Virginia Department of Health

Office of Minority Health and Public Health Policy

Health Care Workforce and Other Initiatives to Assist Medically Underserved Communities and Populations
Annual Report

July 1, 2006 to June 30, 2007

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Executive Summary

Section 32.1-122.22 of the *Code of Virginia* requires that the State Health Commissioner submit an annual report to the Governor and to the General Assembly regarding the activities of the Virginia Department of Health (VDH) in recruiting and retaining health care providers for underserved populations and areas throughout the Commonwealth. The annual report is required to include information on:

(i) the activities and accomplishments during the reporting period;
(ii) planned activities for the coming year;
(iii) the number and type of providers who have been recruited by VDH to practice in medically underserved areas (MUAs) and health professional shortage areas (HPSAs);
(iv) the retention rate of providers practicing in these areas; and
(v) the utilization of the scholarship and loan repayment programs authorized in Article 6 (§32.1-122.5 et seq.), as well as other programs or activities authorized in the Appropriation Act for provider recruitment and retention.

The report is also required to include recommendations for new programs, activities and strategies for increasing the number of providers in underserved areas.

The State Health Commissioner delegated the responsibility of preparing the report to the Office of Minority Health and Public Health Policy (OMHPHP), formerly known as the Office of Health Policy and Planning (OHPP). The mission of the OMHPHP during the reporting year was to improve access to quality health care for all Virginians. To fulfill its mission, the OMHPHP partnered with communities, health professionals and providers, advocacy groups, and other stakeholders to:

- **Conduct policy analyses and research** concerning the cost, quality, and accessibility of health care in the Commonwealth;
- **Assist medically underserved communities and populations** with the development of resources, establishment of partnerships, and identification of programs; and
- **Develop the health care workforce**, including the management of scholarship and loan repayment programs and other initiatives aimed at the recruitment and retention of health care providers.

During the reporting period July 1, 2006 through June 30, 2007, the OMHPHP focused a great deal of its efforts on enhancing and expanding these areas. Some highlights include:

Assisting Medically Underserved Communities and Populations

<u>Minority Health</u>

- OMHPHP launched its 2007 Brown Bag Lunch Series,"Expanding our Collaborative Efforts Utilizing Non-Traditional Resources", to address the needs of Virginia's minority populations. This initiative focuses on Virginia's federally designated minority populations and introduces stakeholders to community resources not commonly utilized.
- The OMHPHP launched a quarterly online newsletter, titled "Virginia OMH E-News," which highlights minority health initiatives, events, funding and resources. This initiative is closely tied to

the expansion of the office's comprehensive website: http://www.vdh.state.va.us/healthpolicy/minorityhealth/index.htm

- With the hiring of a CLAS Act (Culturally and Linguistically Appropriate Health Care Services) Coordinator within OMHPHP, the CLAS Act Initiative has been able to significantly increase its presence both within the VDH and the Commonwealth. The cornerstone project of the Initiative is the launch of the www.CLASActVirginia.org website: a cultural competence resource for both health providers and clients. The CLAS Act Initiative received second place in Category B (programs with budgets under $250,000) from the Association of State and Territorial Health Officials (ASTHO) for its 2007 Vision Award. This award honors outstanding creative state health programs.

Rural Health

- The Federal Office of Health Policy's Small Rural Hospital Improvement (SHIP) Grant Program provides funding to small rural hospitals to help them do any or all of the following: 1) pay for costs related to the implementation of the prospective payment system (PPS), 2) comply with provisions of Health Insurance Portability and Accountability Act (HIPAA) of 1996 and 3) reduce medical errors and support quality improvement. The OMHPHP administers the SHIP Grant Program for Virginia and through its proactive efforts this past year, doubled the number of hospitals (from 12 to 24) in Virginia who receive these funds.
- OMHPHP sponsored a rural health strategic planning meeting on June 13 and 14, 2007 in Staunton, Virginia. The purpose of this meeting was to bring together numerous rural health representatives and experts to strategically plan for the future of health care services in Virginia's rural and remote areas. The meeting also served as the official kick-off for Virginia's Rural Health Plan. The plan will be divided into four main areas, each with its own workgroup: access, quality, data and rural definitions, and workforce. Representation on these workgroups includes over 40 rural health stakeholders.

Health Care Access

- As the Primary Care Office for Virginia, OMHPHP is federally mandated to oversee the Health Professional Shortage Area (HPSA) designation process. In the past year, OMHPHP helped to facilitate 16 new Primary Care HPSA designations within 21 jurisdictions, 25 new dental HPSA designations affecting 28 jurisdictions, and one new mental HPSA designation impacting two jurisdictions.
- To supplement some of its own efforts in analyzing provider supply and requirements, the OMHPHP contracted with the Department of Health Administration of Virginia Commonwealth University to forecast the size of the workforce in 2010 and 2015 and to assess the probable requirements for physicians in these two future years. According to the report (Mick, Nayar & Caretta, 2007):
    - Virginia is a net importer of physicians: according to the 2005 data, about 75 percent of Virginia physicians were not trained in Virginia. Although Virginia educates about the national average of medical students per population (~25 per 100,000 population), only about 36 percent of Virginia's medical students end up practicing in Virginia.
    - In Virginia, the bulk of physicians are located in the most urban places. Conversely, the smallest places in Virginia have the fewest physicians.
    - That Virginia will need more physicians over the next 20 to 30 years seems not in doubt. Population growth alone will require the addition of more of them. Added to this is the increased demand that may result from the retirement of Baby Boomers and their qualification for Medicare. For Virginia, the anticipated growth in demand may be large: the general population is expected to increase by 17% between 2000 and 2020,

whereas the growth among the population over 65 years of age will increase by 65% over the same period (versus 53% for the nation as a whole).

- The U.S. Department of Health and Human Services' Health Resources and Services Administration (HRSA) State Planning Grants Program has awarded the OMHPHP with three rounds of grant funding for a total of just under $1.18 million to collect data, conduct research, and develop plans to provide greater access to affordable health insurance coverage for uninsured Virginians. To date the Virginia State Planning Grant (SPG) has yielded seven major products which provide a foundation for advancing the goal of expanding health coverage for the working uninsured. At the time of the writing of this report, there are two options from the Virginia SPG Program under consideration by the Governor's Health Reform Commission.
- For the past five years, the OMHPHP has led the design and development of telehealth systems in the Commonwealth through its Virginia Telehealth Network (VTN). In this reporting year, the VTN has been incorporated in the Commonwealth of Virginia and is in the process of being recognized as a 501(c)(3) not for profit organization, an industry leader in telehealth has been hired to serve as the acting executive director, a VTN website (http://ehealthvirginia.org) has been developed, and three major grant funding proposals have been submitted.

Developing the Health Care Workforce

Recruitment and Retention Initiatives

- The OMHPHP maintains the PPOVA healthcare recruitment website (www.ppova.org). During the reporting period, the website generated 54,277 visits, averaging 141 hits per day. During the reporting period, 82 positions were posted and 179 candidates used the system to identify positions of interest. This resulted in 329 CV's being forwarded to practice sites.
- The National Rural Recruitment and Retention Network (3RNet) is comprised of state organizations such as State Offices of Rural Health, AHECs, Cooperative Agreement Agencies and State Primary Care Associations. These not-for-profit organizations help health professionals locate practice sites in rural areas throughout the country. For many years Virginia has been a member of the 3RNet and fully participates in its activities. Virginia's Health Workforce Manager is leading the planning committee for the 2007 conference which will be held in Richmond, Virginia.
- The OMHPHP works to identify and assist practice sites in Virginia that are eligible to recruit and place health professionals participating in the National Health Service Corps (NHSC) scholarship and/or loan repayment programs. For the reporting fiscal year, the VDH reviewed 47 applications and the NHSC approved 46 practice sites in Virginia as eligible facilities to recruit NHSC Scholars and Loan Repayment recipients.

Scholarships/Loan Repayment/Waiver Incentive Programs

- The OMHPHP administers the Virginia Physician and Virginia State Loan Repayment Programs. These Programs offer financial incentives to physicians, physician assistants and nurse practitioners who are committed to serving the needs of underserved populations and communities in the Commonwealth of Virginia. Each recipient agrees to serve full-time at medical facilities located in designated health professional shortage areas or medically underserved areas for a minimum of two years. In return for their service, each recipient is provided funds to repay qualifying educational loans. The OMHPHP received and reviewed 31 loan repayment applications and issued 25 loan repayment awards during the reporting period.
- The Mary Marshall Nursing Scholarship Program (MMNSP) provides financial incentives to students pursuing a Licensed Practical Nurse (LPN) or a Registered Nurse (RN) education. The scholarship program requires one month of service by the recipient anywhere in the state for every

$100 of scholarship awarded. The OMHPHP received and reviewed 153 nursing scholarship applications and issued 134 awards during the reporting period.

- The OMHPHP piloted a new nursing scholarship program for nurse educators to increase the number of nursing faculty in Virginia's nursing programs. Eighty-six applications were received for ten $20,000 scholarships that are renewable for one additional year.
- The OMHPHP administers Virginia's participation in the Conrad State 30 J-1 Visa Waiver program. This program is federally authorized and permits VDH to act as "an interested state agency" to request visa waivers for American-trained foreign physicians. These waiver requests allow foreign physicians, on a J-1 visa status, to remain in the U.S. and practice in federally designated health professional shortage areas (HPSAs) and medically underserved areas (MUAs) within Virginia, rather than returning to their home country after completing residency for the required two year period. The OMHPHP assisted in placement of 14 new physicians who utilized the J-1 Visa Waiver process.
- The OMHPHP administers Virginia's participation in the National Interest Waiver program. Physicians applying for a NIW must work full-time for a total of five years in a HPSA or MUA. The OMHPHP issued letters of support for 13 physicians requesting National Interest Waivers.

The OMHPHP is under the leadership of a new office director and is in the midst of a strategic planning process. The OMHPHP will be embracing the following expanded vision and mission for the upcoming reporting year.

Vision: Advancing health equity for all Virginians.

Mission: To identify health inequities, assess their root causes, and address them by promoting social justice, influencing policy, establishing partnerships, providing resources and educating the public.

Health inequities are differences in health status that are systematic, avoidable, and unfair. In Virginia, several racial/ethnic minority groups and low-income populations have generally poorer health status. Health inequities are strongly influenced by differential access and exposure to social determinants of health, which include economic and educational opportunities, quality housing, the physical environment, discrimination, cultural norms, transportation, and others. In order to eliminate differences in health status, thus creating health equity, strategies must focus on the social determinants of health, as well as promotion of quality health care and healthy behaviors.

Although many of the activities being planned by OMHPHP to implement this broader vision are dependent on the availability of appropriate state, federal, and private resources, the OMHPHP has recently submitted a grant proposal to the U.S. Department of Health and Human Services, Office of Minority Health, State Partnership Grant Program to Improve Minority Health and has been invited to submit a full proposal to the Robert Wood Johnson Advancing Public Health Practice and Policy Solutions Grant Program. The OMHPHP is optimistic about its ability to successfully carry out its mission.

I. Legislative Background

Section 32.1-122.22 of the *Code of Virginia* requires that the State Health Commissioner submit an annual report to the Governor and to the General Assembly regarding the activities of the Virginia Department of Health (VDH) in recruiting and retaining health care providers for underserved populations and areas throughout the Commonwealth. The annual report is required to include information on:

(i) the activities and accomplishments during the reporting period;
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(v) the utilization of the scholarship and loan repayment programs authorized in Article 6 (§32.1-122.5 et seq.), as well as other programs or activities authorized in the Appropriation Act for provider recruitment and retention.

The State Health Commissioner delegated the responsibility of preparing the report to the Office of Minority Health and Public Health Policy (OMHPHP), formerly known as the Office of Health Policy and Planning (OHPP). The OMHPHP, whose organizational placement within VDH and mission are described in the next section, prepared the report using the legislative requirements as guidelines.

II. The Office of Minority Health and Public Health Policy

The mission of the Office of Minority Health and Public Health Policy (OMHPHP) during the reporting year was to improve access to quality health care for all Virginians. To fulfill its mission, the OMHPHP partnered with communities, health professionals and providers, advocacy groups, and other stakeholders to:

- **Conduct policy analyses and research** concerning the cost, quality, and accessibility of health care in the Commonwealth;
- **Assist medically underserved communities and populations** with the development of resources, establishment of partnerships, and identification of programs; and
- **Develop the health care workforce**, including the management of scholarship and loan repayment programs and other initiatives aimed at the recruitment and retention of health care providers.

III. Activities and Accomplishments

A. Assisting Medically Underserved Communities and Populations

The Office of Minority Health and Public Health Policy strives to effectively use data to guide policy development, planning, public awareness efforts, and partnerships to improve health outcomes in medically underserved communities and populations. The activities and accomplishments of the OMHPHP during the reporting period could not have been possible without its network of partners as evidenced in the narrative to follow. The OMHPHP considers the formation of partnerships and continued collaboration with partners as both an activity and an accomplishment.

1. Minority Health

Racial and ethnic minorities at all stages of life suffer poorer health and higher rates of premature death when compared to the majority population. In Virginia, racial and ethnic minority populations comprise nearly 30% of the state's total population of 7.3 million. The five federally recognized minority populations are: African American/Black (1,458,697), Hispanic/Latino (378,060), Asian (297,661), Native Hawaiian or other Pacific Islander (5,096), and American Indians or Alaska Natives (23,778).[1]

Available data for Virginia substantiates inequities in health status and health outcomes for racial and ethnic minorities. The life expectancy in 2001 for minority populations (72 years) in Virginia was six years less than whites (78 years). The state's overall infant mortality and teenage pregnancy rates have shown downward trends in the last decade, yet the gap between minority populations and whites has continued.

a. Virginia Office of Minority Health

OMHPHP serves as the State Office of Minority Health for Virginia (OMH). OMHPHP strives to promote the elimination of health inequities among racial/ethnic minorities and low income populations in the Commonwealth. Efforts to eliminate health disparities for racial and ethnic minority groups will only succeed by broadly addressing access to quality health care, health promotion, and the social determinants of health.

Barriers to access to health care include the location of health care facilities and a lack of transportation, fiscal resources, health insurance, health care providers, interpretation and translation services, information and awareness regarding health status, preventive measures, and available health services. In order to promote the reduction, and ultimately the elimination of health inequities for minority populations in Virginia, the OMHPHP looks broadly at the causes of and factors contributing to health inequities.

[1]U.S. Census Bureau, Population Division, County Population Estimates by Race Alone Hispanic or Latino Origin: July 1, 2002. Release Date: March 10, 2004

The Office of Minority Health and Public Health Policy (OMHPHP) has addressed equity by:

- Providing funding to minority community-based organizations to conduct health education, screenings, referrals for primary care, risk reduction activities and preventive measures at the community level;
- Partnering with other programs within the Virginia Department of Health to help them appropriately target racial and ethnic minority communities, low income and rural communities and effectively address the health disparities that are pervasive in these communities; and
- Establishing public/private partnerships with entities that have historical and cultural relationships with and a vested interest in low income, rural, racial and ethnic minority communities, to design and implement programs that effectively eliminate barriers to accessing health care services which would, in turn, lead to the reduction and elimination of health disparities.

The OMHPHP was involved in the following activities during the reporting period:

- Strengthening the infrastructure of the Minority Health Advisory Committee (MHAC) by developing meeting protocols and guidelines and establishing a committee-based facilitator. This committee serves racial and ethnic minority communities by:
    - Advising and making recommendations to the Commissioner;
    - Identifying limitations associated with existing laws, regulations, programs, and services;
    - Identifying and reviewing health promotion and disease prevention strategies; and
    - Supporting policies and legislation to improve accessibility and delivery of health services.
- Increasing awareness of community initiatives and providing national and statewide resources through its website. During the reporting period, the website was reorganized to improve user access to resources that relate to individual minority populations and minority health statistics. The website also continues to feature minority health events, funding opportunities, OMH and community initiatives.
- Launching its 2007 Brown Bag Lunch Series,"Expanding our Collaborative Efforts Utilizing Non-Traditional Resources" to address the needs of Virginia's minority populations. The series is being held respectively during the nationally recognized minority Heritage Celebration months. Each series features speakers representing "Non-Traditional" public health system resources and venues.
- Launching its inaugural issue of Virginia OMH E-News, a quarterly online newsletter highlighting minority health initiatives, events, funding and resources. Interested parties can sign up to receive the newsletter. It has been sent to approximately 300 organizations and individuals.
- Expanding internal partnerships through conducting ongoing meetings with management and leadership personnel of offices and divisions within the VDH. These meetings have enabled the office to share initiatives and explore possibilities for future collaboration that are aligned with each office's programmatic focus.

b. CLAS Act

The CLAS Act Initiative strives to increase access to quality health care for Virginia's increasingly diverse refugee and immigrant populations by providing and developing resources related to culturally and linguistically appropriate health care services (CLAS). The evident need for a concerted and centralized effort on the issue, exampled by a 113% increase in the number of students receiving

English as a Second Language (ESL) through Virginia public schools between 2000 and 2006, has led to the CLAS Act Initiative. The Initiative started as an informal gathering of 45 individuals representing 25 agencies/organizations who met in November 2003, June 2004, and January 2005 for the purpose of networking, sharing resources, and brainstorming about issues, needs, wants and resources for culturally and linguistically appropriate healthcare to immigrants and refugees.

In the past year, with the hiring of the CLAS Act Coordinator within OMHPHP, the CLAS Act Initiative has been able to significantly increase its presence both within the VDH and the Commonwealth. Projects and activities initiated during the reporting period include:

- CLASActVirginia.org. The cornerstone project of the Initiative is the www.CLASActVirginia.org website: a cultural competence resource for both health providers and clients. This easy to navigate central clearinghouse provides a listing of language service providers (including tested and trained medical interpreters), cultural health beliefs, translated patient education materials, cultural and language studies/reports, regulations, best practices, cultural competency training events, links on how to collect data on diverse patients and many additional resources. The website has proven to be unique because it provides information specific to regions within Virginia. It not only takes advantage of nationwide information on policies, laws, model programs, best practices, etc., but it also lists local level resources so health providers are aware of what is available in their own communities.

- Commonly Used Clinical Phrases. The Commonly Used Clinical Phrases resource, available through the website, takes an innovative approach to providing culturally competent language services. The phrases have been translated and audio recordings in Spanish, Korean, Vietnamese, Chinese, French, Arabic, Persian, Russian and Tagalog have been made and posted to the website. The audio files can be played directly to limited English proficient (LEP) clients. To complement the phrases, an accompanying visual flip book is being created. The flip book will provide low literate LEP individuals with a means of responding to the commonly used clinical phrases. The visual flip book is being tested with focus groups representing various cultural groups to ensure the cultural competency of the materials.

- Culturally Appropriate Public Health Training Series. The Culturally Appropriate Public Health Training Series is a collaborative effort of the CLAS Act Initiative, utilizing and developing existing resources intended to meet the cultural competency training needs within the VDH. The significant need for such training has been demonstrated by 81% (1,048 individuals) of VDH respondents answering Yes to the Cultural Needs Assessment question "Would you be interested in participating in cultural sensitivity training?" This program utilizes a pre-existing Memorandum of Agreement between Community Health Services Public Health Nursing and educational institutions across the state. A curriculum is being developed specifically for the VDH workforce based on the results of a Cultural Needs Assessment. Each quarter, a new training in the series will be offered, starting with a regional in-person training on culturally appropriate public health and followed by three statewide videoconference trainings on Working with the Latino Population, Working with Asian Populations and Working with the Muslim Population. An annual Cultural Needs Assessment will be performed to aid in the future content development of this training series.

- Navigating the U.S. Health Care System for Immigrants, Migrants and Refugees. The Navigating the U.S. Healthcare System for Immigrants, Migrants and Refugees project takes a culturally competent approach to teaching immigrants, migrants and refugees how to successfully navigate the U.S. health care system. The OMHPHP has partnered with the Northern Virginia Area Health

Education Center (NVAHEC) to develop educational materials (both web-based and hard copy formats). Based on focus group results indicating that a trusted source acting as an information center is the best way to disseminate information to culturally diverse individuals, the project is also developing a curriculum for cultural brokers (individuals, agencies and organizations who work with refugees and immigrants) to act as a gateway to the health care system for immigrants, migrants and refugees. This teaching curriculum will be accompanied by culturally-appropriate translated low-literacy materials.

- Language Needs Assessment of Virginia's Health Districts**.** The Language Needs Assessment uses Census 2000, Virginia Department of Education English as Second Language, and VDH data to give a comprehensive snap shot of the languages encountered in every health district. The Assessment provides health district specific recommendations for working with Limited English Proficiency (LEP) populations based on federal requirements and guidelines. The Language Needs Assessment is available at www.vdh.virginia.gov/OMHPHP/clasact/languageprofiles.asp.

- Regional Health Care Interpreter Banks

  The OMHPHP partnered with language service providers around the state to build capacity for medical interpretation training as a way to establish regional interpreter banks. The OMHPHP and VDH Emergency Preparedness and Response Programs funded the training of medical interpretation trainers for the following language service providers:

  - *Network for Latino People.* The VDH is a major partner and member organization of the Network for Latino People (NFLP). The goal of NFLP is to support a community coalition to address the effective provision of services, particularly health services, to the growing Latino population, as well as to provide training overcoming barriers to the provision of those services and to identify and address the diverse needs of low and moderate income families.
  - *Refugee and Immigration Services, Hampton Roads and Richmond.* Refugee and Immigration Services (RIS) of the Catholic Diocese of Richmond and Hampton Roads have provided interpretation and case management services for refugees in Virginia for over 27 years. In order to ensure that health needs for this population are addressed, RIS staff orients newcomers to American concepts of health service and provides assistance in negotiating the myriad of service providers in their communities.

- Medical Interpreter Training Grants Program. The Medical Interpreter Training Grants Program was created by the OMHPHP in a partnership with the VDH Emergency Preparedness and Response Programs. Training grants for the cost of tuition for a medical interpretation course are being made available to a limited number of language proficient bilingual individuals in exchange for 40 hours of community service at a safety net provider site and willingness to assist with interpretation in the event of a public health emergency. Virginia language service providers that provide the medical interpretation course for this program are located in Newport News, Williamsburg, Richmond, Alexandria**,** and Harrisonburg and include:
  - *Blue Ridge Area Health Education Center.* The Blue Ridge Area Health Education Center (AHEC) focuses on the health care needs of "vulnerable" populations. The foundation of AHEC activities are partnerships with academic and community based agencies that develop, expand, or support services to underserved and vulnerable populations and link the resources of health and human service professions programs with communities to address local needs.

- *Northern Virginia Area Health Education Center (described above).*
- *Refugee and Immigration Services, Richmond and Hampton Roads (described above).*
- *Network for Latino People (described above).*

El Pueblito. OMHPHP has partnered with the College of William and Mary Student Initiative for Latino Public Health to provide El Pueblito, a Spanish language public health/informational newsletter that is developed and distributed monthly throughout the Williamsburg area. Students at the College of William and Mary develop the content and receive information from local health and human service organizations. The newsletter has been in existence for two years and includes information on health topics, church services, ESL classes, health clinics, bus routes and other information important to the LEP Latino population. The newsletter's staff also makes public service announcements on the local Williamsburg radio station.

The CLAS Act Initiative received second place in Category B (programs with budgets under $250,000) from the Association of State and Territorial Health Officials (ASTHO) for its 2007 Vision Award. This award honors outstanding creative state health programs.

c. Virginia Latino Advisory Board (VLAB)

A representative from the OMHPHP serves as a member of the Virginia Latino Advisory Board (VLAB) which is an advisory board with the power and duty to:

- Advise the Governor regarding the economic, professional, cultural, educational, and governmental links between the Commonwealth of Virginia, the Latino community in Virginia, and Latin America;
- Undertake studies, symposiums, research, and factual reports to gather information to formulate and present recommendations to the Governor relative to issues of concern and importance to the Latino community in the Commonwealth; and
- Advise the Governor as needed regarding any statutory, regulatory, or other issues of importance to the Latino community in the Commonwealth.

2. Rural Health

a. State Office of Rural Health (SORH)

The OMHPHP functions as the State Office of Rural Health (SORH) for Virginia. One of the ways that the Federal Office of Rural Health Policy (ORHP) promotes State and local empowerment to meet rural health needs is by supporting State Offices of Rural Health. The mission of each SORH is to help its individual rural communities build health care delivery systems. State Offices of Rural Health accomplish this mission by:

- collecting and disseminating information;
- providing technical assistance;
- helping to coordinate rural health interests state-wide; and by
- supporting efforts to improve recruitment and retention of health professionals.

b. Critical Access Hospital Program

The federal Medicare Rural Hospital Flexibility Program (Flex) was authorized by the Balanced Budget Act of 1997. This program provides funding to States for the designation of Critical Access Hospitals (CAH) in rural communities and the development of network systems to improve access to care in these communities. Under the program, hospitals certified as CAH facilities can receive cost-based reimbursement from Medicare.

The Flex Program is based on two programs from the early 1990s: the Essential Access Community Hospital and Rural Primary Care Hospital (EACH/RPCH) program and the Montana Medical Assistance Facility (MAF) demonstration project. These programs successfully showed that States, working with their rural communities and providers, could develop networks of limited-service hospitals and other providers, expand the supply of practitioners, improve the financial position of rural hospitals, and foster the integration of services to improve continuity and avoid duplication. Facilities must meet certain federal guidelines to be certified as a CAH, including:

- Be located in a state that has an established State Flex Program;
- Be located in a rural area or be treated as rural under a special provision that allows qualified hospital providers in urban areas to be treated as rural for purposes of becoming a CAH;
- Provide 24-hour emergency care services, using either on-site or on-call staff;
- Provide no more than 25 inpatient beds;
- Have an average annual length of stay of 96 hours or less; and
- Be located either more than 35 miles from the nearest hospital or CAH or more than 15 miles in areas with mountainous terrain or only secondary roads.

The OMHPHP has managed the Virginia Flex program since 1999. At the beginning of the program, Virginia primarily focused on the conversion of eligible hospitals to CAH status and provided support for these hospitals through the conversion process. During the early years of the Virginia Flex program, Virginia increased the number of CAH facilities from one to seven hospitals:

- Bath County Community Hospital - Hot Springs
- Carilion Giles Memorial Hospital – Pearisburg
- Dickenson Community Hospital – Clintwood
- R.J. Reynolds-Patrick County Memorial Hospital - Stuart
- Shenandoah Memorial Hospital - Woodstock
- Carilion Stonewall Jackson Hospital - Lexington
- Page Memorial Hospital - Luray

The Virginia Flex program, like those around the country, has advanced from a concentration on hospital conversion to building a quality rural healthcare infrastructure wherein the CAH is the hub of an organized system of care. In 2007, Virginia used the Flex program to:

- Collaborate with the Virginia Health Quality Center to provide technical assistance and infrastructure for quality improvement activities among CAH facilities. This included activities to (1) improve measures for patients admitted with acute myocardial infarction, heart failure and/or pneumonia, (2) surgical care improvement measures, (3) abstract accurately and publicly report data on the federal Centers for Medicare & Medicaid Services (CMS) site, and (3) increase the use of health information technology, including bar coding, computerized physician order entry and/or telehealth. Out of four learning training sessions from March, 2006 to February, 2007,

there were 16 participants from the CAH facilities. Additionally, all CAH facilities currently participate in the CMS hospital compare website.

- Partner with Page Memorial Hospital to secure and implement a comprehensive action strategic plan of services and programs needed as the CAH facility. The plan developed five strategic goals and objectives for the next five years.
- Partner with Carilion Stonewall Jackson Hospital to implement the Safety and Risk Reduction Program. This program assured that processes and practices of the Emergency Department best meet the needs of patients and families receiving care in the Emergency Department and to decrease the risk for untoward outcomes by improving patient safety within the care processes. The goals of this program were to (1) promote event/risk reporting to risk management, (2) decrease the time from door to doc, (3) decrease the turn around time for obtaining lab results, (4) decrease the time for placing admitted patients in a bed on the floor, (5) improve nurse documentation for medication reconciliation, (6) create communication boards for physicians and staff for better collaboration of patient care (7) re- evaluate nurse standing orders for provision of patient care, (8) increase patient/family satisfaction with emergency department (ED) care, (9) implement use of standing order sets in the ED to decrease variances of care, (10) evaluate the care of chest pain patients presenting to the ED, (11) evaluate the appropriateness of transfers from the ED, (12) redesign patient flow through the registration/triage section, (13) create a bedside registration for the emergency department, (14) create a short registration process with Patient Access (PA), and (15) increase the Fast Track staffing with PAs to decrease patient wait time for minor illnesses/injuries
- Align with the University of Virginia Office of Telemedicine and Virginia Center for Diabetes Professional Education to (1) provide quality diabetes education programs to all CAH facilities and (2) maintain teleconferencing support of CAH facilities through additional broadband telemedicine, with network capabilities upgrade at R.J. Reynolds-Patrick County Memorial Hospital. Four telehealth sessions were provided in 2007: (1) New Medications: Orals and Insulin, (2) Flexible Insulin Strategies, (3) Medical and Behavioral Management of Cardiometabolic Risk, and (4) Progression of Therapy in Type 2 Diabetes.
- Provide funding for technology upgrades at each CAH facility.
- Co-sponsor the Virginia Rural Health Association Annual Conference.
- Provide on-going recruitment and retention support to CAH facilities. This included the addition of a designated CAH section on the PPOVA website.
- Collaborate with the VDH Office of Emergency Medical Services (OEMS) to develop targeted EMS studies in three CAH areas. The study examined various components of rural EMS to provide recommendations on EMS capacity and relationships with CAH facilities. These recommendations will be used to further integrate and strengthen EMS into the rural healthcare infrastructure.
- Conduct a community satisfaction survey to assess the patient/community satisfaction data.
- Collaborate with the Virginia Rural Health Association to conduct an annual program evaluation of Virginia's Flex program.

c. Small Rural Hospital Improvement (SHIP) Grant Program

The Federal Office of Health Policy's Small Rural Hospital Improvement (SHIP) Grant Program provides funding to small rural hospitals to help them do any or all of the following: 1) pay for costs related to the implementation of the prospective payment system (PPS), 2) comply with provisions of Health Insurance Portability and Accountability Act (HIPAA) of 1996 and 3) reduce medical errors and support quality improvement. The OMHPHP administers the SHIP Grant Program for Virginia and

through its proactive efforts this past year, doubled the number of hospitals (from 12 to 24) in Virginia who receive these funds. Virginia's SHIP hospitals are:

- Bath County Community
- Bedford Memorial Hospital
- Buchanan General Hospital
- Carilion Franklin Memorial
- Carilion Giles Memorial
- Dickenson County Medical Center
- Lee Regional Medical Center
- Mountain View Regional Medical Center
- Page Memorial
- Pulaski Community Hospital
- R. J. Reynolds-Patrick County Memorial
- Rappahannock General Hospital
- Riverside Tappahannock
- Russell County Medical Center
- Shenandoah Memorial
- Smyth County Community Hospital
- Southampton Memorial Hospital
- Southern Virginia Regional Medical Center
- Southside Community Hospital
- Stonewall Jackson
- Tazewell Community
- Warren Memorial Hospital
- Wellmont Lonesome Pine
- Wythe County Community Hospital

d. State Rural Health Plan (SRHP) Kick-Off

OMHPHP sponsored a rural health strategic planning meeting on June 13 and 14, 2007 in Staunton, Virginia. The purpose of this meeting was to bring together numerous rural health representatives and experts to strategically plan for the future of health care services in Virginia's rural and remote areas. The meeting also served as the official kick-off for Virginia's Rural Health Plan.

The first portion of the meeting was dedicated to the Federal Medicare Rural Hospital Flexibility Grant Program (Flex). The meeting in Staunton provided an opportunity to strategically plan for the next three Flex program years. Consensus was made to focus on access to care, collaboration and the leveraging current resources. This includes increasing partnerships with community health centers, health districts, free clinics, educational institutions, and other entities to ensure that each Virginian receives quality, affordable and convenient health care services in rural areas.

The second part of the two-day meeting was dedicated to "kicking off" the process for revising Virginia's State Rural Health Plan (SRHP). The original plan was developed in 2000. The plan will be divided into four main areas, each with its own workgroup: access, quality, data and rural definitions, and workforce. Representation on these workgroups includes over 40 rural health stakeholders. These stakeholders represent a variety of public and private organizations, to include:

- Appalachian Agency for Senior Citizens
- Bath Community Hospital (CAH)

- Carilion Clinic Family Medicine Residency Program
- Carilion Giles Memorial Hospital (CAH)
- Center for Rural Virginia
- Edward Via Virginia College of Osteopathic Medicine
- Goodman and Company (Rural Health Consulting Firm)
- Page Memorial Hospital (CAH)
- Radford University, School of Nursing
- Rappahannock Area Health Education Center (AHEC)
- Reach Out and Read Virginia
- Riverside Tappahannock Hospital (SHIP)
- RJ Reynolds Patrick County Memorial Hospital (CAH)
- Rural Health Outreach Program
- Shenandoah County Free Clinic
- Southwest Community Health Systems
- Southwest Virginia Area Health Education Center (AHEC)
- Southwest Virginia Graduate Medical Education Consortium
- Stonewall Jackson Hospital (CAH)
- United States Department of Agriculture, Rural Development
- University of Virginia, Health System
- Virginia Acute Stroke Telehealth (VAST) Network
- Virginia Commonwealth University, School of Medicine, Inner City/Rural Program
- Virginia Commonwealth University, School of Dentistry
- Virginia Community Healthcare Association
- Virginia Dental Association
- Virginia Department of Health, Division of Women's and Infants' Health
- Virginia Department of Health, Office of Emergency Medical Services
- Virginia Department of Health, Office of Epidemiology
- Virginia Department of Health, Office of Health Policy and Planning
- Virginia Health Care Foundation
- Virginia Health Information
- Virginia Health Quality Center (Virginia's Quality Improvement Organization)
- Virginia Hospital and Healthcare Association
- Virginia Rural Health Association
- Virginia Tech University, Center for Gerontology
- Virginia Tech University, Institute for Community Health, Appalachian Cancer Coalition Network

3. Health Care Access

a. State Primary Care Office (PCO)

OMHPHP serves as the PCO for Virginia. Primary Care Offices work through a cooperative agreement with the Office of State and External Affairs, Bureau of Primary Health Care (BPHC), Bureau of Health Professions (BHPr), Health Resources and Services Administration, United States Department of Health and Human Services. The Primary Care Office (PCO) is funded:

- To improve primary care access of underserved and vulnerable populations
- To achieve the vision of 100% access to preventive and primary care services
- To achieve the vision of 0% health disparities in every community across the country.

- To enhance collaboration between the State, Federal, local and private sectors working to improve health status.

The OMHPHP serves as the PCO for Virginia. The "sister" organization to the PCO is the Primary Care Association (PCA). In Virginia, the PCA is the Virginia Community Healthcare Association (VACHA). The OMHPHP works closely with the VACHA on issues relating to improving access to primary care services throughout the Commonwealth. Over the last year, these efforts have included collaborative recruitment efforts to place physicians in health professional shortage and medically underserved areas in Virginia.

b. Designation of Health Professional Shortage Areas

The Health Professional Shortage Area (HPSA) designation system was initially developed in the 1970's to assist in allocating National Health Service Corps placements. Since then, over thirty federal programs use the various shortage designations as qualification criteria for specific health care initiatives (see Appendix A). In addition, numerous state and local foundations and other funding sources use designations as criteria for supporting local efforts to improve access to health care.

Health Professional Shortage Areas have been established for Primary Care, Dental Care and Mental Health Care. A general overview of some of the criteria for HPSA designation is provided in Table 1.

TABLE 1. Requirements for Geographic and Population HPSA

	Primary Care	Dental	Mental Health
Population: Provider Ratio Geographic (a shortage for the total population within a defined service area)	**3,500:1**	**5,000:1**	**30,000:1 (Psychiatrist)**
Population: Provider Ratio Sub-Population or High Needs (an underserved population in a geographic area such as low-income or migrant farm workers)	**3,000:1**	**4,000:1**	**20,000:1**
Travel Time	**30 minutes**	**40 minutes**	**40 minutes**

In addition to geographic and population HPSAs, there are also institutional designations for entities such as Community Health Centers, Rural Health Clinics, federal and state correctional facilities, and mental health facilities.

As the Primary Care Office for Virginia, OMHPHP is federally mandated to oversee the designation process. To this end, the OMHPHP maintains primary care physician, general dentist, and psychiatrist databases and monitors the demographics and health statistics of health care service areas to bring to light potential HPSA sites. All existing designations are currently reviewed on a three-year cycle to assure continuity and effectiveness of incentive programs. The OMHPHP uses both small area analysis techniques along with Geographic Information Systems (GIS) to optimize the HPSA designation process and to provide the highest degree of accuracy possible. Phone surveys of all providers within a service area (and often within contiguous areas) are required for every HPSA designation and the OMHPHP has incorporated these surveys into its ongoing responsibilities.

Because all HPSA designations must be reviewed on a regular basis, areas that may have earlier qualified as a HPSA may no longer qualify at a later date, usually because the designation has

attracted practitioners to serve the area. These are "success stories" that, nevertheless, often present difficulties for both providers and communities because these areas lose their eligibility for special programs, grants and enhanced provider reimbursements.

Primary Care HPSAs are designed to indicate shortages of primary medical care providers defined as family practice, general internal medicine, pediatrics, obstetrics and gynecology, and general practice. Geographic HPSAs, the most common primary care shortage designation, must meet the following criteria:

- Have a population to primary care provider ratio greater than 3,500:1 or greater than 3,000:1 if the population has high needs. A high needs area is determined by one of the following: high poverty rates (more than 20% below poverty), high birth rates (more than 100 births per 1,000 women) or high infant mortality rates (more than 20 infant deaths per 1,000 live births).
- Demonstrate that the primary medical care professionals in contiguous areas are over-utilized, with a primary care provider ratio greater that 2000:1, or that these areas are currently designated as primary care HPSAs. If the contiguous areas are not over-utilized or designated, it must be demonstrated that barriers to accessing the services of primary medical care professionals in these areas exist due to excessive distance (greater than 30 minutes travel time) or other factors.

Virginia currently has 104 primary care HPSA designations in 77 counties and cities throughout the Commonwealth. Forty-eight (48) of these are geographic primary care designations and seven of them are population-based primary care designations. There are also 49 health care facilities with HPSA designations, of which 21 are community health centers, six are rural health clinics and 22 are correctional centers. In the past year, OMHPHP helped to facilitate 16 new designations within 21 jurisdictions (Appendix B).

Calculating the Number of Primary Care Providers Needed in Virginia. There are presently 290 primary care physicians practicing within the designated primary care HPSAs. It is estimated that an additional 105 primary care physicians would be required to serve in these institutions and areas to eliminate the primary care shortages. However, the figures associated with the HPSA designation process should not necessarily be equated with the provider supply needs of the Commonwealth. The FTE shortages noted in Appendix B represent only the required FTEs to remove the HPSA designation from a specific area.

In the last 15 years, the National Ambulatory Medical Survey has shown that the age- and sex-specific utilization rates for all medical visits and for primary care visits have been remarkably stable (Appendix C). These empirically determined utilization rates make it possible to estimate the potential demand by specific populations for primary care services. Using these age- and sex-specific demand factors, the primary care physician to population ratios that would be required to satisfy the demands of populations with divergent age distributions can be computed.

Appendix D applies these ratios to the current primary care HPSA designations by age- and sex-specific categories by rural and urban HPSAs. The physician to population ratio to adequately meet the needs of current urban HPSAs is estimated at 2,489:1. Likewise, the physician to population ratio to adequately meet the needs of current rural HPSAs is estimated at 2,385:1. Using this methodology, there is a total need for 532 primary care physicians rather than the 395 suggested by the federal HPSA methodology. This in turn would suggest a primary care physician shortage of 240 providers, not the 105 suggested by the designation analysis.

Predicting Future Primary Care Provider Needs in Virginia. Current demographic shifts in employment and the subsequent change in population age distributions will greatly affect the demand for health care services, particularly in rural Virginia. Virginia has already experienced the contraction of obstetrical services in rural areas which can be attributed to both the costly nature of such services, and also to the changing age distributions within rural populations. The overall shift in population distribution from the 1990 to the 2000 census and the projections for 2010, 2020, and 2030 by the Virginia Employment Commission and the Virginia Department on Aging (http://www.vda.virginia.gov/2000_04dple.asp) clearly present the forecasted shifts in the overall distribution of metropolitan and rural populations [using throughout the analysis for consistency the Census 2000 definitions of Metropolitan and Non-Metropolitan (including Micropolitan) Areas].

Table 2 summarizes the demographic shift (conurbation) towards the metropolitan areas as more and more towns, villages, and housing developments are affiliated with a larger urban market and employment center.

TABLE 2. Changes in Virginia Population Distributions Using Census 2000 Definitions of Metropolitan Areas and the VEC Projections for Whole Jurisdictions with Current HPSAs

	1990	2000	2010	2020	2030
TOTAL POP	6,187,358	7,078,515	7,892,900	8,601,900	9,275,101
POP in METRO	5,187,267	6,007,063	6,786,500	7,455,400	8,086,300
POP in NON-METRO	1,000,091	1,071,452	1,106,400	1,146,500	1,188,800
% IN NON-METRO	16.2	15.1	14.0	13.3	12.8

Table 3 provides the overall summary of Appendix E and F regarding the percentage change between 1990 and 2030 of the estimated age- sex-distributions within Metropolitan and Nonmetropolitan areas along with the primary care visits and the need for additional primary care providers (PCPs).

TABLE 3. Estimated Population Change 1990-2030 Virginia Employment Commission

	NONMETRO	METRO
	%	%
Under 15	7.1	45.6
15-24	-0.8	26.0
25-44	-8.2	17.1
45-64	27.6	98.5
65-74	70.7	151.2
75 Plus	122.2	237.3
TOTAL POP CHANGE	18.9	55.9
TOTAL VISIT CHANGE	35.7	79.8
ADDITIONAL PCP DEMAND	8.4	91.4
TOTAL PCP REQUIRED IN 2030	552	3,453

Although the Virginia Employment Commissions projections are only at the jurisdictional (city/county) level, OMHPHP has identified any county with even a partial county HPSA as being within a HPSA jurisdiction. This overestimates the populations within HPSAs but remains informative as to how the need for additional physicians is distributed. The VEC projections broken down by current HPSA designations suggests that although from 1990 to 2030 the HPSA population will grow by 29%, the non-HPSA population of Virginia will grow by 66%. Because of this differential growth, even if the HPSA designations would remain constant over this period, it would represent a steadily lower proportion of the total population (Table 4).

TABLE 4. VEC Projections for Whole Jurisdictions With Current HPSAs

	1990	2000	2010	2020	2030
TOTAL POP	6,187,358	7,078,515	7,892,900	8,601,900	9,275,101
POP in NON-HPSA	3,540,686	4,186,796	4,814,100	5,351,300	5,860,300
POP in HPSA	2,646,672	2,891,719	3,078,800	3,250,600	3,414,800
% IN HPSA/NON-HPSA	42.8/57.2	40.9/59.1	39.0/61.0	37.8/62.2	36.8/63.2

However, when age distributions of the HPSA and non-HPSA populations are taken into account a very different picture evolves. A steady divergence of the two populations can be seen in Appendix G, and the overarching impact on provider requirements can be seen in Appendix H. Both populations are aging, but the change is most dramatic for the HPSAs due to the high proportion of rural populations within these areas. Using the same methodology for estimating the physician to population ratio as previously described, to adequately meet the needs of future HPSAs, it is reasonable to assume that these areas will experience a substantial increase in need for providers, perhaps even twice the number that is presently available.

Dental HPSAs are designed to indicate shortages of general dental care and take into account the number (FTE) of dentists, which are, in turn, weighted by the age of the individual dentist and the number (FTE) of dental hygienists and assistants associated with each dentist. Geographic dental HPSAs, the most frequent shortage designation, must meet the following criteria:

- Have a population to general dental provider weighted ratio greater than 5,000:1 or greater than 4,000:1 with high needs. A high needs area is determined by high poverty rates (more than 20% below poverty) or by low fluoridation rates (more than 50% of the population has no fluoridated water).
- Demonstrate that the dental care professionals in contiguous areas are over-utilized with a population to dentist ratio greater that 3,000:1 or these areas recurrently designated as dental HPSAs. If the contiguous areas are not over-utilized or designated, it must be demonstrated that barriers to accessing the services of dental professionals in these areas exist due to excessive distance (greater than 40 minutes travel time) or other factors.

Virginia has 77 separate dental HPSA designations in 62 jurisdictions. The designations include 38 geographic designations in 39 jurisdictions and seven low-income designations in eight jurisdictions, as well as 32 facility designations. Of the 32 facility designations, 23 are community health centers and nine are correctional facilities. In the past year, OMHPHP helped to facilitate 25 new dental HPSA designations affecting 28 jurisdictions (Appendix I).

Calculating the Number of Dental Health Providers Needed in Virginia. There are presently 157 dentists practicing within the designated HPSAs. It is estimated that an additional 129 dentists would be required to serve in these institutions and areas to eliminate the dental shortages. Once again, the numbers associated with the Dental HPSA designation process should not necessarily be equated with the provider supply needs of the Commonwealth.

On October 1, 2006, the VDH Division of Dental Health completed a statewide needs assessment in support of the Virginia Dental Loan Repayment Program (12VAC5-520-80). Because the survey is statewide and includes every jurisdiction in its evaluation, it is instructive to see how this analysis compares with the federal dental HPSA designation. In the statewide needs assessment, the total count of general dentists is first determined for each service area (often a county/city or a county and affiliated city, e.g., Greensville-Emporia, Frederick-Winchester). A population to dentist ratio is then calculated for the entire state and for each service area (currently the statewide ratio is 1:2472). Finally, the additional dentists needed per area to raise the service area ratio to the statewide level are computed. Areas with a need for .5 or more additional dentists are considered a shortage area for the program.

Implicit in this designation process is the assumption that the main dental workforce issue is the maldistribution of providers. Indeed the inductively computed ratio, currently 1:2472, is well below the 1:5000 ratio suggested by the federal dental HPSA program. According to the statewide needs assessment, to eliminate the current disparity, 544 dentists would have to be moved from 18 service areas to the 87 areas with ratios below the state level.

Mental Health HPSAs are designed to indicate shortages of mental health care providers which are defined as psychiatrists and other core mental health providers (e.g., clinical psychologist, psychiatric nurses, marriage/family counselors, and clinical social worker). Geographic mental HPSAs, the most common mental health shortage designation, meet the following criteria:

- Have a population to psychiatrist ratio greater than 30,000:1. High needs areas require the assessment of all core mental health professionals (CMHP) in the area and then the ratios are lowered to 9,000:1 CMHP including psychiatrists, or 6,000:1 CMHP and 20,000:1 psychiatrists.
- Contiguous areas, within 40 minutes drive time of the population center of the service area, must be already designated as a Mental HPSA, be over utilized with a population to psychiatrist ratio greater than 20,000:1, or experience access barriers rendering the contiguous mental health services unavailable. Because the Code of Virginia restricts each Community Services Board (CSB) to only serving the low income individuals who reside in their respective catchment areas, each CSB can generally be designated if shortages in mental health professionals are present within their respective catchments area without having to assess the contiguous areas.

Virginia has 62 separate Mental Health HPSA designations, including geographic, low-income and facility. Of this number there are 20 community health centers and 24 correctional centers, designated as facilities and 14 whole or partial mental health catchment areas of Virginia's Community Service Boards (CSB). The CSB designations represent 67 jurisdictions. Fifty-nine (59) counties and seven cities are designated in their entirety as geographic mental health HPSAs. A portion of Chesapeake is designated as a mental health low-income population HPSA within a CSB catchment area. Two additional designations within Roanoke and Richmond are considered low-income and homeless population HPSAs respectively. In the past year there was one new mental HPSA designation impacting two jurisdictions (Appendix J).

Calculating the Number of Mental Health Providers Needed in Virginia. There are currently 55 psychiatrists practicing within the designated Mental HPSAs. It is estimated that an additional 62 psychiatrists would be required to serve in these institutions and areas to eliminate the mental health shortages. However, as with the primary care and dental HPSA calculations, these figures may not provide an adequate benchmark for the total provider supply needs of the Commonwealth, and most likely reflect an underestimation of those needs.

c. Study of Physician Supply and Requirements in Virginia, 2010 and 2015

To supplement some of its own efforts in analyzing provider supply and requirements, the OMHPHP contracted with the Department of Health Administration of Virginia Commonwealth University to forecast the size of the workforce in 2010 and 2015 and to assess the requirements for physicians in these two future years. According to the report (Mick, Nayar & Caretta, 2007):

- There exist two distinct avenues to becoming a practicing physician in the United States. The first is the domestic track consisting of persons who are U.S. citizens and who are trained in U.S. medical schools. The second track consists of persons who are foreign-trained physicians (known as International Medical Graduates--IMGs). In Virginia, IMGs are a key component of physician supply. As of 2005, again according to the American Medical Association, Virginia was 12th among the states in terms of the total number of IMGs (3,954) and 13th in terms of the proportion of IMGs (20.0 %). One factor that has played a role in IMGs' continuing presence in US medicine is their willingness to practice medicine in underserved areas where US medical graduates are lacking.
- Virginia is net importer of physicians: according to the 2005 data, about 75 percent of Virginia physicians were not trained in Virginia. Although Virginia educates about the national average of medical students (~25 per 100,000 population), only about 36 percent of Virginia's medical students end up practicing in Virginia.
- In Virginia, the bulk of physicians are located in the most urban places. Conversely, the smallest places in Virginia have the fewest physicians.
- That Virginia will need more physicians over the next 20 to 30 years seems not in doubt. Population growth alone will require the addition of more of them. Added to this is the increased demand that may result from the retirement of Baby Boomers and their qualification for Medicare. For Virginia, the anticipated growth in demand may be large: the general population is expected to increase by 17% between 2000 and 2020, whereas the growth among the population over 65 years of age will increase by 65% over the same period (versus 53% for the nation as a whole). However, the estimates do not show dramatic shortages of physicians in the near future.
- The methodology used in assessing Virginia's future need for physicians is not a highly sophisticated one. The absence of the requisite data, particularly longitudinal data, was a major limitation in the ability to conduct the study as some other state-level studies have been accomplished (North Carolina Institute of Medicine, 2007). It may well be that results are underestimates of the future gap between physician supply and requirements. Compared to other studies at the state level, study results are more conservative, i.e., do not make as dramatic estimates of shortage.

d. State Planning Grant

The U.S. Department of Health and Human Services' Health Resources and Services Administration (HRSA) State Planning Grants Program has awarded the OMHPHP with three rounds of grant funding for a total of just under $1.18 million to collect data, conduct research, and develop plans to provide greater access to affordable health insurance coverage for uninsured Virginians. To date the Virginia State Planning Grant (SPG) has produced seven major accomplishments which provide a foundation for advancing the goal of expanding health coverage for the working uninsured. These include:

- Engagement of more than 100 Virginia stakeholders from the business, government, and consumer sectors as participants in SPG Work Groups.
- Completion of the 2004 Virginia Health Insurance and Access Survey, the most comprehensive study of the uninsured yet conducted in Virginia.
- Production of InsureMoreVirginians.org, Virginia's most comprehensive online portal for information on health coverage in the Commonwealth.
- Production of *A Guide to Health Insurance Options for Small Businesses in Virginia*, Virginia's most comprehensive online educational tool for small businesses leaders.
- Design of a Model Health Coverage Product which could be highly affordable for small businesses and working uninsured individuals.
- Design of a policy option for State Reinsurance which, in conjunction with the Model Health Coverage Product (or a similar product), could be used to expand health coverage for the working uninsured and promote economic development for Virginia small businesses.
- Design of a concept for a Virginia Health Coverage Education Project which could be used to proactively educate Virginia small businesses and individuals about the value of health coverage, available options for health coverage, and ways of acquiring health coverage in Virginia.

There are two options from the Virginia SPG Program that have been recommended to the Governor for implementation by the Governor's Health Reform Commission:

- Option 1. Create a Model Health Coverage (Low Annual Max Product) backed by either a Three-Share Financing Structure and/or through a State Reinsurance Program. Affordability continues to be the major barrier to employer-based health coverage for tens of thousands of Virginia small businesses and their employees. After receiving input from numerous stakeholders from the business, government, and consumer sectors, the Virginia SPG has produced a Model Health Coverage Product which includes all Virginia mandated health benefits, but with a $50,000 annual maximum payout. Assuming that employers would pay part of the premium cost, this product could be affordable to many working uninsured with income between 100 and 300 percent of the federal poverty level. The obvious tradeoff would be the assumption of financial risk by the individual or family for health care costs in excess of $50,000 in a single year.

  A Three-Share Financing Structure (private insurers, employers and employees share the cost of the premium, such as the model recently implemented in Tennessee through its CoverTN product) is one way to ensure the long-term affordability of the product. Additionally, the Commonwealth of Virginia could play a role in making health coverage more affordable for small businesses by establishing a state reinsurance program which would pay part of the health claims of enrolled individuals. By coupling state reinsurance with a defined Model Health Coverage (Low Annual

Max) Product, the Commonwealth of Virginia could work with insurance providers to share financial risk so that insurance becomes more affordable for qualifying small businesses, and low-income working uninsured are not faced with financial crises for medical bills beyond their ability to pay. This kind of risk sharing arrangement could expand health coverage by encouraging more small businesses, individuals & families to purchase health coverage. This option could also support economic development by facilitating access to affordable health benefits for growing small businesses.

- Option 2. Create a Virginia Health Coverage Education Project. A consistent theme voiced by Virginia stakeholders is that too many small businesses, individuals, and families who could purchase or otherwise acquire coverage are not doing so because they do not understand the value of health coverage and/or how to obtain health coverage. A Virginia Health Coverage Education Project would proactively educate Virginia small business, individuals, and families about the value of health coverage, available options for health coverage, and ways of acquiring health coverage in Virginia. A Virginia Health Coverage Education Project could be housed as part of an existing organization or a newly formed nonprofit organization. Such a project would consolidate and leverage the various SPG products completed to date, including the work compiled by the various SPG Work Groups; InsureMoreVirginians.org; and the Guide to Health Insurance Options for Virginia Small Businesses.

e. Telehealth

Telehealth is the electronic distribution of healthcare information and services across a healthcare system to facilitate and enhance the delivery of healthcare. It is a discipline that is quickly being adopted throughout the country and world as a means to overcome barriers to quality healthcare. The practice of telehealth incorporates the use of information and communications technologies (ICT) to allow health data, digital images (radiographs, CT scans, etc.), and expertise to be exchanged with health care providers and/or patients in order to facilitate health screenings, conduct remote monitoring, obtain diagnostic interpretations/consultations and provide medical education and distance learning opportunities.

Virginia Telehealth Network. For the past 5 years, the OMHPHP has led the design and development of telehealth systems in the Commonwealth through its Virginia Telehealth Network (VTN). Established in 2002, VTN is a volunteer consortium of professionals from across the state representing a range of domains and stakeholder groups from private/public organizations whose mission is to advance the adoption, implementation and integration of information and telecommunication technologies into mainstream health systems statewide to improve access to quality healthcare for all Virginians.

The VTN is involved in many activities focused around four top priorities for advancing telehealth:

- *Information collaboration.* The VTN works to build a body of knowledge that encapsulates “best practices” for operating effective and sustainable telehealth services, as well as “best practices” for designing, operating and sustaining remote telehealth sites. The information is shared through conferences, meetings, papers and presentations, and through the VTN website. In emulating these practices, participating health care providers are able to increase operational efficiency, reduce associated costs, and improve customer satisfaction, which leads to greater utilization of Virginia’s telehealth networks and improved access to health care.

- *Development of standards.* Telehealth-based standards represent the foundation upon which existing network services and capabilities can grow and new ones can be cost-effectively created. To facilitate Virginia's telehealth vitality and growth, the VTN strives for seamless interoperability between telehealth providers, their services and remote sites through the promotion of standards in 3 areas:
    - Business standards to ensure common operating agreements, to facilitate the sharing of resources and services between organizations, and to unencumber reimbursement/payment processes;
    - Operational standards that enable health care providers to deliver services to patients using standardized templates/clinical formats to ensure quality of service; and
    - Technical standards to ensure seamless hardware and software compatibility and connectivity.
- *Representation and facilitation.* The VTN equitably represents the interests of all health care providers in the Commonwealth as it interfaces with various health agencies, commissions, workgroups, special interests and others constituents within the government. It identifies and monitors key regulatory and policy issues important to the adoption and mainstream integration of telehealth and ensures the work of the VTN and its membership is consistent with priorities established by the VDH and the Commonwealth of Virginia. In its role, the VTN is able to identify common needs, issues and concerns of telehealth networks, and in partnership with appropriate parties, develop strategies for facilitating collective solutions. These solutions could include, but are not limited to, reimbursement, participant compensation/payments, state and federal regulations, collective buying and negotiation powers, grant writing and other forms of access to government funded health care initiatives such as the Rural Health Care Program of the Universal Service Fund.
- *Obtaining financial support for strengthening health information technology capabilities.* The VTN provides information regarding health information technology (HIT) funding opportunities and partners with members in developing grant proposals. Given the strong support of senior government and healthcare leaders, the dedication and passion of its grass roots membership, along with the growing recognition of the value of health information and communications technologies, VDH OMHPHP has made significant investments in VTN over the past year to ensure Virginians can realize all of the benefits that can come from a well integrated and collaborative statewide healthcare system. These FY 06-07 investments in time and resources include:
    - Facilitating VTN's application for state incorporation. The VTN is incorporated in the Commonwealth of Virginia and is in the process of being recognized as a 501(c)(3) not for profit organization.
    - Hiring an industry leader in telehealth to serve as the acting executive director of VTN to formally manage and lead activities.
    - Funding the development of the VTN website (http://ehealthvirginia.org) to facilitate communication across constituencies.
    - Participating in the development of 3 major grant proposals that, if successful, will provide operating funds for VTN activities and significantly enhance the state's ability to deliver telehealth services.
        - Rural Health Care Pilot Project issued by the Federal Communications Commission (FCC),
        - FLEX Health Information Technology Grant issued by the Office of Rural Health Policy, and
        - Medicaid Transformation Grant.

Metro Richmond Tuberculosis Care Pilot Project. In the FY 05-06 report, OMHPHP described its leadership in developing a pilot project to enhance care for tuberculosis patients in the Central Region of Virginia. In this past year, the Metro Richmond Tuberculosis Care Pilot Project plan was created detailing the financial, logistic, and technical process for a tuberculosis patient encounter with a specialist or primary care contact outside of the VDH. In addition three web conference Case Review Sessions have been held with participants from the three health districts of Henrico, Chesterfield and Chickahominy as well as the University of Virginia Office of Telemedicine, Virginia Commonwealth University Office of Telemedicine, and Cross Over Health Center. The Case Review Sessions included presentations by the health districts of clinically complicated tuberculosis patients followed by input from the primary care participants and specialists on the proper clinical care necessary for the specific case. In addition to the Case Review Sessions, several web conferencing platforms have been tested and a platform has been selected. There are plans for expanding the pilot project to include more health districts.

B. Developing the Health Care Workforce

The OMHPHP assists primary care practice sites in recruiting and placing health care professionals, marketing recruitment and placement services, collaborating with the Virginia Community Healthcare Association and other partners to expand the provision of recruitment and placement services, and managing a variety of incentive programs. A brief description of each activity follows.

1. J-1 Visa Waiver Program

Virginia continues to participate in the Conrad State 30 J-1 Visa Waiver Physician Program. This program is federally authorized and permits VDH to act as “an interested state agency” to request visa waivers for American-trained foreign physicians. These waiver requests allow foreign physicians, on a J-1 visa status, to remain in the U.S. and practice in federally designated health professional shortage areas (HPSAs) and medically underserved areas (MUAs) within Virginia, rather than returning to their home country after completing residency for the required two year period.

This waiver option is called the Conrad State 30 Program because it is limited to 30 J-1 visa waivers per state, per year. This program allows every state to petition the U.S. Department of State (DOS) on behalf of 30 J-1 physicians for recommendations to the United States Citizenship and Immigration Service (CIS) to grant J-1 visa waivers. In exchange for filing a petition for the waiver on behalf of the J-1 physician, Virginia receives a commitment to provide medical service for a three year period from each DOS approved J-1 physician. While priority is given to physicians of primary care specialties, J-1 specialist physicians are also placed in HPSAs and MUAs.

The VDH may also recommend waivers for physicians participating in the Appalachian Regional Commission (ARC) J-1 Visa Waiver program. This program is similar to the Conrad State-30 program. Physicians in this program must practice for at least three years in one of the 23 Appalachian counties and eight independent cities in Southwest Virginia.

Physicians participating in the Conrad State-30 (or ARC program) do not displace American physicians. Practice sites wishing to hire a J-1 Visa Waiver physician must first prove that they have advertised and recruited for American physicians for at least six months and were unsuccessful in their recruitment attempts before they are eligible to hire a J-1 Visa Waiver physician.

States are now allowed to use five of the 30 waiver slots for a facility that services patients who reside in one or more designated geographic areas without regard to whether such a facility is located within such a designated area. These five slots are referred to as “non-designated” Conrad slots. Virginia has opted to use these five Conrad slots for “non-designated” applications. Virginia has allotted one non-designated waiver slot to its publicly supported academic medical center, the University of Virginia.

The Conrad 30 Program continues to be an important source of placing health professionals (primary care and specialty physicians) in many of Virginia’s underserved areas; thereby increasing health care accessibility. This program has proven to be extremely successful in placing physicians in rural areas throughout the Unites States that need medical care the most. In fact, reports indicate that 18.3% of the physicians in Virginia are international medical graduates.

During the reporting year, OMHPHP:

- Assisted in placement of 14 new physicians who utilized the J-1 Visa Waiver process.
- Reviewed and processed J-1 Visa Waiver applications within 30 days.

2. National Interest Waiver Program

The National Interest Waiver Program (NIW) allows professionals of exceptional ability to request a waiver of the labor certification requirements. "Labor certification" is the most widely used employment-based opportunity for obtaining a green card. Labor certification requires a U.S. employer to prove that there are no minimally qualified U.S. workers for the position. Once the U.S. Department of Labor "certifies" this application, the employer will be able to apply to the U.S. Citizenship and Immigration Services (CIS) for permanent residency (a "green card") for the foreign employee. This process may take several years.

International medical graduates (IMGs) requesting a NIW must obtain a letter of recommendation from state health departments, stating that their work is considered to be in the “public interest.” Physicians applying for a NIW must work full-time for a total of five years in a HPSA or MUA.

During the reporting year, OMHPHP:

- Issued letters of support for 13 physicians requesting National Interest Waivers.
- Reviewed and processed NIW applications within 30 days.

3. Recruitment and Retention Initiatives

The OMHPHP provides recruitment and retention services for primary care and mental health practice sites located in medically underserved areas, health professional shortage areas, and in state or local government institutions in the Virginia. These services are provided by OMHPHP’s Health Workforce Incentives Coordinator and the Web Manager/Recruitment Liaison. The OMHPHP receives requests from physicians, nurse practitioners, and physician assistants interested in practicing primary care, specialty care, or psychiatry in Virginia. Additionally, requests are received from a variety of practice sites interested in recruiting health professionals. The OMHPHP works with the practice sites and the applicants to refer appropriate candidates. The primary outcome is the increased pool of applicants

resulting in placement of health care professionals in practice sites located in medically underserved areas.

a. Commissioner's Healthcare Workforce Recognition Awards

During this reporting period the OMHPHP introduced a new health workforce initiative at the Commissioner's Health Workforce Advisory Committee (HWAC) meeting -- the establishment of the Commissioner's Healthcare Workforce Awards. The Commissioner's Healthcare Workforce Awards will recognize and thank individuals and organizations for making significant contributions to our communities via initiatives designed to address Virginia's healthcare workforce shortage.

- The first award, "**The Commissioner's Healthcare Workforce Individual Award for Distinguished Service"** will acknowledge persons that are actively involved in successful initiatives addressing healthcare workforce shortages. There will be up to five individual "Distinguished Service" awards.

- The second award, "**The Commissioner's Healthcare Workforce Organization Award for Outstanding Contribution"** will recognize organization's innovation and excellent performance in their efforts designed to address and enhance health care workforce shortage initiatives. There will be up to three organizational "Outstanding Contribution" awards.

Recipients of the 2007 Commissioner's Healthcare Workforce Individual Award for Distinguished Service included:

- **Tony Lawson.** Mr. Lawson received three nominations citing his leadership in several organizations including the Southwest Virginia Graduate Medical Education Consortium, which creates and supports medical residency preceptor sites in rural and underserved communities in Southwest Virginia. As a result of Mr. Lawson's efforts at GMEC, nearly a quarter of its graduating residents chose to practice in Southwest Virginia. Also, under his leadership, Stone Mountain Health Services grew from two to 11 clinics that provide medical and dental care annually to 18,000 patients who live in medically underserved areas.
- **Joe S. Frank**. Mayor Frank's nomination cited his 2005 creation of the Mayor's Physicians Task Force's Virginia Peninsula Physicians Initiative to recruit medical specialists and other healthcare providers. Recognizing the importance of this successful initiative, the Mayor recommended a transition plan to permanently house the Physicians Task Force at the Peninsula Council for Workforce Development.
- **Cato T. Laurencin, M.D., Ph.D**. Dr. Laurencin's nomination cited his work as mentor to a number of students in the Fellowship Program in Academic Medicine for Minority Students. The program is dedicated to improving the health of low-income and minority populations by increasing the number of minority physicians, and training minority medical students to address the special needs of their communities. Dr. Laurencin has worked to assure the diversity of Virginian's healthcare workforce and has provided many students opportunities that would have been unavailable to them otherwise.

Recipients of the 2007 Commissioner's Healthcare Workforce Organization Award for Outstanding Contribution included:

- **Bon Secours Richmond Health System**. Bon Secours Richmond Health System was cited for its efforts in cultivating a dedicated, trained workforce who feel that they are valued for their contributions to patient care. Bon Secours has adopted numerous employee retention benefits and incentives, including starting salaries higher than the minimum wage, discounts for uniforms, tuition prepayment and childcare subsidies for some employees.
- **VCU Blackstone Family Medicine Residency.** The Blackstone residency program was the first

of its kind in the state. Although it closed in 2004, because it lacked proximity to a hospital, it became a model. Similar residency programs in Virginia continue to put the principles and practices of the Blackstone program to work in their settings. Most of the program's 107 graduates practice in underserved communities.

b. Health Workforce Advisory Committee (HWAC)

VDH's Health Workforce Advisory Committee was established to advise the health department on all aspects of its health workforce duties and responsibilities. HWAC Duties and Responsibilities include advising on:

- Designating Virginia Medically Underserved Areas;
- Designating dental, primary care, and mental health professional shortage areas;
- Administering the Virginia scholarship and loan repayment programs;
- Recruiting health care providers, residents, and students;
- Publicizing the functions, programs and activities of VDH available to assist providers in establishing a practice in under served areas;
- Coordinating its health workforce activities with other state agencies as well as public and private entities;
- Identifying and recommending to the Governor and to the General Assembly new programs, activities, and strategies for increasing the number of providers practicing in Virginia's under served areas; and
- Submitting annual reports on the activities and accomplishments of VDH relative to recruiting and retaining providers.

During the reporting period, the HWAC met in September 2006. The HWAC identified a need for data to fully understand the needs of Virginia's dental, pharmacy and mid level practitioners. Also, the HWAC suggested that Health Workforce Studies should include an assessment of current data on Minority Health Workforce doctors in Virginia. HWAC members expressed an interest in maintaining their meeting schedule as it and there was not interest expressed in further sub-committee activity.

c. Primary Practice Opportunities of Virginia (PPOVA) Website

The OMHPHP maintains the PPOVA healthcare recruitment website (www.ppova.org). During the reporting period, the website generated 54,277 visits, averaging 141 hits per day. During the reporting year, the website had 82 available new opportunities posted. More opportunities from Norton, VA were posted than any other county/city. The most frequently recruited specialty was that of Family Practice. By the end of the reporting year, the PPOVA website had 170 active opportunities.

In order to help meet the needs of all Virginians, OMHPHP continues to list all opportunities on the PPOVA website in an effort to provide services to the entire state of Virginia. Even though the recruitment efforts provided through PPOVA have been expanded to include the maximum number of specialties and locations, the majority of practitioner vacancies are for primary care providers. Health Professional Shortage Areas continue to represent a significant portion of the vacancies in the Commonwealth.

d. Marketing of Recruitment and Placement Services

The OMHPHP uses a multi-faceted marketing program, which includes numerous presentations at residency programs and at various health care related symposiums and conferences as well as advertising through newsletters, trade magazines, partner affiliations and websites. The presentations highlight recruitment and placement services and health workforce incentive programs.

Attendees include medical students, nurse practitioners, physician assistants, residents, physicians and other allied professionals. During the reporting year, staff members presented and/or exhibited at the following State and national Conferences:

- Virginia Academy of Family Physicians Annual Meeting,
- American Academy of Family Physicians Conference,
- GMEC Head For the Hills Annual Conference,
- VCU Primary Care Week Program, and
- Virginia Rural Health Association Conference.

They also presented and/or exhibited at the following Virginia Residency Programs:

- ·Fairfax Residency Program (VCU, MCV),
- ·VCU Department of Family Medicine Practice Management Conference,
- ·Riverside Family Practice Residency Program,
- ·Virginia College of Osteopathic Medicine, and
- Shenandoah University.

In an effort to maximize our marketing of Virginia to healthcare providers, the OMHPHP is developing a Health Workforce Incentives Video. The video will feature participants that have utilized Virginia's Incentive Programs. Participants selected for the video include: 1) a physician loan repayment program participant in Max Meadows, VA, 2) a dental loan repayment program participant in Charles City, and 3) a J-1 visa waiver participant in Chincoteague. During production of the video, the physicians as well as members of the medical staffs at their respective centers were interviewed. The interviews highlighted the benefits of working in a medically underserved area as well as in the communities where they are located. The production of the health workforce video is expected to be complete by December 2007. The video will be utilized in a variety of marketing venues to include presentations, exhibits, and mailings.

e. Virginia Recruitment and Retention Collaborative Team

The Virginia Recruitment and Retention Collaborative Team (R&R Collaborative Team) is an initiative between OMHPHP, Virginia's four medical schools and private, public, corporate, federal and state organizations. The OMHPHP was instrumental in the formation of the R&R Collaborative Team in September 2003 and maintains a leadership role. The R&R Collaborative Team's mission is to "Establish and enhance collaborative efforts in partnership with stakeholders to deliver improvements to recruitment processes and retention systems for health care providers with an emphasis on the medically underserved areas in Virginia." VDH Recruitment and Retention Services coordinate the bi-monthly teleconference meetings.

During the initial meetings the R&R Collaborative Team identified tactical and strategic goals, such as enhancing communication. This effort was achieved in part by the linkage of shared information via website links and communications such as newsletters, web pages, brochures and various presentations. This effort continues to maximize communication efficiencies. Additionally, the R&R Collaborative Team has experienced success in contributing content and providing usability feedback resulting in enhancements and greater utilization of Virginia's free online healthcare recruitment website Primary Practice Opportunities of Virginia **www.PPOVA.org**. All R&R Collaborative member organizations are linked through this comprehensive website.

f. National Rural Recruitment and Retention Network (3RNet)

The National Rural Recruitment and Retention Network (3RNet) is comprised of state organizations such as State Offices of Rural Health, AHECs, Cooperative Agreement Agencies and State Primary

Care Associations. These not-for-profit organizations help health professionals locate practice sites in rural areas throughout the country. Each organization has information regarding rural practice sites in their respective states and assist health professionals and their families identify the resources necessary to meet their personal and professional requirements.

For many years Virginia has been a member of the 3RNet and fully participates in its activities. Virginia's Health Workforce Manager has served on the 2006 conference planning committee and will lead the planning committee for the 2007 conference which will be held in Richmond.

g. National Health Service Corps (NHSC) Recruitment and Retention Assistance Application State Recommendation

The OMHPHP works to identify and assist practice sites in Virginia that are eligible to recruit and place health professionals participating in the National Health Service Corps (NHSC) scholarship and/or loan repayment programs. Priority in approving applications for NHSC health professional assignment is given to sites that provide primary, mental and/or dental health services to a HPSA with the greatest shortage. The VDH receives applications for eligibility and must provide a state recommendation. For the reporting fiscal year, the VDH reviewed 47 applications and the NHSC approved 46 practice sites in Virginia as eligible facilities to recruit NHSC Scholars and Loan Repayment recipients.

4. Loan Repayment Programs

a. Virginia Physician and Virginia State Loan Repayment Programs

The OMHPHP administers the Virginia Physician Loan Repayment Program (VLRP) and the Virginia State Loan Repayment Programs (SLRP). These programs offer financial incentives to physicians, physician assistants and nurse practitioners who are committed to serving the needs of underserved populations and communities in the Commonwealth of Virginia. Each recipient agrees to serve full-time at medical facilities located in designated health professional shortage areas or medically underserved areas for a minimum of two years. In return for their service, each recipient is provided funds to repay qualifying educational loans.

Award Criteria:

- State Loan Repayment Program – SLRP – Federal and State Funds – Facility must be a private or public non-for-profit entity and the location must be a HPSA. Eligible recipients are primary care physicians, psychiatrists, general dentists, nurse practitioners and physician assistants.
- Virginia Physician Loan Repayment Program – VLRP - State Funds – No facility restrictions and location must be HPSA or VMUA. Eligible recipients are primary care physicians and psychiatrists.

Additionally, the OMHPHP has continued its partnership with the Virginia Health Care Foundation, which administers the Healthy Communities Loan Fund. This program offers low-interest loans to providers who are located in medically underserved and health professional shortage areas. The availability of capital financing has proven to be an important service to support the retention of physicians and dentists in the Commonwealth's underserved areas. This effort is part of the OMHPHP's broader program of practice management support for physicians practicing in underserved areas.

b. Virginia Dental Loan Repayment Program

The Virginia Dental Loan Repayment Program was established in 2000 but was not funded until the 2005 General Assembly appropriated funds beginning July 1, 2005. This program is open to dental graduates of any accredited U.S. dental school who hold a valid Virginia license, are within 5 years of graduation, and who practice in a dentally underserved area. The loan repayment award is not fixed and is based on Virginia Commonwealth University's School of Dentistry tuition for the year in which the loan was acquired. The first awards to dentists under this program were made in FY 05-06.

The OMHPHP also collaborates with the Division of Dental Health (DDH) in providing Virginia State Loan Repayment Program awards to general practice dentists who are willing to serve in dental HPSAs. This program significantly impacts the VDH efforts to improve access to quality healthcare by ensuring an adequate supply of practitioners who provide services to Virginia residents in primary care and dental HPSAs.

5. Scholarship Programs

a. Mary Marshall Nursing Scholarship Program (MMNSP)

The Mary Marshall Nursing Scholarship Program (MMNSP) provides financial incentives to students pursuing a Licensed Practical Nurse (LPN) or a Registered Nurse (RN) education. The scholarship program requires one month of service by the recipient anywhere in the state for every $100 of scholarship awarded. Awards vary each year and are determined by the number of eligible applicants and the funds awarded by the Board of Nursing and/or the General Assembly.

b. Nurse Practitioner/Nurse Midwife Scholarship Programs

The Nurse Practitioner/Nurse Midwife Scholarship Program provides five - $5,000 scholarships to individuals pursing a nurse practitioner or nurse midwife education in Virginia. For every scholarship awarded, a year of service is required in a medically underserved area of the Commonwealth.

c. Virginia Medical Scholarship Program (VMSP)

The Virginia Medical Scholarship Program (VMSP) awarded scholarships annually to medical students and first year primary care residents in exchange for a commitment to practice in designated medically underserved areas in Virginia. Qualifying medical students received $10,000 per year for up to 5 years. This program has been phased out due to a high default rate. However, three scholarship recipients received their scholarship award during this reporting year. Once eligibility ends for these students, the program will be discontinued.

Budget cuts and a high default rate (40%) are the reasons for the discontinuation of this scholarship program. Scholarships were awarded to students early in their medical education, with a condition that upon completion of their medical education they must work as a primary care provider in a designated underserved area of the Commonwealth. Many scholarship recipients changed their fields and pursued specialties outside of primary care, moved out-of-state or no longer wanted to work in a medically underserved area; these situations resulted in the scholarship defaults. Consequently, the OMHPHP is concentrating placement efforts using the aforementioned Virginia Loan Repayment Programs as incentives to fulfill the service obligation.

IV. The Number and Type of Providers Recruited by VDH to Practice in Medically Underserved and Health Professional Shortage Areas

During the reporting period, 82 positions were posted on Virginia's healthcare recruitment website Primary Practice Opportunities of Virginia (www.ppova.org) and 179 candidates used the system to identify positions of interest (see Tables 5 and 6 for profiles of positions and candidates). This resulted in 329 c.v.'s being forwarded to practice sites.

TABLE 5. Profile of Candidates Registered on www.ppova.org

Specialty	Total	Specialty	Total
Family Practice	45	Dentistry	3
Internal Medicine	39	Pulmonologist	3
Pediatrics	16	Surgery	3
Physician Assistant	15	Internal Medicine/Pediatrics	2
Hospitalist	9	Orthopedic Surgery	2
Psychologist	8	Hematologist	1
Obstetrics/Gynecology	6	Neurology	1
General Practice	5	Nurse Practitioner	1
Adult Nurse Practitioner	4	Obstetrics/Nurse Practitioner	1
General Surgery	4	Physician Assistant/Family Nurse Practitioner	1
Cardiology	3	Urologist	1
		Grand Total	**179**

TABLE 6. Positions Posted on www.ppova.org

Specialty	Total
Family Practice	23
Internal Medicine	10
Physician Asst/Family Nurse Practitioner	6
Family Nurse Practitioner	4
Urology	4
Obstetrics/Gynecology	3
Orthopedics	3
Pediatrics	3
Psychiatry	3
Cardiology	2
Dentistry	2
Emergency Medicine	2
Ear, Nose and Throat	2
Nurse Practitioner	2
Otolaryngology	2
Endocrinology	1
General Surgery	1
Gynecology	1
Hospitalist	1
Nephrology	1
Neurology	1
Oncology	1
Ophthalmology	1
Physician Assistant	1
Pathology	1
Radiology	1
Grand Total	**82**

City	Total	City	Total
Abingdon	5	Victoria	1
Alexandria	1	Virginia Beach	1
Big Stone Gap	2	Woodstock	3
Bland	2	Wytheville	5
Boydton	1	**Grand Total**	**82**
Burkeville	2		
Clintwood	1		
Damascus	1		
Danville	2		
Dublin	1		
Emporia	1		
Fredericksburg	5		
Front Royal	1		
Galax	6		
Grundy	1		
Hampton	1		
Haynesville	1		
Independence	1		
Laurel Fork	3		
Lebanon	3		
Low Moor	5		
Luray	3		
Marion	1		
Martinsville	1		
Newport News	2		
Norton	7		
Pennington Gap	1		
Petersburg	1		
Quinton	2		
Richmond	1		
Roanoke	6		
South Hill	1		

Table 7 shows the Conrad 30 J-1 Visa Waiver Physicians during the reporting period and the areas they are serving.

TABLE 7. Conrad 30 J-1 Visa Waiver Physicians: July 1, 2006 to June 30, 2007

Specialty	Underserved Area
Cardiology	Halifax County
Family Physician	Richmond City
Family Physician	Henry County
Family Practice	Smyth County
Hospitalist/Internal Medicine	Prince Edward County
Internal Medicine	Pittsylvania County
Internal Medicine	Galax/Grayson
Internal Medicine	Henry County
Internal Medicine	Washington County
Internal Medicine/Cardiology	Halifax County
Internal Medicine/Gastro	Halifax County
Neurology	Richmond City
Opthalmology	Albemarle County
Pediatric Intensivist	Richmond City
Pediatrics	Richmond City

Figure 1 shows the location of J-1 Physicians currently completing their three-year service obligation.

FIGURE 1.

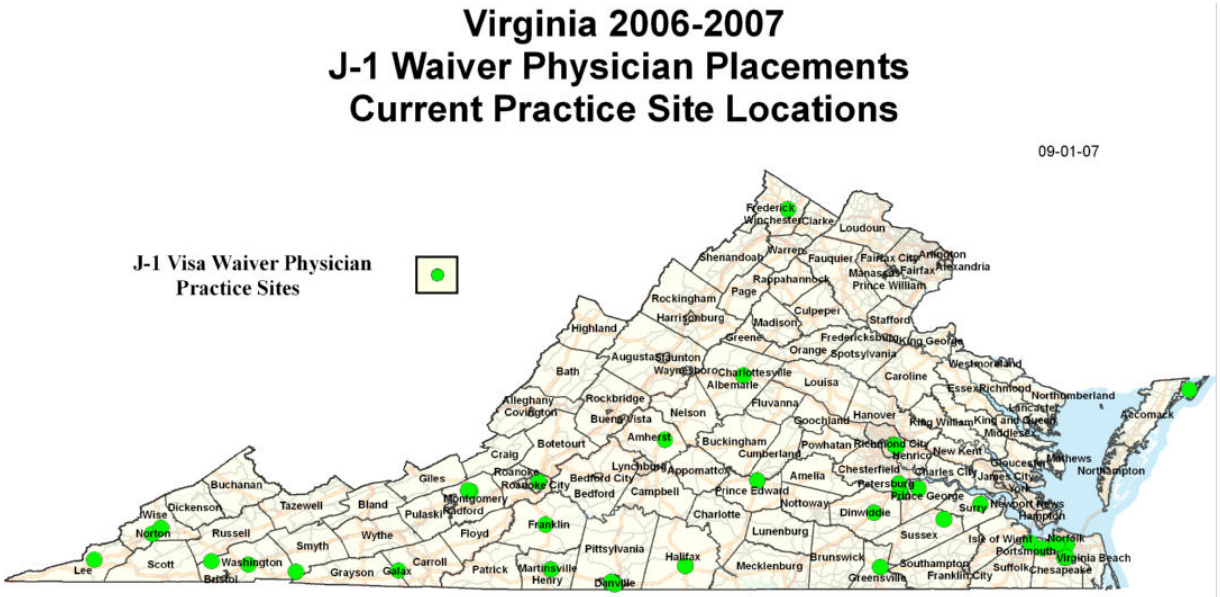


Table 8 shows the National Interest Waiver Physicians during the reporting period and the areas they are serving.

TABLE 8. National Interest Waiver Physicians: July 1, 2006 to June 30, 2007

Specialty	Underserved Area
Cardiology	Halifax County
Family Medicine	Smyth County
Family Medicine	Accomack County
Family Medicine	Halifax County
Hospitalist	Pittsylvania County
Internal Medicine	Portsmouth/Chesapeake City
Internal Medicine	Chesapeake City
Internal Medicine	Prince Edward County
Internal Medicine	Washington County
Pediatrics	Lee County
Psychiatry	Norfolk City
Pulmonology	Wise County

V. The Retention of Providers Practicing in Medically Underserved or Health Professional Shortage Areas

During the reporting period, the OMHPHP accomplished the following with regard to the retention rate of providers practicing in medically underserved and health professional shortage areas in Virginia:

A. Retention of National Health Service Corps (NHSC) – State Loan Repayment Recipients

Since the receipt of the State Loan Repayment Program grant award from the federal government in FY 93-94, a total of 35 practitioners have participated in this program. Twenty participants have completed their required primary care service obligation to the Commonwealth of Virginia. To date, there are 15 program participants currently serving in Virginia HPSAs and there have been no defaults in this program; therefore, the NHSC - Virginia State Loan Repayment Program has a 100% overall retention rate.

B. Study of the Effectiveness of Incentive Programs

During this reporting period, VDH contracted with a consultant to conduct an in-depth study of the effectiveness of the J-1 Waiver Program, the Medical Scholarship Program, the State Loan Repayment Program (SLRP) and the Virginia Loan Repayment Program (VLRP) in retaining physicians in Virginia, and HPSAs specifically. The Virginia "retention rate," i.e., the number and percentage of physicians who were located in Virginia in 2006 compared to the total number who have fulfilled their service obligations, varied from a high of 76.3% for the Loan Repayment Program,

to 51.0% for the Medical Scholarship Program, to a low of 39.9% for the J-1 Visa Waiver Program. However, among those who had remained in Virginia from all of these programs, the probability that they were still found in a HPSA was always at least seven in ten with the J-1 Visa Waiver Program topping out at 83.0%.

To judge whether these programs have effectively fulfilled their intended purpose remains difficult. It would appear, on the one hand, that the J-1 Waiver Program does not perform as highly in retaining physicians in Virginia (39.9%) as the other programs, but those who do remain are very likely to practice in underserved areas (83.0%). The first order effect of the program, namely the three year service obligation of the J-1 Waiver physician, is sufficient to commend the program and deem it effective. Perhaps most significant is that the Commonwealth is required to invest little in administering the program. Careful initial screening and targeted retention programs may improve the long term effectiveness of the J-1 Waiver Program.

The Medical Scholarship Program, on the other hand, represents a long term commitment, often as much as 7 years, before the service obligation is required. The immediate accrued investments and obligations are significant, but the default rate (>40%) undermines the effectiveness of the program. Still over 50% are retained in the Commonwealth with 72.6% of those remaining practicing in HPSA. Because of the high default rate, this program was terminated in 2003. It has been replaced by the State Loan Repayment Program (SLRP) and Virginia Loan Repayment Program (VLRP).

The State Loan Repayment Program (SLRP) and Virginia Loan Repayment Program (VLRP) have less than one third the number of completed obligations of either of the other programs. With a 76.3% Virginia retention rate and with 75.9% of those practicing in Virginia, practicing in a HPSA it would appear that these two programs satisfactorily address both the immediate and long term physician needs of underserved areas.

VI. Utilization of Scholarship and Loan Repayment Programs and Other Authorized Programs or Activities

Federal and state medical scholarship and/or loan repayment programs, as well as several other authorized programs or activities, were developed to attract primary care providers to medically underserved areas in Virginia. By providing financial incentives through these programs for primary care physicians and psychiatrists to practice in high need regions of the state, the OMHPHP hopes to improve the health of the underserved and access to quality health care, especially where health issues have the highest racial, ethnic, and socioeconomic inequities in treatment quality and outcomes.

Preference for recruitment or placement services is given to the Virginia Physician Loan Repayment and the Nurse Practitioner/Nurse Midwife Scholarship Programs because the recipients are required to provide primary care service in a HPSA or VMUA. In addition, the VDH assists the National Health Service Corps (NHSC) recipients with placement in practice sites located in health professional shortage areas or medically underserved within Virginia.

The OMHPHP received 31 loan repayment applications for the Virginia Physician Loan Repayment Program (VLRP) and the Virginia State Loan Repayment Programs (SLRP) during the reporting period. The OMHPHP reviewed applications and issued 25 loan repayment awards. Five applications were ineligible for consideration and one accepted the National Health Services Corps program. Table 9 shows the new loan repayment recipients that were eligible for awards during this reporting period.

TABLE 9. New Loan Repayment Recipients (July 1, 2006 to June 30, 2007)

Profession	Practice Location	Award Eligibility	Profession	Practice Location	Award Eligibility
P.A.	Russell	VLRP	M.D.	Sussex	SLRP
N.P.	Washington	SLRP	P.A.	Russell	VLRP
N.P.	Bland	SLRP	M.D.	Mecklenburg	SLRP
M.D.	Richmond City	VLRP	M.D.	Lancaster	VLRP
M.D.	Richmond City	VLRP	P.A.	New Kent	VLRP
D.D.S.	Charles City	SLRP	D.O.	Essex	SLRP
M.D.	Orange City	VLRP	M.D.	Lancaster	VLRP
N.P.	New Kent	VLRP	M.D.	Louisa	SLRP
M.D.	Essex	SLRP	D.O.	Wytheville	VLRP
M.D.	Smyth	VLRP	M.D.	Louisa	VLRP
N.P.	Mecklenburg	VLRP	N.P.	Middlesex	SLRP
M.D.	Wythe	VLRP	N.P.	Saltville	SLRP
D.O.	Northampton	SLRP			

Figure 2 shows the current practice sites of the 2006 – 2007 SLRP recipients.

FIGURE 2.

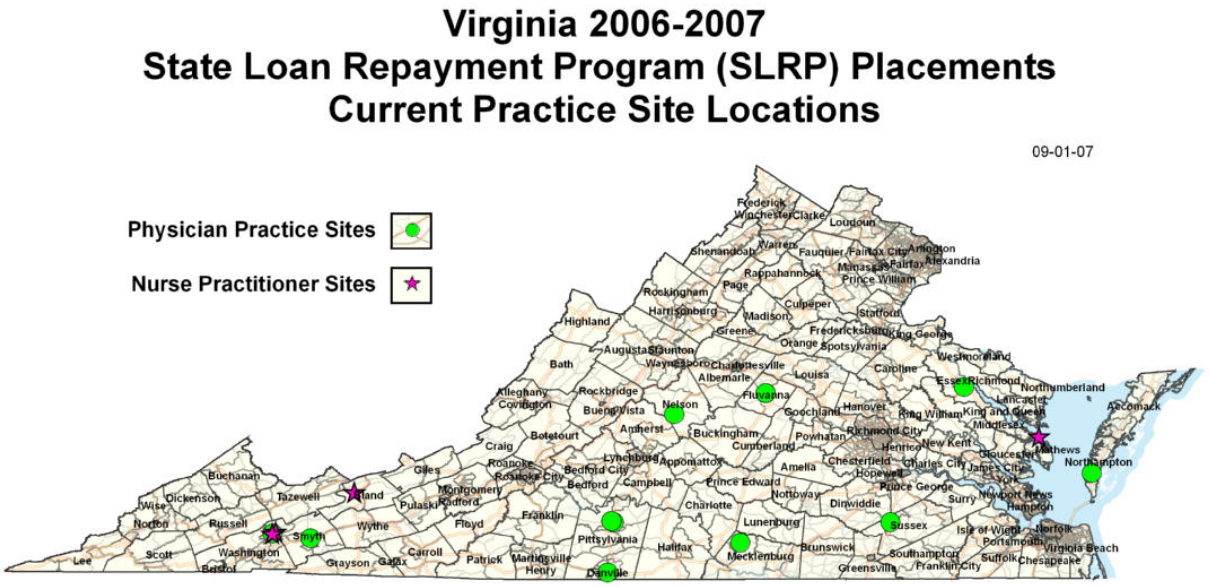
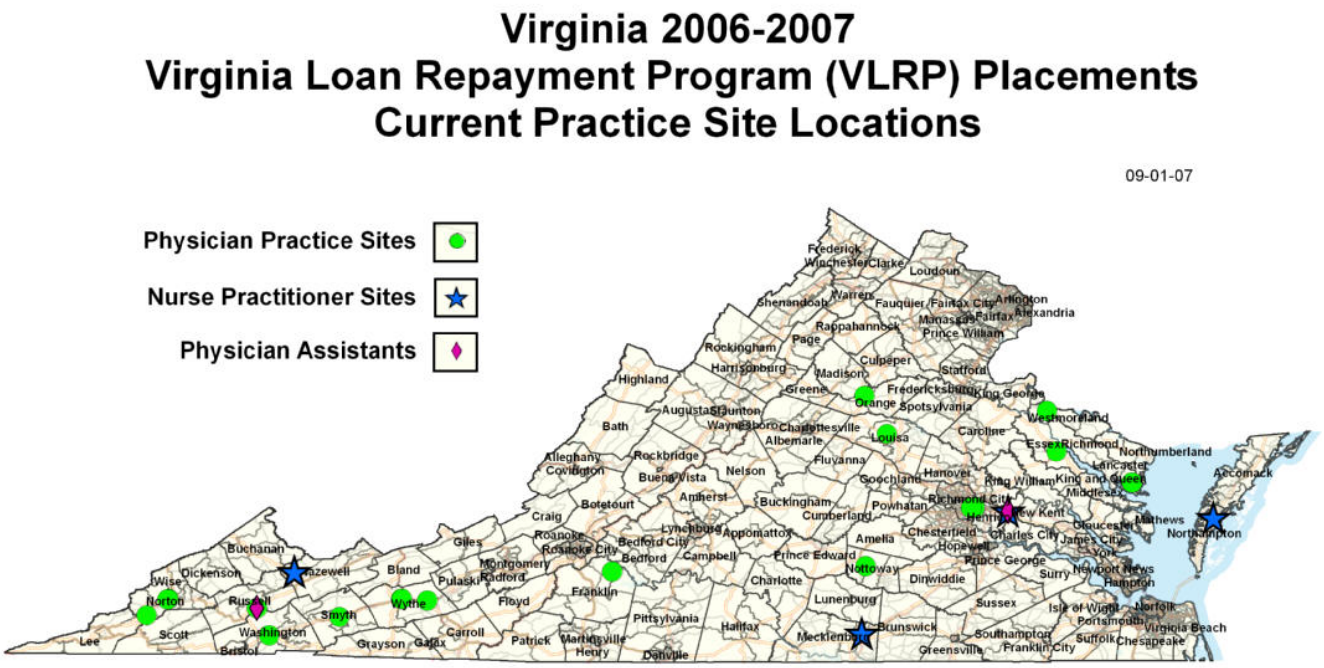


Figure 3 shows the current practice sites of the 2006 – 2007 VLRP recipients.

FIGURE 3.



The Nurse Practitioner/Nurse Midwife Scholarship Program provides five $5,000 scholarships to individuals pursuing a nurse practitioner or nurse midwife education in Virginia. For every scholarship awarded, a year of service is required in a medically underserved area of the Commonwealth. The award recipients for the nursing scholarship programs for the reporting year are show in Table 10.

TABLE 10. Nursing Scholarship Program Recipients (July 1, 2006 to June 30, 2007)

Scholarship Program 2006-2007	*# of Applications Received*	*# of Awards Offered*
Nurse Practitioner/ Mary Marshall Scholarship Program	6	5
Practical Nurse Board of Nursing Funds	40	39
Registered Nurse	107	90
Totals	**153**	**134**

VII. Planned Activities for the Coming Year

Under the leadership of a new office director, the OMHPHP is in the midst of a strategic planning process. The OMHPHP will be embracing the following expanded vision and mission for the upcoming reporting year.

Vision: Advancing health equity for all Virginians.

Mission: To identify health inequities, assess their root causes, and address them by promoting social justice, influencing policy, establishing partnerships, providing resources and educating the public.

Health inequities are differences in health status that are systematic, avoidable, and unfair. In Virginia, several racial/ethnic minority groups and low-income populations have generally poorer health status. Health inequities are strongly influenced by differential access and exposure to social determinants of health, which include economic and educational opportunities, quality housing, the physical environment, discrimination, cultural norms, transportation, and others. In order to eliminate differences in health status, thus creating health equity, strategies must focus on the social determinants of health, as well as promotion of quality health care and healthy behaviors.

Many of the activities being planned by OMHPHP to implement this broader vision are dependent on the availability of appropriate state, federal, and private resources. The OMHPHP has recently submitted a grant proposal to the U.S. Department of Health and Human Services, Office of Minority Health, State Partnership Grant Program to Improve Minority Health and has been invited to submit a full proposal to the Robert Wood Johnson Advancing Public Health Practice and Policy Solutions Grant Program. The OMHPHP is optimistic about its ability to successfully carry out its mission.

The following is a snapshot of some of the activities OMHPHP plans to pursue from July 1, 2007 through June 30, 2008.

Assisting Medically Underserved Communities and Populations

<u>Minority Health</u>

- VDH recently issued a statewide RFP to contract for interpretation and translation services. This contract has been awarded to Language Services Associates (LSA). The CLAS Act Coordinator will be the Contract Manager for this contract which will both leverage resources and assure

VDH has a means of providing linguistically appropriate public health services in over 200 languages.

- A comprehensive Language Access Plan for VDH and all of its local health districts is in the works. As part of the implementation process, "Notice of Rights" posters will be created and distributed. Technical consultation will be provided by the CLAS Act Coordinator to each health district regarding individualizing the plan to meet the needs of the language population encountered by each health district.
- Capacity building mini-grants will be provided to the health districts to increase their ability to work with limited English proficient individuals.
- Additional language service providers will be in place in the coming year with the goal of making medical interpretation courses available throughout the state with added locations in the Rappahannock and southwest regions.

Rural Health

- In June 2007, Virginia conducted a strategic planning meeting for the future of the Flex program. This meeting served as a collaborative strategic planning session with over 40 Flex partners to examine the future of the Flex program and the SRHP. The future of the Flex program over the next three years will be guided by a common vision: to build an integrated and innovative rural health infrastructure that will effectively address Virginia's healthcare disparities by increasing access to care, leveraging resources and promoting collaboration among partners. Virginia will embark on numerous activities to support this vision, which includes but not limited to: (1) expanding telehealth training opportunities among rural hospitals; (2) partnering with the Office of Emergency Medical Services to expand Virginia's nationally-recognized recruitment and retention program; (3) conducting a full Flex program evaluation; (4) conducting a quality improvement assessment to determine baseline quality and performance factors used in rural hospitals; and (5) partnering to increase the telecommunications and electronic medical library.

Health Care Access

- In the coming year, OMHPHP hopes to transition the Virginia Telehealth Network to a 501c3, and make further contribution by actively participating as a board member.
- In previous years, OMHPHP analyses related to Health Professional Shortage Area designations have been primarily descriptive in nature, painting a demographic profile of the designated areas of the Commonwealth. In the upcoming year, the OMHPHP will begin to look more closely at how the designation process intersects with other indicators of health and access to healthcare. One such analyses will be to look at the issue of high persistent poverty. There are 100 census tracts in Virginia that over the three decennial census periods have been persistently impoverished. Approximately one third of the population within these persistent poverty areas are in areas that are not designated. Although these areas may not qualify according to federal HPSA guidelines for designation, it is critical that such areas be proactively reviewed to see if they can form the nucleus of a HPSA. In addition, because of the ability to accurately locate certain unacceptable health outcomes geographically, such as infant deaths, it is possible to attribute these events to specific census tracts, and thereby link them to urban-rural and designated-nondesignated databases. Preliminary analyses have indicated that the undesignated areas of the inner city are at the center of the highest infant mortality rates in Virginia. Although such concentrations are often viewed as related to complex eco-social factors, it continues to be of concern to determine if such factors do indeed inhibit access to primary health care services which in turn exacerbates the problem.

Developing the Health Care Workforce

Recruitment and Retention Initiatives

In an effort to effectively and efficiently recruit health care providers for Virginia for the upcoming year, OMHPHP will:

- Continue to manage, and market its online recruitment website, Primary Practice Opportunities of Virginia. Specifically, the web site will be revamped for easier navigation and utilization;
- Continue to utilize OMHPHP national and local partners as resources to increase the awareness of OHPP recruitment and retention services for the state of Virginia;
- Continue its statewide mass marketing efforts for increased utilization of PPOVA by providers and health care professionals;
- Continue in the recruitment of resident physicians into primary care specialties (Family and Internal Medicine, OB/GYN and Psychiatry). Visits are planned with the medical schools throughout the state of Virginia;
- Develop a healthcare workforce incentives video and develop and implement a marketing plan for the video; and
- Conduct a retention survey of healthcare providers that have utilized state and federal incentive programs.
- Continue to identify and assist practice sites (employers) in Virginia who are eligible to recruit health professionals participating in the (NHSC) scholarship and loan repayment programs.
- Conduct a mass mailing to all eligible practitioners and practice sites, providing them with a NHSC Recruitment and Retention Site Application.
- Conduct a mass mailing to residency programs throughout the U.S. that have a large number of international medical graduates for the Virginia J-1 Visa Waiver Program;
- Continue to recruit, advise and assist health professionals with placement opportunities in Virginia where they can complete their incentive program service obligations.

Scholarships and Loan Repayment Programs

- The VDH will continue to administer incentive programs that require a service obligation in the Commonwealth. These programs include the Mary Marshall Nursing Scholarship, the Virginia Nurse Practitioner/Nurse Midwife Scholarship, the National Health Service Corps - State Loan Repayment Program (SLRP) and the Virginia Physician Loan Repayment Program (VSLRP).
- In addition, the OMHPHP has piloted a new nursing scholarship program for nurse educators to increase the number of nursing faculty in Virginia's nursing programs. The application for this new scholarship began during the reporting fiscal year; however, awards will be made in the upcoming fiscal year (FY 07-08).

VIII. Conclusion

The mission of the OMHPHP during the reporting year was to improve access to quality health care for all Virginians. To fulfill its mission, OMHPHP focused a great deal of its efforts on enhancing and expanding its many programs geared toward assisting medically underserved communities and populations and developing the health care workforce. The OMHPHP has met with a number of notable successes this year. Under the leadership of a new office director, with the umbrella of a new vision and mission, and with the direction provided through a strategic planning process presently underway, the OMHPHP is looking forward to making significant advances in the upcoming year.

IX. Appendices

Appendix A: Selected Federal Programs That Use HPSA and MUA/MUP Designations

Agency/Program Name	Designation Required
HRSA/Div of National Health Service Corps	
Scholarship Program	HPSA
Federal Loan Repayment Program	HPSA
State Loan Repayment Program	HPSA
Grants to States for Community Scholarships	HPSA
HRSA/BPHC/Div of Community and Migrant Health	
Section 330 Health Center Grants	MUA or MUP
FQHC Look-Alike Certification	MUA or MUP
Center for Medicare and Medicaid Services [CMS - formerly HCFA]	
Medicare Incentive Payment Program	Geographic HPSA
Rural Health Clinics Eligible Area	Geo or Pop Group HPSA, MUA
Appalachian Regional Commission	
J-1 Visa Waivers	Geographic or Pop Group HPSA
Conrad "State-30" Program (42 states)	
J-1 Visa Waivers	HPSA, MUA, or MUP (at option of the state)
State Health Departments	
National Interest Visa Waiver	HPSA or MUA/MUP
HRSA/BHPr Title VII & VIII Grants	(Scoring preference if in HPSA or participants from HPSAs)
Residency and Graduate Training in Family Medicine	
Faculty Development in Family Medicine	
Pre-Doctoral Training in Family Medicine	
Faculty Development in General Internal Medicine and/or General Practice	
Faculty Training Projects in Geriatric Medicine and Dentistry	
Residency Training in General Internal Medicine and/or Family Medicine	
Residency Training and Advanced Education in General Practice of Dentistry	
Preventive Medicine and Dental Public	
Health Physician Assistant Training Program	
Podiatric Primary Care Residency Program	
Allied Health Project Grants	
Area Health Education Centers	
Area Health Education Centers - Model Programs	
Health Education and Training Programs	
Interdisciplinary Training for Health Care in Rural Areas	
Health Administration Traineeships and Special Projects	
Special Project Grants to Schools of Public Health	
Nurse Practitioner and Nurse Midwifery Education Program	
Disadvantaged Health Professional Faculty LR and Fellowship Program	
Programs of Excellence in Health Professions Education for Minorities	
Cooperative Agreements to Improve the Health Status of Minority Populations	
Emergency Medical Services for Children	
Professional Nurse Traineeship	
Nurse Anesthetist Traineeship	
Nurse Training Improvement: Special Projects	
SAMHSA	
Mental Health Clinical and AIDS Service-Related Training Grants	

Appendix B: New Primary Care HPSA
July 1, 2006-June 30, 2007

HPSA Name	ID	Type	FTE	# Short	Score	Last Updated
011 - APPOMATTOX COUNTY						
APPOMATTOX	151011	Single County	3	0.9	8	9/6/2006
017 - BATH COUNTY						
BATH	151017	Single County	1.5	0.1	6	9/6/2006
023 - BOTETOURT COUNTY						
NORTHERN BOTETOURT	1519995141	Geographic Area	1	1.4	9	8/11/2006
C.T. 0401.00		Census Tract				
C.T. 0402.00		Census Tract				
035 - CARROLL COUNTY						
CARROLL/GRAYSON/GALAX	151999511H	Geographic Area	14.9	0	6	12/5/2006
CARROLL		Single County				
036 - CHARLES CITY COUNTY						
CHARLES CITY	151036	Single County	1.5	0.6	11	8/18/2006
045 - CRAIG COUNTY						
CRAIG	151045	Single County	0	1.5	16	9/6/2006
051 - DICKENSON COUNTY						
DICKENSON	151051	Single County	5.1	0.2	6	9/1/2006
640 - GALAX CITY						
CARROLL/GRAYSON/GALAX	151999511H	Geographic Area	14.9	0	6	12/5/2006
GALAX CITY		Single County				
077 - GRAYSON COUNTY						
CARROLL/GRAYSON/GALAX	151999511H	Geographic Area	14.9	0	6	12/5/2006
GRAYSON		Single County				
079 - GREENE COUNTY						
GREENE/MADISON	151999511F	Geographic Area	6.3	2.2	7	9/13/2006
GREENE		Single County				
087 - HENRICO COUNTY						
RICHMOND/HENRICO	1519995139	Geographic Area	35.1	3.3	14	2/9/2007
Census Tracts: 2008.04, 2008.05, 2010.01, 2010.02, 2010.03, 2011.01, 2011.02, 2015.01						
670 - HOPEWELL CITY						
FCC PETERSBURG	1519995171	Correctional Institution		3.2	21	2/26/2007
097 - KING AND QUEEN COUNTY						
KING AND QUEEN	151097	Single County	1.8	0.1	8	9/13/2006
101 - KING WILLIAM COUNTY						
KING WILLIAM/NEW KENT	151999511G	Geographic Area	7.2	0.9	5	9/13/2006
KING WILLIAM		Single County				
105 - LEE COUNTY						
USP LEE	1519995172	Correctional Institution		1.7	21	1/29/2007
109 - LOUISA COUNTY						
LOUISA	151109	Single County	6	2	7	11/30/2006
113 - MADISON COUNTY						

GREENE/MADISON	151999511F	Geographic Area	6.3	2.2	7	9/13/2006
MADISON		Single County				
127 - NEW KENT COUNTY						
KING WILLIAM/NEW KENT	151999511G	Geographic Area	7.2	0.9	5	9/13/2006
NEW KENT		Single County				
760 - RICHMOND CITY						
RICHMOND/HENRICO	1519995139	Geographic Area	35.1	3.3	14	2/9/2007
Census Tracts: 0103.00, 0104.00, 0105.00, 0106.00, 0107.00, 0108.00, 0109.00, 0110.00, 0111.00, 0201.00, 0202.00, 0203.00, 0204.00, 0205.00, 0206.00, 0207.00, 0208.00, 0209.00, 0210.00, 0211.00, 0212.00, 0301.00, 0302.00, 0305.00, 0402.00, 0403.00, 0404.00, 0411.00, 0412.00, 0413.00, 0414.00.						
173 - SMYTH COUNTY						
KONNAROCK	1519995163	Geographic Area	4.3	0.3	6	9/11/2006
C.T. 9907.00		Census Tract				
183 - SUSSEX COUNTY						
SUSSEX	151183	Single County	3.2	0.1	4	10/31/2006
191 - WASHINGTON COUNTY						
KONNAROCK	1519995163	Geographic Area	4.3	0.3	6	9/11/2006
Census Tracts: C.T. 0108.00, C.T. 0109.00						

Appendix C: National Ambulatory Medical Care Survey
Rate of Office Visits by Patient's Age and Sex

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
FEMALE															
TOTAL	3.1	3.5	3.3	3.1	3.1	3.2	3.5	3.6	3.2	3.5	3.6	3.6	3.7	3.6	3.8
Under15	2.2	2.7	2.2	2.0	2.2	2.3	2.2	2.3	1.9	2.3	2.4	2.6	2.3	2.4	2.5
15-24	2.3	2.7	2.4	2.2	2.1	2.2	2.4	2.6	2.0	3.2	2.2	2.3	2.3	2.2	2.2
25-44	3.0	3.5	3.1	2.9	2.8	2.9	3.3	3.4	2.8	3.1	3.1	3.1	3.3	3.2	3.1
45-64	3.4	3.7	3.7	3.5	3.6	3.6	4.0	4.1	3.9	4.1	4.3	4.2	4.4	4.2	4.5
65-74	4.9	5.1	5.4	5.0	5.3	5.3	5.8	6.0	5.3	6.1	6.5	6.3	6.1	6.4	6.7
5+	5.9	6.2	6.1	5.9	5.7	6.0	6.5	6.7	6.9	6.4	7.3	7.5	7.3	7.1	7.8
MALE															
TOTAL	2.2	2.5	2.3	2.2	2.2	2.3	2.4	2.5	2.3	2.5	2.6	2.6	2.6	2.7	2.8
Under15	2.3	2.8	2.3	2.2	2.2	2.4	2.4	2.5	2.0	2.4	2.5	2.7	2.5	2.5	2.8
15-24	1.2	1.5	1.2	1.1	1.1	1.1	1.0	1.2	1.1	1.2	1.2	1.4	1.3	1.2	1.3
25-44	1.6	1.7	1.6	1.5	1.5	1.5	1.6	1.6	1.7	1.6	1.7	1.6	1.6	1.5	1.8
45-64	2.6	2.6	2.7	2.4	2.6	2.7	3.0	3.0	2.9	3.0	3.1	3.1	3.1	3.3	3.3
65-74	4.2	4.5	4.6	4.5	4.4	5.0	5.2	5.4	5.1	5.4	6.0	5.8	5.6	6.0	6.2
75+	6.1	6.4	6.2	6.0	6.2	6.8	6.5	6.4	6.6	6.7	7.6	6.8	7.8	7.7	7.4
PERCENTAGE OF VISITS FOR PRIMARY CARE															
VISITS	59.6	63.6	61.5	59.2	61.5	61.5	61.6	63.1	58.1	59.8	59.7	63.2	59.4	58.9	59.9

* National Ambulatory Medical Care Survey (NAMCS): 2005 Summary. USDHHS, Center for Disease Control and Prevention, National Center for Health Statistics, June 29, 2007.

Appendix D: Age Specific Utilization Rates* for Current Primary Care HPSA By Rural and Urban RUCA**

	URBAN HPSA POP	2005 UTILIZATION RATE	TOTAL VISITS	RURAL HPSA POP	2005 UTILIZATION RATE	TOTAL VISITS	2004 ALL HPSA POP	2005 UTILIZATION RATE	TOTAL VISITS
FUnder15	72,549	2.5	178,253	49,224	2.5	120,943	121,773	2.5	299,196
F15-24	50,856	2.2	111,883	34,142	2.2	75,112	84,998	2.2	186,996
F25-44	105,204	3.1	329,289	73,006	3.1	228,509	178,210	3.1	557,797
F45-64	92,240	4.5	412,221	76,397	4.5	341,418	168,637	4.5	753,639
F65-74	27,884	6.7	187,185	26,204	6.7	175,907	54,088	6.7	363,093
F75+	28,799	7.8	225,957	27,399	7.8	214,973	56,198	7.8	440,930
MUnder15	76,173	2.8	215,493	51,188	2.8	144,811	127,361	2.8	360,304
M15-24	50,634	1.3	63,343	39,042	1.3	48,842	89,676	1.3	112,185
M25-44	99,638	1.8	176,857	82,344	1.8	146,161	181,982	1.8	323,018
M45-64	85,037	3.3	282,918	75,390	3.3	250,823	160,427	3.3	533,741
M65-74	22,061	6.2	136,469	22,646	6.2	140,088	44,707	6.2	276,558
M75+	15,878	7.4	117,719	15,747	7.4	116,748	31,625	7.4	234,468
	726,953		2,437,588	572,729		2,004,335	1,299,682		4,441,923
(59.9%) PRIMARY CARE VISITS= 59.9 % OF ALL VISITS (TOTAL VISITS X .599)			1,460,115			1,200,596			2,660,712
PRIMARY CARE FTE TO MEET NEED			292			240			532

* National Ambulatory Medical Care Survey (NAMCS): 2005 Summary. USDHHS, Center for Disease Control and Prevention, National Center for Health Statistics, June 29, 2007.

** The Rural-Urban Commuting Area (RUCA) codes are based on the same concepts used by the Office of Management and Budget (OMB) to define county-level metropolitan and micropolitan. The RUCA codes however are based on census tract level data and therefore provide a more refined way of defining rural. Many federal programs use RUCA codes as part of their funding criteria, defining urban as codes 1-3 and rural as codes 4-10. For analysis purposes all Primary Care HPSA areas were aggregated at the census tract level.

Population estimates for 2004 are used. Claritas estimates provided by the HRSA Data Warehouse, the estimates overestimate the population within HPSAs.

Appendix E: Changes in Population structure in Metropolitan and NonMetropolitan Areas

Virginia Employment Commission Decennial Estimates of Population Distributions From 1990-2030
Office of Management and Budget's (OMB) criteria to define county-level metropolitan and micropolitan area

	1990 RURAL		1990 METRO		2000 RURAL		2000 METRO		2010 RURAL		2010 METRO	
	#	%	#	%	#	%	#	%	#	%	#	%
Sum Under 15	195,472	19.5	1,070,575	20.6	195,676	18.3	1,257,345	20.9	184,187	16.6	1,303,220	19.2
Sum 15-24	139,530	14.0	818,892	15.8	130,566	12.2	834,073	13.9	135,972	12.3	955,525	14.1
Sum 25-44	296,702	29.7	1,835,742	35.4	299,045	27.9	1,938,610	32.3	266,669	24.1	1,896,197	27.9
Sum 45-64	215,670	21.6	950,305	18.3	274,904	25.7	1,355,963	22.6	322,463	29.1	1,814,450	26.7
Sum 65-74	89,342	8.9	311,280	6.0	93,223	8.7	339,233	5.6	105,561	9.5	442,808	6.5
Sum 75 Plus	63,375	6.3	200,473	3.9	78,038	7.3	281,839	4.7	91,548	8.3	374,299	5.5
TOTAL	1,000,091	100.0	5,187,267	100.0	1,071,452	100.0	6,007,063	100.0	1,106,400	100.0	6,786,500	100.0

									Estimated Population Change 1990-2030		
	2020 RURAL		2020 METRO		2030 RURAL		2030 METRO		RURAL	METRO	
	#	%	#	%	#	%	#	%	%	%	
Sum Under 15	200,697	17.5	1,431,630	19.2	209,397	17.6	1,559,012	19.3	7.12	45.6	
Sum 15-24	123,322	10.8	960,313	12.9	138,453	11.6	1,031,948	12.8	-0.77	26.0	
Sum 25-44	274,353	23.9	2,019,306	27.1	272,502	22.9	2,150,425	26.6	-8.16	17.1	
Sum 45-64	303,747	26.5	1,929,281	25.9	275,148	23.1	1,886,571	23.3	27.6	98.5	
Sum 65-74	138,093	12.0	644,166	8.6	152,463	12.8	782,069	9.7	70.7	151.2	
Sum 75 Plus	106,289	9.3	470,704	6.3	140,838	11.8	676,277	8.4	122.0	237.3	
TOTAL	1,146,500	100.0	7,455,400	100.0	1,188,800	100.0	8,086,300	100.0	18.9	55.9	

Appendix F: Changes in Population structure in Metropolitan and Non Metropolitan Areas

Virginia Employment Commission Decennial Estimates of Population Distributions 1990 & 2030
Office of Management and Budget's (OMB) defined county-level metropolitan and nonmetropolitan areas
With NAMCS* Visit Ratios

	1990 RURAL			1990 METRO			2030 RURAL			2030 METRO		
	#	%	VISITS	#	%	VISITS	#	%	VISITS	#	%	VISITS
Sum Under 15	195,472	2.6	517,414	1,070,575	2.6	2,833,812	209,397	2.6	554,274	1,559,012	2.6	4,126,704
Sum 15-24	139,530	1.7	239,992	818,892	1.7	1,408,494	138,453	1.7	238,139	1,031,948	1.7	1,774,950
Sum 25-44	296,702	2.5	729,590	1,835,742	2.5	4,514,090	272,502	2.5	670,082	2,150,425	2.5	5,287,895
Sum 45-64	215,670	3.9	844,132	950,305	3.9	3,719,494	275,148	3.9	1,076,931	1,886,571	3.9	7,384,037
Sum 65-74	89,342	6.5	578,221	311,280	6.5	2,014,604	152,463	6.5	986,739	782,069	6.5	5,061,550
Sum 75 Plus	63,375	7.7	486,530	200,473	7.7	1,539,031	140,838	7.7	1,081,211	676,277	7.7	5,191,776
TOTAL	1,000,091		3,395,880	5,187,267		16,029,525	1,188,800		4,607,375	8,086,300		28,826,912
Primary Care Visits 59.9% of Total			2,034,132			9,601,685			2,759,818			17,267,320
PCP FTE Required (5000 Visits per PCP			407			1,920			552			3,453

* National Ambulatory Medical Care Survey (NAMCS): 2005 Summary. USDHHS, Center for Disease Control and Prevention, National Center for Health Statistics, June 29, 2007.

Appendix G: Virginia Employment Commission Decennial Estimates of Population Distributions From 1990-2030 Based on Current HPSA Summarized at the Jurisdictional Level*

The Changes in Population Structure in Designated and NonDesignated Areas

	1990 HPSA		1990 NON-HPSA		2000 HPSA		2000 NON-HPSA		2010 HPSA		2010 NON-HPSA	
	#	%	#	%	#	%	#	%	#	%	#	%
Under 15	516,146	19.5	749,901	21.2	562,321	19.4	890,700	21.3	548,902	17.8	938,505	19.5
15-24	405,909	15.3	552,513	15.6	390,669	13.5	573,970	13.7	404,083	13.1	687,414	14.3
25-44	889,964	33.6	1,242,480	35.1	915,841	31.7	1,321,814	31.6	852,666	27.7	1,310,200	27.2
45-64	496,963	18.8	669,012	18.9	656,513	22.7	974,354	23.3	834,785	27.1	1,302,128	27.0
65-74	199,144	7.5	201,478	5.7	194,913	6.7	237,543	5.7	229,261	7.4	319,109	6.6
75 Plus	138,546	5.2	125,302	3.5	171,462	5.9	188,415	4.5	209,103	6.8	256,745	5.3
TOTAL	2,646,672	100.0	3,540,686	100.0	2,891,719	100.0	4,186,796	100.0	3,078,800	100.0	4,814,100	100.0

									Estimated Population Change 1990-2030		
	2020 HPSA		2020 NON-HPSA		2030 HPSA		2030 NON-HPSA		HPSA	NON-HPSA	
	#	%	#	%	#	%	#	%	%	%	
Under 15	587,114	18.1	1,045,214	19.5	612,957	18.0	1,155,451	19.7	18.8	54.1	
15-24	376,792	11.6	706,843	13.2	409,730	12.0	760,671	13.0	0.9	37.7	
25-44	868,077	26.7	1,425,582	26.6	869,943	25.5	1,552,983	26.5	-2.2	25.0	
45-64	836,629	25.7	1,396,399	26.1	779,779	22.8	1,381,940	23.6	56.9	106.6	
65-74	329,866	10.1	452,393	8.5	387,695	11.4	546,836	9.3	94.7	171.4	
75 Plus	252,123	7.8	324,870	6.1	354,695	10.4	462,419	7.9	156.0	269.0	
TOTAL	3,250,600	100.0	5,351,300	100.0	3,414,800	100.0	5,860,300	100.0	29.0	65.5	

* Because the Virginia Employment Commission data is only available at the jurisdictional level, as contrasted with the 2004 Claritas estimates provided by the HRSA Data Warehouse, the estimates overestimate the population within HPSAs.

Appendix H: Virginia Employment Commission Decennial Estimates of Population Distributions From 1990-2030 Based on Current HPSA Summarized at the Jurisdictional Level*

With NAMCS* Visit Ratios

	1990 HPSA			2000 HPSA			2010 HPSA			2020 HPSA			2030 HPSA		
	#	X	VISITS	#	X	VISITS	#	X	VISITS	#	X	VISITS	#	X	VISITS
<15	516,146	2.6	1,366,238	562,321	2.6	1,488,464	548,902	2.6	1,452,944	587,114	2.6	1,554,090	612,957	2.6	1,622,498
15-24	405,909	1.7	698,163	390,669	1.7	671,951	404,083	1.7	695,023	376,792	1.7	648,082	409,730	1.7	704,735
25-44	889,964	2.5	2,188,421	915,841	2.5	2,252,053	852,666	2.5	2,096,706	868,077	2.5	2,134,601	869,943	2.5	2,139,191
45-64	496,963	3.9	1,945,113	656,513	3.9	2,569,592	834,785	3.9	3,267,347	836,629	3.9	3,274,566	779,779	3.9	3,052,055
65-74	199,144	6.5	1,288,860	194,913	6.5	1,261,477	229,261	6.5	1,483,775	329,866	6.5	2,134,891	387,695	6.5	2,509,165
75 +	138,546	7.7	1,063,618	171,462	7.7	1,316,314	209,103	7.7	1,605,282	252,123	7.7	1,935,549	354,695	7.7	2,722,997
TOTAL	2,646,672		8,550,414	2,891,719		9,559,850	3,078,800		10,601,077	3,250,600		11,681,779	3,414,800		12,750,640
Primary Care Visits 59.9% of Total			5,121,698			5,726,350			6,350,045			6,997,386			7,637,634
PCP FTE Required (5000 Visits per PCP)			**1,024**			**1,145**			**1,270**			**1,399**			**1,528**

* National Ambulatory Medical Care Survey (NAMCS): 2005 Summary. USDHHS, Center for Disease Control and Prevention, National Center for Health Statistics, June 29, 2007.

Appendix I: New Dental HPSA
July 1, 2006-June 30, 2007

HPSA Name	ID	Type	FTE	# Short	Score	Last Updated
011 - APPOMATTOX COUNTY						
APPOMATTOX	651011	Single County	3.2	0.2	6	9/1/2006
017 - BATH COUNTY						
BATH	651017	Single County	0.9	0.3	7	4/18/2007
025 - BRUNSWICK COUNTY						
BRUNSWICK	651025	Single County	3.3	0.5	5	9/14/2006
027 - BUCHANAN COUNTY						
BUCHANAN	651027	Single County	2.3	3.8	15	9/14/2006
029 - BUCKINGHAM COUNTY						
BUCKINGHAM	651029	Single County	2.8	0.6	8	10/31/2006
045 - CRAIG COUNTY						
CRAIG	651045	Single County	0.5	0.8	13	3/31/2007
053 - DINWIDDIE COUNTY						
DINWIDDIE	651053	Single County	1.8	4.2	12	9/14/2006
595 - EMPORIA CITY						
GREENSVILLE/EMPORIA CITY S.A.	6519995175	Geographic Area	2.8	0	7	4/17/2007
EMPORIA CITY		Single County				
063 - FLOYD COUNTY						
FLOYD	651063	Single County	1.4	2.3	12	9/1/2006
081 - GREENSVILLE COUNTY						
GREENSVILLE/EMPORIA CITY S.A.	6519995175	Geographic Area	2.8	0	7	4/17/2007
GREENSVILLE		Single County				
670 - HOPEWELL CITY						
FCI PETERSBURG	6519995139	Correctional Institution		4.5	21	2/27/2007
099 - KING GEORGE COUNTY						
KING GEORGE/WESTMORELAND	6519995174	Geographic Area	6.1	0.8	6	1/22/2007
KING GEORGE		Single County				
105 - LEE COUNTY						
USP LEE	6519995140	Correctional Institution		1.6	21	2/8/2007
109 - LOUISA COUNTY						
LOUISA	651109	Single County	4.7	2.3	5	3/29/2007
111 - LUNENBURG COUNTY						
LUNENBURG	651111	Single County	1.3	1.7	14	9/6/2006
700 - NEWPORT NEWS CITY						
LOW INC - NEWPORT NEWS	6519995128	Population Group	0	4.2	20	11/17/2006
Census Tracts: 0301.00, 0303.00, 0304.00, 0305.00, 0306.00, 0308.00, 0309.00, 0313.00.						
135 - NOTTOWAY COUNTY						
NOTTOWAY	651135	Single County	1.9	1.6	12	9/1/2006
139 - PAGE COUNTY						
PAGE	651139	Single County	2.7	3.1	10	9/7/2006
141 - PATRICK COUNTY						
PATRICK	651141	Single County	2.4	2.4	10	9/14/2006
740 - PORTSMOUTH CITY						
LOW INC - DOWNTOWN	6519995172	Population Group	2.5	1.2	10	9/7/2006

PORTSMOUTH						
Census Tract: 2105.00, 2107.00, 2111.00, 2114.00, 2117.00, 2118.00, 2119.00, 2120.00, 2121.00, 2126.00, 2127.01, 2127.02.						
157 - RAPPAHANNOCK COUNTY						
RAPPAHANNOCK	651157	Single County	0	1.8	12	10/27/2006
167 - RUSSELL COUNTY						
RUSSELL	651167	Single County	3.2	3.8	12	9/14/2006
181 - SURRY COUNTY						
SURRY/SUSSEX	6519995173	Geographic Area	0	4.1	12	10/31/2006
SURRY		Single County				
183 - SUSSEX COUNTY						
SURRY/SUSSEX	6519995173	Geographic Area	0	4.1	12	10/31/2006
SUSSEX		Single County				
185 - TAZEWELL COUNTY						
LOW INCOME - TAZEWELL	6519995138	Population Group	2.5	8.1	15	9/14/2006
TAZEWELL		Population Group				
187 - WARREN COUNTY						
WARREN	651187	Single County	5.5	2.8	7	9/14/2006
193 - WESTMORELAND COUNTY						
KING GEORGE/WESTMORELAND	6519995174	Geographic Area	6.1	0.8	6	1/22/2007
WESTMORELAND		Single County				
195 - WISE COUNTY						
WISE/NORTON	651195	Single County	3.6	7.5	16	9/14/2006

Appendix J: New Mental HPSA

July 1, 2006-June 30, 2007

HPSA Name	ID	Type	FTE	# Short	Score	Last Updated
550 - CHESAPEAKE CITY						
SOUTH NORFOLK (PLANNING DISTRICT 20)	7519995163	Geographic Area	0	1.1	18	9/7/2006
Census Tracts: 0201.00, 0202.00, 0203.00, 0204.00, 0205.01, 0205.02, 0206.00, 0207.00, 0209.03.						
710 - NORFOLK CITY						
SOUTH NORFOLK (PLANNING DISTRICT 20)	7519995163	Geographic Area	0	1.1	18	9/7/2006
Census Tracts: 0050.00, 0051.00, 0052.00, 0053.00.						