



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

REPORT TO CONGRESS

**PREVENTIVE MEDICINE AND PUBLIC HEALTH
TRAINING GRANT PROGRAM**

Fiscal Year 2022

Executive Summary

This is the fiscal year (FY) 2022 report to Congress on the Preventive Medicine and Public Health Training Grant Program administered by the Health Resources and Services Administration (HRSA). This report to Congress is required by section 768(d) of the Public Health Service Act, which states:

“The Secretary shall submit to the Congress an annual report on the program carried out under this section.”

This report provides a description of activities and funding levels for the Preventive Medicine and Public Health Training Grant Program, which is carried out through HRSA’s Preventive Medicine Residency (PMR) Program. The goal of the Program is to increase the number, quality, and diversity of preventive medicine physicians trained in preventive medicine specialties who can lead public health activities, including the integration of population health with primary care, management of response to disasters, and outbreak investigations. In FY 2022, the PMR Program received almost \$7.3 million in annual appropriations and awarded continuation funding to 17 PMR Program grant recipients. This is the final year of funding for this cohort’s period of performance before the grant was recompeted in FY 2023. The reporting period for this report is academic year 2021 to 2022 (August 1, 2021, to July 31, 2022).



Fiscal Year 2022 Report on the Preventive Medicine and Public Health Training Grant Program

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Acronym List

ABMS	American Board of Medical Specialties
ACGME	Accreditation Council for Graduate Medical Education
AY	academic year
CHW	community health worker
DCBOH	DeKalb County Board of Health
ECHO	Extension for Community Healthcare Outcomes
FQHC	Federally Qualified Health Center
FY	fiscal year
GME	graduate medical education
HRSA	Health Resources and Services Administration
IM/PM	internal medicine/preventive medicine
MOUD	medications for opioid use disorder
MUC	medically underserved community
OEM	occupational and environmental medicine
OUD	opioid use disorder
PGY	postgraduate year (also known as residency) ¹
PH/GPM	public health and general preventive medicine
PHS Act	Public Health Service Act
PMR	Preventive Medicine Residency Program
SDOH	social determinants of health
SUD	substance use disorder
UCSF	The Regents of the University of California, San Francisco
UMMC	University of Mississippi Medical Center
UNC	University of North Carolina
VA	Department of Veterans Affairs

¹ PGY-1 is the first year of graduate training after completion of the formal 4 years of medical school. Similarly, PGY-2 and PGY-3 are the abbreviations for postgraduate years 2 and 3. Residents typically begin the 2-year Public Health and General Preventive Medicine training in PGY-2, after at least 1 year of direct clinical training.

I. Legislative Language

This is the fiscal year (FY) 2022 report to Congress on the Preventive Medicine Residency (PMR) Program (also referred to as “Program”) which carries out the Preventive Medicine and Public Health Training Grant Program administered by the Health Resources and Services Administration (HRSA). This Program is authorized by section 768 of the Public Health Service (PHS) Act (42 U.S.C. § 295c).

The PHS Act requires this report in section 768(d) (42 U.S.C. § 295c(d)):

“The Secretary shall submit to the Congress an annual report on the program carried out under this section.”

II. Introduction

HRSA is committed to reducing health disparities by increasing access to quality services and promoting a skilled health professions workforce. Innovative programs that increase the number and skills of physicians graduating from preventive medicine residencies increase access to care. HRSA provides training in graduate medical education (GME) through grants to entities to train residents in preventive medicine specialties. Through these innovative residency programs, participants are prepared to advance public health research, address emerging public health issues, and assume leadership roles within the public health system.

Preventive Medicine Specialties

Preventive medicine is one of the 40 specialties recognized by the American Board of Medical Specialties (ABMS).² Preventive medicine physicians are educated in both clinical medicine and public health. Preventive medicine training includes biostatistics, direct patient care, environmental health sciences, epidemiology, health services administration, practicing prevention in clinical medicine, and social and behavioral sciences. The fundamental competencies of preventive medicine align with the current version of the *Ten Essential Public Health Services* framework.³ The ABMS and Accreditation Council for Graduate Medical Education (ACGME) recognize three specialty areas under the “preventive medicine” umbrella: aerospace medicine, occupational and environmental medicine (OEM), and public health and general preventive medicine (PH/GPM).⁴

Effective July 1, 2020, the ACGME became the sole accrediting entity for both allopathic and osteopathic GME.⁵ This change streamlined the accreditation process and enabled consistency in outcomes between allopathic and osteopathic medicine.

² ABMS. (n.d.). About ABMS. Retrieved February 23, 2023, from <https://www.abms.org/member-boards/>.

³ de Beaumont. (2020). *10 Essential Public Health Services*. Retrieved February 23, 2023, from <https://debeaumont.org/10-essential-services/>.

⁴ ACGME. Retrieved February 23, 2023, from <https://www.acgme.org/specialties/preventive-medicine/overview/>.

⁵ History of the Transition to a Single GME Accreditation System. Benefits of Single GME. Retrieved August 21, 2023, from <https://www.acgme.org/about/transition-to-a-single-gme-accreditation-system-history/>.

Preventive medicine training requirements include at least 1 year of clinical residency training in an ACGME-accredited program followed by 2 years of competency-based education, academic- and practicum-based training, and the completion of a Master of Public Health or other comparable postgraduate degree.⁶ During their preventive medicine specialty training, residents train in community-based organizations including health centers, federal government, health departments, managed care organizations, non-governmental organizations, and private industry.

Residents often combine their preventive medicine residency training with another specialty, such as family medicine, internal medicine, or pediatrics. These residency programs are completed either sequentially or integrated as a combined residency training program.

The Centers for Medicare & Medicaid Services funds most GME based on payment formulae established by statute and regulation.⁷ These formulae are linked to the residents' time spent furnishing direct patient care, the number of residents, and patient volume; reimbursable time must be linked to patient care activities, thus excluding time spent completing the Master of Public Health and other public health activities from funding.⁸ In addition, caps on residency slots and the direct linkage of payments with Medicare patient volume, have been found to systematically disadvantage non-clinical, population-based specialties, such as public health and general preventive medicine.⁹ Therefore, traditional hospital-based GME does not cover the majority of the training required for preventive medicine. As a result, unlike most GME training, there is no national, sustained mechanism for preventive medicine residency programs, and local funding sources are often lacking, limited, or unreliable.¹⁰ ABMS reported that of the 23,694 newly board-certified physicians in 2020, only 218 physicians were certified in preventive medicine (96 physicians in PH/GPM, 87 in occupational medicine, and 35 in aerospace medicine).¹¹ HRSA, as authorized by section 768 of the PHS Act, is the largest single source of federal support specifically for preventive medicine residencies.¹²

⁶ ACGME. (2020). ACGME Program Requirements for Graduate Medical Education in Preventive Medicine. Pgs. 16 and 64. Retrieved February 26, 2023, from https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/380_PreventiveMedicine_2020.pdf?ver=2020-06-30-144631-400.

⁷ Centers for Medicare & Medicaid Services. (December 5, 2023). Direct Graduate Medical Education (DGME). Congressional Research Service. Retrieved December 21, 2023, from <https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/direct-graduate-medical-education-dgme>.

⁸ Ibid.

⁹ Committee on the Governance and Financing of Graduate Medical Education; Board on Health Care Services; Institute of Medicine; Eden J, Berwick D, Wilensky G, editors. Graduate Medical Education That Meets the Nation's Health Needs. Washington (DC): National Academies Press (US); 2014 Sep 30. 3 GME Financing. Retrieved February 26, 2023, from <https://www.ncbi.nlm.nih.gov/books/NBK248024/>.

¹⁰ Jung P, Lushniak B. Financing Preventive Medicine Graduate Medical Education. *J Public Health Manag Pract*. 2021 May/Jun; 27 Suppl 3, HRSA Investment in Public Health: S206-S210. Retrieved February 26, 2023, from <https://pubmed.ncbi.nlm.nih.gov/33785698/#:~:text=doi%3A%2010.1097/PHH.000000000001308.%20PMID%3A%2033785698>.

¹¹ ABMS. (2020). ABMS Board Certification Report 2020-2021, pg. 34. Retrieved February 26, 2023, from <https://www.abms.org/wp-content/uploads/2022/01/ABMS-Board-Certification-Report-2020-2021.pdf>.

¹² See footnote 10.

III. Overview

This report describes the funding levels and selected highlights of HRSA’s PMR Program which carries out the Preventive Medicine and Public Health Training Grant Program.

The goal of the PMR Program, which has a 5-year period of performance, is to increase the number, quality, and diversity of preventive medicine physicians trained in preventive medicine specialties who have the capacity to lead public health activities, including the integration of public health with primary care, leadership in management of response to disasters, and outbreak investigations. The PMR Program supports this goal through awards to accredited schools of public health, medicine, or osteopathic medicine; accredited public or private nonprofit hospitals; state, local, or tribal health departments; and consortiums of two or more of these entities that plan and develop new residency training programs or expand current programs in the specialty of preventive medicine.

In FY 2022, HRSA awarded continuation funding to 17 PMR Program grant recipients. This is the final year of funding for this cohort’s period of performance before the grant is recompeted.

IV. FY 2022 Preventive Medicine Residency Program

The PMR Program supports GME training for preventive medicine residents by defraying the costs of living expenses, tuition, and fees. Grant recipients use the grant funds to plan, develop, and implement preventive medicine curricula; operate or participate in an accredited residency program in preventive medicine; establish, maintain, or improve academic administrative units in preventive medicine; and establish, maintain, or improve residency programs that improve clinical teaching in preventive medicine. The PMR Program encourages grant recipients to develop new, community-based rotations and focus on health equity. Grant recipients may also use PMR Program grant funds for stipends and travel support for residents who present their academic activities and research findings at national academic meetings. A portion of grant funds provides support for faculty and staff who are directing residency programs, developing curricula, teaching, and coordinating residency program activities, including clinical rotations and public health experiences.

HRSA held a competition for the PMR Program in FY 2018 with a 5-year period of performance and made 17 awards. Table 1 provides a summary of FY 2022 awards.

Table 1 – FY 2022 Preventive Medicine Residency Program Awards

	State	Awardee	Award (FY 2022)	Discipline
1	California	University of California, Los Angeles	\$398,471	PH/GPM
2	California	California Department of Public Health	\$384,577	PH/GPM
3	California	University of California, San Diego	\$398,011	PH/GPM
4	California	The Regents of the University of California, San Francisco	\$398,693	Occupational Medicine

	State	Awardee	Award (FY 2022)	Discipline
5	Colorado	The Regents of the University of Colorado	\$398,692	PH/GPM
6	Connecticut	The Griffin Hospital, Inc.	\$398,864	PH/GPM
7	Georgia	Emory University	\$385,361	PH/GPM
8	Georgia	The Morehouse School of Medicine, Inc.	\$398,693	PH/GPM
9	Maine	Maine Medical Center	\$395,811	PH/GPM
10	Michigan	Regents of the University of Michigan	\$372,564	PH/GPM
11	Mississippi	University of Mississippi Medical Center	\$374,676	PH/GPM
12	New Jersey	Rutgers, The State University of New Jersey	\$364,211	PH/GPM
13	New Mexico	University of New Mexico	\$398,690	PH/GPM
14	New York	The Research Foundation for the State University of New York, Stony Brook	\$398,693	PH/GPM
15	North Carolina	University of North Carolina at Chapel Hill	\$389,918	PH/GPM
16	Pennsylvania	The Trustees of the University of Pennsylvania	\$397,470	Occupational Medicine
17	West Virginia	West Virginia University Research Corporation	\$387,527	PH/GPM and Occupational Medicine
	Total*		\$6,640,922	

*This total funding level reflects total grant award amounts and does not include funding for program administrative costs such as grants administration and oversight, information technology, and other administration expenses.

FY 2022 HRSA Activities to Support Preventive Medicine

HRSA's Bureau of Health Workforce hosted the first national virtual PMR graduation on June 9, 2022, to celebrate residents' completion of their residency. There were 55 graduates for AY 2021 to 2022 representing the 17 PMR grantees.

The Bureau of Health Workforce's Division of Medicine and Dentistry hosted the Preventive Medicine Annual Stakeholder Meeting on November 16, 2022. The goals of the meeting were to promote the contributions of preventive medicine physicians in building healthy communities, strengthen the community of preventive medicine physicians throughout the U.S. health system, highlight the accomplishments of preventive medicine residents in HRSA's PMR Program, obtain input from stakeholders on resident projects, and generate additional questions for study in the improvement of health outcomes. Residents submitted abstracts of their scholarly projects, and 15 residents, representing 11 of the 17 funded residency programs, gave presentations on their projects. Topics included COVID-19, emergency preparedness, health equity, preventive screening, and telehealth. Stakeholders invited to the event represented 11 non-federal and six federal entities.

V. Selected Program Highlights

In AY 2021 to 2022, the PMR Program provided financial support through grant funding to 118 residents. Thirty-one percent of PMR residents were underrepresented minorities, and 28 percent came from disadvantaged and/or rural backgrounds.¹³ Over the course of the AY, residents engaged in 72,133 patient encounters across all training settings, including in primary care settings (86 percent of residents) and in medically underserved communities (MUC, 67 percent of residents). A total of 55 residents were in their final year and completed their residency programs. Of the 49 AY 2021 to 2022 graduates who reported employment data at the end of the AY, 57 percent were already working in primary care settings and 14 percent were working in MUCs. In addition, of the 57 prior year graduates with 1-year follow-up data, 35 percent currently work in public health/prevention settings, 30 percent currently work in primary care settings, and 19 percent remained working in MUCs.

Over the AY, PMR Program grant recipients continued training activities in state and local health departments to address pressing public health issues. The COVID-19 pandemic continued to create unique learning opportunities for residents while they addressed the health care needs of underserved communities. Additionally, the public health crises of opioid use disorders (OUD) and substance use disorders (SUD) continued to be of growing concern during the pandemic and grant recipients focused their work on innovative ways to address these crises. Moreover, each residency program focused on meeting the needs of underserved populations, with training in prevention and public health that contributed to HRSA's goals of improving access to quality services, building healthy communities, and reducing health disparities.

Highlights from HRSA-funded Preventive Medicine Residency Programs

Below are select programmatic highlights of the 17 PMR grant recipients.

CALIFORNIA

The University of California, Los Angeles

COVID-19 Response Activities: Residents participated in a study on the impact of COVID-19 on the experiences of children and families with neurodevelopmental disabilities within Los Angeles County. The study focused on the family characteristics associated with improved educational experiences and improved service access.

¹³ HRSA considers individuals to come from a disadvantaged background if they meet certain economic or environmental/educational requirements. For example, an individual may be considered economically disadvantaged if they come from a family with an annual income below certain income thresholds, or economically/environmentally disadvantaged if they graduate from a high school with low graduation rates, SAT scores, or college matriculation rates. An individual who is an underrepresented racial minority may or may not also come from a disadvantaged background. For a detailed explanation of "disadvantaged backgrounds," see the Scholarships for Disadvantaged Students Notice of Funding Opportunity, retrieved on May 31, 2023, from <https://grants.hrsa.gov/2010/Web2External/Interface/FundingCycle/ExternalView.aspx?fCycleID=4f019659-b6f7-4d58-82ef-c5f9c9a47ae5>.

Health Equity Activities: Residents completed rotations at a street medicine program implemented by the Los Angeles County health department and provided clinical services to unhoused veterans. Residents also provided care for pediatric populations at medically underserved clinical training sites within Los Angeles County. In addition, residents participated in community-based programs to improve health literacy and lifestyle behaviors of community members.

SUD/ODU Activities: The Internal Medicine/Preventive Medicine (IM/PM) combined residency program remains an active member of the University of California, Los Angeles Addiction Medicine Consortium and the University of California, Los Angeles Anti-Vaping Champions. These collaborations work to improve residents' skills in primary and secondary prevention and management of SUD in adolescents and adults living in underserved communities. Residents are developing a curriculum for the prevention and management of vaping.

California Department of Public Health

COVID-19 Response Activities: Residents conducted a quality improvement project for which they surveyed Berkeley providers about the barriers to providing COVID-19 therapeutics. The residents presented the results at a town hall meeting for city government employees and community-based organizations. During the presentation, the residents informed the audience about the new California Department of Public Health's COVID-19 therapeutics telehealth program. The residents also distributed information about the telehealth program and COVID-19 test kits at senior centers, libraries, shelters, and affordable housing units. The California Department of Public Health employed one of the residents who graduated this year in the Immunization Branch to work on COVID-19 vaccine uptake.

Health Equity Activities: One resident presented their poster on patients with prediabetes at three national conferences. Another resident submitted a paper for publication to *Obesities*, an open-source peer-reviewed journal, regarding the ability to afford balanced meals and adequate fruit and vegetable intake.¹⁴

SUD/ODU Activities: Residents are in the process of analyzing results from the California Hospital and Emergency Room Discharge Data and the California Healthy Kids Survey on Youth Mental Health/Substance Abuse.

Telehealth Activities: The program participated in a report and study on *Telehealth Utilization by Medi-Cal Beneficiaries by Broadband Coverage* in California. Researchers completed the study as a part of the final state Medicaid health information technology plan report which has been submitted and approved by the Centers for Medicare & Medicaid Services. The program was also involved in the evaluation of health information technology needs in non-hospital care settings.

¹⁴ Saxena P, Caldwell J, Ramos A, Flores D, Shah D, Kuo T. Food Security, Fruit and Vegetable Intake, and Chronic Conditions among Supplemental Nutrition Assistance Program Education Participants Attending Free Food and Produce Events. *Obesities*. (August 2022). Retrieved on August 22, 2023, from <https://doi.org/10.3390/obesities2030021>.

University of California, San Diego

COVID-19 Response Activities: During the COVID-19 pandemic, preventive medicine residents played crucial roles directly supporting the pandemic response of the San Diego County Public Health Department and other public health efforts. One resident served as a lead resident for the American College of Preventive Medicine's campaign addressing vaccine hesitancy. Another worked with San Diego Health Department community epidemiologists on studies on the prevalence and sequela of Long COVID.

Health Equity Activities: Forty percent of the PH/GPM residency program's residents are from traditionally underrepresented communities. The program focuses outreach efforts on undergraduates, medical students, and residents of diverse backgrounds to encourage them to consider careers in preventive medicine. Residents provide clinical and preventive services to underserved populations in a variety of settings, such as Federally Qualified Health Centers (FQHC).

SUD/ODU Activities: In response to the rising opioid epidemic, the residency has been building a robust training track in addiction medicine. The track has graduated two residents who have gone on to complete addiction medicine fellowships and currently has one dedicated addiction medicine resident. The residency program provides training to all residents through didactic seminars and elective rotations. Elective rotations are at clinics providing medications for opioid use disorder (MOUD) and other treatments for patients suffering from a variety of addiction disorders. Specific sites include University of California, San Diego Intensive Therapy Outpatient Clinic; the Owen Clinic for HIV care; and University of California, San Diego Obstetrics clinics, as well as the sites providing care for underserved populations. Residents also participate in the San Diego County Opioid Initiative Project designed to identify exposures and prior comorbidities that predispose persons to SUDs. The residency program has a paper accepted for publication on the contribution of adverse childhood experiences on addiction to opioids and other drugs as adults.

Telehealth Activities: The COVID-19 pandemic greatly expanded participation of residents in telemedicine, as most clinics converted to this care delivery model. Now, as many services transition back to in-person visits, residents are involved in assessing the benefits of telemedicine. One study by a graduating resident is analyzing patient preferences and the effectiveness of telemedicine visits involving a survey of Kaiser patients. Another ongoing study by a current resident is examining the effectiveness of telemedicine in managing addiction and SUDs compared with management exclusively involving in-person visits.

The Regents of the University of California, San Francisco

COVID-19 Response Activities: Occupational COVID-19 management among health care and other vulnerable workers has emerged as an important component of the HRSA-supported residency program at University of California, San Francisco (UCSF). This is reflected in multiple resident-led research and quality improvement projects leading to peer reviewed publications. Residents have been lead authors on two publications in 2022 and co-authors on

two other articles, one published and one under consideration for publication. Two residents have presented at *Grand Rounds* on topics related to COVID-19 and occupational health.

Health Equity Activities: OEM residents from UCSF go on to serve in the public sector and in settings where they apply preventive health strategies pertinent to vulnerable populations with health disparities arising from exposures to hazards in the workplace and environmentally in the community at large. This program is especially important at UCSF because the changing nature of the California workplace makes OEM training vital to addressing critical needs of vulnerable subpopulations, where factors such as lack of training, poor safety precautions, overrepresentation in dangerous industries, language barriers, piece-rate pay, and undocumented status place workers at increased risk for occupational-related injuries and illnesses. The health effects of recent massive wildland fires underscore these vulnerabilities. Residents have presented at *Grand Rounds* on such topics as silicosis in engineered stone fabrication workers and toxic exposures in miners.

SUD/ODU Activities: The program educates residents on workplace issues pertaining to SUDs, including drug-free workplace regulations, and employee assistance program content.

COLORADO

The Regents of the University of Colorado

COVID-19 Response Activities: Residents engaged in COVID-19 related activities with the Colorado Department of Public Health and Environment. One resident provided expert ethics review for Colorado Department of Public Health and Environment colleagues on use of mobile vaccination units and compared antiviral effectiveness at preventing hospitalization from influenza and COVID-19. Another resident wrote and developed a health care provider survey to investigate barriers to a strong recommendation for pediatric COVID-19 vaccines, worked on projects studying vaccine hesitancy in rural Colorado counties using a community-engaged research process, and studied changes in maternal attitudes about vaccines during the COVID-19 pandemic using a vaccine hesitancy survey.

SUD/ODU Activities: Two residents participated in a clinical rotation at the Rocky Mountain Regional Department of Veterans Affairs (VA) Medical Center in the Tobacco Cessation clinic. Three residents also participated in a clinical rotation with the program director at an adult outpatient opioid treatment program providing SUD treatment services to over 800 patients. One resident rotated with the Steadman Group, a behavioral health consulting group in Colorado, and conducted population health research on inpatient SUD readmission rates. In addition, the resident analyzed evidence supporting contingency management for the treatment of stimulant use disorders and drafted a brief to Colorado Department of Health Care Policy and Financing management analyzing a bundled payment model for addiction treatment. Another resident was active in education related to SUDs. The resident wrote a letter to the editor of *Pharmacy Times*¹⁵ providing epidemiologic feedback on an article about the potential for gabapentin misuse, wrote an overview of pharmacotherapy for alcohol use disorder published in the

¹⁵ Locke T, Sugar S, Coyle DT. (December 2022). Letter to the Editor: Future Analyses of Gabapentin Use. *Pharmacy Times*. Retrieved on August 22, 2023 from <https://www.pharmacytimes.com/view/letter-to-the-editor-future-analyses-of-gabapentin-use>.

Colorado Family Physician,¹⁶ co-authored an op-ed in the *Colorado Sun* newspaper on the alcohol-related propositions on the 2022 statewide ballot examining association between alcohol availability and incidence of excessive drinking on a population level, and presented to middle school parents at the International School of Denver about adolescent substance use and prevention of drug initiation.

Telehealth Activities: A resident evaluated the effect of the COVID-19 pandemic and the transition to telehealth on pre-exposure prophylaxis delivery services for HIV prevention at Denver Health.

CONNECTICUT

The Griffin Hospital, Inc.

COVID-19 Response Activities: Preventive Medicine and IM/PM residents served as primary care providers for the Naugatuck Valley Region of Connecticut. Combined IM/PM residents provided care in the inpatient setting (general medicine, telemetry/cardiology, and intensive care unit) to COVID-19 patients and other patients.

Health Equity Activities: A resident provided project management and administration of a local grant to assess the needs of the community on how members would prefer to have the hospital system interface with them related to demographic questions. The goal is to align the systems with the electronic medical record and to educate the staff. Several residents worked with the program director on a study of cancer screening and bridging health inequities. This information helped the quality team prioritize which patients to contact, particularly among those who were vulnerable to health inequities because of age, insurance type and coverage, and other measures of vulnerability.

SUD/ODU Activities: An IM/PM resident participated in the Opioid Overdose Project held at the New Haven Health Department. Residents are receiving training in MOUD as part of the population health, addiction medicine, and wellbeing rotation.

Telehealth Activities: A preventive medicine resident with an Internal Medicine background helped launch the Remote Patient Monitoring Program for patients living with congestive heart failure and other cardiovascular conditions by assisting with project management, logistics, and integration of the program's standing orders into the electronic health record. Residents continue to receive training on the Hale telemedicine platform. As the need arose, the hospital incorporated virtual telemedicine visits in the primary care settings.

GEORGIA

Emory University

COVID-19 Response Activities: Residents are engaged in multiple activities at the DeKalb County Board of Health (DCBOH) including developing a protocol for COVID-19 home testing

¹⁶ Locke T, Coyle DT. (Fall 2022). Medical Treatment of Alcohol Use Disorder. Lift the Label Feature; Colorado Family Physician Newsletter. (No electronic version currently available).

of HIV-positive patients, conducting data analysis from DCBOH's mobile units to support COVID-19 vaccination, writing and conducting an agency-wide survey and needs assessment on attitudes on COVID-19 vaccination, developing and conducting an educational campaign for COVID-19 return-to-work policies, addressing vaccine misinformation for all departments within DCBOH, and developing an employee testing plan to support screening for COVID-19 at DCBOH.

At the Atlanta VA Medical Center, one resident participated in the development of COVID-19 prevention and treatment dashboards, and two other residents worked on a quality improvement project focusing on COVID-19 testing. At the Georgia Department of Public Health, a resident conducted an analysis of prenatal care visit data from vital records to determine if there were changes in use in 2020 compared to 2019 as a result of the COVID-19 pandemic.

Health Equity Activities: A resident participated in multiple facets of the Community Resource Hub project of the Grady Health System, designed to shift the burden of navigating the social resource system from the patient to the "system." This program seeks to foster a close network of community partners and a streamlined way to support patients in the referral and service acquisition process. The resident conducted routine assessments on social determinants of health (SDOH) and health status, followed up on community referrals, and conducted electronic medical record reviews to capture health metrics such as blood pressure and diabetic testing to use in program evaluation. The resident also analyzed financial data to estimate program impact on hospital readmissions, emergency department visits, and the associated cost to the health system.

Blood Pressure Outreach is a program to increase Grady's blood pressure control measure that aims to have at least 50 percent of patients with a blood pressure at or below their goal. A resident working with the program conducted direct outreach to patients who did not have a blood pressure reading in the current calendar year, worked with the clinical team to schedule nurse visits and refill blood pressure medications, and performed other blood pressure management tasks.

Four preventive medicine residents participated in a 24-month program that equips residents to effectively address the SDOH at the individual and health care system levels. A resident participated in a project on improvement of clinical reminders compliance for depression/suicide/post-traumatic stress disorder screenings for veterans participating in the home-based primary care program.

SUD/ODU Activities: A resident worked at the Grady Medication-Assisted Opioid Treatment Clinic conducting initial evaluations of patients presenting for their first visit in an outpatient SUD treatment clinic, seeing patients for routine follow-up appointments, and discussing treatment plans with the entire clinical team.

Telehealth Activities: At DCBOH, one resident developed a pilot for implementing telehealth into an existing refugee program. At the Atlanta VA telehealth clinic, a resident provided direct patient care to veterans through telehealth as well as participated in didactic sessions and educational presentations for the clinical team. Another resident provided hepatitis C treatment,

HIV pre-exposure prophylaxis, hepatitis B treatment, hepatitis A and hepatitis B immunizations, and treatment for latent tuberculosis infection, using telehealth for the infectious disease clinic at the Atlanta VA Medical Center.

The Morehouse School of Medicine, Inc.

COVID-19 Response Activities: A resident participated in an epidemiology rotation at the Fulton County Board of Health as part of the COVID-19 response. During monthly didactic sessions in infectious diseases epidemiology and control, all residents received continuous updates on COVID-19 epidemiology, prevention, and control, including changes in the coronavirus variants and protection against variants by booster vaccination. Residents applied this knowledge by providing the most up-to-date clinical preventive medicine and primary care services to patients.

Health Equity Activities: Four of the five residents trained in the past year are members of underrepresented minorities. The educational program for residents continued to emphasize and address the social, economic, and policy determinants of health through unique applied or “real world” experiences including a social, cultural, and behavioral longitudinal rotation in a community- or faith-based organization. Two new residents also completed a course titled *Bridges to Health Equity*. These same two residents led the health equity training for the American College of Preventive Medicine’s lifestyle coaches certificate program. These lifestyle coaches are for the National Diabetes Prevention Program sponsored by the Centers for Disease Control and Prevention.

SUD/ODU Activities: The residency program continued training several residents and core faculty in the prevention, treatment, and management of SUD/ODU through online training offered by the Boston University School of Medicine. Residents and faculty received a certificate of course completion and applied this training in their clinical settings to screen for OUD. Clinical settings included safety net clinics for homeless families, teens, and young adults; a community primary care clinic of Grady Health System; OEM clinics at the Atlanta VA Medical Center; and a privately owned occupational medicine clinic. A resident who graduated in October 2021 began an addiction medicine fellowship and returned to give a special didactic to the residents and faculty on SUD diagnosis, treatment, and management among marginalized populations.

MAINE

Maine Medical Center

Health Equity Activities: The Maine Medical Center Leadership in Preventive Medicine residency program has been expanding prevention care and training throughout their system. The program successfully launched the Community Informed Care Initiative to address gaps in health care delivery, access, and care experienced by non-English speaking and other disadvantaged communities. The Preventive Medicine Residency Director leads this program with assistance from the preventive medicine residents. The program uses community health workers (CHW) to respond to the community’s identified needs, connect disenfranchised communities to providers, and provide a network that connects care across disciplines. The residents serve as clinical supports to the CHW and help create and disseminate education on how to best use CHWs in clinical care teams.

To help promote the use of CHWs, residents also facilitate a Project Extension for Community Healthcare Outcomes (ECHO) series that focuses on the barriers to health care access faced by the immigrant population, how clinical care teams can use CHWs to help overcome those barriers, and the importance of acknowledging and providing services to help overcome barriers within a patient's SDOH. These community-led educational sessions for health care professionals have been, to date, the most widely attended Project ECHO series sponsored by MaineHealth.

Telehealth Activities: Maine Medical Center's residents have participated in developing and continuing a virtual platform for group medical visits. They audit and participate in visits and develop facilitation skills to make the platform more successful. This model shifted from in-person to virtual during the COVID-19 pandemic and added in remote patient monitoring devices.

MICHIGAN

Regents of the University of Michigan

COVID-19 Response Activities: Residents' COVID-19 support efforts included continued participation in vaccine clinics at local health departments and youth centers. One resident assisted a youth center in developing their COVID-19 plan and response. Another resident contributed to a program designed to address COVID-19 vaccine disparities; they presented on understanding and addressing vaccine hesitancy in Detroit, which resulted in local programs with listening sessions, outreach, and vaccine opportunities.

Health Equity Activities: Several residents engaged in collaborations with FQHCs and community health centers. One resident conducted an assessment with recommendations of the hepatitis C screening program at an FQHC, helping the clinic to prepare for providing hepatitis C treatment to the community. Another resident conducted a quality improvement project to assess the feasibility of conducting obstetric intake exam by telephone, facilitating the clinic's move to a new telehealth program and improving prenatal care. A third resident co-authored grant applications for pediatric screening programs at a community health center and another resident conducted a prenatal care assessment for Washtenaw County with the goal of identifying areas where care is substandard and determining causal factors that the clinic could address.

SUD/ODU Activities: The residency program participated in the state's Opioid Task Force meetings. A resident assisted in developing a program for addressing marijuana use in children, conducted focus groups on adolescent/young adult perceptions of marijuana, and presented the program to a local health system.

Telehealth Activities: As noted above, a resident conducted a quality improvement project to assess the feasibility of conducting obstetric intake exams by telephone, facilitating the clinic's move to a new telehealth program.

MISSISSIPPI

University of Mississippi Medical Center

COVID-19 Response Activities: All residents rotate with the University of Mississippi Medical Center (UMMC) Student and Employee office and participate in activities related to the COVID-19 tracking/return-to-work process for employees. All residents participated in rotation activities with the Mississippi State Department of Health's Acute Disease Epidemiology Branch, which included surveillance and disease control for COVID-19 infections.

Health Equity Activities: The residency program required all residents to complete the course entitled *Social Determinants of Health*. All residents rotate with the Myrlie Evers Williams Institute for the Elimination of Health Disparities prior to graduation. All residents also participated in UMMC's poverty simulation activity and quality improvement (a health literacy/cultural competence activity) prior to graduation. UMMC hired a 2021 UMMC Preventive Medicine residency graduate as a faculty member in 2022 to work full-time with the medical center's Ryan White clinic, with a focus on addressing lifestyle factors to prevent chronic diseases in patients with HIV infection. UMMC created an elective rotation on lifestyle factors and one resident rotated in this site in the previous grant year.

In December 2022, the Department of Preventive Medicine appointed its first Vice Chair of Diversity, Inclusion, and Community Engagement to provide oversight to all the department's efforts in these areas. UMMC created an inaugural rural community medicine rotation for all postgraduate year (PGY)-3 residents. Planned activities center around visiting rural towns in the Mississippi Delta region, to include a farm tour with discussion of farmer health initiatives with Mississippi State University Extension Service experts; a tour of a rural community center; a tour of a local public school and school-based clinic; and a visit with a rural hospital, including interactions with community members, medical staff, and patients to address issues of health disparities and SDOH.

SUD/ODU Activities: Four residents completed a clinical rotation in the Addiction Psychiatry clinic, where they assisted in treatment of patients with addiction disorders. All residents completed a brief clinical rotation with the UMMC Pain Management Clinic in the Department of Anesthesiology, which provides pain treatment options other than opioid medications.

Telehealth Activities: One resident rotated with the HRSA-funded UMMC Center for Telehealth Excellence. All current PGY-2 residents met with leaders of the Center for Telehealth Excellence to learn about the strategy and operations of telehealth in UMMC as part of their Health Systems Management rotation. Innovative tools involved in this educational experience include digital stethoscopes and remote blood pressure monitoring.

NEW JERSEY

Rutgers, The State University of New Jersey

COVID-19 Response Activities: The residency program provided workshops examining public health strategies regarding COVID-19. The residency program works on COVID-19 epidemiology with the New Jersey Department of Health Communicable Disease Services, and

all residents spend at least 2 months with that service. The program works with the Newark Department of Health and Community Wellness monitoring COVID-19 and vaccine coverage in long-term care facilities and meeting with Newark staff each month to discuss trends and concerns.

Health Equity Activities: The residency program is located in Newark, the largest and most diverse city in New Jersey. Many of the patients seen in the hospital and in clinic lack health insurance, are from generations of lower-income families, and do not have English as their primary language. Rutgers medical students have a homeless health team and for the past 2 years at least one preventive medicine resident has worked with those students, first to address COVID-19 prevention and response among the homeless and now to determine how to deliver preventive care to this population. The Rutgers School of Public Health, where residents gain their academic credits, focuses on teaching about health equity and SDOH. The school's curriculum focuses on gender equity, factors associated with aging, and other social issues. Four of the residents are members of underrepresented minority groups.

SUD/ODU Activities: All residents interact with the Addiction Medicine Fellowship Program. Two residents completed a 1-month addiction medicine elective rotation. Upon graduation, both residents will pursue addiction medicine fellowships, one in New Jersey and one in Michigan. The addiction medicine program director hosts preventive medicine residents in her Thursday clinic for persons with SUD. All residents acquire additional SUD experience at the VA. The IM/PM maternal health residents work with the obstetrics/gynecology addiction medicine specialists caring for pregnant and postpartum women with SUD. One resident completed a public health research project examining the role of substance use interfering with routine cancer screening. Two preventive medicine faculty have board accreditation to practice in addiction medicine.

Telehealth Activities: All residents have opportunities to practice telehealth during the VA health promotion/disease prevention rotation.

NEW MEXICO

University of New Mexico

COVID-19 Response Activities: Faculty and residents play key roles in COVID-19 exposure assessments and in vaccine implementation programs. Residency faculty created and directed a COVID-19 call center in which residents participate in triaging exposed and symptomatic persons. Residents provided COVID-19 vaccines and medical support at mass events. Residents assisted the New Mexico Department of Health pandemic response for persons experiencing homelessness. Two residents had posters accepted and presented at the 2022 American Occupational Health Conference in Salt Lake City, Utah. The first poster title was *Assessment of COVID-19 Symptoms in Boosted Healthcare Personnel of a Tertiary Care Hospital*. The other poster, which received acceptance for publication, was titled *Exposure Profile of Healthcare Personnel Infected with COVID-19 in a Tertiary Care Hospital: A Brief Report*.

Healthy Equity Activities: One resident completed a project at the FQHC, First Choice Community Healthcare, applying a lifestyle intervention among patients with diabetes mellitus type 2. Another resident completed a study of the relationship between race and ethnicity and diabetes mellitus prevalence in uranium workers, as Hispanic and American Indian communities in New Mexico perform much of the uranium mining. Residents provided clinical care in the University of New Mexico Addiction and Substance Abuse Program clinic for diverse and underserved populations. All first-year residents complete the Traditional Healing/Curanderismo course, where healers from the Southwest and Mexico are the instructors. Residents learn about the history, traditions, rituals, herbs, and remedies of Curanderismo, a folk healing tradition of the Southwestern United States, Latin America, and Mexico.

SUD/ODU Activities: All residents provided clinical SUD and mental health services to adults and adolescents. One resident provided maternal health care to women with SUD. All residents are trained in harm reduction, needle exchange, and behavioral counseling. One recent graduate is now a faculty member within the University of New Mexico Addiction Medicine program in the Department of Psychiatry. In the past year, one graduate completed and another started an addiction medicine fellowship.

Telehealth Activities: All residents completed a rotation in telehealth in their senior year with Project ECHO. Residents within the occupational medicine clinic completed telehealth visits with patients.

NEW YORK

The Research Foundation for the State University of New York, Stony Brook

COVID-19 Response Activities: Residents developed protocols for the new pediatric vaccine boosters for ages 6 months to 5 years for the health department immunization clinic. The residents participated in weekly telephone communicable disease meetings with county and state public health officials including discussions of Ebola, influenza, respiratory syncytial virus, and COVID-19. Two residents, now faculty, conducted and disseminated research on COVID-19. One resident published a paper and presented three papers and two posters at national meetings. The other resident presented two papers and two posters at national meetings.

Health Equity Activities: Residents developed and conducted activities to increase wellness among underrepresented minority residents. Two residents presented papers at national meetings relating to health equity and/or SDOH.

SUD/ODU Activities: Residents prepared a policy document for MOUD for the Suffolk County Department of Health Services Jail Medical Unit. Residents trained in OUD/SUD at the Northport VA Medical Center and at health department methadone maintenance clinics. Additionally, some senior residents took an elective addiction medicine rotation at Stony Brook Eastern Long Island Hospital.

Telehealth Activities: The residency program expanded the Tele-Preventive Medicine Service, led by the residents, to improve access for seniors enrolled in the Family Medicine Patient Centered Medical Home.

NORTH CAROLINA

University of North Carolina at Chapel Hill

COVID-19 Response Activities: The residency program maintained and expanded its relationship with University of North Carolina (UNC) Occupational Health through the recurrent COVID-19 waves. Residents have been instrumental in maintaining the guidelines for isolation and return to work protocols for hospital employees.

SUD/ODD Activities: The residency program has close relationships with UNC's Addiction Medicine and Tobacco Treatment Programs. The program provides all residents with the opportunity for MOUD training and Tobacco Treatment Certification. Residents provide addiction treatment in institutional and intensive outpatient treatment settings.

Telehealth Activities: Residents provide SUD/ODD counseling using telehealth.

PENNSYLVANIA

The Trustees of the University of Pennsylvania

COVID-19 Response Activities: Several resident rotation projects and presentations had a focus on COVID-19. Titles include *Working from Home During the COVID-19 Pandemic: The Largest Global Experiment in Telecommunicating in Human History* and *Prioritizing the Emotional Well-Being of Healthcare Providers During & Beyond COVID-19*. The residency program director and faculty published and presented papers on COVID-19.

Health Equity Activities: The program director and another faculty member co-authored an article in the *Journal of Public Health Management and Practice* on increasing diversity related to establishing the Inclusion and Diversity Committee.

SUD/ODD Activities: The program director provided a lecture series on opioid use.

Telehealth Activities: Two residents provided telehealth medicine to veteran patients for war-related illness and injury and burn pit exposures at the War Related Illness and Injury Study Center at the local veteran medical center with a multidisciplinary team.

WEST VIRGINIA

West Virginia University Research Corporation

COVID-19 Response Activities: Residents worked in one rural and one urban county health department promoting vaccine acceptance, tracking vaccine uptake, evaluating current vaccine programs, and monitoring the pandemic. Residents also worked in community vaccine clinics.

Health Equity Activities: The PH/GPM residency program is one of only two rural programs in the country. Residents spent 4 months providing primary care at an FQHC in Fairmont, West Virginia. Residents worked in the Harrison County Health Department clinic and the Monongalia County Health Department Women, Infants, and Children program. Residents

conducted research on barriers to care for peripheral vascular disease and after-stroke care, disparities of health access and quality in different counties, and ways to improve access and outcomes. Residents completed scholarly projects on SDOH that impact the patient populations in two FQHC facilities. The residents worked with the Project ECHO program, which provides specialist information and response to physicians in the rural areas of West Virginia. Residents attended and presented lectures in the Project ECHO program.

SUD/ODU Activities: Residents completed a longitudinal clinical rotation in The Chestnut Ridge Center Dual Diagnosis Unit. Residents completed didactic instruction in SUD treatment. Residents provided clinical care at the Lifestyle Medicine Clinic and the Intensive Therapeutic Lifestyle Change outpatient setting. Residents addressed SUD at the population level during two health department rotations.

VI. Summary and Conclusions

The PMR Program supports HRSA's goals of fostering a health care workforce capable of addressing current and emerging needs, achieving health equity, and enhancing population health while ensuring underserved communities have access to quality health care and support services.

Health priorities, such as addressing emerging infectious diseases and non-communicable chronic diseases, present tremendous challenges and require solutions involving prevention, public health strategies, and leadership. Preventive medicine physicians, through their clinical and public health preparation, provide this essential leadership and expertise in many areas of health care, including integrating public health with primary care, providing leadership in governmental public health, and conducting outbreak investigations to prevent the spread of emerging diseases.

This report describes the efforts that HRSA's PMR Program undertook to increase the number of preventive medicine physicians who address public health needs and enhance the quality of their training. These efforts demonstrate how the funded grantees advance key components of health service delivery and strengthen the health care system's focus on prevention and health promotion. Such efforts increase interprofessional training and improve the quality of care by strengthening their collaboration with public health systems.

The preventive medicine physicians that complete these residency programs contribute to HRSA's mission to improve health and reduce health disparities by increasing patients' access to quality services, strengthening the skilled health workforce, and engaging in innovative programs. Graduates practice in and lead local and state health departments and federal public health agencies, serve as medical directors in community health centers, conduct research and teach in academic settings, pursue fellowship training, and work as quality improvement and medical informatics specialists. Residents and graduates work in both clinical and public health roles, and provide leadership in efforts to improve population health, primary care, and health care systems. Preventive medicine residency training gives them a unique capacity to integrate clinical and public health approaches to addressing the nation's health problems and priorities.