

Commonwealth of Massachusetts  
The Office of Health and Human Services  
Department of Public Health  
75 State Street, Boston, MA 02108-4619

CHARLES D. BAKER  
Governor

KARYN E. POLITO  
Lieutenant Governor

MARYLOU SUDDERS  
Secretary

MONICA BHAREL, MD, MPH  
Commissioner

Tel: 617-624-6000  
[www.mass.gov/dph](http://www.mass.gov/dph)

August 6, 2015

Steven T. James  
House Clerk  
State House Room 145  
Boston, MA 02133

William F. Welch  
Senate Clerk  
State House Room 335  
Boston, MA 02133

Dear Mr. Clerk,

Pursuant to Sections 25L and 25N of Chapter 111 of the Massachusetts General Laws, please find enclosed a report from the Department of Public Health entitled the *Massachusetts Health Care Workforce Center Annual Report*.

Sincerely,

Monica Bharel, MD, MPH  
Commissioner  
Department of Public Health

**Charles D. Baker**  
Governor

**Karyn Polito**  
Lieutenant Governor



**Marylou Sudders**  
Secretary

**Monica Bharel, MD, MPH**  
Commissioner

# Massachusetts Health Care Workforce Center Annual Report

**August 2015**

Massachusetts Department of Public Health



## Legislative Mandate

The following report is hereby issued pursuant to Section 25L and 25N of Chapter 111 of the Massachusetts General Laws as follows:

Chapter 111 M.G.L., Section 25L

*There shall be in the department a health care workforce center to improve access to health and behavioral, substance use disorder and mental health care services. The center, in consultation with the health care workforce advisory council established by section 25M and the secretary of labor and workforce development, shall: (1) coordinate the department's health care workforce activities with other state agencies and public and private entities involved in health care workforce training, recruitment and retention, including with the activities of the Health Care Workforce Transformation Fund; (2) monitor trends in access to primary care providers, and nurse practitioners and physician assistants practicing as primary care providers, behavioral, substance use disorder and mental health providers, and other physician and nursing providers, through activities including (i) reviewing existing data and collection of new data as needed to assess the capacity of the health care and behavioral, substance use disorder and mental health care workforce to serve patients, including patients with disabilities whose disabilities may include but are not limited to intellectual and developmental disabilities, including patient access and regional disparities in access to physicians, nurses, physician assistants, and behavioral, substance use disorder and mental health care professionals and to examine physician, nursing and physician assistant, behavioral, substance use disorder and mental health professionals' satisfaction; (ii) reviewing existing laws, regulations, policies, contracting or reimbursement practices, and other factors that influence recruitment and retention of physicians, nurses, physician assistants, behavioral, substance use disorder and mental health professionals; (iii) projecting the ability of the workforce to meet the needs of patients over time; (iv) identifying strategies currently being employed to address workforce needs, shortages, recruitment and retention; (v) studying the capacity of public and private medical, nursing, physician assistant, behavioral, substance use disorder and mental health professional schools in the commonwealth to expand the supply of primary care physicians and nurse practitioners and physician assistants practicing as primary care providers and licensed behavioral, substance use disorder and mental health professionals; (3) establish criteria to identify underserved areas in the commonwealth for administering the loan repayment program established under section 25N and for determining statewide target areas for health care provider placement based on the level of access; and (4) address health care workforce shortages through the following activities, including: (i) coordinating state and federal loan repayment and incentive programs for health care providers; (ii) providing assistance and support to communities, physician groups, community health centers and community hospitals in developing cost-effective and comprehensive recruitment initiatives; (iii) maximizing all sources of public and private funds for recruitment initiatives; (iv) designing pilot programs and making regulatory and legislative proposals to address workforce needs, shortages, recruitment and retention; and (v) making short-term and long-term programmatic and policy recommendations to improve workforce performance, address identified workforce shortages and recruit and retain physicians, nurses, physician assistants and behavioral, substance use disorder and mental health professionals.*

*(b) The center shall maintain ongoing communication and coordination with the health*

*disparities council, established by section 16O of chapter 6A.*

*(c) The center shall annually submit a report, not later than March 1, to the governor, the health disparities council, established by section 16O of chapter 6A; and the general court, by filing the same with the clerk of the house of representatives, the clerk of the senate, the joint committee on labor and workforce development, the joint committee on health care financing, and the joint committee on public health. The report shall include: (1) data on patient access and regional disparities in access to physicians, by specialty and sub-specialty, and nurses, physician assistants, behavioral, substance use disorder and mental health professionals; (2) data on factors influencing recruitment and retention of physicians, nurses, physician assistants, and behavioral, substance use disorder and mental health professionals; (3) short and long-term projections of physician, nurse, physician assistant and behavioral, substance use disorder and mental health professionals supply and demand; (4) strategies being employed by the council or other entities to address workforce needs, shortages, recruitment and retention; (5) recommendations for designing, implementing and improving programs or policies to address workforce needs, shortages, recruitment and retention; and (6) proposals for statutory or regulatory changes to address workforce needs, shortages, recruitment and retention.*

#### Chapter 111 M.G.L, Section 25N

*There shall be a health care workforce loan repayment program, administered by the health care workforce center established by section 25L. The program shall provide repayment assistance for graduate and medical school loans to participants who: (1) are graduates of medical, nursing, or physician assistant schools or accredited graduate schools; (2) specialize in family health or medicine, internal medicine, pediatrics, obstetrics/gynecology, psychiatry, behavioral health, mental health or substance use disorder treatment; (3) demonstrate competency in health information technology, at least equivalent to federal meaningful use standards as set forth in 45 C.F.R. Part 170, including use of electronic medical records, computerized physician order entry and e-prescribing; and (4) meet other eligibility criteria, including service requirements, established by the board.*

*Each recipient shall be required to enter into a contract with the commonwealth which shall obligate the recipient to perform a term of service of not less than 2 years in medically underserved areas as determined by the center.*

*(b) The center shall promulgate regulations for the administration and enforcement of this section which shall include penalties and repayment procedures if a participant fails to comply with the service contract.*

*The center shall, in consultation with the health care workforce advisory council and the public health council, establish criteria to identify medically underserved areas within the commonwealth. These criteria shall consist of quantifiable measures, which may include the availability of primary care medical services or behavioral, substance use disorder and mental health services within reasonable traveling distance, poverty levels and disparities in health care access or health outcomes.*

*(c) The center shall evaluate the program annually, including exit interviews of participants to determine their post-program service plans and to solicit program improvement recommendations.*

*(d) The center shall file an annual report, not later than July 1, with the governor, the clerks of the house of representatives and the senate, the house and senate committees on ways and*

*means, the joint committee on health care financing, the joint committee on mental health and substance abuse and the joint committee on public health. The report shall include annual data and historical trends of: (1) the number of applicants, the number accepted and the number of participants by race, gender, medical, nursing, physician assistant, behavioral health, substance use, and mental health specialty, graduate, physician assistant, medical or nursing school, residence prior to graduate, medical, nursing, or physician assistant school and where they plan to practice after program completion; (2) the service placement locations and length of service commitments by participants; (3) the number of participants who fail to fulfill the program requirements and the reason for the failures; (4) the number of former participants who continue to serve in underserved areas; and (5) program expenditures.*

Given the interconnected nature of the activities detailed in these two sections, the Department of Public Health combines these two reports to more accurately reflect the ongoing work of the Health Care Workforce Center.

## **Executive Summary:**

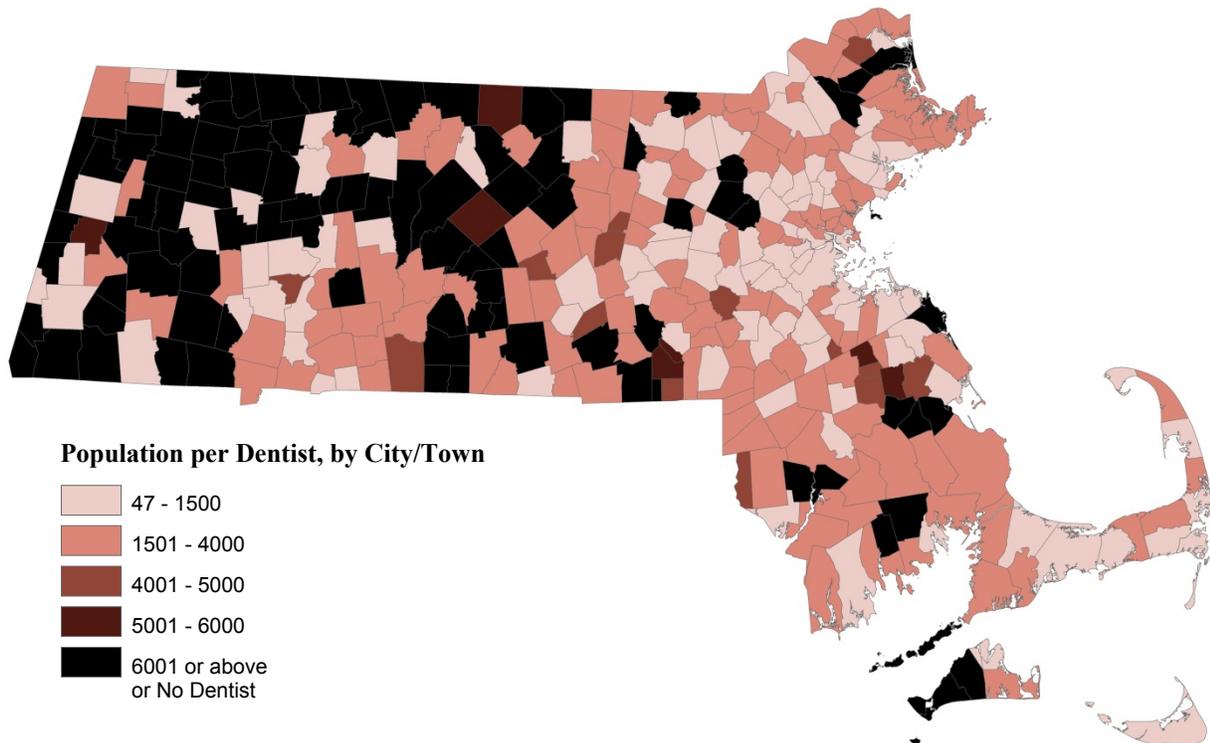
The mission of the Health Care Workforce Center (the Center), established by Chapter 305 of the Acts of 2008 and expanded by Chapter 224 of the Acts of 2012, is to improve access to health care in the Commonwealth by supporting programs that assure an optimal supply and distribution of primary care and other health professionals. The Center strives to fulfill its mandate and to further the goals of Chapter 224 by focusing its work in three areas:

- Collection and analysis of data on the Commonwealth's primary care workforce, which is broadly defined to include physicians, advanced practice nurses, physician assistants, dentists, and mental health professionals to support development of targeted strategies for addressing workforce gaps;
- Administration of federal and state programs that encourage recruitment and retention of primary care providers; and
- Coordination of DPH health care workforce activities with those of other public and private entities to leverage primary care workforce development efforts.

What follows is a description of these three areas, including activities, achievements and challenges during the reporting period.

## ◆ HEALTH CARE WORKFORCE DATA COLLECTION

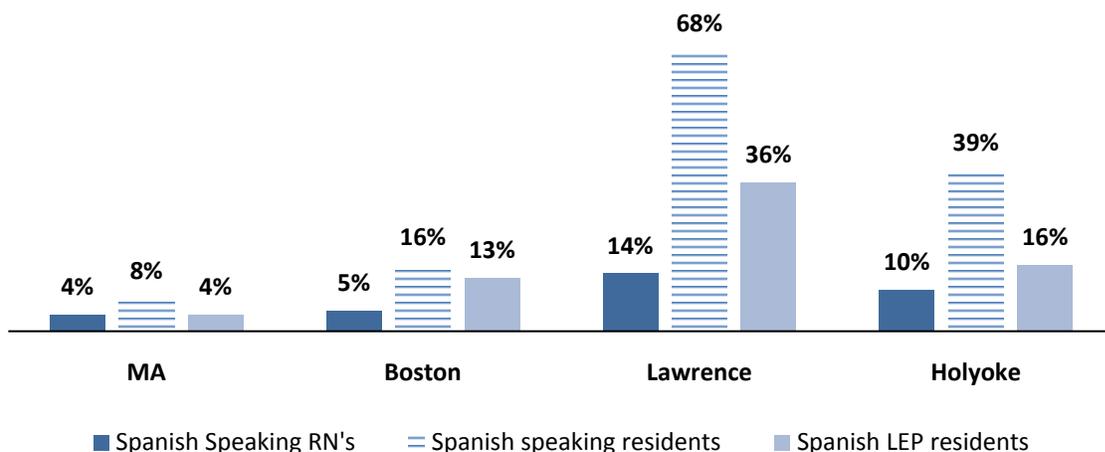
The [Health Professions Data Series](#) was developed in 2009 following a mandate to monitor the composition and distribution of health care providers and to identify solutions to address potential workforce shortages. A core dataset was developed to monitor workforce trends in the following seven licensed disciplines: physicians, physician assistants, nurses, licensed practical nurses, dentists, and dental hygienists. This dataset contains information on demographics, education, employment characteristics, and future plans of these health professionals and allows for the identification of current and emerging issues in the supply and distribution of the health care workforce. The data series is critical for resource allocation, policy and program development, and to inform a number of Health Care Workforce Center initiatives. One such initiative is the Massachusetts Loan Repayment Program, which relies on workforce distribution data to better target recruitment and retention efforts. The map below, which shows the density of dentists at the town/city level, is an example of how the data can be used to identify areas of need. A high population to dentist ratio is indicative of a shortage in supply of dental providers. Please note that the category of cities and towns that have a population to dentist ratio of 6,001 or above also includes many cities and towns without a dentist.



Data Source: Health Professions Data Series – Dentist 2012

In addition to the geographic distribution of health professionals, data on demographics, education, and future plans are important for the Center’s long term strategic planning around health care access. To only view health care access from a supply perspective does not take into account other potential barriers to care such as the linguistic needs of specific communities. The figure below is an example of how the data series can help identify potential towns and cities where language barriers may exist.

### Limited English Proficiency Among Spanish Speaking Nurses in Three MA Communities



Data Source: Health Professions Data Series: Registered Nurse 2012

The ongoing collection of health care workforce data is essential to fulfilling the Center’s mission of improving access to care, particularly in our changing health care environment. The *Health Professions Data Series* will continue to be a valuable resource in the planning, resourcing, and implementation of the reforms called for in Chapter 224 relating to quality, cost effectiveness, and access. To access published health professions data series reports, please visit: <http://www.mass.gov/eohhs/gov/departments/dph/programs/community-health/primarycare-healthaccess/healthcare-workforce-center/health-care-workforce-development-reports.html>

### ◆ PRIMARY CARE RECRUITMENT AND RETENTION

The Center plays a critical role in primary care recruitment and retention by

- promoting primary care as a rewarding career choice to health professions students,
- utilizing loan repayment funds to encourage a variety of primary care provider types to practice in areas that have primary care shortages and/or high concentrations of underserved populations (e.g. mental health facilities, rural and some urban areas, or prisons), and

- developing and disseminating strategies for retaining primary care providers in those sites.

**Promoting primary care to prospective professionals:** During the reporting period, Center staff have undertaken both in-person and social media outreach to undergraduate and graduate students who might be interested in a career in primary care in an underserved community. In-person sessions have included discussions and presentations at academic training center career days or similar settings in Boston, Worcester and Amherst. The Center also has created web and Facebook pages which include comprehensive information on the various loan repayment programs as well as other resources.<sup>1</sup>

**Loan Repayment and J-1 Visa Waiver Programs:** The primary recruitment and retention initiative of the Center is the Massachusetts Loan Repayment Program for Health Professionals (MLRP). The MLRP supports the placement of primary care health professionals in shortage areas by providing funding that reduces outstanding health professional education loans. Resources for these programs are limited and the demand is high. Each year, the Department receives applications from two-to-three times as many applicants as the Center has funding for. As a result, the Center makes every effort to “triage” applicants to the opportunity that is most likely to meet individual needs, including referring applicants to other federally-administered and privately-funded opportunities.

In recent years federal resources (e.g. the [National Health Service Corps](#)) are less accessible to Massachusetts health professionals as needs are greater in other states. For example, in 2014, Massachusetts received 84 NHSC clinician placements worth \$2.6 million. Until now, our reliance on federal resources has enabled the MLRP and NHSC to help maintain a steady pool of qualified health professionals in medically underserved areas of Massachusetts. This increases the demand for loan repayment for Massachusetts’ high need areas. The Center’s loan repayment program is managed with an eye to maximizing all funding, and the program continues to be a known resource and essential tool supporting health care access. The Center staff work closely with partners to maximize current retention best practices and tools. These partners include, though not limited to, the Massachusetts League of Community Health Centers, The Kraft Center for Community Health, and other state and private health professional training programs and other entities.

The MLRP currently consists of two Components:

- *Component A* is funded by a grant from the federal Health Resource and Services Administration (HRSA) that requires a \$1 to \$1 non-federal match. This federal funding also requires that awardees practice in a federally designated Health Professional Shortage Area (HPSA). The Center was required to competitively re-apply for this federal grant in 2014. The grant application was successful, including the request for an additional \$200,000 in annual funding, bringing the total grant award to \$550,000 annually for 5 years.

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<sup>1</sup> During the reporting period, a staff reduction at the Center resulted in a hiatus in managing these online resources, and a new hire anticipated June 2015 through a Federal grant will assume responsibility for the Center’s social media activities.

- *Component C* is primarily funded by state line item 4510-0715, which was eliminated in 9c reductions in FY15. Remaining funding comes from the Health Workforce Transformation Fund (see below) established by Chapter 224 of the Acts of 2012, which mandates an Inter-State Agreement between the Executive Office of Labor and Workforce Development and the MDPH. As such, the Component C can utilize more flexible placement criteria in response to specific state needs.

Information on current MLRP participants is contained in **Appendix 1**.

In order to be eligible to apply for the MLRP, applicants must have an employment commitment from an eligible employer (i.e. a public or non-profit entity) providing services in a geographic area or community that is identified as high need. Participants must agree to work at least 40 hours/week and provide the equivalent of two years of professional health services in clinical practice for that employer. A reduced-hour schedule is permitted, and the length of service is increased commensurate with the reduction. In the event of a breach of contract, the MLRP can recoup all loan repayment funds provided to the individual, but it is important to note that there has been only one breach of contract since 2009.

The last MLRP application cycle began on March 1 and closed on September 15. Applications are reviewed by a committee which includes individuals with expertise in epidemiology, substance abuse, behavioral health, youth health, reproductive health, rural health, oral health, and representation from the Massachusetts League of Community Health Centers (the League), the state's federally designated Primary Care Association. Awards vary by profession. Physicians, Psychologists (PhD.), and Nurse Practitioners are eligible for a total award of up to \$50,000 over two years (up to \$25,000 per year). All other qualified health professionals are eligible for a total award of up to \$40,000 over two years (up to \$20,000 per year). Due to the 9C budget reductions in SFY 2015, the award amounts have been reduced across all awardees, making the highest award amount \$40,000 for a two-year contract. Overall, the Center's loan repayment program supports approximately 25-35 awards each year.

Chapter 224 of the Acts of 2012 established the Health Care Workforce Transformation Fund, administered by the Executive Office of Labor and Workforce Development, and mandated that 20% (\$4,000,000 over a four-year period) of the fund be transferred to the Department to support the work of the Center including the MLRP and its data collection activities. In order to expand the reach of these resources, the Department entered into a contract with the League for a complementary loan repayment program focused on eligible primary care physicians, physician assistants, and nurse practitioners in community health centers, and to establish a primary care residency program funded through state account 4510-0110, however this program was eliminated in a 9c reduction in FY15. The League receives \$500,000 per year over four years, and the remaining \$2,000,000 is retained by the Department to support the MLRP and the Center.

An important additional source of primary care capacity in underserved areas of the state is the J-1/Conrad-30 Physician Visa Waiver program. A J-1 visa is a non-immigrant visa issued by the United States to visitors participating in programs that promote cultural exchange, especially to obtain medical or business training within the U.S. Among those for whom J-1 visa waivers are

available are physicians who agree to practice in federally designated shortage areas for a 3-year period, including community health centers, correctional facilities or other sites located within a federally designated shortage area. In 2014, the Massachusetts J-1/Conrad 30 Physician Visa Waiver Program supported 30 physicians. A total of 84 physicians are currently obligated through the program and practicing in areas of greatest need. In 2014 the Center initiated an exit survey process with J1 Visa Waiver program physicians who are in their final year of obligation, in order to assess retention and identify any quality improvement steps to improve retention, as well as prioritizing placement. Survey data results will be in our next report.

**Health Professions Evaluation and Retention Activities:** The MLRP effectively functions as an investment in the state's primary care infrastructure. To ensure that the "return" on that investment extends beyond the two-year service requirement, the Center has devoted considerable resources to evaluating the MLRP – both with respect to participants' experience with the application process and, at the completion of their service term, their experience with the placement. The purpose of these inquiries is to improve MLRP administration, and to identify ways to increase participants' satisfaction so that they may choose to continue practicing in the same site or underserved area.

With regard to MLRP administration, the Center built on research it had undertaken in 2011-2013 on retention overall, and retention through the MLRP and J1 Visa Waiver program. This research entailed intensive literature review and evaluation of the MLRP-awardee's application experience and their retention in their high-need practice area through survey and targeted interviews with health professionals and site administration. The research results were extensive and furthered our understanding of both recruiting and retaining health workforce in these unique settings. The Center's recruitment and retention findings are consistent with national trends, and identified that there are low-cost high impact tools and incentives that can be developed/used including and beyond providing loan repayment such as engaging the clinician, providing relevant and accessible trainings and learning opportunities, opportunities for career advancement and career paths; and appropriate and timely orientation to work site systems, colleagues, and patient population. As primary care delivery moves towards an inter-professional teams model, worksites will need to consider all options when developing recruitment and retention plans.

This research demonstrated that sites in high need areas may need additional support in their health workforce development. Despite the evidence based value in formal plans for both recruitment and retention, most sites do not have in place a formal recruitment or retention plan. The Center also learned that hospital affiliation increased the recruitment and retention capacity of community based agencies; that community based agencies find it difficult to compete with neighboring hospitals' salaries and benefits, and that finding ways to guarantee access to loan repayment would enhance the value as a recruitment tool.

The literature review and survey results also informed next steps. For example the Center developed a "Welcome Packet" for MLRP awardees, with relevant program information and now administers a welcome-survey to (1) obtain feedback on its own performance in the application process and (2) to gather information that would be useful to the practice site in orienting its MLRP participants. Highlights of the 2014 welcome survey are:

- The overwhelming majority of participants found the MLRP application process – including responsiveness of Center staff – to be good or excellent.
- The top four variables that were important to participants in choosing their work site were, in descending order: working with underserved populations; opportunities for professional growth; the site’s reputation; the site’s qualification for the MLRP. Neither the salary nor the benefit package was identified as a key variable.
- The overwhelming majority of participants were provided an orientation by their work site that they considered helpful to their effectiveness in their roles. *Research indicates that an adequate and appropriate work-site orientation is an important element in retaining health professionals.*
- Over 97% of participants indicated that they planned to continue practicing at their site beyond their MLRP commitment.

In addition to the relatively new welcome survey, since 2009 the Center has conducted a semi-annual exit survey prior to MLRP participants completing their term of service. Highlights of the most recent exit survey are as follows:

- The majority of participants decided to work with underserved populations when they were in their health professional training program.
- The top four sources of satisfaction with other aspects of their site experience were – in descending order: the mission and goals of the site; relationship with colleagues; the site’s reputation in the local community; and, the benefits package.
- More than eighty percent of survey respondents indicated that they planned to continue working at the practice site of service.

The overall finding from both the welcome and the exit surveys is that MLRP participants have both an initial and ongoing commitment to working with underserved populations, and the financial support they receive from the MLRP makes it possible for them to pursue those practice goals. Research also indicates that while the loan repayment program is an essential tool, other initiatives are also important to maintain long-term retention beyond a 5-year period.

The Center has received grant funding from the federal Health Resources and Services Administration (HRSA; one grant supports the loan repayment program (as noted above) and the other is focused on needs assessment, shortage designation and health workforce assessment and development, and complements the Center priorities. These federal grant funds along with the funds from the Health Care Workforce Transformation Fund support the Center initiatives including loan repayment support to approximately 25-35 health professionals annually.

**Graduate Medical Education:** Chapter 224 also established a special commission to “examine the economic, social and educational value of graduate medical education in the Commonwealth and to recommend a fair and sustainable model for future funding of graduate medical education (GME) in the Commonwealth”. This commission was convened between February and July of 2013 and found at baseline, the demand for primary care providers are projected to increase by 8% by 2020. The final report of the special commission recommended that the Health Care Workforce Center be assigned the responsibility related to GME, including providing additional

data coordinated with existing data collection efforts. Specific efforts include tracking the number and geographic and specialty distribution of programs in the Commonwealth, tracking physician workforce, monitoring the funding received by programs in the Commonwealth for GME as well as related workforce programs, monitoring the retention of trainees and population demographics and monitoring the quality of GME programs.

**A Nurse Practitioner Residency Program** proposal, as yet unfunded, has been developed as an innovative initiative to support current and new teaching programs at community health centers. The nurse practitioner population was prioritized to complement extant physician residency programs, and ultimately develop a relevant model to adapt/replicate at community health centers or other relevant sites.

This intent of this proposed nurse practitioner (NP) pilot program is to demonstrate a replicable model, with the adaptability to meet unique teaching community opportunities and resources at health centers. Important outcomes would include demonstrated competency in practice for new graduate NP's and their self-reports on several dimensions such as professional identify, practice confidence, integration onto care teams. Such a program would contribute to NP retention in high need areas, and contribute to improved quality and costs of care. Sites would include community health centers which would be evaluated for readiness to implement the program, in order to secure the best possible outcomes. If funding is identified for this pilot program, evaluation and technical assistance from an existing NP Residency Program would be included.

#### **COORDINATING PRIMARY CARE WORKFORCE DEVELOPMENT ACTIVITIES**

A number of public and private entities are engaged in work related to ensuring an adequate health care workforce, and specifically an adequate primary care workforce, within the Commonwealth. A key aspect of the Center's mandate is to ensure that the Department of Public Health's efforts are coordinated with those activities. The Center is pleased to report the following:

- Chapter 224 reconfigured the Health Care Workforce Advisory Council by expanding its membership to include additional specialty representatives. The Council will assess current workforce initiatives and collaborate with the Center on improving access to care across the Commonwealth. To date, only fourteen of the members have been appointed by the Governor's office. The statutory language includes nineteen slots. There is no slot to date that represents oral health care.
- The Center continues monthly meetings with the Commonwealth Corporation which represents the Executive Office of Labor and Workforce Development, and includes the Massachusetts Area Health Education Center (MassAHEC). The purpose of these meetings is to support communication and support, and collaboration where appropriate. Each of the entities represents a unique aspect or component of health workforce and brings that perspective to the discussion.

- The Center is represented on the Health Workforce Transformation Fund Advisory Board. The Director of the Division of Health Access represents the MDPH Commissioner on this Board and the Center Director provides program-support.
- The Center collaborates with the Massachusetts Area Health Education Center (MassAHEC) and the Massachusetts League of Community Health Centers (MLCHC) on several initiatives relating to health centers and rural health care. The work includes a survey of physicians and nurse practitioners practicing in community health centers. The survey will provide important information on factors, including various aspects of working conditions, which influence physician decisions to continue to remain in primary care in an underserved area. These survey responses help the Center shape workforce initiatives and improve recruitment and retention of health professionals.
- The Center was a key contributor to the efforts by the Rural Access Commission, established by Section 203 of the FY13 GAA. The recommendations of the report by the Commission include, in part, recommendations for the development of an enhanced infrastructure to identify and address rural workforce needs and implementation of data-driven and evidenced based strategies to address health care worker shortage in rural communities. The key action steps recommended include “increase the accessibility of state healthcare workforce programs to rural healthcare organizations”. These findings are based on the Commission’s report that health care workforce shortage problems are prominent in rural areas.
- The Center worked closely with the State Office of Rural health on health workforce assessment and distribution regarding the needs in North Berkshire County, responding to the abrupt closure of the North Adams Hospital.
- The *Health Professions Data Series* continues and core data set has been refined in response to Chapter 224 to include questions about providing care for individuals with disability, and gathers data on health professionals providing military service.

### NEXT STEPS

Essential next steps in the coming year for the Center initiatives are to:

- Finalize the *Health Professions Data Series* draft report on physicians in preparation for publication
- Continue work with the Division of Professional Licensure to gather data on additional health workforce disciplines including behavioral health, allied health, and others
- Continue work with the MDPH Bureau of Substance Abuse Services (BSAS) on those substance use providers licensed through BSAS
- Refine Massachusetts-specific high need or shortage designation criteria.

## RECOMMENDATIONS

The Center is mandated to include recommendations to the General Court in its annual report. The recommendations are as follows:

- **Support loan repayment and other evidence-based retention initiatives.** As the MLRP recipient exit surveys demonstrate, the MLRP has been a successful recruitment and retention strategy. The MLRP benefits greatly from the four-year infusion of funds through the Health Workforce Transformation Fund. The MLRP depends on the reliable and sufficient funds to maintain the federal grant matching dollars and also sufficient appropriations to the more flexible state-funded program. This latter program will become even more important to preserving access to health care in the Commonwealth as the Center has seen a reduction in access to National Health Service Corps clinicians since the cessation of the American Recovery and Reinvestment Act (ARRA) funding to the Corps, increasing reliance on the MLRP for support in high need areas. In addition the Center anticipates that the federal methodology for designation of HPSAs will soon be revised in a way that disadvantages the state, thus also increasing reliance on state-based resources.

Research over time suggests loan repayment programs are much more effective than “up front” scholarship programs in attracting new health professionals to primary care. Our own clinician surveys indicate high retention as do other studies:

States’ support-for-service programs bring physicians to needy communities where a strong majority work with at-risk patient populations; half stay over 8 years. Loan repayment and direct financial incentive programs demonstrate the broadest successes (Outcomes of States’ Scholarship, Loan Repayment, and Related Programs for Physicians: *Medical Care* • Volume 42, Number 6, June 2004; *Donald E. Pathman, MD, MPH, et al.*) and (<http://healthinfo.montana.edu/MTHWAC/multi-state-nhsc-retention-collaborative-final-report.pdf>)

- **Maintain and strengthen the Center’s capacity to analyze and report on the ability of the primary care workforce to meet the present and future health care needs of the Commonwealth’s residents.** The Center, with critical support from the Division of Health Professions Licensure, has systematized health workforce data collection, analysis and reporting resulting in the *Health Professions Data Series* with limited resources. With the advent of the Healthcare Workforce Transformation Fund the Department dedicates a portion of the dollars to support a 0.5 FTE Epidemiologist to perform the type of analytical work necessary to produce actionable projections on primary care workforce supply and demand in the Commonwealth. This funding and initiative synchronize with Chapter 224’s requirement that certain health professionals provide information “designed to facilitate health resource planning and market share analysis” as a condition of licensure.

## **CONCLUSION**

The Commonwealth of Massachusetts is recognized as a national leader in efforts to build a sufficient, high-performing primary care workforce. The capacity to collect health professions workforce data will ultimately ensure that the health care needs of Massachusetts residents are adequately addressed. There are, however, some factors over which the Commonwealth has little control, particularly around the training and reimbursement of primary care providers. The federal government, particularly in its capacity as administrator of Medicare and principal funder of graduate medical education, will need to take the lead in altering the incentives to make primary care a more attractive career alternative for health professionals. Nevertheless, the Center has made great strides by leveraging the resources available to make health care more accessible, particularly in underserved communities. The Department of Public Health is extremely grateful for this ongoing support and will continue to address issues of access and reduction of health disparities in the coming fiscal year.

## APPENDIX 1

### State FY 2015      New awardees in contract

#### Section A

This list includes eighteen new health professional awardees that are funded in part by the Health Workforce Transformation Funds transferred from the Executive Office of Labor and Workforce Development (EOLWD) to support the Center through an Inter-state-agency agreement as described in Chapter 224.

In total, 32 new awards were made to health professionals in state fiscal year 2015 using a combination of federal and non-federal funding. This report only notes those health professionals funded with the Health Workforce Transformation Fund agreement.

<b>Race</b>	<b>Sex</b>	<b>Discipline</b>	<b>Specialty</b>	<b>School</b>	<b>Employer City</b>	<b>Contracted Time</b>
White	F	PA	Mental Health, Physician Assistant	Providence Behavioral Health Hospital	Holyoke	2 yrs
Asian	F	MD	Pediatrician	South Cove Community Health Center	Boston	2 yrs
White	F	MD	Pediatrician	East Boston Neighborhood Health Center	East Boston	3 yrs + 6 mo
White	F	CNM	Certified Nurse Midwife	MGH Revere Health Center	Revere	2 yrs
Asian	F	DO	Pediatrician	Northern Berkshire Pediatrics	North Adams	2 yrs
White	F	PNS	Psychiatric Nurse Specialist	Gosnold Thorne Counseling Center	Centerville	2 yrs
White	F	NP	Family Practice	Upham's Corner Health Center	Boston	2 yrs
White	M	PNS	Psychiatric Nurse Specialist	Lynn Community Health Center	Lynn	2 yrs
White	F	PA	Physician Assistant	Hampden County House of Corrections Sherriff's Department	Ludlow	2 yrs
White	F	NP	Family Practice	Community Health Connections	Leominster	2 yrs
White	F	MD	Psychiatrist	Community Healthlink	Worcester	2 yrs

**Section A continued New awardees in state fiscal year 2015**

White	M	DO	Psychiatrist	Community Health Connections	Fitchburg	2 yrs + 6 mo
White	F	DO	Pediatrician	Holyoke Health Center	Holyoke	2 yrs + 4 mo
Black	F	MD	Obstetrics/Gynecology	Boston University School of Medicine	Boston	2 yrs
White	F	PNS	Psychiatric Nurse Specialist	Boston College	Boston	2 yrs
White	M	PNS	Psychiatric Nurse Specialist	Whittier Street Health Center	Boston	2yrs
White	F	NP	Family Nurse Practitioner	Lowell Community Health Center	Lowell	2yrs
White	F	NP	Pediatric	Health First Family Care Center	Fall River	2yrs

**Section B**

Following is a list of previously awarded health professionals who continue to be in contract through the Massachusetts Loan Repayment Program for Health Professionals. Their contract funds include both state and federal sources.

<b>Race</b>	<b>Sex</b>	<b>Discipline</b>	<b>Specialty</b>	<b>School</b>	<b>Employer City</b>	<b>Contracted Time</b>
White	F	NP	Family Practice	University of Massachusetts, Worcester	Worcester	2 yrs + 6 mo
Black	M	MD	Psychiatry	Harvard Medical School	Boston	2 yrs + 8 mo
White	F	NP	Family Practice	University of Massachusetts, Worcester	Worcester	2 yrs
White	M	MD	Family Practice	Wright State University	Athol	2 yrs
White	F	MD	Family Practice	Case Western Reserve University	Gardner	2 yrs
White	F	MD	Pediatrics	Albany Medical College	Pittsfield	4 yrs
White	F	MD	Psychiatry	University of Massachusetts Medical School	Lynn	2 yrs
White	F	NP	Adult Nurse Practitioner	Yale University School of Nursing	Chicopee	2 yrs
White	F	NP	Adult Nurse Practitioner	Regis College	Lawrence	2 yrs + 7 mo
Black	F	NP	Adult Nurse Practitioner	University of Massachusetts, Amherst	Edgartown	4yrs

**Section B continued**

<b>Race</b>	<b>Sex</b>	<b>Discipline</b>	<b>Specialty</b>	<b>School</b>	<b>Employer City</b>	<b>Contracted Time</b>
White	F	CNM	Certified Nurse Midwife	University of California	Boston	2 yrs
White	F	NP	Family Nurse Practitioner	University of Cincinnati	Lawrence	2 yrs
White	F	NP	Women's Health	University of Pennsylvania	Florence	2 yrs + 6 mo
White	F	NP	Adult Nurse Practitioner	MGH Institute of Health Professions	Boston	2 yrs
Hispanic	M	PNS	Psychiatric Nurse Specialist	University of Massachusetts, Lowell	Leominster	2 yrs
White	M	MD	Pediatrics	Vanderbilt University	Roxbury	2 yrs
White	F	MD	Family Practice	University of Southern California	Everett	2 yrs + 7 mo
Asian	F	MD	Internal Medicine	Chicago Medical School	Boston	2 yrs
White	M	MD	Psychiatry	St. Louis University	Boston	2 yrs

### Section C Contracts Completed

Following is a list of twenty-three previously awarded health professionals who completed their MLRP contract in state fiscal year 2014 and showing if the health professional is retained at their practice site beyond their MLRP contracted period.

<b>Race</b>	<b>Sex</b>	<b>Discipline &amp; Specialty</b>	<b>School</b>	<b>Employer City</b>	<b>Contracted Time (Completion)</b>	<b>Retention*</b>
White	F	MD/Psychiatry	University of Pennsylvania School of Medicine	Boston	3 yrs (completed)	Yes
White	F	NP/Family Practice	Regis College School of Nursing	East Boston	2 yrs (completed)	Yes
White	F	NP/Geriatrics	MGH Institute of Health Professions	East Boston	2 yrs (completed)	No
White	M	MD/Psychiatry	University of Massachusetts Medical School	Tewksbury	2 yrs (completed)	Yes
White	M	MD/Psychiatry	University of Washington School of Medicine	North Adams	2 yrs (completed)	Yes
White	F	MD/Psychiatry	University Massachusetts Medical School	Lynn	2 yrs (completed)	Yes
White	F	NP/Family Med	MGH Institute of Health Professions	Taunton	2 yrs (completed)	Yes
Other	F	NP/Family Med	Regis College	Gloucester	2 yrs (completed)	No
White	F	MD/Psychiatry	Boston University School of Medicine	Cambridge	2 yrs (completed)	Yes
White	F	MD/Psychiatry	Penn State University College of Medicine	Jamaica Plain	2 yrs (completed)	No
White	F	MD/Psychiatry	Tulane University School of Medicine	Tewksbury	2 yrs (completed)	Yes
White	F	MD/Family Practice	Des Moines University	North Adams	1 yr (completed)	No

**Section C: contracts completed in 2014**

<b>Race</b>	<b>Sex</b>	<b>Discipline &amp; Specialty</b>	<b>School</b>	<b>Employer City</b>	<b>Contracted Time &amp; Completion</b>	<b>Retention*</b>
White	F	MD/Psychiatry	Medical College of Virginia	Pocasset	2 yrs (completed)	Yes
Hispanic	M	NP/Family Practice	Rivier College	Shrewsbury	2 yrs (completed)	Yes
White	M	NP/Pediatrics	Boston College	Springfield	2 yrs (completed)	No
White	F	MD/Pediatrics	Albany College	Roxbury	1 yr (completed)	No
White	F	MD/Psychiatry	SUNY Buffalo School of Medicine	Tewksbury	4 yrs (completed)	Yes
Hispanic	F	MD/Psychiatry	Harvard South Shore Adult Psychiatry	Boston	3 yrs (completed)	Yes
White	F	MD/Pediatrics	Regis College	Brockton	3 yrs (completed)	Yes
Asian	F	MD/Psychiatry	University of Massachusetts	Boston	2 yrs (completed)	Yes
White	F	MD/Internal Med/Geriatrics	State University of NY-Downstate	Springfield	2 yrs (completed)	Yes
Asian	F	MD/Internal Medicine	Chicago Medical School	Boston	2 yrs (completed)	Yes
Black	M	NP/Adult	MGH Institute of Health Professionals	Norfolk	2 yrs (completed)	No

\* Remaining at practice site of contract commitment post MLRP contract commitment.