

HORIZON 2030

Meeting California's Primary Care Workforce Needs



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HORIZON 2030:

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Introduction

This study was undertaken for the California Primary Care Association (CPCA) to examine emerging issues, challenges, and opportunities to build primary care workforce capacity in the state of California. A priority focus was on innovations and opportunities to strengthen the primary care workforce for community clinics and health centers (CCHCs). CPCA commissioned this inquiry to inform proactive solutions to the growing shortages of primary care providers and the corresponding impact on health access, quality, and cost. Millions of newly covered Californians are seeking primary care services. The increased need for greater capacity, simultaneous with an aging workforce and growing competition among health systems for primary care providers (PCPs), suggests that CCHCs will face increasing challenges in the coming years. While the shift in financing incentives under the Affordable Care Act (ACA) plays to the strengths of CCHCs in terms of their emphasis on prevention and a comprehensive approach to care, increased competition for a limited number of primary care graduates with considerable financial debt suggests that current shortages will become more acute. At current utilization, California will need an estimated 8,243 additional primary care physicians by 2030, a 32% increase compared to its current workforce of 25,153 workforce (as of 2010) (Pettersson, Cai, Moore, & Bazemore, 2013).

A critical challenge will be ensuring sufficient primary care access for the growing number of Californians covered by Medi-Cal as a result of the ACA. Over 12.7 million or 1/3 of Californians are now covered by Medi-Cal (Karlman, 2015). California's ratio of primary care physician full time equivalent (FTEs) participating in Medi-Cal is estimated at 35-49 per 100,000 Medi-Cal enrollees, well short of the 60-80 that the federal government estimated are needed (Coffman, Hulett, Fix, & Bindman, 2014).

With these concerns in mind, key informant interviews were conducted with 25 leaders representing health sector employers, primary care leaders, health professions schools, professional and trade associations, health foundations, and state governments (see Exhibit A). Key informants shared insights on strategies to address primary care workforce issues, key barriers and promising solutions, and the roles of health employers, health professions schools, and government in building primary care capacity. They also discussed the impact of changes in health care finance, payment and delivery, the use of technology, and emerging innovations in practice and public policy. Because CPCA has extensive ongoing discussions with CCHC leaders about primary care workforce solutions, this inquiry focused on supplementing their input with an environmental scan of innovative practices and perspectives of key leaders engaged outside the CCHC field and in other states.

An extensive literature review was also conducted to identify promising programs, policies and practices being implemented nationally and in other states to meet primary care capacity needs. Insights from the literature review most relevant to primary care solutions in California were incorporated into the findings and recommendations summarized in this report. A detailed summary of the literature review is available through CPCA.

Findings from the key informant interviews and literature review emphasize that primary care workforce shortages are a product of a complex array of barriers and that strengthening capacity on a scale large enough to address emerging needs requires multifaceted solutions and systems change. They also stress that more coordinated, definitive action is needed to implement policy and practice innovations that address key barriers and optimally leverage resources to create meaningful increases in primary care capacity. This is particularly critical in safety net settings and underserved regions where resources are limited and barriers and solutions are more complex.

To provide CPCA and its partners with a framework for prioritizing the most salient and impactful primary care capacity solutions, the consulting team used the Coordinated California Primary Career Workforce Pathway Model (see Exhibit B). The consultants had previously developed and utilized the model in numerous public and private workforce initiatives (CWIB, 2012 and OSHPD, 2013). The consultants used the model to inform inquiry questions and to organize priority findings and recommendations. It provides a comprehensive view of current barriers that must be systematically addressed to build primary care workforce capacity in California. Barriers identified in previous processes and by key informants on this project are described in Exhibit B. CPCA and partners can use the model along with recommendations in this report to frame a comprehensive primary care workforce strategy and prioritize policy, program, and practice solutions.

Pathway Model findings and recommendations in this summary focus on five of the components of the model identified by CPCA and key informants as most salient for immediate and long term primary impact on primary care workforce.

THEY INCLUDE:

- 1. Career Awareness and Education**
- 2. Residencies and Graduate Medical Education Funding**
- 3. Primary Care Transformation and Finance Innovations**
- 4. Recruitment and Retention**
- 5. State and Regional Strategies and Infrastructure**

Specific findings and recommendations for each of these 5 components are detailed in separate sections. Each section will include a brief overview, highlights from key informant interview findings and the literature review, and targeted recommendations. Recommendations include changes in practice as well as potential areas for investment, partnerships, and policy development. Institutional, regional, and state level recommendations are proposed.

General Primary Care Landscape Themes

The following general themes emerged from the interviews and the literature review:

- All interviewees indicated that the need to address primary care workforce challenges is becoming increasingly important and urgent. Interviewees expressed significant concern about growing shortages, maldistribution, and capacity challenges, and their corresponding impact on access, quality, and cost. They also identified the imperative to increase the number and distribution of diverse and culturally and linguistically responsive providers as a top priority.
- While building primary workforce capacity is a growing priority, a number of interviewees noted that no one in California “owns” the problem. Without more definitive leadership, action, and accountability, progress toward meaningful solutions may be slow and uncoordinated and the problem and its adverse impacts will become more acute.
- As one interviewee described and others agreed, “primary care workforce is not just a policy issue, it’s an all hands on deck issue, much more about delivery system change required to increase primary care capacity.” There is “no silver bullet solution.”
- Some stakeholders are not as sympathetic to CCHCs workforce needs because of the level of reimbursement from Federally Qualified Health Center (FQHC) status compared to others serving underserved communities.
- Rather than focus on CCHCs not having enough primary care providers and losing ground due to unfair competition with larger employers, CPCA and CCHCs may secure greater political and financial support for primary care workforce solutions if issues are framed and documented as access and quality challenges for millions of newly insured Californians. Interviewees recommended that mobilizing patients and providers to tell their stories and put a “human face” on the issue could increase public, political, and private support.
- Much better documentation and awareness of primary care workforce problems and consequences is needed.
- It is important to increase investments in primary care training program capacity and residencies in California (including physicians, physician assistants (PA), and advance practice nurses) to expand the pool of qualified and diverse primary care graduates. California lags behind many other states in meaningful investment and innovations in primary care training capacity, though we have the highest rate in the nation of training program graduates who choose to practice in the state (Jones, Tilton, Jolly, Redden, & Bledsoe, 2013). Capacity expansion should be tied to increased production of graduates who pursue primary care and should be accompanied by greater incentives to recruit and retain graduates to practice in safety net settings and underserved communities.
- Even with expanded investment, training programs will not produce enough graduates in time to meet near-term or long-term primary care needs. Therefore, interviewees emphasized the importance of CPCA, regional consortia, and CCHCs accelerating and increasing implementation of primary care transformation. Recommendations included the following:
 - Re-define “access to care” in a manner that brings focus to the full range of available staff and tools needed to meet patient needs in the most cost-effective ways (i.e. beyond in-person physician visits).
 - Accelerate implementation of cost-effective, multi-disciplinary primary care teams that more effectively leverage the roles and expertise of advance practice nurses, physician assistants, community health workers and promotores, medical assistants, health educators, and social workers, among others.
 - Pilot and formally evaluate which models and workers can most effectively provide quality, accessible service and create policy that aligns regulatory and reimbursement incentives.
 - Secure investment and increase collaborations in support of CCHC practice transformation and Patient Centered Medical Home (PCMH) model expansion. Increase partnerships and leverage: major care

transformation grants being implemented in California (e.g., Center for Medicare and Medicaid Innovation (CMMI) innovation grants); expert support resources (e.g., California Quality Collaborative, Center for Care Innovations, and University of California (UC), San Francisco, Center for Primary Care Transformation); and private health system advances.

- Increase opportunities for primary care professionals to train in emerging CCHC primary care teams and models. Provide necessary infrastructure and cost support to enable CCHCs to support and expand training capacity and partnerships.
- Move beyond incremental steps to advance larger system changes for CCHCs. Increase focus on prevention and strategies to better manage demand and improve health. Historical experience at the community level creates the potential for CCHCs to lead the field in this regard.
- Many key informants identified scope of practice as a key issue in efforts to increase primary care capacity. Key informants emphasized attention to ensuring that team members have the authority and ability to operate at the top of their scope of practice rather than recommending legal changes. At the same time, there were recommendations that CCHCs in designated shortage areas have the opportunity to explore pilot project waivers to evaluate the impact of expanding scope for non-physician providers. This could enable service needs to be met and the impact on quality, cost, and scope to be assessed.
- While there are potential champions for policies and programs that strengthen primary care workforce, there are concerns about where needed investment will come from in this political and financial environment. Investment in primary care workforce does not appear to be a priority focus in the California governor's office, among policymakers, nor among private sector employers or foundations (beyond a major recent multi-year investment by The California Endowment). At least one key legislative champion did, however, emphasize that "if it can become a high enough priority, money can be found." Greater documentation and more effective communication of primary care workforce challenges and their consequences along with mobilization of broad-based political support will be necessary.
- CCHCs will face increasing competition for insured patients. They must innovate and become more "managed care compatible" in partnership with health system and public system providers. CCHCs bring valuable expertise in addressing social needs, population health, and effective use of team members like promotores and community health workers (CHWs). Developing these working relationships offers the potential to better coordinate workforce investment, reduce health care costs, and develop a more regionally integrated approach to health care financing and delivery.
- ALL providers and payers are pressed by the lack of primary care providers. This has increased competition with CCHCs, both for new and practicing primary care providers. Even major health systems, including Kaiser Permanente, are having a more difficult time recruiting primary care providers.
- Key informants recommended exploring options for regional coordination of workforce development strategies and better integration of services as important paths to build primary care capacity, streamline delivery models, and share limited staff.
- Health care in the future will likely be financed and delivered through a few large integrated delivery systems that maximize technology and team-based care under global reimbursement. It is essential in the near-term for CCHCs to find new ways to partner and become aligned with these systems for population health, service, staff, and technology.

These general themes highlight the landscape within which CPCA, regional consortia, and CCHCs can engage with other stakeholders to accelerate and advance primary care capacity solutions. They also represent an important call to action for greater and more collective efforts. Based on our inquiry findings, the consultants recommend that CPCA and partners consider the following overarching priority strategies for action now to move the needle on primary care capacity in California.

Overarching Priority Recommendations

1. Educate the public and key stakeholders about growing primary care access, quality, and cost challenges by utilizing compelling data and patient voices to make the case for urgent action and investment in primary care capacity expansion.
2. Improve documentation and communication of primary care workforce problems and consequences. Document emerging primary capacity problems to identify priority regions, settings, and barriers for targeted policy, program, and practice solutions.
3. Secure additional investment and partnerships to accelerate primary care transformation within CCHCs including pilot projects, training, technical assistance, and shared learning. Leverage health system and statewide initiatives. Advocate for establishment of an Institute for Primary Care Transformation similar to successful initiatives in other states.
4. Increase the number of primary care residencies in California with a priority focus on residencies in community health centers and medically underserved regions. Advocate for policy change and infusion of public and private funds to support primary care residencies and offset anticipated funding reductions; including funds to sustain the level of investment provided by The California Endowment for loan repayment and residencies in underserved regions. Focus increased residencies in documented underserved areas and for place-committed individuals.
5. Expand loan repayment funds and provisions to incentivize new and existing providers to practice in CCHCs. Establish new loan repayment program administered by CPCA for CCHCs modeled after successful Massachusetts program. A CPCA administered program would complement existing programs, mobilize additional funds and enable CCHCs to determine the most direct, effective investments to address priority needs.
6. Advocate for funds to expand University of California, Programs In Medical Education (PRIME) program capacity and support stabilization and increased enrollment in UC Riverside, School of Medicine. Link funding to targeting candidates committed to primary care practice in underserved areas; particularly those from underserved California communities and with needed cultural and linguistic skills. Increase accountability for graduates from PRIME and UC Riverside, School of Medicine to pursue primary care.
7. Develop formal ongoing relationships between CPCA and other key advocacy organizations and build an inclusive broad-based coalition to focus explicitly on primary care access and workforce-related policy solutions.
8. Develop state level public-private entity with the necessary expertise, capacity, and relationships to advance collaborative primary care workforce solutions. Convene a process for development of a multi-year strategic plan for California to strengthen primary care capacity and access. Key informants indicated that greater shared ownership, infrastructure and systematic solutions are needed. They expressed concerns that current initiatives are fragmented, understaffed and underfunded, constrained to enable only minor incremental change and not acting quickly enough to address urgent needs.
9. Accelerate and expand payment reform and pilot projects that align financial incentives and regulations with new team-based primary care models.

Recommended Roles for CPCA and Regional Consortia

Based on interview findings and models from other states, CPCA, regional consortia, and CCHCs can play some or all of the following roles to advance priority primary care capacity solutions:

1. Convene key public and private stakeholders to agree upon coordinated strategies, action plans, and investments to advance primary care solutions.
2. Build a broad-based coalition and policy agenda to advance primary care capacity solutions. Engage associations, health employers, health professions schools, primary care residency programs, and Medi-Cal patient advocates. Advocate for policy, regulatory, and payment changes to advance primary care capacity solutions. Promote solutions that can better leverage existing federal and state programs and resources.
3. Quantify primary care access and quality problems and mobilize the patient voice to be a catalyst for greater action and investment.
4. Promote CCHC leadership and accomplishments in primary care access and capacity innovations. Highlight and spread advances in team-based care, practice at top of scope, and use of technology. Lead pilot projects that challenge conventional approaches to practice and payment. Monitor and communicate the impact on access, quality and cost.
5. Expand partnerships with private and public health systems, health plans, and accountable care organizations for: care coordination, access and quality innovations, increasing the provider pool, service delivery, and investment in CCHC primary care capacity.
6. Strengthen linkages with statewide and regional health pathway initiatives to increase the pool of qualified, diverse candidates serving on CCHC primary care teams.

The following sections highlight findings and recommendations within specific pathway components.

Pathway Model Findings and Recommendations

I. Career Awareness and Education

Overview

For California and CCHCs to have a sufficient pool and pipeline of qualified, diverse primary care team members, there must be a more systematic, large-scale approach to strengthening primary care career awareness. There must also be targeted policies and programs to expand educational capacity and graduates in key primary care professions. Programs and policies must accelerate and expand the number of physicians, nurse practitioners, physician assistants, and other workers committed to primary care and to practice in community health centers and underserved communities.

There are already many innovative programs in California communities, educational institutions, and community health centers that are strengthening primary care career awareness and education. However, combined, they are not producing a sufficient supply, distribution, and diversity of graduates to meet growing primary care needs, particularly for underserved regions and from underrepresented populations.

Findings

Key informants described a number of awareness and educational barriers that undermine primary care production and distribution. Key barriers include: awareness and perceptions of primary care career options; a culture in many health professions training programs that doesn't encourage primary care; insufficient educational capacity relative to student demand and workforce needs; the growing cost of health training and associated student debt; and candidate concerns about primary care compensation, practice support, and lifestyles.

In addition, many promising programs addressing these barriers face scale, institutionalization, and sustainable funding challenges. For example, a key bright spot for the UC Schools of Medicine is PRIME, an innovative training program focused on meeting the needs of California's underserved populations in both rural communities and urban areas by combining specialized coursework, structured clinical experiences, advanced independent study, and mentoring. These activities are organized and structured to prepare highly motivated, socially conscious students as future clinicians, leaders, and policymakers. PRIME currently enrolls 342 students (65% are underrepresented minorities) in 6 programs (UC Health, 2014).

All PRIME programs select students with a mission to serve the underserved, many of whom have an interest in primary care. PRIME programs could be leveraged and expanded to increase primary care providers to serve in underserved communities. However, the UC system does not have state funding to support current capacity or expansion. UC leadership would like to expand the PRIME programs as it offers the quickest and most viable opportunity to increase the number of medical students pursuing primary care (reported in key informant interviews).

Expansion of the new UC Riverside, School of Medicine is another potentially viable and high impact opportunity to increase primary care physicians. UC Riverside, School of Medicine's mission is to graduate primary care physicians who practice in the Inland Empire and other underserved regions. It targets students from the region who want to become primary care physicians and serve their communities. UC Riverside, School of Medicine currently has an incoming class of 50 medical students per year. While there is potential for expansion, UC Riverside, School of Medicine does not have sufficient funding support to neither sustain the current program nor expand. UC Riverside, School of Medicine faces upcoming accreditation concerns that undermine the future of the program unless sufficient, sustainable funding can be provided (reported by key informant interviews).

Key informants also emphasized that beyond sustaining and expanding PRIME and UC Riverside, School of Medicine, additional increases in the capacity of public medical schools in California would contribute to meeting growing primary care needs. California is simply not producing enough medical school graduates to meet current and future need, and production is far behind comparable states. A key indicator for assessing state medical school production is the number of medical students per 100,000 population. California ranks 43rd in the nation at 17.8 medical students per 100,000, while in comparison, New York ranks 6th at 50.3 per 100,000 (AAMC, 2015). One consequence of California's limited medical school capacity is 63% of California students who attend medical school do so out of state. Given the high cost of educating medical students, it has been financially beneficial to the state for California students to pursue medical school in other states. However, given acute and growing physician shortages, the financial benefit to the state should be weighed against the costs and health consequences associated with insufficient access to care, including increased emergency room costs. Given that California ranks first in the nation with 62.4% of its in-state medical school graduates subsequently practicing in the state, an expansion in California medical school capacity could result in a much needed increase in the physician supply. If funding for capacity expansion were tied to increasing the number of graduates pursuing primary care – and programs were held accountable – there could be a meaningful impact on the number of primary care physicians, particularly if primary care residencies are sufficiently increased and financial incentives for practice in primary care are also strengthened.

While there are significant political and financial barriers to expansion of public medical school capacity in California, it is an important strategy to actively explore now, given its potential long-term benefit and the time required to implement such expansion. Capacity expansion should be considered as part of a California strategic plan or policy agenda targeted at systematically meeting statewide and regional primary care workforce needs.

Expansion of medical school capacity, as well as increasing the number of nursing and physician assistant graduates who pursue primary care, would increase the potential for California to accelerate growth of its primary care health workforce. Interviewees noted that there are thousands of college and post-baccalaureate students in California who are interested in becoming physicians and other health providers. A growing number are from underrepresented groups and underserved regions. A more intentional, large-scale focus on targeting and supporting these prospective students and students already in health professions schools to pursue primary care offers the highest potential short-term yield for addressing primary care workforce needs in CCHCs. There are hundreds of programs on California State University (CSU), University of California (UC), private, and community college campuses that support promising, diverse students to pursue health careers. For example, the Health Careers Opportunity Program at CSU Fresno, Biology Scholars Program at UC Berkeley, and Medical Scholars Programs at UC Davis and UC Riverside support undergraduate students, primarily from underrepresented or disadvantaged backgrounds, to succeed academically in pre-health majors and pursue health careers. Student health clubs, like Chicanos in Community Medicine at UC Los Angeles and Black Students in Health at UC Berkeley, have hundreds of students interested in health careers. Enrichment opportunities such as the Summer Medical and Dental Education Programs, Health Career Connection, COPE Health Solutions, and San Francisco State Summer Science Institute have a growing number of students who have a mission to serve their communities and could be promising candidates for primary care careers. What is missing and needed are more targeted, large-scale efforts to recruit and prepare students for primary care careers and service in community health centers. CPCA, regional consortia, and CCHCs could strengthen and increase the scale of formal partnerships with these programs. These partnerships could be highly productive even without additional educational capacity.

Another immediate opportunity to significantly increase the number and diversity of California students as part of the primary care workforce is expanded partnerships between CCHCs and health career pathway programs. Health career pathway programs provide K-16 youth from local communities with academic, career, and mentorship support to pursue health careers. Pathway programs partner with local employers to provide students with real world exposure, experience, and work-based learning. There are many pathway programs in California, such as the Doctors Academy in Fresno and FACES for the Future in San Diego, that have a proven

track record at supporting low-income students from local communities to successfully pursue primary care careers.

California is experiencing an unprecedented large-scale, rapid expansion of health career pathway programs. The Career Pathways Trust Program administered by the California Department of Education has invested \$500 million of state funds over the past two years in building K-14 career pathways in regions throughout California. Many regional programs have a focus on health careers and are seeking partnerships with local providers for work-based learning. In addition, the James Irvine Foundation, The California Endowment, The California Wellness Foundation and other funders are investing millions in K-16 health career pathway development. There is a large-scale opportunity for health centers to partner with these initiatives, which also include area health professions schools, to strengthen their primary care workforce and pipeline.

The combination of growing challenges, thousands of Californians interested in health careers, and millions of dollars being invested in health career pathways, offers CCHCs and health system partners an opportune time to take action to build a system for primary care awareness and education.

Our key informant interview findings and research on practices in other states suggest the following recommendations for increasing primary care awareness and education to strengthen the numbers of graduates pursuing primary care and practicing in community health centers:

Recommendations

- 1. Promote “Primary Care for a Healthier California” media campaign.** The campaign could promote primary care as vital to healthcare access, quality, and cost, and to community health. It could also promote a range of careers as innovative, personally and professionally rewarding, and create a vision of growing our own California workforce. It could emphasize the danger of growing shortages and prominently feature the voice of the consumer and providers. A priority focus could be on recruitment of the future primary care workforce for CCHCs. The campaign would target the public, businesses, and K-16 and health professions school students, particularly those from underserved regions and underrepresented groups. It could use lessons learned from the 2010 Johnson and Johnson funded Nursing Campaign which had a significant impact on recruitment into nursing and the current Robert Wood Johnson Foundation – American Association of Retired Persons Future of Nursing Campaign.
- 2. Establish a “Grow our Own” California Primary Care Workforce Initiative through formal linkages with kindergarten through health professions school regional health pathway initiatives.** The initiative could be connected to the primary care promotional campaign described in recommendation number 1. Dozens of regional health pathway initiatives are being implemented throughout California over the next 3 years with substantial funding and accountability. CPCA, regional consortia and CCHCs could work with regional health pathway programs to promote primary care awareness, provide exposure and training opportunities, and offer pathways to employment. By exposing students to health centers and primary care early on and maintaining relationships with them as they advance in their pursuit of health careers, CCHCs can influence more local, place-committed students to get trained in primary care and be employed by area health centers. Partnerships also need to have a focus on students already in health professions schools who can be employed in CCHCs in a short period of time. The following strategies could be part of a “Grow our Own” Campaign:
 - Develop a statewide database of primary care interested students for tracking and support. Utilize it to create an online community and promote programs, paths, and opportunities for students. Provide continuous engagement to inspire and retain primary care career interest and support education and career advancement.

- Develop partnerships between CCHCs and health training programs to provide targeted exposure and support for students from their region to successfully pursue primary care. Exposure would begin in high school with intensive support provided from freshman year in college through health professions education, residency, and practice entry (like the UC Davis Medical School Prep Medico for Latino students in partnership with Kaiser Permanente). Pilot in selected regions and professions in partnership with UC and CSU.
- Secure public and private funds to strengthen CCHC capacity to provide work-based learning opportunities for K-16 health pathway students and clinical rotations capacity for students in health professions schools.
- Increase CCHC partnerships and programs with Osteopathic Medicine schools that produce more graduates that pursue primary care and serve in underserved communities.
- Expand CCHC partnerships with nursing and physician assistant programs to provide more exposure, rotations, and post-graduation employment opportunities.
- Strengthen the pipeline of people from underrepresented backgrounds completing UC, CSU, and Community College health training to employment in CCHCs. Invest in regions where the documented need is greatest.

3. Develop formal, large-scale partnerships between CPCA, regional consortia, and CCHCs with programs that effectively support undergraduate, post baccalaureate, and health professions students to pursue primary care. One of the highest yield strategies for strengthening primary workforce in the near term is more targeted efforts to recruit students already far along in their education, beyond K-12, to pursue primary care and work in CCHCs. This can be a primary part of a “grow our own” strategy in recommendation number 2 or pursued as a separate strategy. Students already in college, post baccalaureate programs, or health professions school can be influenced and supported to pursue primary care and can become employed in CCHCs within a relatively short period of time. Interviewees suggested that CCHCs and other providers may not be taking full advantage of this potential talent pool. While capacity constraints and costs of offering opportunities on top of current shortages are a barrier, many CCHCs are already involved in these partnerships. Examples include: CAFP Future Faces of Medicine, Physicians Medical Fellowship, Health Career Connection, Area Health Education Centers, Latino Medical Students Association, and Mi Mentor. To make meaningful progress to increase primary care workforce, these and new partnerships need to be expanded through the following strategies:

- Secure private funding for paid opportunities for students to gain primary care exposure, experience, and mentorship within health centers and to fund necessary infrastructure within CCHCs.
- Develop statewide and regional partnerships at sufficient scale to impact workforce needs.
- Provide primary care-related experiences and jobs for students in and post college and maintain ongoing relationships to support health professions school entry, completion, and return to primary care CCHC practice.
- Partner with health professions schools and residency programs to support student entry, funding, and support for completion and continued primary care interest.
- Leverage Song-Brown requirement for funded residency programs to have formal linkages with local health pathway initiatives. Require funded programs to have larger scale, targeted programs focused on recruitment and support of area undergraduate pre-health students to pursue primary care, rather than the current dominant focus on K-12. They should also include formal partnerships with CCHCs as part of the strategy. Secure funding for pilots between health centers and residency programs linked to regional health pathway initiatives. Explore the potential for Steven M. Thompson Loan Repayment Program and State Loan Repayment Program to have more formal linkages with CCHCs.

- 4. Increase primary care emphasis and capacity in California medical schools with a priority focus on enrolling residents from underserved regions.**
 - Advocate for funds to expand UC PRIME Programs. Link funding to targeting candidates committed to primary care practice in underserved areas, particularly those from underserved California communities and with needed cultural and linguistic skills.
 - Support stabilization and increased enrollment in UC Riverside, School of Medicine.
 - Advocate for expanded enrollment at other existing public medical schools, particularly those that produce graduates for underserved regions.
 - Develop a program that provides preferential consideration and funding for students who are from underserved rural areas and who contractually commit to primary care practice or underserved specialties and regions in California.
 - Advocate for public medical school accountability for reporting on and achieving target goals for graduates pursuing primary care and service in medical shortage regions.
 - Advocate for state funding preference to health professional schools that meet or exceed target numbers of graduating students in designated primary care specialties.
 - Increase the number of California students who are accepted to California public medical schools who commit to pursuing primary care and/or underserved communities.
- 5. Pilot accelerated primary care medical school and residency programs to reduce training program time and costs (like the new Accelerated Competency-based Education in Primary Care Program at UC Davis, in partnership with Kaiser Permanente).** Link program funding and accountability to production of graduates to pursue primary care in underserved regions.
 - Explore development of accelerated BS-MD training programs to support California students who want to practice primary care and reduce the cost and length of training. There are over 18 accelerated programs nationally including programs in Texas, Pennsylvania, and Rhode Island.
- 6. Increase training capacity and residency opportunities for students and recent graduates from RN, NP, and PA programs to practice in CCHCs.** Secure funding for CCHC infrastructure to coordinate the placements.
- 7. Establish an endowment within an appropriate entity using public and private funds to provide scholarships for medical, nursing, or PA school for students from underserved regions in California who contractually commit to primary care practice in an underserved region.** Funding would go directly to students tied to their pursuit of primary care training and practice.
- 8. Explore a potential partnership and initiatives with UC Office of the President to increase education and training for MDs, NPs, and PAs to pursue primary care.**

2. Residencies and Graduate Medical Education Funding

Overview

Almost all key informants indicated that expansion of primary care residencies in California should be a top priority. An expanded number of residencies would increase the pool of primary care providers in California. Research has clearly indicated that residency selection plays an important role in influencing where physicians practice. According to the AAMC 2013 Physician Workforce Data Book, California ranks first in the nation with 70% of residency graduates staying on to practice in the state. Unfortunately, with only 9.5 primary care residents per 100,000 persons, California ranks 32nd in the number of primary care residents and fellows per 100,000 population. By comparison, New York ranks 1st with 32.7 primary care residents per 100,000 persons. The difference is driven in part by the fact that the State of New York contributes state funds for Graduate Medical Education (GME) subsidies while the State of California does not contribute at all; however, it does provide some funding to support primary care residencies through the Song-Brown Commission. This limited funding for residencies has resulted in California ranking 41st in the growth of residencies since 2001 while our need for physicians continues to expand.

According to the California Academy of Family Physicians (CAFP), well-qualified new physicians who would like to train in the state instead must leave California due to limited residency opportunities, often not returning to practice in California (CAFP, 2015). In 2014, for example, Family Health Centers of San Diego Family Medicine Residency Program received 744 applications for six slots, the White Memorial Family Medicine Residency Program in Los Angeles received 600 applications for seven slots, and the UC San Francisco, Fresno Family Medicine Residency Program received 762 applications for 12 slots. Combined California residency programs train approximately 360 Family Medicine Residents per year. This is an insufficient amount to produce the number of primary care physicians needed (CAFP, 2015). According to the AAMC, California has the second oldest physician population in the country (AAMC, 2014). This, combined with expanded coverage and population growth, means that at current utilization rates California will need an estimated 8,243 primary care providers by 2030 (Petterson, Cai, Moore, & Bazemore, 2013). Additionally, as we consider the impact primary care residents have on meeting current primary care needs, it is important to note that residents provide essential primary care services while in training, estimated at 600 visits per year per resident (CAFP, 2015).

Prior to the Balanced Budget Act (BBA) of 1997, Medicare support of GME was open-ended and hospitals had a potent financial incentive to add new residency slots because each new position generated additional Medicare revenues. In response to concerns about an oversupply of physicians and increasing Medicare costs, the BBA capped the number of Medicare-supported physician training slots. Hospitals are free to add residents beyond their cap, but these trainees do not generate additional Medicare revenues. The cap on Medicare funding was set at each hospital's resident count in the cost report period ending on or before December 31, 1996. With this step, the geographic distribution of Medicare-supported residencies was essentially frozen in place without regard for future changes in local or regional health workforce priorities or the geography or demography of the U.S. population (Eden, Berwick, & Wilensky, 2014).

California receives \$9.5 billion in GME funding annually. The Medicare portion has been frozen since 1997 despite California's 20% population growth. Medicare GME payments are based on statutory formulas that were developed at a time when hospitals were the central – if not exclusive – site for physician training. The rules continue to reflect that era. GME monies are distributed primarily to teaching hospitals, which in turn have fiduciary control over the funds. This creates a disincentive to training in non-hospital settings where most residents will eventually practice and most people seek health care services. Because the Medicare formulas are linked to Medicare patient volume, the system disadvantages children's hospitals, safety net hospitals, and other training sites that care for mostly non-elderly patients. Medicare-supported training slots are frozen where they existed almost two decades ago, perpetuating inequities in the geographic distribution of training slots and

ignoring changes in the geography and demography of the U.S. population. Medicare GME funding is formula-driven, without accountability for national health care needs or priorities (Eden, Berwick, & Wilensky, 2014).

Medicaid regulations do not recognize specifically – although the Centers for Medicare & Medicaid Services (CMS) does allow – GME as an approved component of inpatient and outpatient hospital services. If a state Medicaid program opts to cover GME costs, the federal government provides matching funds. States have multiple mechanisms for distributing Medicaid funds for GME. They can distribute these funds as add-ons to inpatient or outpatient visit payments or by incorporating GME support into Medicaid managed care capitation rates. States have considerable flexibility in how they use Medicaid funds for GME purposes, including which professions and which settings and organizations are eligible to receive support for health professions education. In 2005, for example, all but three state Medicaid programs provided GME support. Since then, several states have ceased – or reported that they are considering ending – Medicaid GME funding because of budgetary constraints (Eden, Berwick, & Wilensky, 2014).

California does not provide GME funding but does allocate funding and secure other funds for primary care residencies through The California Song-Brown Residency Program. Song-Brown was established in 1973 to provide financial support that contributes to increased placements of family practice residents, nurse practitioners, physicians assistants, and registered nurses in medically underserved areas. A Song-Brown Commission of practitioners and academicians are intended to provide ongoing input that informs the design and implementation of the program.

According to CAFP and key informants, primary care residency programs in California are threatened with millions of dollars in funding cuts from federal, state, and private sources at a time when primary residency expansion should be a top priority (CAFP, 2015). The cuts include:

- The five year Teaching Health Center (THC) GME program which brought more than \$16 million to California residency programs was set to expire in 2015. Fortunately, an additional two years of federal funding was infused through H.R. 2 (2015). However, the funding does not cover total program cost nor address long term need.
- The Primary Care Residency Expansion, which awarded more than \$18 million in grants to California to create new resident positions in primary care residency programs, is ending.
- A 3-year, \$21 million California Endowment grant supporting the Song-Brown Program expires in 2016.
- In 2014, the Legislature appropriated an additional \$4 million from the California Health Data and Planning Fund, but it was only a one-time investment.

One of the key workforce provisions of the ACA was the creation of the Teaching Health Center GME program. The program is a 5-year initiative intended to expand the number of residents in primary care medicine and dentistry training in community-based, ambulatory care settings. Eligible GME programs include family medicine, internal medicine, internal medicine-pediatrics, obstetrics and gynecology, psychiatry, geriatrics, and general and pediatric dentistry (HRSA, 2011).

The number of THCs and THC physician trainees has grown steadily since 2011, when the first HRSA awards were granted. By 2014, more than 550 residents were being trained in 60 THC programs across 27 states and the District of Columbia (Ku, Mullan, Serrano, Barber, & Shin, 2015). After completion of their training, residents are expected to provide care for almost one million patients per year. Three-quarters of the THC residency programs are sponsored by nonprofit community health centers and the rest are at similar community-based settings. Appropriations were authorized only from FY 2011 through FY 2015 and reconsidered by Congress each year during that period. The long-term prospects of the program are uncertain. As a result, existing or prospective THCs may find it difficult to recruit future trainees without some assurance of future funding, because it takes 3 or more years to complete a residency program (CAFP, 2015)

The Geiger-Gibson report commented that it is too early for a full assessment of the THC program. Because the program began in 2011, and three years are usually needed to complete a residency, only a small share of the total number of residents have had the time to complete their training (2 classes completed in 2013 and 11 classes completed in 2014). A more comprehensive evaluation is in progress. However, preliminary results from the Geiger-Gibson study demonstrate positive and promising results and signal why this innovative model of graduate medical education should continue to be developed and tested (Ku, Mullan, Serrano, Barber, & Shin, 2015):

- Almost all (91%) of THC graduates remain in primary care practice, compared to less than one-quarter (23%) of traditional GME graduates.
- About three times as many THC graduates (76%) choose to practice in underserved communities, compared to 26% of traditional graduates.
- Almost four times (21%) as many THC graduates enter practice in rural areas, versus 5% of traditional graduates.
- Forty percent (40%) of THC graduates go on to practice at CCHCs, compared to 2% of traditional graduates.
- Most (66%) of the initial THC graduates continue to practice in the states where they were residents. Thus, they usually remain in the areas that mustered resources for the residency programs, building workforce capacity in those local areas.

Given these impressive results, securing sufficient funds to sustain and potentially expand THCs is an important consideration in statewide and regional strategies to build primary care capacity.

Findings

Key informants emphasized the importance of sustaining and expanding primary care residencies in California with a strong emphasis on those in community health centers and underserved regions.

The most significant concerns expressed by key informants were related to the critical need to sustain and expand funding for primary care residencies, particularly in outpatient settings and underserved communities. The need to sustain the funding provided by The California Endowment through the Song-Brown Commission was mentioned by several interviewees and the most urgent need.

Key informants also suggested that a more robust role for Song-Brown Commission members may be appropriate in setting goals and the identification and education on policy options that advance the stated purpose of the program. It was also noted that the issue of uncertainty in terms of not only where you will go but also whether you will receive support is a significant challenge for primary care residency candidates.

One key informant noted that health professions education institutions in other states (particularly in the eastern U.S.) are aggressively pursuing inter-professional training, in contrast to California schools, due in part to scope of practice/turf battles. Inter-professional education occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes. Once students understand how to work inter-professionally, they are ready to enter the workplace as a member of the collaborative practice team. This is a key step in moving health systems from fragmentation to a position of strength (World Health Organization, 2010). There is a need to assess what is happening in California, and explore strategies to strengthen this form of education.

Key informants noted the relative paucity of internationally-trained medical graduates (IMGs) in California, particularly when compared to states such as New York. They identified this as an important avenue to increase the number of bilingual, Latino physicians. Mexico was identified as a good source, as their medical schools

are producing many physicians, but there are insufficient opportunities to practice in Mexico. Mexican-trained physicians who complete a residency in the US and pass their boards can be a source of primary care physicians for California. Medical school graduates from Puerto Rico were also identified as a promising candidate pool, with five medical schools, and students graduate as U.S. physicians.

Many interviewees mentioned the International Medical Graduate (IMG) program at UC Los Angeles as a best practice program for training medical graduates from Latin America to practice primary care in California. Participants are required to practice primary care in an underserved community upon graduation. The program graduates 6-8 residents per year and is solely funded by private philanthropy. Funding includes support for families while graduates are preparing for their boards. There is a 100% board pass rate in the IMG program and graduates are highly recruited and valued by employers. Some interviewees recommended replication of the IMG Program on other UC campuses.

Recommendations

1. Increase the number of primary care residencies in California with a priority focus on residencies in community health centers and medically underserved regions.
2. Advocate for infusion of public and private funds to the Song-Brown Program to support primary care residencies and offset anticipated funding reductions. Focus increased for residencies in documented underserved areas for place-committed individuals.
3. Implement better tracking of impact made by Song-Brown, State Loan Repayment Programs, and other programs to make the case for further investment.
4. Expand and clarify the roles for members of the Song-Brown Commission in the development of policy options that increase primary care capacity and diversity in urban and rural California communities.
5. Explore creation of a Primary Care Training Consortium in partnership with California primary care residency programs (similar to the New Mexico Primary Care Training Consortium), potentially a part of Song-Brown.
6. Develop a multi-year strategic plan for expansion of primary care residencies and recruitment of California students. The consortium could recruit students from underserved California communities to pursue primary practice.
7. Advocate for State GME funding to supplement Federal funding. Explore the potential for a model similar to New Mexico's in which Federally Qualified Health Center (FQHC) sponsored primary care residency development is included in the base Medicaid funding budget and FQHC payment system.
8. Explore Development of a Graduate Medical Education Council in California (similar to the Utah Medical Education Council). A Council could pursue more innovative and coordinated approaches to GME allocation linked to changing workforce priorities. Alternatively, Song-Brown Commission could take on a similar role to the Utah Council.
9. Provide the compelling evidence case (e.g., comparative funding for residencies) for policies that increase financial subsidies for family practice residency rotations in community health clinics. Options should include consideration of Medicaid subsidies.
10. Explore replication of the International Medical Graduate (IMG) Program at UC Los Angeles, School of Medicine, which trains international medical graduates to go into primary care practice and has a strong track record.
11. Partner with and mobilize the 51 California family medicine residency programs for collective action. Residency programs can be found at <https://residency.familydocs.org/>.

3. Primary Care Transformation and Finance Innovations

Overview

The passage of the Affordable Care Act and the shift in financing incentives from volume to value creates an imperative for health care provider organizations to build their capacity to provide primary care and preventive services. Health care leadership will increasingly assume risk for health conditions that are primarily driven by factors outside of clinical service delivery. While the force of the imperative varies in different markets, there is strong motivation for CCHCs, given their focus of services in communities where health inequities are concentrated, to demonstrate a capability to cost-effectively serve these populations. In many ways, CCHCs are well positioned to play a significant role in the transformation of the health care field, given their long-term presence in low-income communities, strong working relationships with diverse stakeholders, and understanding of the social determinants of health.

In this context, there is growing awareness of opportunities to align population health management, community health improvement strategies, and community development investments in low-income communities. There is approximately \$150 billion per year in financial institution investments,¹ federal subsidies, and increasingly, program-related investments (PRIs) of private philanthropy in affordable housing, grocery stores and other healthy food financing options, child care centers, and CCHCs, among other forms of local physical infrastructure.

All of these investments build momentum for community revitalization and expand access to essential services. Dignity Health is among the national leaders in their engagement in these enterprises, and other organizations such as Kaiser Permanente are rapidly building capacity for engagement. In addition to exploring ways in which programs and services of hospitals can be aligned with community development investments, Dignity Health has allocated approximately \$100 million of their investment portfolio for direct investments in these community development initiatives, often making pre-development loans that provide essential support during the early stages of the process.

There are substantial opportunities for CCHC capacity building through these investment and program alignment initiatives that could include not only expansion of physical infrastructure but also diversification of services, data systems development, and other forms of capacity building. This expanded capacity would contribute substantially to the ability of CCHCs to partner with health systems in improving population health, as well as enhance their ability to recruit and retain PCPs. In addition to the engagement of forward thinking health systems as partners in the design and financing of inter-sectoral approaches to health improvement, it will be increasingly important for CCHCs to build working relationships with community development corporations, community development financial institutions, and other key stakeholders who play an important role in facilitating and aggregating Community Reinvestment Act-related loans that improve physical and social living conditions in neighborhoods.

Findings

Primary care transformation was the major focus of key informant comments. Most expressed that given the major barriers to producing a supply of providers, CPCA and CCHCs should devote significantly increased and accelerated focus on primary care transformation. Informants acknowledged the misalignment between FQHC reimbursement and alternative methods of managing primary care demand and access. Millions of dollars are being invested nationally and in California, including major CMMI transformation grants. The UCSF Center for Primary Care Workforce Excellence and Center for Care Innovations are also leading, innovating, and spreading primary care transformation efforts in California and nationally. Informants felt that CCHCs should take greater advantage

¹ Includes approximately \$130B in loans from financial institutions in fulfillment of their Community Reinvestment Act obligations, as well as between \$20 and 30B through a variety of federal funding incentives such as Low Income Housing Tax Credits, New Market Tax Credits, and Community Development Block Grants.

of these programs and resources as well as pursue more collaboration with health systems and medical groups to advance primary care transformation. One key leader of national transformation efforts that includes health systems and health centers commented: “the issues and solutions are the same; there should be more collaboration and shared learning.”

Implementation of CPCA's innovative payment reform pilot, Alternative Payment Methodology (APM), legislated by California Senate Bill 147, is a major mechanism for CCHCs to advance primary care payment and delivery transformation. This pilot, with its capitated payment preparedness program (CP3), will accelerate and provide support for implementation of payment incentives aligned with development of alternative encounters and team-based models to promote improved quality, access, and health outcomes. It may result in more efficient and effective use of all primary care team members and less reliance on primary care physicians. While CP3 includes resources and technical assistance to support implementation, additional resources and partnerships should be developed to focus on accelerated and expanded primary care transformation. While payment reform is very promising, it will take years to fully experience the value, so CCHCs should also increase their partnerships with health systems and medical groups.

Health systems, medical groups, and associations, such as Pacific Business Group on Health, have major primary care innovation and redesign initiatives underway. Many are investing millions of dollars and have already implemented major transformations in primary care that have demonstrated improvements in capacity, efficiency and impact. One key informant, who has led large-scale national and California programs to transform primary care, indicated that “the issues and solutions are similar in health centers and private settings. Health Centers that have been part of collaborative transformation efforts have benefited from share learning and training with health systems and medical groups and have provided valuable innovations and lessons learned to others.” Informants encouraged CPCA, regional consortia, and CCHCs to fully embrace collaboration with health system partners and engage in more partnerships, training, and pilots to accelerate transformation for all.

Another area of critically important primary care transformation and specialized skill of CCHCs in this regard involves the engagement of CHWs, or promotores, as part of team-based care delivery. CCHCs engage CHWs or promotores in a broad spectrum of services and activities, ranging from targeted chronic disease management to community organizing, as well as advocacy around issues such as landlord compliance with housing ordinances for tenant exposure to indoor environmental hazards. With an ongoing presence in these communities, CHWs or promotores are in a unique position to bring consideration of the social determinants of health, as well as a sensitivity to cultural and socio-economic dynamics into care delivery and the leveraging of external support systems.

CCHCs are also skilled in optimizing the engagement of primary care team members other than physicians, including nurse practitioners, physicians assistants, and other allied health professionals. CCHCs in rural areas in particular have learned from necessity to support all members of primary care teams to engage at the top of their scope of practice, and as a result are well-positioned to inform other provider organizations in the design of innovative practice strategies and inform the development of public policies that better mobilize the skills of all health professionals.

Current linkages between CCHCs and health systems are limited and serve as obstacles to the development and diffusion of innovations that could and should flow in both directions. In a statewide California assessment of the roles and contributions of CHWs or promotores to the Triple Aim objectives in 2013, none of the CCHCs could quantify the returns on investments/cost savings, primarily because they did not have sufficient access to emergency department (ED)/hospitalization data that would enable them to determine the total cost of care for patients.

One recent innovation that offers substantial potential for increased innovation and the alignment of hospitals and CCHCs is the development of a health information exchange (HIE) in San Diego. San Diego Health Connect is an HIE involving 21 of the 23 hospitals (excluding Prime Hospitals), and 14 of the 16 CCHCs. It is a federated model, in that data is not stored, but members can query and configure findings for patients in real time. The system includes real-time alerts when patients come into EDs, and they are currently working on a common referral system. Key factors in the movement towards an HIE are the fact that San Diego is somewhat geographically isolated from the rest of the state and has some history of more integrated approaches to health care and health improvement. There are 4 working groups that meet on an ongoing basis for joint problem solving and the design of innovations. They currently have a CMMI grant focusing on reducing heart attacks and strokes by 50% in the next two years.

Building seamless regional data systems that link providers and payers while supporting the diffusion of innovations in care delivery and community health improvement offer immense potential to improve population health, reduce costs, and leverage the differential expertise and experiences of hospitals, CCHCs, and payers. In the process, working relationships can be established to similarly coordinate efforts to build primary care capacity at the regional level, a much more cost-effective and sustainable approach to health workforce development.

While CCHCs are faced with acute shortages of PCPs in the immediate future, mainstream providers and payers are also increasingly pressed by a lack of primary care capacity. This increases competition with CCHCs, both for new medical residents and for practicing physicians who may be approaching burnout. One Kaiser Permanente key informant noted that where they may have had 5-6 applicants for primary care physician slots in the past, they are lucky these days to get 1-2 applicants for a posted position.

An important near term strategy to expand primary care capacity in community clinics could be a more systematic engagement of PAs working under the supervision of primary care physicians. California allows up to 4 PAs to work under each supervising primary care physician, but some medical malpractice groups will only allow 2 PAs per physician, if in a high volume, high needs setting. A national analysis is needed to assess the benefits and costs of engaging PAs in other states, some of which allow as many as 6 PAs per supervising physician. A more robust evidence base would help make the case for legislative action.

The passage of California Senate Bill 494 in October 2013 offers support for expanded engagement of PAs, authorizing the addition of 1,000 enrollees (beyond a 2,000 base) for each PA supervised by a primary care physician. Authorization requires an evaluation of location, hours, language capabilities, and PAs. Thus far, there has been no coordinated use of this legislation to expand the engagement of PAs.

Recommendations

1. Secure additional investment and partnerships to accelerate and advance primary care transformation within CCHCs. Provide additional funds for pilot projects, training, technical assistance, and shared learning.
2. Advocate for establishment of an Institute for Primary Care Transformation similar to the Connecticut Institute for Primary Care Innovation.
3. In lieu of public policy changes, explore regional collaboration and application of transformation innovations among CCHCs and health systems.
4. Review the practices of medical malpractice companies at the national level to identify innovations for potential replication (e.g., some companies support a 4/1 PA-MD ratio).
5. Develop regional strategy for CCHC training and deployment of CHWs and clinical team members as part of skills/technology exchange with health systems.

6. Develop investment strategy with hospitals to support pre-development financing of FQHC infrastructure expansion (including enhanced information systems) that helps community development financial institutions (CDFIs) secure larger scale Community Reinvestment Act (CRA) related investments.
7. Explore the development of ACO models where mainstream providers such as Kaiser Permanente could provide specialty care for clinics with global payment models.
8. Document the San Diego Health Connect model (including Triple Aim benefits) as a lever to secure support for near term replication/piloting in at least two other sites (one rural) through combination of public sector funds (e.g., 1115 Waiver) and private philanthropy.
9. Partner with CHA, CAPA, IHA, and key payers to build a compelling case to CMA for PAs and NPs to practice at the top of their scope, focusing on addressing tangible concerns.
10. Explore new partnerships among CCHCs and private physician groups and health systems for staffing and practice innovations:
 - Explore partnerships with private practice physician groups in underserved areas who may be willing to share staffing or contract for services.
 - Develop partnerships with hospitals and health systems for investment in primary care capacity development, shared staffing, and provision of specialty care service.
 - Promote innovative practices from CCHCs and raise funds for technical assistance to support adaptation in other clinics.

4. Recruitment and Retention

Overview

Recruitment and retention of primary care providers is a process that begins with early exposure and mentoring of youth, is reinforced through participation as part of clinical training, and is sustained by creating supportive systems in work and the community. Many, if not most, PCPs choose to work in CCHCs as an expression of a commitment to serve residents in low and moderate income communities.

Interviewees noted that there is a lack of understanding among many employers about the needs, desires, and interests of recent graduates. More current and in depth research should be completed and shared about preferences, barriers, and corresponding recruitment strategies.

Recruitment of primary care professionals needs to be done systematically from K-12 through health professions schools and practice. The recommendations outlined in the awareness and education and residency sections are part of a comprehensive systems approach. There also needs to be accelerated and expanded efforts to recruit and retain new and existing health professionals.

Findings

Intensified competition from health systems was frequently cited as a major barrier to CCHC recruitment and retention. Large health system employers such as Kaiser Permanente are often cited as aggressive competitors in the recruitment of primary care providers, offering candidates a combination of higher salaries, support systems, and manageable schedules that are not typically available through CCHCs. In an interview with Kaiser Permanente leadership, it was noted that the market for primary care providers has continued to tighten as coverage has expanded, driving up salaries and dramatically reducing the number of applicants for open positions.

Key informants expressed the importance of sustaining and expanding loan repayment programs and increasing their effectiveness at incenting practice in CCHCs and underserved areas. CPCA, with a broader coalition, can advocate for changes in federal, state, and private loan repayment options. There are many examples of promising programs throughout the country that can inform California strategies.

The National Health Service Corps (NHSC) is often cited as an important resource in expanding primary care providers in CCHCs. Approximately \$283 million in NHSC funding was provided in 2014 for over 9,200 PCPs to work in 4,900 settings across the country. One challenge cited by a key informant, however, is that residents have limited influence over where they will be placed, and may be sent to communities other than where they have family, roots, and a commitment to serve.

There is strong evidence that medical residents are interested in practicing in CCHCs, but there are a variety of clear obstacles cited by key informants, including:

- Increasing debt and lack of reliability upon loan repayment programs
- Disparities in income (relative to mainstream provider organizations)
- Current cohort of residents have the passion (e.g., social justice), but are more concerned and attentive to the concept of a balanced lifestyle than prior cohorts
- CCHC systems and infrastructure to support primary care practice are perceived as less advanced than is available to providers in health systems and medical groups
- Insufficient access to specialist colleagues and referrals

Another key informant suggested that it is “somewhat of an obsession” to focus only on differentials in salary and benefits for PCPs between CCHCs and hospitals, noting that a key issue is a difficult work environment with complex patients and processes and limited support. As such, the issue is equally about quality of life (i.e., job and family). The key informant cited the comments of another PCP working in a CCHC setting, who indicated that he was frustrated that he couldn’t do or ensure that the kind of follow up that is needed is carried out – in essence, he is unable to pursue his passion. Others commented that insufficient specialty access and support is another major barrier to primary care providers practicing in CCHCs. This is an important area for further development of partnerships with health systems and other providers and use of tele-health.

These comments were reinforced by another key informant who cited a strong correlation between the financial strains of PCPs (and the CCHCs who engage them) and limited ability to effectively implement the kinds of systems redesign that is necessary in the current environment. For CCHCs, the demographic challenges they confront serves as an overlay to these systems issues.

Large health systems and medical groups have the ability to direct substantial resources to technological advancements and other support systems that are generally not available in CCHCs. One key informant emphasized that recent primary care graduates are in an optimal position to take advantage of new technologies, and are naturally frustrated that such innovations are often not available in CCHC settings – this serves as a powerful incentive for PCPs to choose larger employers.

Kaiser Permanente has key internal leaders who see the opportunity and imperative to work more actively at the regional level in supporting a more shared approach with CCHCs and other partners regarding technology development and data sharing. Moving forward, this will require thoughtful selection of specific regions where there is substantial potential, and modeling of collaborative strategies. It was noted that the issue of workforce development, while critically important, is only one dimension of a larger issue of how to balance competitive dynamics with an understanding of the benefits of alignment.

Some informants proposed exploration of a tax benefit for providers who work in underserved settings and communities. There were comments that this would be cheaper than raising Medi-Cal rates for all providers.

Some informants suggested that the California Department of Health Care Services (DHCS) expand its J1 Visa Waiver Program. DHCS can currently waive the two-year home residency requirement for up to 30 foreign trained physicians per year. The program has a priority emphasis on primary care physicians. Increasing the number of waivers granted each year for primary care physicians that practice in CCHCs and medically underserved areas could enhance provider recruitment and accelerate their ability to practice in needed areas. Other states, including Massachusetts, Arizona, Alabama, and states in the Appalachian Region, have pursued this strategy. The Conrad State 30 Program allows each US state health department to utilize the J1 Visa Waiver Program (Rural Health Information Hub, 2014).

Recommendations

- 1. Sustain and expand loan repayment funds and provisions that incentivize new and existing providers to practice in CCHCs. Increase preference for California residents.**
 - Establish clear parameters for scholarships that support practice in CCHCs with a) early commitment of resources, and b) agreement to practice in desired setting (assuming the setting and support systems meet criteria).
- 2. Secure investment for a new loan repayment program administered by CPCA for CCHCs. Model it after the successful Massachusetts League of Community Health Centers that has increased recruitment and retention of physicians, nurse practitioners, and physician assistants.**
- 3. Establish Special Projects Program also administered by CPCA for CCHC providers to implement projects aligned with their interests and CCHC priorities to incent retention and satisfaction. Model after the successful Massachusetts League of Health Centers Program.**
- 4. Seek legislation to establish a fund to support capacity building for support systems that encourage primary care practices in CCHCs. Could include technology investments (EHRs, interoperability with mainstream providers/payers, telemedicine), team-based care innovation technical assistance, research and evaluation, etc.**
- 5. Where appropriate, establish medical groups to contract with health centers as a mechanism to make it attractive to recruits because it can offer strengthened stability, support, and benefits of a group practice model.**
- 6. Advocate for National Health Service Corps and loan repayment programs in California to provide more discretion for candidates to practice in underserved areas they prefer.**
- 7. Explore options for expanding the number of primary care physicians granted home residency requirement waivers through the J1 Visa Waiver Program by the California Department of Health Services.** Increasing the number of waivers could facilitate the ability to recruit providers in medically underserved areas and accelerate their ability to practice.
- 8. Consider advocacy for a “tax credit” or benefit for providers who practice in underserved regions of California as has been explored in some other states.**

5. State and Regional Strategies and Infrastructure

Overview

Successful implementation of solutions and systems change to meet primary care workforce needs at statewide and regional levels requires a more coordinated, multi-year strategic approach. Other states have established coordinating centers, coalitions, or councils that have taken on the responsibility for implementing primary care workforce plans and solutions. These entities can also monitor the ongoing changes in delivery models and workforce needs and make adjustment to plans. Sufficient coordinating infrastructure with staff that have the capacity, expertise, and relationships to develop policy, system, and program solutions is also needed. Data and reporting systems to monitor supply and demand and track the impact of programs are critical. Coordinating entities can also lead well-executed campaigns to educate key stakeholders about primary care workforce needs and mobilize advocacy. Coordinating entities can also be accountable for achieving the intended results of action plans and investments and for meaningful systems change. They can facilitate greater alignment among payers, providers, educational institutions and health training programs to respond to emerging priority workforce demand and supply needs.

There is also a need to sort through issues at a higher level – what we need to do at the aggregate level. There is a need, for example, to look into the regulatory issues on telemedicine and understand how to expand investment and focus on resources for specialty care in rural settings. There is a clear need to bring higher education and employers together.

Findings

All key informants interviewed indicated that the need to address primary care workforce challenges is becoming increasingly important and urgent. There is significant concern about growing shortages, maldistribution and capacity challenges and their corresponding impact on access, quality, and cost. The need to increase the number and distribution of culturally and linguistically responsive providers from our increasingly diverse communities is also a growing concern.

Successfully addressing these complex challenges will require the ability to execute immediate solutions, a multi-year sustained effort and continuous innovation. However, as one key stakeholder described and almost all others concurred, though it is “everyone’s to experience, no one in California ‘owns’ the problem and solutions.” More detailed and geographic-focused documentation and understanding of primary care workforce needs and problems is clearly necessary to determine potential entry points and potential returns on investment for diverse stakeholders.

There is also “not a great sense of how we fix it,” nor is there a “silver bullet.” As was also described, primary care workforce is “not just a policy issue, it’s an all hands on deck issue, much more about delivery system change required to increase primary care capacity.” Given the magnitude and complexity of the challenges, most key informants agreed that more coordinated, systematic strategies among all key stakeholders are required at the state and regional levels. There is also a shared perception that greater infrastructure and investment are required for successful strategy implementation and large-scale impact. The infrastructure could serve as the backbone for a multi-stakeholder collective impact approach at the state and regional levels through which a common agenda, shared measurements, communication systems, and mutually reinforcing activities are utilized to advance solutions.

A number of key stakeholder organizations expressed an interest in more in-depth, focused engagement with CPCA on the health workforce issues. One key informant observed that it appeared that engagement of California Hospital Association (CHA) on workforce issues has waned in recent years, and expressed strong interest in a more robust dialogue in the coming months.

There are substantial variations in dynamics, and configuration of health care stakeholders make it difficult, if not impractical, to forge agreements at the statewide level that drive collaborative agreements. At the same time, there are discussions and actions being taken at the state level that may lay the groundwork for increased collaboration at the regional level. For example, California Senate Bill 289 allows the California Department of Public Health to approve schools to train Clinical Laboratory Scientists (CLS) in preparation for licensure. Currently, hospitals have to spend between \$55,000 and \$100,000 to train a single CLS candidate before they can sit for licensure. California Senate Bill 289 creates an opportunity for hospitals to come together and design regional programs that serve all facilities.

Under the auspices of the CHA, senior industry leaders have also initiated conversations about the development of a joint fund to support the training of a variety of clinicians. One key informant cited Sutter Health's nursing training program as an example of leadership in the establishment of a regionally serving program. Another key informant suggested that CCHC leadership begin to participate in these conversations in the coming months in order to bring particular focus to PCP shortages and identify other areas of common interest.

It is important to note that there is variability in the willingness and experience of leaders in different regions to explore the opportunity for collaboration (resource sharing, program alignment, scaling) across competing providers, payers, employers, and educational institutions. It may be prudent to start with specific regions where there is some history of productive dialogue among competing health care organizations, in the interest of producing near term results that may provide the impetus for replication in regions with less relevant experience. Private philanthropic organizations such as The California Endowment and the California Health Care Foundation may be key resources in designing and supporting strategies that can identify tangible near term results.

Recommendations

1. Improve documentation and communication of primary care workforce problems and consequences.

Health employers, health professions schools, policymakers, advocates, and the public need a more clear and compelling understanding of:

- The source, magnitude, and trends related to primary care workforce problems.
- Geographic and health settings where the problems are, or will be, most severe.
- The impact of post-ACA demand on provider capacity and access.
- Supply challenges – CPCA needs better data on vacancies and must do a better job telling the story of the adverse consequences to patients and communities.
- The impact of competition for providers on health center capacity, access, and quality.
- When and where practice at the full current scope of practice is a viable solution and when and where scope of practice changes are required.
- How payment levels and misalignment of regulatory and reimbursement incentives impact potential solutions for more efficiently managing primary care demand.
- The consequences to patients, communities, businesses, and tax payers.

2. Establish shared measures and mechanisms for baseline reporting and ongoing monitoring of primary care workforce supply, demand, and production.

- Advocate for the Office of Statewide Health Planning and Development (OSHDP) and/or private sector stakeholder clearinghouse to generate reports on primary care workforce capacity and to make data available for analysis of problems and opportunities. Strengthen OSHDP's capacity and expertise for regular reporting and analysis.

- Focus priority attention on tracking primary care investments and their impact.
 - Provide semiannual reporting to the legislature on primary care workforce status, consequences, and corresponding actions taken.
3. **Develop state level and regional backbone organizations with the necessary expertise, capacity, and relationships to advance collaborative primary care workforce solutions with public and private stakeholders and funding sources.**
 - Develop and implement actions to address immediate priority challenges for the safety net and other providers.
 - Develop set of criteria and assess readiness for collaboration in regions across the state. Use results to select a sample of regions to accelerate efforts to date, and develop models for replication and scaling.
 4. **Develop a multi-year strategic plan for California to strengthen primary care capacity and access.**
 - Clearly define problems and corresponding solutions, goals, and required investment.
 - Identify priority issues and regions for targeted primary care investment.
 - Develop a road map for investments over time to build a comprehensive, large-scale system to strengthen the primary care workforce statewide and regionally.
 - Identify backbone organizations responsible for implementation and ongoing monitoring and reporting on progress.
 5. **Review policy options that create new opportunities to work around the prohibition on the corporate practice of medicine.** This may require the convening of a commission that brings primary care providers, payers, and employers to the table to consider options that create space for incremental improvements.
 6. **Expand the role of the Song-Brown Commission to monitor and recommend policy solutions to address primary care residency needs and ensure the capacity of OSHPD to staff it.** Organize with a greater focus on responding to industry workforce needs.
 7. **Develop formal ongoing relationships between CPCA and other key advocacy organizations, including California Academy of Family Physicians, California Hospital Association, California Medical Association (CMA), California Association of Physician Assistants, (CAPA) California Association of Public Hospitals and Health Systems (CAPH), and California Association of Health Plans (CAHP).** Form an inclusive broad-based coalition to focus explicitly on primary care workforce and access related policy solutions.
 8. **Explore the design of 2-3 regional pilots for collaboration among CCHCs, hospitals, and other providers that build on recent developments including pooling of funds for training, coordination of recruitment, and collaboration with academic institutions.**
 9. **Create a fund for investment in primary care workforce and redesign innovations that leverage health system investments with federal, state, and philanthropic sources.** Advocate for a "tax" and public source of sustainable funding.

Call to Action

Over the past decade many reports have been written about primary care challenges nationally and in California. The reports projected a significant need for additional primary care capacity and recommended innovative policy, practice, and delivery model solutions. In response, many key strategies and investments have been implemented that have resulted in important incremental change. However, as key stakeholders interviewed for this report expressed, further, more large-scale action, investment, and systems change is urgently needed to mitigate acute primary care capacity challenges and their health consequences for Californians. The need for near and long term practical solutions is most acute for CCHC's and other safety net providers and communities they serve but consequences are being felt by all stakeholders. CPCA commissioned this inquiry to be a catalyst for action and to fuel advancement of innovative solutions and partnerships that will meaningfully move the needle toward sufficient primary care capacity for all Californians.

Everyone needs to play a role in the solution. We encourage you to join with CPCA and others to prioritize and advance recommendations that can have immediate impact and start now to create long term systems change. The list of overarching recommendations on page 7 is a great place to start, as are the 5 sections of component-specific recommendations (pages 9-26). Included in those recommendations is development of statewide and regional coalitions, infrastructure, and partnership to implement coordinated, comprehensive, multi-year strategic plans and policy agendas to meet the growing primary care needs of our population.

This is your call to action to be a part of the solution. Now is the time!

Exhibit A

Key Informant Interviews

Key informant interviews were conducted with the following individuals:

HEALTH SECTOR EMPLOYERS

Raymond Baxter, PhD, Senior Vice President, Kaiser Permanente, Community Benefit, Research and Health Policy
Daniel Chavez, MBA, Executive Director, San Diego Health Connect
Hector Flores, MD, Co-Director, White Memorial Medical Residency Program
Don Hufford, MD, Chief Medical Officer, Western Advantage Health Plan
Winston Wong, MD, Medical Director, Kaiser Permanente, Community Benefit

HEALTH PROFESSIONS SCHOOLS

Janet Coffman, PhD, Associate Professor, University of California, San Francisco
Katherine Flores, MD, Director, University of California, San Francisco, Latino Center for Medical Education and Research
David Hayes-Bautista, PhD, Professor of Medicine, University of California, Los Angeles, School of Medicine
Fitzhugh Mullan, MD, Professor of Medicine and Health Policy, George Washington University
Cathryn Nation, MD, Vice President, University of California Office of the President
J. Nwando Olayiwola, MD, Director, University of California, San Francisco, Center for Primary Care Excellence

PROFESSIONAL AND TRADE ASSOCIATIONS

Theresa Anderson, MPH, Public Policy Director, California Academy of Physicians Assistants
Cathy Martin, Vice President, Workforce Policy, California Hospital Association
Leah Newkirk, JD, Vice President, Health Policy, California Academy of Family Physicians
Joan Pernice, RN, Clinical Health Affairs Director, Massachusetts League of Community Health Centers

HEALTH FOUNDATIONS

Sophia Chang, MD, MPH, Vice President of Programs, California Health Care Foundation
George Flores, MD, Program Manager, The California Endowment
Sandra Shewry, MPH, MSW, Policy Director, California Health Care Foundation

STATE GOVERNMENT

Ron Chapman, MD, Health Officer, Yolo County, Former Director California Department of Public Health
Adam Gray, Assemblymember, 21st District, Chair, Government Organization Committee
Katie Heidorn, MPA, Deputy Secretary, California Health and Human Services Agency
Ed Hernandez, MD, State Senator, 22nd District, Chair, Senate Health Committee
Lance Lang MD, Chief Medical Officer, Covered California
Robert Montoya, MD, Former Deputy Director, Office of Statewide Health Planning and Development, Consultant
Linda Onstad-Adkins, Acting Deputy Director, Health Workforce, Office of Statewide Health Planning and Development

Exhibit B

Coordinated California Primary Workforce Pathway

Target Groups

- Undergraduates
- Post Baccalaureate (POST BAC) Students
- Medical Students and RNs
- Immigrant Health Professionals
- Incumbent Workers
- High School and Community College Students
- Career Changers and Displaced Workers
- Veterans
- California Residents from Under-represented Backgrounds
- Primary Care Professionals from Other States



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