to why I was not hired."

4. "I had to leave the state of CO to find a job as an APRN. I currently work in WY where I was granted my DEA and prescriptive authority as soon as I was granted my APRN state license. I received a job immediately, actually even before I had my WY APN license. Thanks Wyoming! I am an incredible asset (I believe this) who the state of CO has lost out on. Many others are to follow."

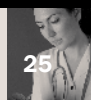
5. The group that I work with will not consider hiring an NP without RXN because of the complexity of the process. While I have made every effort to change this opinion, I have had no success. Though I know several excellent new graduate NPs within my system, I am unable to recruit them to work with my group because of the prescriptive authority process."

6. "I was otherwise considered a very good fit for a number of job opportunities, but because I did not have prescriptive abilities, I didn't get past the recruiter. I have started seeking employment in other states. After dedicating more than 20 yrs to the nursing profession, I am feeling discouraged. However, I have decided to "do what it takes" (including a move to another state) rather than continue working as an RN for months on end after I complete my FNP training."

7. "Leaving Colorado is definitely an option due to the limited opportunities in Colorado. The discussion among my NP classmates is where we will be able to work and most are open to leaving Colorado."

8. "I have already planned to move to Montana or Idaho because I know this is not a requirement there. I have done clinicals at a FQHC here in Colorado Springs. Last week while doing my clinicals, the medical director came by and my preceptor introduced me and said to him that I would be an outstanding new NP when I graduate. The director's only response was, "Yes, but the new NPs in this state have to fulfill that physician supervision thing which is just a terrible hassle." So I am still planning to move to Idaho or Montana when I graduate."

9. "Many practices do not want to hire new NP's vs. PA's because they are required to staff an MD for every hour they staff a NP. If NP's are hired then the pay grade starts way lower due to the financial strain it will put on the practice. It is discouraging to further a career with no promise of a better lifestyle. The structure of the upcoming health care plans can greatly utilize NPs if this requirement could be removed. Keeping it in place will greatly affect the presence of NP's in this state."



APPENDIX IV: FOOTNOTES

- ¹ Colorado Department of Labor and Employment data.
- ² Colorado Health Institute report on Colorado's Primary Care Workforce, February 2014 and CO Department of Regulatory Agencies license data
- ³ Colorado Health Institute report on Colorado's Primary Care Workforce, February 2014, CO Department of Regulatory Agencies license data and Center analysis.
- ⁴ CO Department of Regulatory Agencies license data and Center analysis.
- ⁵ Colorado MD graduate data sourced from www.medschoolmapper.org.
- ⁶ Colorado Department of Regulatory Agencies license data, surveys of APRN schools and Center analysis.
- ⁷ Eibner C, Hussey P, Ridgely MS, and McGlynn EA, Controlling Health Care Spending in Massachusetts: An Analysis of Options, Santa Monica, Calif.: RAND Corporation, TR-733-COMMASS, 2009. page 99.
- ⁸ Ibid. page 103.
- ⁹ Perryman Group (2012). The economic benefits of more fully utilizing advanced practice registered nurses in the provision of care in Texas. Author: Waco, TX.
- ¹⁰ Florida State Legislature, Office of Program Policy Analysis. Expanding Scope of Practice for Advanced Registered Nurse Practitioners, Physician Assistants, Optometrists, and Dental Hygienists. December 2010.
- ¹¹ M.O. Munding, R.L. Kane, E.R. Lenz, et al., Primary Care Outcomes in Patients Treated by Nurse Practitioners or Physicians: A Randomized Trial. JAMA, 2000. 283(1): p. 59-68.
- ¹² D. Lawrence, Physician Assistants & Nurse Practitioners: Their Impact on Health Care Access, Costs, and Quality. Health Med Care Serv Rev, 1978.
- ¹³ J.F. Cawley, G.E. Combs, and R.H. Curry, Non-Physician Providers Am J Public Health, 1986. 76(11): p. 1360.
- ¹⁴ National Governors Association (2012). The Role of Nurse Practitioners in Meeting Increasing Demand for Primary Care.
- ¹⁵ Federal HRSA National Practitioner Data Bank. www.npdb.hrsa.gov. Center analysis of data from 2000 to 2013.
- ¹⁶ Federal Trade Commission (2014). Policy Perspectives: Competition and Regulations of Advanced Practice Nurses.
- ¹⁷ CO Department of Regulatory Agencies license data and Center analysis.
- ¹⁸ 24th Annual Legislative Update. The Nurse Practitioner. January 2012. Vol. 37, no. 1.
- ¹⁹ Center surveys in 2013 and 2014.

NPATCH APN RXN Regulatory Review Process Stakeholders and Testimony

Alfred Gilchrist, CEO, Colorado Medical Society
Alicia Haywood, Colorado Rural Health Center
Amy Downs, Colorado Health Institute
BBC Research & Consulting
Ben Price, Colorado Association of Health Plans
Benjamin Kupersmit, Kupersmit Research
Brad Ash, Senior Vice President, COPIC
Caring for Colorado Foundation
Cassidy Smith, Colorado Health Foundation
Colorado Nurses Association
Gail Finley, Colorado Hospital Association
George Dikeou, Consultant, COPIC
Georgja Roberts, Division of Professions and Occupations, DORA
Hannah Zippin, Division of Professions and Occupations, DORA
Karren Kowalski, CEO, Colorado Center for Nursing Excellence
Kelly Johnson, Children's Hospital Colorado
Lauren Larson, Director, Division of Professions and Occupations
Patsy Cullen, Board of Nursing, NPATCH Member, Regis University
Ronne Hines, Deputy Director, Division of Professions University of Colorado

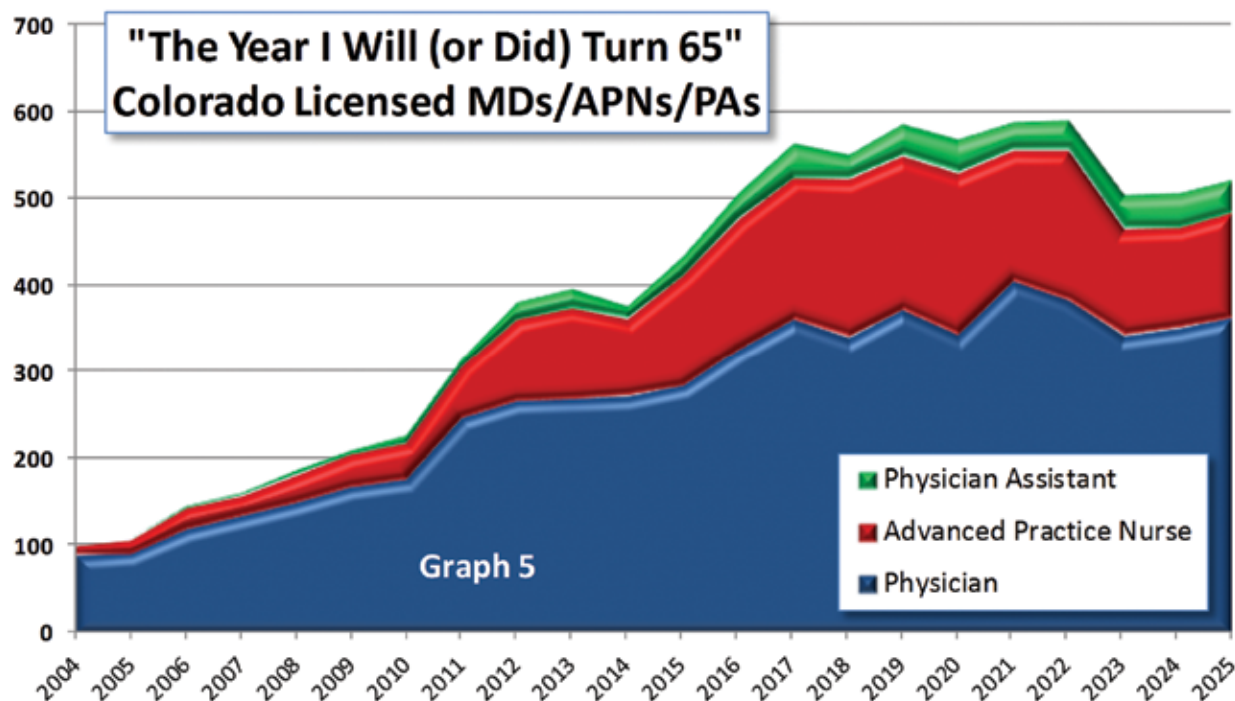
Coalition to Improve Access to Healthcare in Colorado

American Association of Retired Persons
Beth-El School of Nursing and Health Sciences,
Univ of Colorado, Colorado Springs
Caring for Colorado Foundation
Centura Health
Clinica Family Health Services
Colorado Center for Nursing Excellence
Colorado Coalition for the Medically Underserved
Colorado Community Health Network
Colorado Hospital Association
Colorado Mesa University
Colorado Nurse Midwives
Colorado Nurses Association
Colorado Rural Health Centers
Colorado State University, Pueblo
Denver Health Community Health Services
Evergreen Nursing
Health ONE
Loretto Heights School of Nursing – Regis University
Southwest Women's Health Associates
The Children's Hospital of Colorado
The Colorado Health Foundation
University of Colorado College of Nursing, Denver
University of Colorado Hospital
University of Northern Colorado School of Nursing





Special Focus: The Retirement Profile of Colorado Healthcare Professionals



Although other factors are still very significant, the largest single source (65%) of healthcare professional workforce demand in Colorado over the coming decade will be the need to backfill the retirement of existing healthcare professionals.

Graph 5 provides an age profile of Colorado-licensed healthcare professionals with an in-state mailing address as of November 2013. The vertical axis indicates how many of these healthcare professionals will reach the age of 65 in a specific year. The total number ranges from a low of 400 in 2013 to a high of nearly 600 starting in 2020. Some may retire earlier and some later, but an average retirement age of 65 is assumed.

Overall, including the eventual retirements of the already-over-65 MDs and APNs, Colorado will need at least 700 new healthcare providers each year for the next decade to replace retiring professionals just to stay even in terms of healthcare workforce capacity. Obviously,

there are other factors such as population growth, aging population and health reform that will increase this annual demand, but a significant core of the demand comes from replacing retirees.

As the graph indicates, there are 2,700 licensed active healthcare professionals (MDs, APNs, and PAs) that are already over the age of 65 that could leave the workforce at any time or at least could significantly reduce their working hours.

The physician assistant workforce population has a much younger profile overall, so their retirement-driven workforce demand is much less significant than that for MDs and APNs.

Another factor is that according to HRSA research, even if physicians continue working after 65, they reduce their workload down from a full time practice to a 75% or less work week.

