



U.S. Department of Health and Human Services

**Fiscal Year 2012 Report on the Preventive Medicine
and Public Health Training Grant and Integrative
Medicine Programs**

**Submitted to the
Committee on Health, Education, Labor and Pensions
U.S. Senate
and
Committee on Energy and Commerce
U.S. House of Representatives**

EXECUTIVE SUMMARY

This is the third annual Report to Congress on the Preventive Medicine and Integrative Medicine Programs, administered by the Health Resources and Services Administration (HRSA). This report is required by Section 768(d) of the Public Health Service (PHS) Act (42 U.S.C. Section 295c), as amended by Section 10501(m)(1) of the Affordable Care Act (PL.111-148), which states:

SEC. 768. PREVENTIVE MEDICINE AND PUBLIC HEALTH TRAINING GRANT PROGRAM.

(a) **GRANTS** - The Secretary, acting through the Administrator of the Health Resources and Services Administration and in consultation with the Director of the Centers for Disease Control and Prevention, shall award grants to, or enter into contracts with, eligible entities to provide training to graduate medical residents in preventive medicine specialties.

(b) **ELIGIBILITY** - To be eligible for a grant or contract under subsection (a), an entity shall be-

- (1) an accredited school of public health or school of medicine or osteopathic medicine;
- (2) an accredited public or private nonprofit hospital;
- (3) a state, local, or tribal health department; or
- (4) a consortium of 2 or more entities described in paragraphs (1) through (3).

(c) **USE OF FUNDS** - Amounts received under a grant or contract under this section shall be used to-

- (1) plan, develop (including the development of curricula), operate, or participate in an accredited residency or internship program in preventive medicine or public health;
- (2) defray the costs of practicum experiences, as required in such a program; and
- (3) establish, maintain, or improve-
 - (A) academic administrative units (including departments, divisions, or other appropriate units) in preventive medicine and public health; or
 - (B) programs that improve clinical teaching in preventive medicine and public health.

(d) **REPORT** - The Secretary shall submit to the Congress an annual report on the program carried out under this section.

This report includes a summary of fiscal year (FY) 2012 HRSA Preventive Medicine Residency Program accomplishments and funding levels. In FY 2012, HRSA awarded nine Preventive Medicine Residency Program grants totaling \$3,719,445.

This report also includes a description of the Integrative Medicine Program (IMP) and the National Coordinating Center for Integrative Medicine (NccIM). The IMP and NccIM were newly funded programs authorized in FY 2012 by PHS Act Section 765 (42 U.S.C. 295), as amended by Section 5206 of the Affordable Care Act (P.L. 111-148), and PHS Act Section 768 (42 U.S.C. 295c), as amended by Section 10501(m)(1) of ACA (P.L. 111-148). The Report

Language for the Consolidated Appropriations Act of 2012 (P. L. 112-74) provided guidance for allocation of funds to the IMP and the NccIM.

In FY 2012, HRSA awarded 12 IMP grants totaling \$1,785,233 and one cooperative agreement for the NccIM at \$773,676. The purpose of the IMP is to incorporate evidence-based integrative medicine content into existing preventive medicine residency programs, provide faculty development to improve clinical teaching in both preventive and evidence-based integrative medicine, and facilitate delivery of related information that will be measured through competency development and assessment of the trainees. The NccIM provides technical assistance to the IMP grantees, collects data, evaluates the IMP training programs, provides support for the coordination and evaluation of faculty development programs, and disseminates IMP best practices and lessons learned nationally.

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ACRONYMS

ABPM	American Board of Preventive Medicine
ACGME	Accreditation Council for Graduate Medical Education
ACPM	American College of Preventive Medicine
AM	Aerospace Medicine
ARRA	American Recovery and Reinvestment Act
AY	Academic Year
CAM	Complementary and Alternative Medicine
CHC	Community Health Center
FQHC	Federally Qualified Health Center

FY	Fiscal Year
GME	Graduate Medical Education
HHS	U.S. Department of Health and Human Services
HRSA	Health Resources and Services Administration
IMP	Integrative Medicine Program
IMPriME	Integrative Medicine in Preventive Medicine Education
MPH	Masters of Public Health
NccIM	National Coordinating Center for Integrated Medicine
OM	Occupational Medicine
PHS	Public Health Service
PH/GPM	Public Health/General Preventive Medicine Program

PROGRAM OVERVIEW

HRSA is committed to improving health equity by increasing access to quality services and promoting a skilled health professions workforce. One mechanism for achieving this is through supporting innovative programs that increase the number and skills of physicians educated in prevention science and public health, who in turn are prepared to build the evidence-base for prevention and to assume leadership at all levels of the public health system. These programs are critical to transforming the largely hospital-based U.S. health care system focused on disease treatment to a system with a primary care hub that prioritizes prevention and wellness.

The HRSA Preventive Medicine Residency Program is authorized by the Public Health Service (PHS) Act, Title VII, Section 768 (42 U.S.C. 295c), as amended by Section 10501(m)(1) of the Affordable Care Act (P.L. 111-148). The PHS Act requires the Secretary of Health and Human Services (HHS) to submit an annual report to Congress concerning the programs carried out under Section 768 of the PHS Act. This is the third annual report developed in response to the statutory requirement.

This report also includes information on the Integrative Medicine Program (IMP), and the National Coordinating Center for Integrative Medicine (NccIM) that were described in the Report Language for the Consolidated Appropriations Act of 2012 (P. L. 112-74). These programs are authorized by Sections 765 and 768 of the PHS Act.

The HRSA Preventive Medicine Residency Program was initially authorized under Section 793 of the PHS Act, as amended by the Omnibus Reconciliation Act of 1981 (P.L. 97-35), enacted on August 13, 1981. Section 793 of the PHS Act provided authority to the Secretary of HHS to make grants to, and enter into contracts with, schools of medicine, osteopathic medicine, and public health to plan and develop new residency training programs in preventive medicine. The statute also provided the authority to maintain or improve existing training programs in preventive medicine and to provide financial assistance to residents enrolled in such programs.

The Affordable Care Act expanded the types of entities eligible to apply for the HRSA Preventive Medicine Residency Program by including accredited public or private nonprofit hospitals; state, local, or tribal health departments; or a consortium of two or more of the eligible entities. The Affordable Care Act also expanded the scope of how funds may be used. As amended by the Affordable Care Act, the statute states that funds may be used to:

1. plan, develop (including the development of curricula), operate, or participate in an accredited residency program in preventive medicine or public health;
2. defray the costs of practicum experiences, as required in such a program; and
3. establish, maintain, or improve academic administrative units in preventive medicine and public health or programs that improve clinical teaching in preventive medicine and public health.

HRSA PREVENTIVE MEDICINE PROGRAM

Preventive Medicine as a Specialty

Preventive medicine is one of 145 medical specialties and subspecialties recognized by the 24 Member Boards of the American Board of Medical Specialties.¹ The American Board of Preventive Medicine (ABPM) is one of the 24 member Boards. The ABPM was formed in 1948 based on the recommendation of a joint committee comprised of representatives from the Society of Preventive and Industrial Medicine and Public Health of the American Medical Association and the Committee on Professional Education of the American Public Health Association as “The American Board of Preventive Medicine and Public Health, Inc.” The name was changed to the American Board of Preventive Medicine, Inc. in 1952. Public Health and General Preventive Medicine were combined into one specialty area of certification by ABPM in 1983.²

Preventive Medicine is the specialty of medical practice that focuses on the health of individuals, communities, and defined populations. These physicians are trained in both clinical medicine and public health. The goal is to protect, promote, and maintain health and well-being and to prevent disease, disability, and death. Preventive medicine specialists have core competencies in biostatistics, epidemiology, environmental and occupational medicine, planning and evaluation of health services, management of health care organizations, research into causes of disease and injury in population groups, and the practice of prevention in clinical medicine. They apply knowledge and skills gained from the medical, social, economic, and behavioral sciences. Preventive medicine has three specialty areas with common core knowledge, skills, and competencies that emphasize different populations, environments, or practice settings. These areas are public health and general preventive medicine, aerospace medicine, and occupational medicine.²

- Public Health and General Preventive Medicine (PH/GPM) focuses on promoting health, preventing disease, and managing the health of communities and defined populations. PH/GPM physicians combine population-based public health skills with knowledge of primary, secondary, and tertiary prevention-oriented clinical practice. These physicians investigate disease outbreaks; assess the medical needs of both individuals and populations; counsel patients for health promotion behavioral changes; implement community-based programs that reduce the exposure to disease risk factors or better manage chronic diseases; conduct policy analyses to improve population health; complete research to inform health policy; design and operate surveillance systems; and proficiently promote clinical preventive medicine for individuals and populations, such as following guidelines for clinical preventive services like immunizations, screening tests,

¹ American Board of Medical Specialties website: http://www.abms.org/About_ABMS/member_boards.aspx. Accessed October 2, 2014.

² American Board of Preventive Medicine, Inc. website: <http://www.theabpm.org/aboutus.cfm>. Accessed October 6, 2014.

and chemoprophylaxis (the administration of medication for the purpose of preventing disease or infection).^{3,4}

- Aerospace Medicine (AM) focuses on the clinical care, research, and operational support of the health, safety, and performance of crewmembers and passengers of air and space vehicles, working together with support personnel who assist with the operation of such vehicles. AM physicians develop the scientific evidence that guides health care for the personnel and passengers of air and space vehicles. Through ongoing assessment of the aerospace workforce, they assure the safety of the passengers. They assess the conditions under which it is safe to operate these vehicles. These medical residents must develop competency in managing aerospace and general medical problems of aerospace personnel; develop and apply medical standards to facilitate the prevention, early diagnosis and treatment of health hazards; educate passengers and other physicians about the hazards of flight with certain medical conditions; and serve as passenger advocates promoting flight safety. They must also identify appropriate patients for aeromedical transport and provide guidance for safe aeromedical transport of patients with common medical problems; provide advice regarding the development of air and space flight equipment, biomedical equipment, and vehicles for flight and space flight; develop techniques for enhancing human performance and crew resource management; provide safety information and education; conduct the medical aspects of any mishap investigation, including recommendations to prevent recurrences; conduct aeromedical research relating to the flight environment; develop and apply medical care standards and programs; evaluate the physiologic effects of space flight; and conduct and evaluate longitudinal studies on astronauts.⁵
- Occupational Medicine (OM) focuses on the health of workers, including the ability to perform work; the physical, chemical, biological, and social environments of the workplace; and the health outcomes of environmental exposures. These programs have a close relationship with the Centers for Disease Control and Prevention and the National Institute of Occupational Safety and Health, serve as resources for the primary health care personnel who care for migrants, and assess the health effects of workplace hazards. They are able to identify factors affecting health that are present in the workplace and take actions to maintain a healthy workplace. In addition, they organize healthy lifestyle and wellness programs at the workplace. OM specialists supervise the direct care of workers. They are competent in preventing, mitigating, and managing the medical problems of workers and safeguarding employees and others in the workplace by using

³ American Board of Preventive Medicine, Inc. website: <http://www.theabpm.org/aboutus.cfm>. Accessed October 6, 2014.

⁴ Accrediting Council on Graduate Medical Education (ACGME) website: http://www.acgme.org/acgmeweb/Portals/0/PFAssets/ProgramRequirements/380_preventive_medicine_07012014.pdf. Accessed October 6, 2014. ACGME Program Requirements for Graduate Medical Education in Preventive Medicine, Effective July 1, 2011.

⁵ Accreditation Council on Graduate Medical Education (ACGME) website: http://www.acgme.org/acgmeweb/Portals/0/PFAssets/ProgramRequirements/380_preventive_medicine_07012014.pdf. Accessed October 6, 2014. ACGME Program Requirements for Graduate Medical Education in Preventive Medicine, Effective July 1, 2011

appropriate techniques to assess safe and unsafe work practices. They also enhance the productivity of workers by monitoring surveillance data for prevention of disease in the workplace, recognize and respond to outbreak events of public health significance in the workplace setting, recognize and evaluate potentially hazardous workplace and environmental conditions, recommend controls to reduce exposure so that they enhance the health of workers, and apply toxicological and risk assessment principles to evaluate hazards in the workplace. OM specialists are grounded in ethics that promote the health and welfare of the individual worker.⁶

Preventive medicine residency programs are accredited by the Accreditation Council for Graduate Medical Education (ACGME) and/or the American Osteopathic Association. As of July 2011, new ACGME accreditation standards require 4 months of direct patient care in the 24 months of residency training (a minimum of 2 months each year). The training requirements consist of 2 years of competency-based education and academic-and practicum-based training that incorporate the attainment of a Master's of Public Health (MPH) or other appropriate post-graduate degree. Accredited preventive medicine residency programs require prior graduate medical education training, including at least 1 year of clinical training, therefore, preventive medicine residency training occurs in postgraduate years (PGY) 2 and 3. Teaching hospitals may receive Graduate Medical Education (GME) Medicare payments for residents in accredited preventive medicine residency programs. However, most preventive medicine training occurs in nonprovider settings, where the residents perform activities that may not always be clinical in nature. While Medicare reimbursement is available in nonprovider settings, such reimbursement is conditioned on the types of activities pursued during the time a resident spends in such nonprovider settings. Generally, Medicare GME reimbursement is limited to time spent in patient care activities, and certain non-patient care activities, such as didactic conferences and seminars only in nonprovider settings whose main purpose is to provide patient care. As a result of these conditions, opportunities for receipt of Medicare GME funding for preventive medicine training is limited.

Preventive medicine physicians may complete either the MPH or other graduate degree in fields such as Epidemiology, Preventive Medicine, Community Health, Tropical Medicine and Hygiene, Occupational Health, Environmental Science, Environmental Toxicology, or Health Management. All residents must complete graduate level courses in epidemiology, biostatistics, health services management and administration, environmental health, and the behavioral aspects of health. In addition to the common core, other required content is specific to the concentration of the program. For example, the PH/GPM residents should complete applied epidemiology (to include acute and chronic disease), advanced biostatistics, advanced health services management, clinical preventive services, and risk/hazard control and communication. The OM residents should complete courses in toxicology, occupational epidemiology, industrial hygiene, safety and ergonomics, risk/hazard control, and communication. The AM residents should

⁶ Accreditation Council on Graduate Medical Education (ACGME) website http://www.acgme.org/acgmeweb/Portals/0/PFAssets/ProgramRequirements/380_preventive_medicine_07012014.pdf. Accessed October 6, 2014. ACGME Program Requirements for Graduate Medical Education in Preventive Medicine, Effective July 1, 2011.

complete courses in toxicology, global health and travel medicine, principles of aviation and space medicine, and accident investigation/risk management and mitigation.⁷

HRSA Preventive Medicine Residency Program Funding Levels

The HRSA Preventive Medicine Residency Program provides support for PGY-2 and PGY-3 medical training in preventive medicine, and stipends for residents to defray the costs associated with living expenses, tuition, and fees. During the new competing cycle in FY 2010, \$2.8 million was awarded to support nine preventive medicine residency programs. These nine grantees consisted of seven PH/GPM and two OM programs (see Table 1). Seven of the nine programs that received funding were first time HRSA Preventive Medicine Residency Program grantees. Two of the funded grantees were newly accredited preventive medicine residency programs.

In FY 2012, HRSA awarded nine Preventive Medicine Residency Program non-competing continuation grants totaling \$3,719,445. The average award amount for these nine grantees was \$413,271. Residency program funds were used to plan and develop preventive medicine curricula, operate or participate in an accredited residency program in preventive medicine, establish and maintain academic administrative units in preventive medicine, and improve clinical teaching in preventive medicine. The HRSA Preventive Medicine Residency Program also provided travel support for residents who present their research at national meetings as a required element (for program accreditation) of their graduate medical education and professional development. A portion of the funds were used to support faculty who are directing the program, developing curricula, and teaching.

Table 1 highlights the total HRSA Preventive Medicine Residency Program's FY 2010-FY 2012 funding supported through appropriations.⁸ HRSA Preventive Medicine Residency Program funding increased from \$2,831,147 in FY 2010 to \$3,719,445 in FY 2012, an increase of \$888,298, which resulted in higher average award amounts per grantee. In addition to the grantees supported through FY 2012 appropriations, eight HRSA Preventive Medicine Residency Program grantees continued to operate with \$6.7 million in funds awarded in FY 2010 through the American Recovery and Reinvestment Act (ARRA).

⁷ Accreditation Council on Graduate Medical Education (ACGME) website http://www.acgme.org/acgmeweb/Portals/0/PFAssets/ProgramRequirements/380_preventive_medicine_07012014.pdf. Accessed October 6, 2014. ACGME Program Requirements for Graduate Medical Education in Preventive Medicine, Effective July 1, 2011.

⁸ Funding amount provided for preventive medicine residency programs throughout this Report does not include costs associated with grant reviews, grant processing costs, follow-up performance reviews, and additional overhead costs.

Table 1. FY 2010–FY 2012 HRSA Preventive Medicine Residency Program Grant Awards

FY	Number of Awards	Total Awards	Average Award
2010	9	\$2,831,147	\$314,572
2011	9	\$3,408,395	\$378,711
2012	9	\$3,719,445	\$413,272

Table 2 provides a list of individual grantees; award amounts for each grantee in FY 2010, FY 2011, and FY 2012; and the specialty discipline supported by each grantee.

Table 2. FY 2010–2012 HRSA Preventive Medicine Residency Program Grantees

State	Grantee	Award (FY 2010)	Award (FY 2011)	Award (FY 2012)	Discipline
California*	University of California, San Francisco	\$118,589	\$190,000	\$200,000	OM
Colorado	University of Colorado Health Sciences Center, Denver	\$204,704	\$264,426	\$273,447	PH/GPM
Georgia	Morehouse School of Medicine	\$520,478	\$542,457	\$560,302	PH/GPM
Michigan*	University of Michigan, Ann Arbor	\$655,981	\$782,889	\$799,164	PH/GPM
New Jersey*	University of Medicine and Dentistry of New Jersey – New Jersey Medical School (UMDNJ-NJMS) Merger with Rutgers. Name changed to: Rutgers, New Jersey Medical School	\$172,878	\$325,976	\$443,733	PH/GPM
New Mexico*	University of New Mexico Health Sciences Center	\$298,533	\$343,643	\$447,258	PH/GPM
New York	The State University of New York – SUNY at Stony Brook	\$293,214	\$296,702	\$296,702	PH/GPM
Oregon*	Oregon Health and Science University	\$261,443	\$321,347	\$329,968	PH/GPM
Utah*	University of Utah	\$305,327	\$340,955	\$368,871	OM
Total		\$2,831,147	\$3,408,395	\$3,719,445	

*First-time Preventive Medicine Residency Program HRSA-supported grantees.

OM=Occupational Medicine; PH/GPM=Public Health/General Preventive Medicine

Results to Date for the HRSA Preventive Medicine Residency Program

Data about residents trained and supported through the HRSA Preventive Medicine Residency Program are collected from grantees through the required Performance Reports for Grants and

Cooperative Agreements. Data is available for Academic Year 2011-2012⁹ and Academic Year 2012-2013.¹⁰ Data for residents supported through annual appropriations are presented below.

Demographics

To date, there have been 82 residents trained and supported through annual appropriations across the 2 academic years.¹¹ Results have consistently shown that the majority of residents trained and supported through the HRSA Preventive Medicine Residency Program are female, primarily between the ages of 30 and 39, and identify as either Non-Hispanic or Latino White or Non-Hispanic or Latino Asian. Table 3 contains an overview of resident demographics for each academic year.

⁹ Supported with FY 2011 funds.

¹⁰ Supported with FY 2012 funds.

¹¹ The total number of residents trained and supported through annual appropriations is calculated by adding the number of residents who completed the program in academic year 2011-2012 with the total number of residents trained and supported through the program in academic year 2012-2013. Adding the total number of residents in each academic year would result in double counting those who were still in training at the end of academic year 2011-2012 but moved on to Year 2 of the program in academic year 2012-2013.

Table 3. Demographic Characteristics of HRSA Preventive Medicine Residency Program Enrollees, Academic Years 2011 and 2012

Demographic	Academic Year 2011-2012		Academic Year 2012-2013		
	Number of Residents	% of AY Total ^a	Number of Residents	% of AY Total ^b	
Sex	Male	20	32.79%	16	29.09%
	Female	41	67.21%	39	70.91%
Age	20-29 years	5	8.20%	7	12.73%
	30-39 years	37	60.66%	35	63.64%
	40-49 years	15	24.59%	11	20.00%
	50 and over	4	6.56%	2	3.64%
Race/Ethnicity	Hispanic or Latino (All Races)	2	3.28%	2	3.64%
	Non-Hispanic or Latino American Indian or Alaska Native	0	0.00%	1	1.82%
	Non-Hispanic or Latino Asian	14	22.95%	12	21.82%
	Non-Hispanic or Latino Black or African-American	13	21.31%	11	20.00%
	Non-Hispanic or Latino White	31	50.82%	28	50.90%
	Non-Hispanic or Latino More than One Race	1	1.64%	1	1.82%
	Disadvantaged Background^c	Yes	18	29.51%	12
No	13	21.31%	22	40.00%	
Not Reported	30	49.18%	21	38.18%	

^a Denominator: 61 Total Residents from AY 2011-2012

^b Denominator: 55 Total Residents from AY 2012-2013

^c Disadvantaged background is defined as a citizen, national, or a lawful permanent resident of the United States or the District of Columbia, the Commonwealths of Puerto Rico or the Mariana Islands, the Virgin Islands, Guam, the American Samoa, the Trust Territory of the Pacific Islands, the Republic of Palau, the Republic of the Marshall Islands and the Federated State of Micronesia who either: 1) Comes from an environment that has inhibited the individual from obtaining the knowledge, skill, and abilities required to enroll in and graduate from a health professions school or from a program providing education or training in an allied health profession; or 2) Comes from a family with an annual income below a level based on low income thresholds according to family size published by the U.S. Bureau of Census, adjusted annually for changes in the Consumer Price Index, and adjusted by the Secretary of HHS for use in health professions and nursing programs.

Each academic year, grantees of the HRSA Preventive Medicine Residency Program have partnered with over 100 different sites to provide clinical and experiential training in preventive medicine to residents. Overall, residents have been trained in a variety of clinical and public health settings such as hospitals, community health centers (CHC), local and state health departments, aerospace operations centers, and Veterans Affairs hospitals and clinics. Results have consistently shown that over 40 percent of the sites used to train residents are located in medically underserved communities across the country and between two to three residents are trained at each site during the academic year (Table 4).

Table 4. Characteristics of Sites Used to Train Residents Supported through Annual Appropriations

		Academic Year 2011-2012	Academic Year 2012-2013
Total Number and Percentage of Sites Used to Train Residents		100	107
Location of Sites Used to Train Residents	Medically Underserved Communities	44 (44%)	47 (44%)
	Rural Areas	1 (1%)	3 (2.8%)
	Primary Care Settings	*	24 (22.4%)
Average Number of Residents Trained at Each Site		3	2

Note: Respondents could select more than one response.

*Data not available for this academic year because the data was not collected in the performance measures. The performance measures related to training sites had not yet been approved by OMB.

Program Completers (Graduates)

To date, the HRSA Preventive Medicine Residency Program has produced a total of 53 preventive medicine physicians across the 2 academic years. In Academic Year 2011-2012, 27 residents completed their residency in preventive medicine. As part of its performance measurement strategy, the Bureau of Health Workforce began requiring grantees to assess each resident's intentions to practice in specific designated settings at the moment of completion. In FY 2012, results showed that, for the cohort of residents who would complete the program by June 30, 2013, 50 percent of the program completers intended to practice preventive medicine in medically underserved communities, approximately 25 percent of the program completers intended to practice preventive medicine in a primary care setting, and around 8 percent of the program completers indicated an intention to practice preventive medicine in a rural area (Table 5).

Table 5. HRSA Preventive Medicine Residency Program Completers

	Academic Year 2012-2013
Total Number and Percent of Residents who Completed their Residency in Preventive Medicine	26
Post-Completion Intentions*:	
Intend to Practice in Medically Underserved Communities	13 (50%)
Intend to Practice in Rural Areas	2 (7.7%)
Intend to Practice in Primary Care Settings	6 (23.1%)
None of the Above	7 (26.9%)

*Totals exceed 100 percent because respondents could select more than one response.

Grantees were scheduled to provide 1-year follow-up employment data on program completers by July 30, 2014. The Bureau of Health Workforce has begun exploring how intentions, among other factors, are associated with where residents practice preventive medicine within 1 year of completing the residency program.

HRSA Preventive Medicine Residency Program Highlights

The following are selected highlights of promising practices among HRSA Preventive Medicine Residency Program grantees funded through annual and ARRA appropriations:

Annual Appropriations

The **University of Colorado** preventive medicine residents assessed mental health needs in rural communities in central and northeastern Colorado, analyzed hospitalization rates for ambulatory-care sensitive conditions in southeastern Colorado. Residents also rotated with the local Area Health Education Center, and gathered data to identify Colorado communities with poor health outcomes and high hospitalization rates for mental health conditions along with many other activities. Results of these projects were incorporated into a county health improvement plan, used to prioritize funding for community health programs in high-need communities, and used to improve mental health services in rural communities.

The **Morehouse School of Medicine** program strives to graduate physicians, especially Blacks or African-Americans and other underrepresented minorities, who are well-trained in public health and preventive medicine and are prepared to meet the needs of medically underserved communities and help eliminate health inequities. The program has established affiliations with two Federally Qualified Health Centers (FQHC) to provide resident clinical experiences, a senior residential facility to provide health education and health promotion activities to its residents, and the Georgia Regional Extension Center for training in health informatics for all the residents. The program provided residents with training in lifestyle medicine, integration of public health and primary care, and community-based participatory research. They have integrated a focus on health disparities throughout the curriculum. The residents have the opportunity to work with various health professionals, including physicians, scientists, nurse practitioners, dietitians, advanced practice nurses, social workers, health educators, policymakers, and allied health workers. These interactions provide the residents with invaluable interprofessional experiences.

The **Oregon Health and Science University** provided leadership rotations for its preventive medicine residents at the Oregon State Health Department. Residents were involved in projects related to pesticide exposure, low birth weight, childhood flu, food insecurity, and other topics related to primary care and mental health care. The results of these projects informed policy development for the Oregon Health Authority.

The **Rutgers New Jersey Medical School**, formerly known as the University of Medicine and Dentistry of New Jersey, expanded practicum rotations for its preventive medicine residents. Residents evaluated a cervical cancer screening program at the Newark Department of Child & Family Well-Being Health Center, a FQHC. The residents also assisted in conducting public health surveillance and outbreak investigations in Newark. In addition, residents are involved in obesity prevention and tobacco cessation programs at the Veterans Affairs facility during rotations.

The **State University of New York at Stony Brook** implemented a curriculum in lifestyle medicine, including behavioral theories, motivational interviewing, and shared decision making

and counseling for behavior modification. Residents learned the clinical application of these concepts through rotations at the New York County Health Departments.

The **University of California, San Francisco** provided preventive medicine residents with public health practice experiences in occupational health. Residents participated in a 10-week session entitled “Clinical Management of Occupational Health Problems,” and worked in interdisciplinary teams that consist of nurses, industrial hygienists, and other health and safety personnel. The residents provided direct care in CHCs to increase the quality of the primary care services related to occupational health.

The **University of Michigan at Ann Arbor** partnered with 20 CHC clinics in medically underserved communities in Michigan to facilitate the rotations for its preventive medicine residents over a 7-month period. This provided opportunities to enhance the integration of public health and primary care in these CHCs and increased the preventive medicine residency program’s application of these principles.

The **University New Mexico Health Sciences Center’s** preventive medicine residents engaged in rotations with correctional facilities in New Mexico to teach inmates about sexually transmitted diseases and other health matters.

The **University of Utah’s** preventive medicine residents gained experience in public health and primary care integration in occupational medicine. Residents focused on preventive screening for occupational hazards, identified exposures, and handled workers' compensation cases. Some residents worked onsite, assisting mining employees as part of their physical exams and injury care.

ARRA Appropriations

The **Emory University** provided preventive medicine residents with practical experiences in population and clinic-based maternal child health and reproductive health in collaboration with the Georgia Division of Public Health at both the state and county levels. Residents participated in initiatives that targeted the reduction of unintended pregnancies, infant mortality, low birth weight, and pre-term births to improve the health of women of reproductive age and their families.

The **Griffin Hospital** has implemented and evaluated a needs-based training curriculum in lifestyle medicine to train preventive medicine residents in research methods and public health practice. Residents learned about evidence-based obesity prevention, how to provide cost-effective health care, and how to work in interdisciplinary teams to respond to public health disasters.

The **Johns Hopkins University’s** preventive medicine residents were engaged in evaluation, assessment, data collection, and analysis for projects related to early infancy, adolescence, and children with special health care needs.

The **University of California San Diego's** preventive medicine residents lead programs that targeted prevention and disease management in underserved communities. Residents assisted in the evaluation of a multi-year clinical trial that assessed the effectiveness of primary care interventions in the prevention of obesity. Residents also assisted with population needs assessments of refugee clinics in California, which led to the development of a Refugee Population Needs Assessment Workbook.

The **Tulane University** addressed issues critical to the Louisiana Gulf, focusing on rural public health and health care quality. Preventive medicine residents participated in the University's Rural Immersion Program, which exposed residents to practicum experiences in rural public health. This program partnered with the Veterans Affairs Medical Center to implement a longitudinal performance improvement plan.

The **University of California, Davis School of Medicine** partnered with the California Department of Public Health to enhance teaching, research, and public health practice experiences for preventive medicine residents. This 2-year experience provided residents with specific training in addressing health disparities and the social determinants of health among underserved populations.

The **University of Pennsylvania** preventive medicine residency program supported rotations for residents in occupational and environmental health resulting in 95 percent of the graduates returning to their local communities to practice OM. Residents also have rotations with the Veterans Affairs Medical Center.

The **University of Rochester School of Medicine and Dentistry** expanded its clinical rotations for its preventive medicine residents to include the Anthony Jordan FQHC and Passport Health, an international travel clinic. One resident was hired by the FQHC upon graduation. Increased learning opportunities in quality improvement were made available for the residents.

HRSA INTEGRATIVE MEDICINE PROGRAM

Integrative Medicine in Preventive Medicine

This program is an enhancement of preventive medicine residency programs. The principles of integrative medicine align with the principles and competencies in place for preventive medicine. The focus on prevention, individual self-care, and team care implicit in integrative medicine is consistent with the prevention focus in preventive medicine residency programs. Integrative medicine, although a natural fit for public health and preventive medicine, is also increasingly evolving with curricular enhancements for primary care specialties, and in practice through enhancements in the health care system. These integrative medicine projects benefit from the lessons learned through projects that support integrative medicine curricula in medicine and nursing programs that were previously funded by HHS.

The PHS Act Section 765 (42 U.S.C. 295), as amended by Section 5206 of the Affordable Care Act (P.L. 111-148), and Section 768 (42 U.S.C. 295c), as amended by Section 10501(m)(1) of the Affordable Care Act (PL.111-148) provides authorization to incorporate

evidence-based integrative medicine content into existing preventive medicine residency programs, provides faculty development to improve clinical teaching in both preventive and evidence-based integrative medicine, and facilitates the delivery of related information that will be measured through competency development and assessment of the trainees. The Report Language for the Consolidated Appropriations Act of 2012 (P. L. 112-74) provided guidance for allocation of funds to the IMP and the NccIM.

Integrative medicine is an overarching umbrella that includes the complementary and alternative therapies and disciplines. It emphasizes the relationship of the practitioner and consumer by placing the whole person at the center of care. This approach addresses all aspects of one's lifestyle to include the full range of physical, psychological, social, and environmental influences affecting health. The concept of integrative medicine has been evolving over more than a decade and integrative medicine principles are now being applied to multiple specialties and disciplines. Medical specialties such as family medicine and pediatrics are starting to incorporate content on the elements of integrative medicine; however, these specialties are not expected to develop competence in using some of the complementary therapies such as acupuncture, herbal therapies, or massage therapy in direct care. Increasingly, the medical curriculum is exposing the medical students and physicians to both the principles of integrative medicine and the wide range of health care providers.

Integrative medicine's focus on prevention, interprofessional team care, and incorporation of lifestyle changes that promote health is of critical importance in improving the health of the population and meeting the goals of the Affordable Care Act. Due to the movement toward integrative medicine by many disciplines and the incorporation of evidence-based complementary therapies that is part of this evolving change in the health care system, the use of complementary and alternative medicine (CAM) in the United States has been increasing substantially during the past 20 years. In 2007, according to the National Health Interview Survey, approximately 38 percent of adults 18 years and older and 12 percent of children use CAM in the United States, spending \$33.9 billion in out-of-pocket expenses for CAM-related products and visits to CAM practitioners.¹²

The defining principles of integrative medicine are as follows:

- The relationship between the patient and practitioner is critical to treatment;
- All factors that influence health, wellness, and disease are taken into consideration;
- Care addresses the whole person, including both mind and body;
- It is based in good science and is inquiry driven and evidence-based;
- Alongside the concept of treatment, the broader concepts of health promotion and the prevention of illness are paramount; and
- Care is individualized to best address the person's unique conditions, needs, and circumstances.¹³

¹² National Health Interview Survey, 2007. http://www.cdc.gov/nchs/nhis/nhis_2007_data_release.htm. Accessed October 6, 2014.

¹³ The Bravewell Collaborative, What is Integrative Medicine? 2011, <http://www.bravewell.org>. Accessed June 9, 2014.

Integrative Medicine Program Grants

In FY 2012, the IMP supported 12 grants for a total of \$1,785,233 with an average award of \$148,766. The IMP grants were awarded to accredited preventive medicine residency programs and supports activities that: (1) incorporate evidence-based integrative medicine content into existing preventive medicine residency programs, (2) provide faculty development to improve clinical teaching in both preventive and evidence-based integrative medicine, and (3) facilitate delivery of related information that will be measured through competency development and assessment of the trainees.

The IMP does not support stipends for the residents. However, it does support faculty development in the areas of integrative medicine, curriculum development, and education, in both the didactic and the clinical application of the integrative medicine principles for the residents, so that they achieve competency in the areas of integrative medicine in preventive medicine.

National Coordinating Center for Integrative Medicine

The NccIM cooperative agreement was awarded to the American College of Preventive Medicine (ACPM) to establish an Integrative Medicine in Preventive Medicine Education (IMPriME) Center. This center is responsible for: (1) convening grantees to share promising practices, (2) developing competencies for integrative medicine in preventive medicine education, (3) establishing an interprofessional community of learning on integrative medicine in preventive medicine, (4) providing technical assistance and faculty development activities for the IMP grantees, (5) making available expert resources, and (6) disseminating information through presentations and publications on the activities and outcomes of the programs. The community of learning for integrative medicine and preventive medicine includes partners in preventive medicine training, primary care, and other health professions such as nursing, dentistry, pharmacy, physical therapy, and CAM practitioners. One outcome of the work of IMP grantees and the IMPriME Center was the development of integrative medicine competencies for preventive medicine education mapped to the ACGME standards for preventive medicine.

The IMPriME Center helped to maximize the success of the 12 IMP grantees and measure the impact of the HRSA's investment. In addition, the IMPriME Center has a more national scope beyond the IMP grantees, as it is responsible for helping to establish evidence-based practices related to the integration of integrative medicine and preventive medicine in education and practice.

Integrative Medicine Program and Funding Levels

The IMP was funded for the first time in FY 2012 at \$2,558,909, of which 12 preventive medicine residency programs received \$1,785,233 and one cooperative agreement was awarded to ACPM at \$773,676 to establish the IMPriME Center. Table 6 provides a list of IMP FY 2012 grantee awards. These grants have a 2-year project period with a start date of September 30, 2012.

Table 6. FY 2012 IMP Grantee Awards

State	Grantee	Award (FY 2012)
California	Loma Linda University	\$148,554
California	University of California, San Diego	\$149,272
Connecticut	The Griffin Hospital, Inc.	\$149,896
Maryland	The Johns Hopkins University	\$149,998
Maryland	University of Maryland	\$149,963
Massachusetts	Boston Medical Center Corporation	\$139,200
Michigan	Regents of the University of Michigan	\$149,640
New Jersey	University of Medicine and Dentistry of New Jersey – New Jersey Medical School (UMDNJ-NJMS) Merger with Rutgers in 2013. Institution name changed to: Rutgers, New Jersey Medical School	\$149,748
New Mexico	University of New Mexico	\$150,000
North Carolina	University of North Carolina, Chapel Hill	\$150,000
South Carolina	South Carolina Research Foundation	\$148,964
Tennessee	Meharry Medical College	\$149,998
	Total	\$1,785,233

CONCLUSION

Preventive medicine physicians provide leadership in public health, enhance national and global actions to anticipate and ameliorate hazards to population health, and contribute to developing the evidence base for clinical preventive services. Preventive medicine is tasked with addressing population health needs and coordinating population training with specialties that can strengthen the clinical aspect of preventive medicine and primary care. Preventive medicine provides key leadership in integrating public health in primary care services by focusing on health promotion and prevention of illness in order to improve health outcomes. The residents develop competencies in both public health and clinical medicine that enables an excellent perspective for leadership in CHCs and in public health departments. Specific challenges to the development of preventive medicine as a specialty are the ability to attract more residents who will serve as public health leaders and to maintain ample funding for programs to train, supervise, provide for living expenses, and evaluate their residents.

In FY 2012, the HRSA Preventive Medicine Residency Program supported through annual appropriations and ARRA funding almost a quarter (23 percent) of the 73 ACGME-accredited preventive medicine residency programs in the United States. In addition, about 40 percent of the training sites were in medically underserved areas. These programs have enhanced access by providing preventive care to vulnerable and underserved populations.

Preventive medicine residency programs are preparing residents to address emerging topics in public health and preventive medicine, particularly among diverse populations. Residents

trained in preventive medicine become effective catalysts in integrating public health into primary health care. They provide leadership in implementation of the National Prevention Strategy, which aims to improve the health and quality of life for individuals and families. They accomplish this by promoting strategies that shift the focus of the health care system and care of individuals and families from sickness to prevention and wellness. Prevention and wellness is also the focus of the IMP as it incorporates lifestyle changes that improve the health of populations and as integrative health care approaches evolve in education, practice, and public health systems.

Health and wellness issues facing the national and global population, such as emerging infectious diseases, non-communicable chronic diseases, multiple chronic conditions, and lifestyle behaviors affecting these conditions present tremendous challenges and require extraordinary solutions involving prevention, public health, and ongoing and increased leadership from preventive medicine physicians. Successful implementation of the Affordable Care Act requires strong leaders in public health and preventive medicine. HRSA is committed to strengthening preventive medicine training through innovative programs and continuous quality improvement, and to increasing access to health care by developing a diverse, culturally competent health workforce.