

**ADVISORY COMMITTEE ON
TRAINING IN PRIMARY CARE
MEDICINE AND DENTISTRY**

***TRAINING A BETTER PREPARED
WORKFORCE FOR THE FUTURE***

**22nd Annual Report to
the Secretary of the
U.S. Department of Health and Human Services
and to Congress**

May 2024

**Advisory Committee on Training in Primary Care
Medicine and Dentistry (ACTPCMD)**

**Training a Better Prepared Workforce
for the Future**

**Twenty-second Annual Report
to the
Secretary of the United States
Department of Health and Human Services
and the
Congress of the United States**

May 2024

The views expressed in this report are solely those of the Advisory Committee on Training in Primary Care Medicine and Dentistry and do not represent the perspectives of the Health Resources and Services Administration nor the United States Government.

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Authority

The Advisory Committee on Training in Primary Care Medicine and Dentistry (ACTPCMD) is a Federal advisory committee under the auspices of the Health Resources and Services Administration (HRSA), an agency of the U.S. Department of Health and Human Services (HHS). HRSA is the primary Federal agency for improving access to health care by strengthening the health care workforce, building healthy communities, and achieving health equity. The ACTPCMD is authorized by section 749 (42 U.S.C. § 293*l*), of the Public Health Service (PHS) Act, as amended by Section 5303 of the Patient Protection and Affordable Care Act (ACA). The Committee is governed by provisions of the Federal Advisory Committee Act (FACA) of 1972 (5 U.S.C. Chapter 10), as amended, which sets forth standards for the formation and use of advisory committees.

The ACTPCMD advises and makes recommendations to the Secretary of HHS (Secretary) on policy, program development, and other matters of significance concerning the medicine and dentistry activities authorized under Section 747 of the PHS Act, as it existed upon the enactment of Section 749 in 1998. The ACTPCMD develops, publishes, and implements performance measures, develops and publishes guidelines for longitudinal evaluations, and recommends appropriation levels for programs authorized under Part C of Title VII of the PHS Act. The Committee also provides reports to the Secretary, the Senate Committee on Health, Education, Labor and Pensions (HELP), and the House of Representatives Committee on Energy and Commerce (E&C) describing the activities of the Committee.

The ACTPCMD currently focuses on the following primary care professions and disciplines: Family Medicine, General Internal Medicine, General Pediatrics, Physician Assistants, General Dentistry, Pediatric Dentistry, Public Health Dentistry, and Dental Hygiene.

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Sincerely,

Tonya Fancher

Tonya Fancher, MD, MPH
Chair, ACTPCMD

Executive Summary

While the term “population health” is relatively new in the history of medicine, it has recently gained increased importance among research and policy circles, as well as educational institutions and health care systems. Population health is not precisely defined, but the concept centers on the outcomes of groups rather than individuals.

For many years, the focus of the health care system was primarily on clinical care, but some new models estimate that medical care only accounts for 20% of the modifiable contributors to a population’s healthy outcomes, while the remaining 80% are related to social and structural determinants such as physical environment, social factors, health behaviors, structural racism/discrimination, and economic factors.

As a result, many health professions educational programs are now incorporating population health as part of their undergraduate training, although additional training models are still needed in other areas (e.g., tracks, rotations, fellowships, certificate programs, residencies, Master of Public Health (MPH)). Educating primary care clinicians in population health is a strategic effort that could have a lasting positive impact on the health of Americans.

Another effort that needs to be undertaken is the development of successful models of training during massive disruption events, such as a natural disaster, power grid failure, or war. For example, the COVID-19 pandemic interrupted the education of primary care clinicians due to school closures or training program interruptions. While some institutions were able to work around the impacts of the pandemic, more work is needed to develop successful national emergency preparedness approaches that educational institutions can use in a future disruptive event.

The Committee has developed three recommendations that focus on population health and emergency preparedness. They are presented below.

ACTPCMD Recommendations

Recommendation 1

The ACTPCMD recommends the creation of new training (e.g., tracks, rotations, fellowships, certificate programs, MPH) in public health/population health and preventive medicine in primary care medicine residencies, physician assistant programs, primary care dental residencies, and dental hygiene programs with an additional \$80 million in funding.

Recommendation 2

The ACTPCMD recommends the continuation of the Primary Care Training and Enhancement-Community Prevention and Maternal Health (PCTE-CPMH) program, with additional funding to expand the Community Prevention track to include \$2.4 million (15%) for Physician Assistants and \$16 million for dentists.

Recommendation 3

The ACTPCMD recommends that Congress fund and the Secretary, HHS, create Collaborative Center(s) to develop and disseminate successful models of training in primary care medical residencies, physician assistant programs, primary care dental residencies, and dental hygiene programs in the event of a massive training disruption (e.g., pandemic, natural disaster, power grid failure, war).

Overview

This report covers three broad areas: population health, maternal health, and emergency preparedness. Training a better prepared health care workforce for the future increasingly means considering aspects of population health in their education and training. While some programs have successfully incorporated population health at the undergraduate level, further emphasis is needed for training at other levels such as fellowships, rotations, tracks, and certificate programs.

In the area of maternal health, improvements are needed to address the nation's morbidity and mortality. These rates have increased in the United States and are especially concerning for some disadvantaged populations.

Finally, the COVID-19 pandemic demonstrated the impact such an event can have on the training of health care professionals at a time when they are needed the most. In this context, emergency preparedness means developing successful training models that can mitigate the impact of an emergency on training the health care workforce. Each of these three topics is discussed in detail in the sections below.

Population Health

Population Health

The term “Population Health” has not been defined precisely, although some researchers define it as the “health outcomes of a group of individuals.”¹ The term came into the spotlight during the COVID-19 pandemic, which heightened awareness on the impact of race/ethnicity, structural racism, and access to health care on the health of individuals and populations.² Over the past few years, various organizations have included it as part of their standards.

The Accreditation Council for Graduate Medical Education lists in their *Guide to the Common Program Requirements (Residency)* the inclusion of competencies related to patient care that is designed to improve population health.³ The American Association of Colleges of Nursing (AACN) makes population health one of their domains in their *Essentials*, the core competencies for professional Nursing Education.⁴ Similarly, the American Academy of Physician Associates names one of their competencies “Society and Population Health” which aims, in part, to improve the health of patient populations.⁵

Taking a population health approach means going beyond the traditional focus of providing clinical care to one individual to also consider the health outcomes of a community or population. A population health approach also recognizes that an individual's health can be tied to factors beyond clinical care, such as those found in their home, school, work, and other environments. Furthermore, population health recognizes that the community can hold various

resources and types of support beyond clinical care, which can be provided by organizations such as faith-based groups, nonprofit organizations, and government-funded agencies. For example, such organizations can provide individual support in areas such as economic stability, housing, food access, or transportation and these, in turn, can have an impact on the individual's health.⁶

Health Disparities and Social Determinants of Health

Central to the understanding of population health is the issue of health disparities. The Centers for Disease Control and Prevention define health disparities as “preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations.”⁷

For example, disparities were clearly seen during the pandemic where communities of color and other underserved populations experienced disproportionate rates of infection, hospitalization, and death.⁸ Unfortunately, health disparities have persisted for decades.

Some examples of disparities include increased rates of chronic disease, obesity, and premature death for racial and ethnic minorities compared with Whites; a rate of infant mortality in African Americans that is double that of Whites; suicide death rates that are approximately 50% higher among Native Americans compared with Whites; and higher premature death rates in rural counties compared with other type of counties.⁹

Public health experts now agree that the health of a population is dependent on much more than clinical care alone. Conditions in the environments where people are born, live, learn, work, play, worship, and age—also known as social determinants of health (SDOH)—can affect a wide range of health, functioning, and quality-of-life outcomes and risks.¹⁰

While clinical care is important, some models estimate that clinical care only accounts for 20% of the modifiable contributors to a population's healthy outcomes. The other 80% are related to the physical environment, social factors, health behaviors, and economic factors.^{11,12,13}

For example, conditions such as poverty, education, structural racism, homophobia, clinician implicit bias, physical environment, unsafe housing, public safety, governmental policies, disability, and many other factors have been found to be able to contribute to an individual's health.^{14,15} Understanding SDOH is therefore an important tool in the primary care clinician's toolbox that helps them care for patients and address issues related to population health.

Maternal Health

Maternal mortality and morbidity are key indicators of women's health as a population. Although maternal mortality rates have fallen worldwide from 1990 to 2015, the rate has increased in the United States, which has one of the highest rates among developed countries. In 2015, it ranked 46th among the 181 countries reporting maternal mortality rates.¹⁶

Maternal morbidity—the unexpected outcomes arising from pregnancy or delivery—disproportionally affects people of color and can have short- or long-term consequences to the mother's health.¹⁷ Some common conditions include cardiovascular disease, high blood pressure, infection, and blood clots. These issues can require additional care, longer hospitalizations, and adversely affect the woman's quality of life.¹⁸

One of the factors impacting high rates of mortality and morbidity in the United States is the lack of access to high-quality prenatal and maternity care services by some populations. For instance, in rural parts of the United States some women are geographically isolated with limited access to obstetric care and facilities. Research shows that 45% of rural counties in the United States had no hospital obstetric services from 2004–2014.¹⁹

For these and other reasons, training primary care clinicians in maternal health clinical services—as recommended in this report—can help reduce mortality and morbidity rates, because these clinicians might be the only providers available to women in areas without easy access to specialists.²⁰

In addition, it is imperative that the United States and global partners review and address the current state of evidence-based maternal health policies, clinical programs, and data-driven solutions that have contributed to the global downward trend of maternal mortality and to improve maternal health outcomes. For example, the promotion of better oral health among pregnant persons through oral health integration into OB-GYN clinics has shown promising results by reducing the oral bacterial load in mothers that cause systemic inflammation and helping them develop healthy hygiene habits that they pass on to their offspring.

HRSA Programs in Maternal Health

One of HRSA's strategies for addressing maternal health is the *Primary Care Training and Enhancement-Community Prevention and Maternal Health* (PCTE-CPMH) program. The purpose of the program is to train primary care physicians in maternal health care clinical services (or population health) to improve maternal health outcomes.

The program aims to increase the number of primary care physicians trained in public health and general preventive medicine, or trained in enhanced obstetrical care, to increase maternal health

care expertise as well as the number of primary care physicians trained in enhanced obstetric care in rural and/or underserved areas. An annual investment of \$16 million has been made for 30 awards for the period of 2020-2026.²¹

Population Health Training

Population Health Training

Although the concept of population health has been discussed for years, the emergence of population health as department-level initiatives in academic medical centers is relatively recent.²² The education and training of primary care clinicians in this area is important to support the improved health of individuals and communities served by those same clinicians. A 2017 survey of 5,000 active members of the American Academy of Family Physicians (AAFP) showed that clinicians want to help patients address the SDOH they encounter but have been stymied by barriers such as time and staffing. In addition, 56% of the clinicians surveyed felt unable to provide solutions to their patients in the area.²³

The 2019 report *Teaching Residents Population Health Management* by the Association of American Medical Colleges (AAMC) and the University of California, San Francisco states that “Population health management is ... a building block of ... high-value primary care but is inconsistently understood and operationalized in practice and training settings.”²⁴

Some medical schools have made efforts to incorporate population health prior to medical residency training. In 2019, a total of 150 medical schools were surveyed regarding the inclusion in the school’s curriculum. Of the 150 schools surveyed, 41 responses were received. Out of these, 32 schools reported having a structured population health curriculum in place and 7 reported having a dedicated population health module. While some schools are incorporating public health into their curriculum, the topics and curricular requirements can vary significantly. Also, additional efforts are required to reach the goal of all medical schools including public health as part of their curriculum.²⁵

For primary care medical residency programs, a 2019 review of the literature showed that more than half do not have significant, long-term training on SDOH as a part of their curricula. The review showed that 47% of the primary care residency programs in the literature provided only short-term SDOH training (less than 6 months or delivered via one-time sessions) and were typically integrated into one-month rotations. In addition, nearly 74% of the curricula used didactic training to deliver content, while 51% reported using some type of experiential learning (e.g., patient-based or clinic learning) and 38% used both. Most programs reported outcomes such as resident satisfaction, self-reported knowledge, and/or attitudes about SDOH.²⁶

In the area of dentistry, HRSA supports the development and enhancement of dental public health residency programs, has funded a project to develop dental public health competencies, and continues to support the integration of a dental public health curriculum in predoctoral dental and dental hygiene programs in the United States.²⁷

The curriculum was developed by the American Association of Public Health Dentistry and incorporates eight dental health competencies: promoting culturally competent oral health care; describing SDOH and their impact on the oral health of the individual and population; and using population-based health data for health promotion and quality improvement.²⁸

In addition, some schools of dentistry have integrated social determinants of health, where students perform rotations in rural and underserved areas. At Rutgers School of Dental Medicine, students participate in a community dental clinic rotation in a federally qualified health center or other community health center. In addition, students learn about the impact of culture in communicating and receiving dental care.²⁹

The inclusion of population health education and training into other primary care professions—such as physician assistants, nurses, and dental hygienists—cannot be overstated, which is why the Committee recommends that it be incorporated in primary care curricula (e.g. medical, dental, physician assistant (PA), and dental hygiene education), clinical training (e.g., tracks, rotations, fellowships, and certificate programs), and residencies (e.g., primary care medicine and dental residencies).

Exemplary Program

Kaiser Permanente Internal Medicine Residency Program

The Kaiser Permanente Internal Medicine (IM)/Public Health and General Preventive Medicine Residency Track is the result of a partnership between UC Berkeley’s School of Public Health and Kaiser Permanente. During the program’s first three years, residents complete internal medicine requirements among summer, fall, and spring courses and learn about clinical health disparities research, quality improvement and patient safety, and health policy. In the fourth year of the program, residents complete an 11-month Interdisciplinary MPH program. The fourth year offers various clinical options in primary care, specialty, and hospital-based clinical work. The combination of taking IM courses coupled with a MPH capstone project allows those in their fourth year to bridge residency to fellowship, residency to faculty career, or residency to leadership career.³⁰

Texas Tech University Health Sciences Center El Paso – Doctor of Dental Medicine (DMD) and Community Health Certificate (CHC) Program

The Woody L. Hunt School of Dental Medicine has developed a DMD and CHC program,

which covers both biomedical knowledge and the concepts of social determinants of health, social justice, principles of health promotion, research, epidemiology, and other topics. A dental colloquium helps students understand other areas such as ethics, wellness, and cultural aspects. In addition, students in the program develop a research project in partnership with the community through a practicum.³¹

Emergency Preparedness

Emergency Preparedness

The COVID-19 pandemic placed health care systems worldwide under intense pressure and in some cases stretched resources beyond capacity.³² In the United States, the effect of the pandemic was clear: there was severe stress on the health care workforce due to shortages, burnout, exhaustion, and trauma.³³

In addition to impacting the health care workforce already practicing, the pandemic also impacted the education and training of the future workforce. The AACN reported in 2020 that nursing schools did not accept 80,000 qualified applicants, reflecting faculty and clinical site shortages.³⁴ The AAMC found no change in projected enrollment in medical schools in 2020-2021 due to COVID-19.³⁵ Health professions schools used various approaches to understand and respond to the challenges presented by the pandemic.

During 2020-2021, the Physician Assistant Education Association (PAEA) undertook a project designed to better understand the impact of the pandemic on PA programs. Of the 162 PA programs surveyed, the majority (50.6%) reported suspension of rotations by clinical sites and/or preceptors. A smaller number of programs (34.6%) reported unexpected cancellations, changes, and disruptions in the didactic year. In addition, about a third (29%) of the programs reported unplanned and imposed changes to or from online instruction.³⁶

One of the ways PA programs displayed innovation in response to the COVID-19 challenge was through increased integration of telemedicine in both the didactic and clinical years. Nearly 30% of didactic students surveyed were new to receiving telemedicine instruction as a result of the pandemic, with another approximately one-third of programs signaling their intent to add more telemedicine content in the future.³⁷

Adaptations and changes to the PA curriculum also took place as a response to the pandemic. About 15% reduced the number of direct patient care and hands-on clinical hours/weeks; 14.2% shortened the duration of individual supervised practice clinical experiences; 43.2% increased the adoption of telemedicine experiences; and 33.3% had call-back days that were in-person and shorter (or fewer). In general, many students displayed considerable resilience throughout the pandemic, although 14.2% of the students surveyed withdrew from the didactic program or

involuntarily decelerated from the program.³⁸

Similar efforts were undertaken by medical and dental schools. Some medical schools used virtual learning, allowing students to access materials at a time of their choosing. When clinical rotations were paused in 2020, virtual clinical experiences were used, including virtual rounds and rotations, as well as the use of telehealth for rotations.³⁹ In nursing, a journal article presenting an integrative review found an increase in the use of technology applications for teaching and learning. For example, virtual reality platforms were incorporated into simulation labs to create immersive student learning experiences.⁴⁰

The pandemic also had an impact on U.S. dental school clinics. A 2021 survey by the American Dental Education Association found a 50% reduction in patient visits to the dental school clinics and a 42% decline in revenue. In addition, 92% of the dental schools suspended some or all of the community-based patient care experiences for a period of time.⁴¹

An example of a strategy used by one dental school to continue the education of dentists during the pandemic is presented below. While the singular efforts launched by such educational institutions are laudable, greater coordination is needed to support the continuation of education and training nationwide during a pandemic. The Committee therefore suggests the support of efforts to preemptively develop and disseminate successful models used by primary care training programs in the event of a massive training disruption (e.g., pandemic, natural disaster, power grid failure, war).

Exemplary Program

University of the Pacific – Arthur A. Dugoni School of Dentistry

The School of Dentistry at the University of the Pacific used online learning, assessment, and communication as strategies to continue teaching dental students during the COVID-19 pandemic, when other dental schools closed. A protocol was developed using WebEx and Zoom to implement lectures, seminars, case discussions, and even Observed Structured Clinical Examinations (OSCEs) in restorative dentistry.

The school also used SoftChalk, a web-based content authoring program which allowed students to review dental case studies that included patient photographs and X-rays. ThingLink software allowed the university to offer interactive and immersive learning experiences that included images, videos (with clickable tags and outcomes), and branching scenarios. Virtual reality experiences were introduced to allow learners to engage with various clinical scenarios involving patient avatars, dental personnel, and medical equipment consistent with a real-world dental office. Finally, tools like intraoral cameras, scopes, and displays were used to create a simulation environment.

Summary

Incorporating population health in primary care curricula, residency training, fellowships, and other types of education and training is critical as studies show that it can help clinicians improve the health of both individuals and populations.

There are three recommendations in this report. The first aims to create new training in population health, such as tracks, rotations, fellowships, certificate programs, and MPH programs aimed at primary care professionals. The second focuses on training for primary care professions, including physician assistants and dentists, in the area of maternal health to help reduce maternal mortality and morbidity rates. The third highlights the urgent need for the development and dissemination of successful training models in primary care education in the event of a massive training disruption.

The ACTPCMD believes the implementation of these recommendations can help enhance the health care system to be better equipped to address the health needs of individuals and populations across the country and sustain the education of primary care clinicians in the event of a massive training disruption.

List of Acronyms and Abbreviations

AACN	American Association of Colleges of Nursing
AAFP	American Academy of Family Physicians
AAMC	Association of American Medical Colleges
ACA	Affordable Care Act
ACTPCMD	Advisory Committee on Training in Primary Care Medicine and Dentistry
COVID-19	Coronavirus Disease of 2019
HHS	U.S. Department of Health and Human Services
HRSA	Health Resources and Services Administration
MPH	Master of Public Health / Masters in Public Health
PCTE-CPMH	Primary Care Training and Enhancement-Community Prevention and Maternal Health program
OSCEs	Observed Structured Clinical Examinations
PA	Physician Assistant
PAEA	Physician Assistant Education Association
SDOH	Social Determinants of Health

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