



# ADDRESSING COLORADO'S PRIMARY CARE PROVIDER SHORTAGE

PUBLIC POLICY AGENDA

*“If current trends continue, by 2025 there will be a statewide shortage of nearly 2,200 primary care providers.”*

~ Colorado Health Institute



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# The Colorado Health Care Professions Workforce Policy Collaborative

The analysis and recommendations presented in this document were researched and developed by members of The Colorado Health Care Professions Workforce Policy Collaborative. The goal is to inform and educate policymakers, health care professionals, workforce experts, educators and the general public about the primary care provider shortage in Colorado. The Collaborative encourages the widespread sharing and discussion of these recommendations.

## Organizations Participating in the Collaborative:

- Adams County Education Consortium
- Caring for Colorado Foundation
- Colorado Area Health Education System and Regional offices: Centennial, Central Colorado, San Luis Valley, Southeastern Colorado, Western Colorado
- Aims Community College Foundation
- Colorado Behavioral Healthcare Council
- Colorado Center for Nursing Excellence
- Colorado Community College System
- Colorado Community Health Network
- Colorado Department of Labor & Employment
- Colorado Department of Public Health and Environment
- Colorado Health Institute
- Colorado Hospital Association
- Colorado Medical Society Foundation
- Colorado Nurses Association
- Colorado Rural Health Center
- Colorado School of Public Health
- Denver Health
- El Pomar Foundation
- Jefferson County Public Health
- Kaiser Permanente Rocky Mountain Region
- Mental Health America of Colorado
- Office of Primary Care
- Regis University
- San Luis Valley Regional Medical Center
- The Colorado Health Foundation
- University of Colorado Denver School of Medicine
- University of Colorado Denver Child Health Associate/Physician Assistant Program
- University of Colorado Denver School of Dental Medicine
- University of Colorado Denver School of Pharmacy
- Western Interstate Commission for Higher Education



## Consultants to the Collaborative

TAG Strategies (formerly The Adams Group)

Center for Research Strategies

Health Professions workforce data and analysis provided by the Colorado Health Institute

The Colorado Trust provides support to the Colorado Health Professions Workforce Policy Collaborative 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.

## INTRODUCTION

The Colorado Health Professions Workforce Policy Collaborative is a multi-disciplinary group of more than 30 organizations that is committed to ensuring a highly qualified health care workforce to provide all Colorado residents with access to quality health care. The Collaborative's unique contribution to this vision is to research and develop possible public policy solutions that it recommends by consensus.

Public policy regarding health care workforce is complex and varies across the different professions. The Collaborative has chosen as its 2009 focus primary care providers, which include physicians, physician assistants, and advance practice nurses in family practice, internal medicine and pediatrics. During 2010 the Collaborative will focus on policy interventions for the health care workforce beyond primary care.

*If current trends continue, by 2025 there will be a statewide shortage of nearly 2,200 primary care providers.*

Predictions based upon current delivery models and the best available data analyzed by the Colorado Health Institute show that if current trends continue, Colorado will have a severe shortage of primary care providers by 2025. Indeed, in many parts of the state, including rural, frontier, and inner city areas, that shortage has already arrived. The magnitude of the current and predicted shortage is so great that it cannot be solved by local communities, health care and educational institutions, foundations, and other entities alone. Their contributions are critical, but significant action is needed by the state and federal governments to have a lasting and sustainable impact.

This document is based upon thorough research and a shared understanding of the issues facing health care professionals that was developed by Collaborative members over the course of a year. The policy interventions recommended here have been divided into two categories – immediate and future. The Collaborative recognizes the challenges presented by the current fiscal environment and has therefore prioritized for immediate action six strategies that can and should be undertaken by the State of Colorado immediately, preferably during the 2010 session of the General Assembly. These six interventions have

minimal impact on the state budget and build a foundation for future interventions.

Finally, this report describes larger systemic issues that affect health care workforce – education, economic development and other health care reforms. The health care workforce is complex and interdisciplinary, and public policy solutions and strategies implemented over time will need to respond accordingly.

### IMMEDIATE POLICY INTERVENTIONS

1. *Collect key data through the State's existing professional licensing and certification processes*
2. *Enact policies to increase the numbers of physician assistants and advanced practice nurses in primary care practice*
3. *Increase public funding for health professions education programs*
4. *Optimize Effectiveness of Loan Programs*
5. *Streamline and coordinate administration of clinical placements and other health care professional training programs*
6. *Support policies to increase the number of clinical experiences and residencies*

# COLORADO'S SHORTAGE OF PRIMARY CARE PROVIDERS

## The Time for Action is Now

As the United States moves towards possible expansions in health coverage, our country will need health professionals to meet both the current and future demand for health care. Data reveal alarming gaps in the distribution and number of health professionals, with serious shortfalls expected within the next 10 to 20 years.

### SHORTAGES ACROSS THE HEALTH PROFESSIONS

The following statistics highlight areas where shortages of health care workers are being projected:

- ***Colorado's aging health care workforce will become an increasingly serious problem over the next 10 years.*** While the availability of health care jobs is expected to grow by 20 percent,<sup>1</sup> the numbers of health care workers will shrink by 17 percent as aging workers retire.<sup>2</sup>
- ***Shortages are expected across many health care professions.*** For example, Colorado is expected to experience severe shortfalls in the numbers of physicians, surgeons, nurses, pharmacists, dental hygienists, physician assistants and physical therapists.<sup>3</sup>
- ***Colorado's current nursing shortage of 11% is predicted to triple by 2020.*** While the number of nurses declines, job opportunities are expected to increase by 46% between 2004 through 2014.<sup>4</sup>

### SHORTAGE OF PRIMARY CARE PROVIDERS

Of particular concern are the shortages projected for Colorado's primary care workforce. Based upon current practice models, assumptions, and the best data available, the Colorado Health Institute (CHI) has analyzed supply and demand for primary health care professionals. CHI projects that by 2025 Colorado will need an additional 2,200 primary care providers beyond the anticipated supply.\* (This estimate is referred to as "the shortage" throughout this document.) This shortage of primary care providers includes just over 1,000 physicians, 480 physician assistants, and 660 advanced practice nurses practicing in primary care. This could have a negative effect on thousands of Coloradans' ability to access primary care services resulting in longer waits, less provider choice, and a number of other access restrictions.

### IMPACTS OF THE PRIMARY CARE SHORTAGE

#### *Impacts on Health*

Evidence demonstrates the positive impact of primary care services on health. Those with adequate access to primary care have been shown to realize a number of health and economic benefits including: a) reduced all-cause mortality and morbidity due to cardiovascular and pulmonary diseases; b) less use of emergency departments, hospitals and diagnostic tests; c) better detection of breast cancer and reduced incidence and mortality due to colon and cervical cancer; d) lower medication use and care-related costs; and e) 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.<sup>5</sup>

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\*This projection from CHI is based upon the ratios of primary care providers to population (also called provider panel sizes) in Colorado in 2005. Using the 2005 levels as a base, CHI analyzed the predicted supply of primary care providers and the estimated demand for their services over the next fifteen years and determined that, by 2025, Colorado will have 2,200 too few primary care providers to meet the demand.

### *Impacts on Access to Health Care*

Shortages among primary care providers are affecting Colorado's rural counties. More than 1 million Coloradans live in a community with less than half of the primary health providers needed to optimally deliver primary health services.<sup>6</sup>

Over 50 of Colorado's 64 counties are designated by the federal government in part or as a whole as primary care Health Professional Shortage Areas. CHI reports that in 2007, no active licensed physicians lived in Bent or Washington counties, while Mineral and Costilla counties had only one active licensed physician each. Colorado's 10 other rural counties each had fewer than five licensed physicians, and it is unclear how many of them are actively practicing and providing services to those communities.

Nurse practitioners and physician assistants provide substantial amounts of health care, representing 46% of providers within rural federally qualified community health centers. According to CHI, demand for these providers will increase over the next 16 years by 27 percent for physician assistants and by 39% for nurses working in outpatient and ambulatory care.<sup>7</sup> This information suggests increasing shortages will be occurring within these critical primary care fields.

### *Impacts on Local Economies*

Primary care providers are important to the economies of the communities they serve because they provide employment and generate income for other health care organizations such as hospitals and nursing homes. Studies show that one primary care physician can generate up to \$1.5 million in revenue, \$0.9 million in payroll and create 23 jobs in both the physician clinic and the hospital.<sup>8</sup> Similarly, advanced practice nurses have been proven to benefit local economies by positively impacting the quality and financial outcomes of care for each patient individually and for entire patient populations.<sup>9</sup>

## THE COLORADO HEALTH PROFESSIONS WORKFORCE POLICY COLLABORATIVE

### **History of the Collaborative**

The Colorado Health Professions Workforce Policy Collaborative was created to better understand the complex nature of health care workforce public policy and to develop and support effective changes. The roughly 40 members of the Collaborative represent sectors responsible for and affected by health workforce issues, including health care facilities, government agencies, research and policy organizations, and educational institutions.

*The Collaborative's work is designed to bring about its vision of ensuring a highly qualified health professions workforce to provide all Colorado residents with access to quality health care.*

Over the course of the last year, Collaborative members have conducted research, reached out to stakeholders, and identified policies and other priorities that will assist the state in tackling its health professions workforce issues. The Collaborative determined that it would focus its work on state-level policy change because that is the arena in which it could have the most impact and effect immediate improvements. While considering policy priorities for Colorado, the Collaborative assessed options based upon whether they were: evidence-based, actionable, able to address root causes of the problem, able to positively impact the general population over time, and demonstrable with measurable outcomes.

The Colorado Trust – a grantmaking foundation dedicated to achieving access to health for all Coloradans by 2018 – has provided a three-year (2008-2011) grant to support the Collaborative’s efforts to help build and strengthen the state’s health care workforce. Facilitation, policy analysis and development, and project management has been provided by The Adams Group. The Center for Research Strategies has provided additional research and technical assistance, and the Colorado Health Institute has provided data and analysis on the health professions workforce.

## Initial Focus on the Primary Care Provider Shortage

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After conducting research and examining the state of the health professions workforce as a whole, Collaborative members decided to focus first on addressing Colorado’s severe shortage of primary care providers.

In early 2009, CHI presented the Collaborative with supply and demand projections, based upon the best data available, which indicate that by 2025 the state will have a shortage of nearly 2,200 primary care providers. For purposes of the Collaborative’s policy recommendations, primary care providers include Doctors of Medicine (MDs), Doctors of Osteopathic Medicine (DOs), Advanced Practice Nurses (APNs), and Physician Assistants (PAs) in family, general internal and pediatric practice.<sup>†</sup> This critical shortage of primary care providers is likely to have significant effects on Coloradans’ access to care over the coming decades.

*The 2010 work plan for the Collaborative will explore behavioral, mental and oral health professions, the full range of nursing, medical specialty care and allied health care providers.*

The agenda presented in this document summarizes a state policy roadmap designed as a starting point for addressing the primary care provider shortage by 2025. In the following sections, the Collaborative provides recommendations for immediate and future policy interventions at the state level, as well as a discussion of broader systematic reforms to the health care system. Collaborative members reviewed many policy options and prioritized them with a view toward the fiscal and political realities facing the state at this time.

These recommended policies to address Colorado’s shortage of primary care providers are a first step in the Collaborative’s efforts to ensure a highly qualified health care workforce that will provide all Colorado residents with access to quality health care. In the fall of 2009, the Collaborative will begin developing strategies to address the priority issues facing the health professions workforce beyond primary care. Given the particularly stark shortages in the state’s primary care workforce, the Collaborative made a strategic decision to focus first on policies that can lead the state down the path of ensuring an adequate workforce to meet Colorado’s primary health care needs.

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<sup>†</sup>The Collaborative recognizes that there are varying definitions of “primary care provider” and that many include oral and behavioral and mental health professionals who provide fundamental health services. Collaborative members have elected to focus the policy agenda presented here on physical health providers in primary care in anticipation that the Collaborative’s subsequent policy agenda, to be presented for the 2011 legislative session, will highlight the priorities for other, equally important sectors of the health professions workforce.

## IMMEDIATE INTERVENTIONS

The six policies presented in this section are the Colorado Health Professions Workforce Collaborative's priorities for action at the state level during Colorado's 2010 legislative session. In prioritizing these recommendations, the Collaborative considered which would be most realistic for implementation in the upcoming year. The following policies will help lay the groundwork for further interventions and begin the work necessary to alleviate Colorado's primary care provider shortage by 2025.

### 1. Collect key data through the State's existing professional licensing and certification processes

#### OVERVIEW

Efforts to solve Colorado's health care workforce shortage, in general, and the primary care provider shortage, in particular, are hindered by a lack of useful and available data. The Colorado Department of Regulatory Agencies (DORA) does not collect all the demographic and practice-related data that would be useful in giving policymakers, researchers, and others interested in workforce issues a clear and accurate picture of the health care workforce in Colorado. The State is missing an important opportunity to leverage existing resources and processes to better inform public policy by tracking health professions workforce needs and projections over time.

DORA is the entity responsible for regulating health care professionals, reviewing provider license and certification applications, keeping records of individual professionals practicing in the state, and issuing renewals of provider licenses and certifications. To fulfill these responsibilities, DORA maintains contact with regulated health professionals in Colorado – all of whom must renew certifications and licenses on a continuing and frequent basis. DORA collects little demographic or practice information from Colorado's health professionals through this process.

#### POLICY INTERVENTION

*1.A Add relevant data points to DORA certification and licensing applications and renewal processes for pertinent health care professionals in Colorado, and work with DORA to make such collected data available for research and analysis while taking health care professionals' privacy and confidentiality into consideration.*

#### DISCUSSION

Currently, DORA does not collect important practice-related data – such as whether a provider is actively practicing or is simply keeping a current license for possible future use – which could be extremely useful in state workforce planning efforts. Additional data could provide crucial information such as distribution of primary care providers and percentage of actively practicing providers as opposed to current license holders.

If DORA were to collect this information from its license/certification applicants and those seeking renewal, the data collection process would become much more streamlined, efficient, and effective. Private workforce survey efforts have fairly low return rates, but integrating additional data points into necessary regulatory processes could dramatically increase the amount and quality of data collected.

Implementing policy intervention 1.A would contribute toward the overall goal of alleviating the primary care provider shortage by helping policymakers assess the status and distribution of Colorado's health

professions workforce and enabling them to track the success of workforce interventions and policies. The monies invested in health professions workforce surveys and data collection by businesses and private organizations could be put to better use on other workforce initiatives, since the State and health professionals as individuals would take responsibility for data collection. It is important to take into consideration the privacy of the health professionals and confidentiality of the information that is collected and possibly shared with entities outside state government. Legislation enacting policy intervention 1.A would need to address the circumstances under which this data can be shared, with whom, and at what level of detail.

## 2. Enact policies to increase the number of physician assistants and advanced practice nurses in primary care practice<sup>‡</sup>

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### OVERVIEW

Many primary care providers who practice in collaboration with and independently of physicians, including PAs and APNs are integral to the provision of quality primary care services, and they are crucial to providing adequate and affordable access for millions of health care consumers. The benefits provided by such providers have been well-documented, but these professionals are not utilized to their full potential in many primary care settings in Colorado. Inadequate and inequitable reimbursement practices, outdated perceptions about their roles, and a lack of understanding of their professional capacity have led to the “underutilization” of PAs and APNs in primary care. This not only affects these professionals but has a negative impact on health care quality, cost, and access for all Coloradans.<sup>10</sup>

In recent years, Colorado has begun to take action to improve this issue, addressing a number of scopes of practice issues for these providers. These changes have improved the practice of PAs and APNs in the state, but there are a number of outstanding issues and barriers that still impede their involvement in the provision of primary care in Colorado.

### POLICY INTERVENTIONS

- 2.A *Add to the current reporting requirements imposed by HB 08-1390 a provision that would require insurers and third-party payors regulated by the State of Colorado to disclose to the Insurance Commissioner their reimbursement policies regarding the reimbursement of health care professionals who are not physicians but provide services identical to those of physicians within their respective scopes of practice.*
- 2.B *Require all vendors contracting with the State of Colorado for individuals covered by state-sponsored insurance programs and state-funded programs that directly deliver services to children and adults to provide direct reimbursement to PAs and APNs for services provided within their respective scopes of practice.*

### DISCUSSION

These policy interventions (2.A and 2.B) were recommendations from the Governor’s Collaborative Scopes of Care Advisory Committee, as a result of a comprehensive study completed in December 2008. Colorado statute indicates that an insurance company shall not be precluded from setting different fee schedules for

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<sup>‡</sup>The Collaborative recommends that policymakers also include consideration of Dental Hygienists (DHs) in implementing these policy interventions. Although oral care is not a central focus of this policy agenda, Collaborative members recognize that the reimbursement issues discussed here are more than germane to DH practice in Colorado. To streamline efforts and be as effective as possible in improving the provision of health care in the state, DHs should be included along with APNs and PAs in these policy discussions to increase access to essential health care services.

different services performed by different health professionals, but that 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, based on anecdotal information collected from private payors by the Collaborative Scopes of Care Advisory Committee, the requirement for equal payment does not appear to be uniformly practiced among all private payors.

Enacting these policy interventions would contribute toward the overall goal of alleviating the shortage of primary care providers in Colorado by 2025 by addressing reimbursement issues for PAs and APNs. Requiring health plans and other payors to report their reimbursement policies and practices to the Colorado Division of Insurance within DORA would assist the State in ensuring these providers are adequately and equitably reimbursed and in taking action against those payors that are not in compliance. Additionally, requiring all vendors contracting with the State for individuals covered by state-funded health care programs to directly reimburse these providers would ensure consistency across State health coverage programs and encourage APNs and PAs to participate as primary care providers for these populations.

### 3. Increase public funding for health professions education programs

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#### OVERVIEW

To alleviate the shortage of primary care physicians, Colorado will need to recruit or educate a significant number of health professionals in addition to its baseline of projected graduates and the current number of providers practicing in the state. One of the most effective means of increasing the number of primary care providers in Colorado is to “grow our own”, meaning Colorado could educate more primary care health professions students in-state to increase the likelihood that they will remain after graduation.<sup>11</sup> Colorado also should focus on educating more state residents, particularly those from rural areas, because they would be more likely to stay in Colorado and practice primary care.<sup>12</sup> However, the recent economic downturn has aggravated the state’s already severe higher education funding shortage. Instead of expanding or offering more incentives, schools have been forced to consider raising tuition, limiting capacity, cutting financial aid, or taking other measures to meet financial needs.

While Collaborative members understand it would be unlikely that funding for health professions education programs could be increased in 2010, they raise this as a priority issue because education funding is fundamentally important to training the professionals necessary to begin alleviating an impending crisis.

#### POLICY INTERVENTIONS

3.A *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, and other stakeholders to examine the issue of health professions education program funding within the state budget appropriations for secondary and higher education.*

*Among the funding issues this task force could examine and consider expanding are:*

- *programs that encourage Colorado students from middle school through twelfth grade to consider the possibilities offered by a career in the health professions by exposing them to the field and preparing them to be successful in math, science and technology curricula;*
- *programs offering post-secondary certificates and associate degrees in the health professions;*
- *higher education programs offering four-year degrees in the health professions;*

- *programs to diversify the health care professions workforce, especially regarding race and ethnicity;*
- *graduate and professional school programs in the health care fields;*
- *clinical placements, preceptors, and other training programs for health professions students;*
- *loan repayment and scholarship programs for health professions students serving in priority areas;*
- *residencies and other post-graduate training programs for advanced health professionals; and*
- *loan repayment and other financial incentives for health professions faculty, clinical placement instructors, preceptors, and other clinical providers who are responsible for educating Colorado's health professions workforce.*

*This task force should issue a report of its findings and make recommendations and/or draft legislation as appropriate to ensure that health professions education programs are adequately funded to meet current and future demands on Colorado's health professions workforce.*

*The legislative interim task force also should share its findings with the Governor's Office and the Colorado Department of Higher Education as the department embarks upon its statewide strategic planning effort to determine the future direction of the state higher education system.*

## DISCUSSION

Because budget challenges are anticipated to severely affect policymakers' ability to increase or even preserve higher education funding levels in the 2010 legislative session, the Collaborative recommends that the legislature commit to studying the issue and crafting strategies to address funding levels. Although Collaborative members stress the importance of increasing funding for health professions education programs and understand that this is the single most effective intervention in ensuring an adequate number of health professionals in the future, they understand current constraints and recommend that policymakers, in the least, undertake a thorough examination of this issue and its implications and begin planning for potential solutions and future interventions. This will raise awareness about the importance of the state's health professions education programs and educate policymakers and the broader public about the projected needs and the best strategies to meet them.

## 4. Optimize Effectiveness of Loan Programs

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### OVERVIEW

Health professions students are increasingly reluctant to enter into primary care practice, and many attribute this trend to the confluence of high levels of educational debt and relatively low earning potential in primary care practice. The reluctance of health professions students to enter into this field has contributed to the statewide shortage of primary care providers that is particularly stark in rural and underserved communities who must overcome unique challenges in providing access to health care services.

Providing incentives to primary care professionals in the form of loan repayment and special tax credits has been shown to encourage service in rural and underserved areas. Programs such as the National Health Service Corps recruit recent graduates to primary care settings and underserved areas through a promise of educational loan repayment in return for a few years of dedicated service. Colorado has in place state health professional loan repayment programs which similarly provide loan repayment for service in priority areas.

### POLICY INTERVENTION

- 4.A *Pursue opportunities to streamline loan repayment programs, avoid tax penalties, and secure federal matching dollars by pooling public and private resources and making existing programs more efficient and effective.*

Background – Passed in the 2009 legislative session, HB 1111 established the state Primary Care Office within the Department of Public Health and Environment, funded additional staff support for Primary Care Office priorities, increased state investment in the State Health Care Professional Loan Repayment Program, and set up a process for further coordination and improvement of health professions loan repayment efforts in Colorado. HB 09-1111 directed a community board to identify successful loan repayment programs and best practices across the country, summarize the existing loan repayment programs in Colorado, review and make recommendations on the merits of consolidating or streamlining existing Colorado programs, pursue opportunities to maximize federal match, and recommend measures to strengthen public-private partnerships around loan repayment in Colorado. The board is required to complete this report by December 1, 2009, and its recommendations should be implemented in the 2010 legislative session.

## DISCUSSION

As aforementioned, financial disincentives prevent a number of health care professionals and health professions students from entering into the primary care field, and this has contributed significantly to the statewide shortage of primary care providers. Loan repayment programs can counteract those disincentives and encourage professionals to serve where they are most needed.

Every increased investment in state loan forgiveness programs has the direct effect of increasing the number of health care professionals placed in rural and underserved areas for a minimum of two years. Based on the average award granted through one such program in 2008, every \$30,000 of additional investment provides an additional health care provider in an underserved area of Colorado. This ratio could be more impactful for non-physician providers, because they tend to have less educational debt and therefore require less investment to repay outstanding loans.

## 5. Streamline and coordinate administration of clinical placements and other health care professional training programs

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### OVERVIEW

In order to increase the number of primary care providers serving in Colorado, the relevant health professions education programs will need to graduate a significant number of additional students per year. However, simply expanding educational capacity in the school programs will not be effective in reducing the shortage unless complimentary expansions occur in the number and availability of clinical placement sites and preceptors (licensed health professional who provides clinical education to students in their area of expertise).

Increasing the number of clinical placement and training program sites requires an initial identification of current and potential sites for all programs. At this time, there is no centralized or coordinated database of placement sites in Colorado that integrates all medical disciplines, potential placement sites, and school placement needs. Instead, individual healthcare education programs contract directly with placement sites to provide clinical experiences for their students, resulting in an administrative burden for all parties and uncertainty as to the availability and scheduling of clinical placements. The lack of information on placements further perpetuates a bottleneck effect in health professions education, restricts student access to a broader diversity of sites, discourages recruitment of new placement sites and creates an adversarial relationship among schools competing for placement opportunities.

## POLICY INTERVENTIONS

- 5.A *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.*

Background – Colorado currently has a fragmented system for seeking, soliciting, and securing health professions clinical training programs. For example, the Colorado Center for Nursing Excellence currently maintains a registry of clinical placement opportunities for select nursing professions, while the Colorado system of Area Health Education Centers operates a graduate student placement program. After one year of operation, the utilization of Colorado Center for Nursing Excellence's registry resulted in a 21% increase in the number of successful placements across the state.<sup>13</sup> Although this is a promising program with encouraging results, this registry is limited only to placements for pre-licensure nursing students. A more comprehensive and cross-discipline approach is needed to effect significant change in better preparing Colorado's health professions workforce to meet the health care demands of the future.

The increase in placements seen by the Colorado Center for Nursing Excellence's registry is attributable to the coordination and streamlining provided by the statewide registry, which provides greater ease of access into the system for potential sites, facilitates recruitment of new sites, facilitates better relationships between schools and placement sites, encourages sharing of best practices and standardized training requirements, and increases transparency to encourage more facilities to increase their level of participation. Conducting further study and investigation in a coordinated, multidisciplinary manner to assess the potential for replicating these efforts in other training programs and across state systems could lead to an expansion of this registry's impressive and impactful outcomes.

- 5.B *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.*

Background – Currently there is insufficient evidence to determine whether required reporting of possible clinical placement sites would necessarily increase the number of placements. Therefore, it is essential to have the opportunity to study this issue. The experience to-date with rural tracks for health care professions students and special scholarships for service after graduation should be used to inform this study. Furthermore, there is currently an urban pilot project in four counties, (Adams, Jefferson, Denver, and Arapahoe) that is seeking, through an innovative, interdisciplinary collaborative, to model clinical placement site recruitment techniques to increase capacity of partner health care professions programs (High School through under graduate) in the region. Combined, these current rural and urban projects provide excellent opportunities to inform any statewide effort with concrete, relevant experience, including information about what is valued by employers.

While educational programs must compete for placements sites, clinical facilities and providers carry the administrative burden of contacting multiple educational institutions and programs in order to be placed on the appropriate registries to stay connected with students. If the State

were to require disclosure of available placements and provide statewide coordination of programs, students and placement sites, this would reduce competition, administrative burden and duplication of efforts that affect all parties involved.

## DISCUSSION

Statewide coordination of clinical training placements has the potential to have a significant impact on the number of primary care professionals serving in Colorado. When asked about the barriers to producing increased numbers of primary care providers, many Colorado educational program administrators will cite the lack of clinical placement and other training program availability. Even if they had the funding and capacity to dramatically expand their educational programs, they say, this would not necessarily produce more primary care providers unless there is a commensurate increase in placement and training program capacity. Creating a statewide system for placement opportunities that will coordinate communication between educational programs, placement sites, and students is the first step in expanding capacity. As mentioned, the Colorado Center for Nursing Excellence's registry of nursing placements saw a 21% increase in successful pre-licensure placements. Other states such as Oregon, Florida, and Rhode Island all have nursing registries in place and have seen similarly positive outcomes. Massachusetts and Michigan have had limited experience with registries for all health care professions.

If further study led to the conclusion that broad participation in a registry would lead to improved effectiveness in clinical placements, the initiative could be carried out by a public/private partnership. The data would likely be collected by the Colorado Department of Public Health and Environment (CDPHE) and provided to the statewide registry administrator for incorporation into the placement database.

Although a number of registries specific to nursing clinical placements have been implemented and have shown promising results, there is very little information on how successful this approach would be for other health care professions. Clinical training programs for professions that require advanced degrees are understandably more complicated and time-consuming than clinical placements for certified nurse assistants – and they are less facility-based and require more one-on-one time with educators and supervisors.

Although statewide coordination of multi-disciplinary placements will require funding for initial development and ongoing maintenance, it is imperative that the use of this database not be prohibitive in cost or cumbersome to use by all participants. For these reasons, it would necessary to quantify and clarify actual expenses, consider multiple financial models and build functionality to accommodate varied access needs in order to provide the best possible service to healthcare providers of all sizes. The four county pilot can provide some quantifiable data, in addition to exploring other state and regional programs to find both a local and statewide recommendation.

## 6. Support policies to increase number of clinical experiences and residencies

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### OVERVIEW

Evidence suggests that physicians are more likely than not to practice in the state in which they complete their graduate medical education – internships, residencies, and fellowships – with generalist physicians being even more likely than specialists to remain. The likelihood that physicians remain in the state of their training programs is also strongest in those states that train smaller numbers of physicians compared to their populations and in contrast with other states with more robust medical education systems. These factors build a case for increased investment in Colorado's ability to train more medical, advanced practice

nursing and physician assistant graduates in-state, since they will be likely to settle in Colorado to practice once their education is complete.

## POLICY INTERVENTION

6.A *The Governor and members of the state General Assembly should encourage Colorado’s congressional delegation to support measures that will increase the state’s ability to train more medical, advanced practice nursing and physician assistant graduates in Colorado programs through increased funding and more flexible parameters.*

## DISCUSSION

With few exceptions,<sup>17</sup> funding for residency programs is provided by the federal government through Graduate Medical Education (GME) payments from Medicare. At present, federal statute caps those payments at certain numbers of resident slots per facility that offers training. Although there are some measures of flexibility allowed within these caps (limited exceptions for rural areas and primary care, for example) many argue that they deny states the ability to adapt to dynamic shifts in demand and changes in the local physician workforce.

The Collaborative supports proposals made by national organizations (e.g. AARP) to expand the usage of GME payments to support training for advanced practice nursing and physician assistants.

Because advocating for increased state funding for primary care residencies would be extremely difficult in the midst of a budget crisis, the Collaborative instead recommends that the Governor and Legislature encourage their federal counterparts to consider expanding Colorado’s ability to train more primary care residents in-state through federally funded programs, with the expectation that many of those providers will elect to practice in the state.

# ONGOING AND FUTURE INTERVENTIONS

The policies recommended in the preceding section are, in the view of the Collaborative, achievable in the 2010 legislative session because they have minimal impacts on the state budget and are not politically complex. However, Collaborative members recognize that alleviating the projected statewide shortage of 2,200 primary care providers will require a sustained and comprehensive effort involving many diverse stakeholders over the long term. To address the shortage more comprehensively, the Collaborative recommends that the policies in this section be considered and implemented as soon as budget and environmental conditions allow.

INTERVENTION	ACTION ITEMS
Recognize the important contributions of APNs, PAs and DHs in providing primary care services	<ul style="list-style-type: none"> <li>▶ Ensure that APNs, PAs and DHs are included in new and developing delivery models and other delivery system reforms, including primary care medical home models and payment structure reforms.</li> <li>▶ Educate the public and provider communities about the documented and potential benefits of APNs, PAs and DHs in the provision of primary care, including making consumers and physicians aware of the research and evidence available on the effectiveness of such providers and conducting ongoing research on the issue.</li> </ul>

INTERVENTION	ACTION ITEMS
Provide incentives to primary care providers who serve in underserved and rural settings	<ul style="list-style-type: none"> <li>▶ Increase State funding for health professional loan repayment programs for primary care providers serving in rural and underserved areas of Colorado.</li> <li>▶ Rejuvenate the State's former tax credit for health care providers, most recently amended in HB 01-1257, which expired in the 2008 tax year. Revise this tax credit so that it no longer requires recipients to have outstanding educational debt in excess of the tax credit received and so that it is funded consistently. Also consider allowing all primary care providers access to this credit, instead of restricting it to those in rural health care professional programs.</li> <li>▶ Encourage veteran primary care providers to delay retirement and stay in practice longer by providing income tax exemptions for primary care providers who are over the age of 60 and practicing in primary care settings at least part-time.</li> </ul>
Place more J-1 physicians and better integrate them into Colorado communities	<ul style="list-style-type: none"> <li>▶ Increase the capacity of the Primary Care Office to assist international medical graduates (IMGs) in adjusting to practice in underserved areas, giving them and their host communities the tools to effectively integrate IMGs into the community, assist with communication and cultural understanding, and other efforts to encourage the IMGs to remain in the community once the three-year service period has concluded.</li> <li>▶ Encourage the Colorado Board of Medical Examiners to recognize the unique time-sensitive situation faced by IMGs who are completing their residencies, applying for a Colorado medical license, and submitting application for a J-1 Visa Waiver to remain in the United States once training is complete. The Board should allow flexibility in application and document submission deadlines for IMGs in extenuating circumstances.</li> </ul>
Assist communities in providing community-based incentives to help in primary care provider recruitment and retention	<ul style="list-style-type: none"> <li>▶ Create in statute a program that will issue a request for proposals from Colorado communities interested in conducting a pilot project to demonstrate the effectiveness of community-based provider incentives in recruiting and retaining primary care providers. If the pilot proves successful, consider further state methods of assisting communities in providing incentives to attract and retain primary care providers.</li> </ul>
Provide incentives for preceptors and facilities that provide training and clinical experiences for health professions students	<ul style="list-style-type: none"> <li>▶ Provide tax incentives to clinicians who precept to encourage more clinicians to offer precepting services and do their part in educating the health care workforce of the future.</li> <li>▶ Provide tax incentives or reduce licensing fees for facilities that serve as clinical placement sites.</li> </ul>
Invest in technological advancements that will decrease the administrative burden of providing primary care	<ul style="list-style-type: none"> <li>▶ The Governor and members of the General Assembly should encourage Colorado's congressional delegation to support measures that will develop standard electronic claims attachment formats for the most commonly requested attachments and supporting documentation.</li> </ul>

## COMPREHENSIVE REFORMS AND SYSTEM CHANGES

### SYSTEM REFORMS AFFECT PROVISION OF PRIMARY CARE

Strategies being considered as part of health care reform at the national level as of the writing of this report include a number of policy options that reorganize the ways in which health care is delivered and reimbursed. While the full scope of potential reforms remains unclear, several options under consideration address shortages of primary care providers. Discussions are underway to increase payments for primary care and preventive services. Also being considered are reforms to the current reimbursement system to move away from a fee-for-service model and toward paying for performance or reimbursing for whole episodes of care. In addition, broader roles for community health clinics, coupled with increased funding for the National Health Service Corps, could allow for an expansion of these services in underserved communities. More broadly, experiments involving new delivery models such as medical homes would change reimbursement incentives to reorient primary care towards preventive services and chronic care management.

Core components of a patient-centered medical home (PCMH) include a team-based approach to care, a focus on wellness and preventive care and enhanced care management. Within PCMHs, patients are linked to a personal caregiver or case manager who in turn works with a team of individuals at the practice level who collectively take responsibility for their ongoing care. Standards as to which practice sites would be eligible to be considered as PCMHs have not been decided, and reimbursement strategies remain to be resolved. Nonetheless, many now suggest that reforms surrounding the role of primary care are central to broader efforts to expand access to health care and improve quality across the system.

### OPTIMIZING THE WAY PRIMARY CARE PROVIDERS WORK TOGETHER

As the state and the nation move forward with these and other comprehensive reforms, the respective roles of different primary care professionals will need to adjust in tandem. Changing the delivery system, payment structures, and fixing misaligned incentives will require optimizing the way primary care providers work together to achieve the goals of increased access, controlled costs, and improved quality system-wide. As these reforms are implemented, it is crucial that the fundamental contributions of all primary care providers be recognized and adequately and appropriately addressed. In particular, APNs and PAs play integral roles in the provision of primary care – especially in areas where providers are in the shortest supply. Their orientation toward team practice, their broad education, and their preference toward primary care make these providers well-suited to manage patients in a PCMH and offer continuity and comprehensive care coordination. In many rural and frontier communities, APNs and PAs are the only health providers available and serve as *de facto* medical homes.<sup>18</sup> In all communities, APNs and PAs work in integrated teams with physicians and other health professionals to provide comprehensive, quality care. They also provide medical care to elderly populations and manage chronic medical conditions, yet current regulatory policies and payment practices pose limiting barriers to the most effective use of these qualified health professionals.

The general public and certain provider communities are not fully aware of the benefits offered by APNs and PAs in providing increased access to quality primary care. Outdated notions of primary care being provided solely by physicians create barriers to the full utilization and integration of these health professionals. Extensive research and evidence is available to demonstrate the effectiveness of APNs and PAs in primary care practice, and their achievements should be recognized and appropriately considered in broader discussions of comprehensive health care reform and system-wide changes.

## CONCLUSION

The general data trends that form the basis for this report are not new; the current and worsening health care professional shortage has been understood for some time. What is new is the resolve of a broad coalition, representing a variety of health professions and health care stakeholders, to proactively address this complex issue. Many of these organizations are helping by developing and implementing innovative models. Others are redoubling efforts to recruit and retain needed professionals. However, all agree that the magnitude of this problem is so great and the required solutions are so broad that public policy changes are needed – soon.

In recognition of the extraordinary economic strain on the state budget, Collaborative members have prioritized immediate policy interventions that require little or no state money. These can and should be implemented in 2010. However, when the state's economic conditions improve it will be necessary for the state to focus even more concretely on the needs of an aging health care workforce that is shrinking relative to the state's population. Today's state leaders must resist the temptation to delay action on this long-term problem – the brunt of which will fall on their successors if action is not taken now. Even though some of the items categorized as future interventions are expensive, policymakers must act on them to ensure that the state has the health care professionals it needs.

The solutions for the health care workforce are complex, expensive and long-term. The actions that are required span multiple state departments – including Public Health and Environment, Health Care Policy and Finance, Regulatory Affairs, Higher Education, Labor and Employment, and Education. Strong leadership is needed to coordinate solutions and ensure effective action. The Collaborative stands ready to support the state's public officials as they seek to secure the health and safety of our state by ensuring adequate access to high-quality health care for Colorado residents now and into the future.

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<sup>1</sup> Dohm A, Shniper L. Employment outlook: 2006–16 occupational employment projections to 2016. *Monthly Labor Review*; 2007:86- 125.

<sup>2</sup> Hall A. *Current and future health care workforce needs of Colorado*. Denver: Colorado Department of Labor & Employment; 2008.

<sup>3</sup> US Department of Labor - Employment and Training Administration. Occupational Information Network (O\*NET) data. [Http://www.onetcenter.org/](http://www.onetcenter.org/).

<sup>4</sup> Miller ME. *The nursing workforce in Colorado, educating registered nurses to meet Colorado's healthcare needs*. Denver, CO: Colorado Center for Nursing Excellence; 2003.

<sup>5</sup> Commission on Family Medicine. *Framing the medical home: a key to accessibility, affordability and personal responsibility in health care*. Denver, CO: [author], 2005.

<sup>6</sup> Colorado Department of Public Health and Environment, Primary Care Office, <http://www.cdphe.state.co.us/pp/primarycare/index.html>. Accessed 7/10/09.

<sup>7</sup> Colorado Health Institute (2008) Collaborative Scopes of Care Advisory Committee: Final Report of Findings.

<sup>8</sup> National Center for Rural Health Works. *The economic impact of a rural primary care physician and the potential health dollars lost to out-migrating health care services*. [Http://www.ruralhealthworks.org](http://www.ruralhealthworks.org). Accessed 7/10/09.

<sup>9</sup> Byers, Jacqueline Fowler RN, PhD; Brunell, Mary Lou RN, MSN. “Demonstrating the Value of the Advanced Practice Nurse: An Evaluation Model.” *AACN Advanced Critical Care*. Vol. 9:2. May 1998. [Http://journals.lww.com/aacnadvancedcriticalcare/pages/articleviewer.aspx?year=1998&issue=05000&article=00014&type=abstract](http://journals.lww.com/aacnadvancedcriticalcare/pages/articleviewer.aspx?year=1998&issue=05000&article=00014&type=abstract).

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<sup>10</sup> For more information on the quality of care provided by non-physician health care professionals and the barriers that currently restrict their ability to provide care, see the *Colorado Collaborative Scopes of Care Study*, commissioned through Executive Order by Governor Bill Ritter, Jr., and conducted by the Colorado Health Institute:  
<http://coloradohealthinstitute.org/resourceHotissues/hotissuesViewItemFull.aspx?theItemID=43>.

<sup>11</sup> “When states make the education investments that result in more jobs, services, and economics in their state, the future looks bright. This human capital perspective is a major advantage [in] family medicine since Family Practitioners have 36% higher in-state retention in the state of their medical school location compared to other physicians. This increases to 44% higher for the family physicians graduating from the 81 public allopathic schools.”

Bowman, Robert C. *Instate Retention of Family Physicians: Dependable Primary Care Workforce Retained within States*. Department of Family Medicine, University of Nebraska Medical Center.  
[Http://www.unmc.edu/Community/ruralmeded/retention\\_of\\_family\\_physicians.htm](http://www.unmc.edu/Community/ruralmeded/retention_of_family_physicians.htm).

<sup>12</sup> According to the Robert Graham Center, being born in a rural county increases the odds of practice in a rural area by 2.4 times and nearly doubles the odds of choosing family medicine. It also increases the odds of choosing primary care or serving in a health center by approximately 50% and of serving in a shortage/underserved area by nearly 30%.

*Specialty and Geographic Distribution of the Physician Workforce: What Influences Medical Student and Resident Choices?* Robert Graham Center, American Academy of Family Physicians. [Http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2009/rgcmo-specialty-geographic.Par.0001.File.tmp/Specialty-geography-compressed.pdf](http://www.graham-center.org/online/etc/medialib/graham/documents/publications/mongraphs-books/2009/rgcmo-specialty-geographic.Par.0001.File.tmp/Specialty-geography-compressed.pdf).

<sup>13</sup> Colorado Nursing Clinical Placement Inventory and Matching System. Colorado Center for Nursing Excellence. Deborah Center, Program Director. 22 May 2009.

<sup>14</sup> For more information on the Michigan health professions student clinical placement project, called ACE Placement, visit <http://aceplacement.org/>.

<sup>15</sup> For more information on the Oregon clinical placement registry, created and maintained by the Oregon Center for Nursing, visit <http://ocnplacement.org/>

<sup>16</sup> Overall, 51% of physicians are practicing in the state in which they obtained their graduate medical education. Generalist physicians are more likely than specialists to remain in their state of graduate medical education (odds ratio 1.36). Also, there is a negative association between the number of physicians in training per capita in a state and the likelihood of a physician remaining in the state to practice – in other words, states like Colorado that train a relatively small number of physicians in comparison with other states have a higher likelihood of retaining more of those physicians after their education is complete (ratio of 0.90 to 0.91, for an increment in resident supply of 10 per 100 000 population).

Seifer, Sarena D., Karen Vranizan, MA, and Kevin Grumbach, MD. “*Graduate Medical Education and Physician Practice Location: Implications for Physician Workforce Policy*.” JAMA. 1995; 274(9):685-691.

<sup>17</sup> In addition to Medicare GME payments, there are two other less-significant sources of funding for residency programs. First, individual states can elect to make a state appropriation for GME through their Medicaid programs, which can receive an enhanced match from the federal government. An additional but indirect source of funding for GME comes through federal government Disproportionate Share Hospital (DSH) payments. Because having residents on staff allows hospitals to serve more publicly insured and uninsured patients, hospitals may be able to increase their DSH reimbursement through this expanded service and therefore increase the facility’s bottom line and future ability to train more residents.

<sup>18</sup> According to data compiled by the Colorado Health Institute from Peregrine Management Corporation, four counties in Colorado do not have a single *actively practicing* physician (MD or DO) and at least fifteen others have less than five physicians providing services in the county. PAs, APNs, and other providers commonly provide primary care services in those areas where physicians are in short supply.  
[Http://datacenter.coloradohealthinstitute.org/data\\_results.jsp?i=67&rt=3&p=2&c=5](http://datacenter.coloradohealthinstitute.org/data_results.jsp?i=67&rt=3&p=2&c=5).