

2008

Virginia's State
Rural Health Plan
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Supporting Rural Health Through Action

VIRGINIA RURAL HEALTH PLAN

Purpose:

The Virginia Rural Health Plan (VA-RHP) is a three to five year action plan targeted towards the advancement of health and health care services in rural areas. The plan provides an analysis of the current health status in rural areas and develops practical strategies that will lead to improvements in health, not solely in the delivery of health care services.

Goal:

The goal of the VA-RHP is to strengthen the current and future rural health infrastructure in Virginia.

Acknowledgments

The Virginia Rural Health Plan (VA-RHP) is the product of numerous partnerships and collaborations throughout the Commonwealth. This plan would not have been possible if it were not for the invaluable expertise, experience and commitment of a multitude of organizations, individuals, government officials, hospital providers, rural advocates and citizens who are dedicated to improving the quality of life, health and health care services for all rural Virginians.

To all of the visionaries who were instrumental in developing the original VA-RHP and establishing fundamental goals and standards for the designation of Critical Access Hospitals – standards that remain foundational to maintaining quality rural health network systems today – thank you.

To the many partners who assisted over the past five years with the development of the revised VA-RHP - the Commonwealth and its citizenry are grateful for your dedication, sacrifice and expertise.

To Jonathan Sprague, Rocky Coast Consulting, for facilitating many hours of work group meetings and conference calls and taking copious notes – your effort was greatly appreciated.

To all who will continue to partner over the next three to five years to ensure timely and accurate implementation, guidance and benchmarking – please accept our gratitude in advance for your time, energy and resources.

Table of Contents

Acknowledgments..... ii

Table of Contents iii

Executive Summary..... iv

The Virginia Rural Health Plan (2008) 1

 Introduction 1

 Background and Purpose 7

 Core Guiding Principles for Improving Rural Health in Virginia 12

 Fundamental Building Blocks for Virginia’s Rural Health Care System..... 16

 Recommendations 20

 Next Steps and Future Direction..... 23

Appendix A: Sec. 1820. [42 U.S.C. 1395i–4]..... 24

Appendix B: Code of Virginia § 32.1-122.07 25

Appendix C: Profile of Rural Virginia..... 27

Appendix D: Defining Rural..... 33



Executive Summary

The Commonwealth of Virginia is dedicated to improving the quality of health and health care services for all Virginians. In 2006, the Governor established a 32-member Health Reform Commission to make recommendations on how the Commonwealth could improve the overall health care system. The Commission released its report, *“Roadmap for Virginia’s Health: A Report of the Governor’s Health Reform Commission,”*¹ in 2007. This report served as a call to action for the Commonwealth, business and community leaders, advocates, policymakers, citizens, public health officials, providers and school leaders. Recommendations from this report were related to workforce, access, prevention, quality, long-term care, infant mortality, obesity, tobacco use and transparency.² The recommendations, if implemented and funded appropriately, would increase the state’s overall health ranking and ensure “a healthy future for all Virginians.”³ Ultimately, this monumental report aimed at making Virginia one of the top ten healthiest states in the nation. In December 2006, the Governor signed Executive Order 42 to strengthen the transparency and accountability of the healthcare system.

In response to the national *Healthy People 2000* and now *2010* initiatives, the Virginia Department of Health (VDH) took the lead in identifying key focus areas and objectives that needed to be addressed in the Commonwealth. The overarching goals for the Healthy Virginians 2010 initiative are the same as those being advanced through the nationwide agenda: (1) increase the quality and years of healthy life and (2) eliminate health disparities. Out of the 28 focus areas and 467 objectives found in *Healthy People 2010*, there were 77 objectives within 24 focus areas that were deemed to be most important to Virginians.

Additionally, numerous boards, agencies and organizations have conducted studies, developed initiatives and advocated for funds to create and sustain quality health care services and systems in Virginia. The Virginia Board of Health is dedicated to several priority public health issues.

The VDH Office of Minority Health and Public Health Policy (OMHPPH) is dedicated to identifying health inequities, assess their root causes, and addressing them by promoting social justice, influencing policy, establishing partnerships, providing resources and educating the public. The OMHPPH promotes health equity and works to decrease and ultimately eliminate health inequities throughout the Commonwealth through the work of its two Divisions:

- *Division of Health Equity (DHE)* – Promotes a focus on social determinants of health and social justice, in addition to more traditional health promotion, as key strategies to eliminate health inequities that exist by socioeconomic status, race/ethnicity, geography, gender, immigrant status and other social classifications.
- *Division of Primary Care and Rural Health (DPCRH)* – Promotes health equity throughout the Commonwealth by improving access to quality care, supporting the development of models of care and addressing barriers related to rurality.

¹ Commonwealth of Virginia. *Roadmap for Virginia’s Health: A Report of the Governor’s Health Reform Commission*. Retrieved September, 2007 from: <http://www.hhr.virginia.gov/Initiatives/HealthReform/index.cfm>

² *Roadmap for Virginia’s Health: A Report of the Governor’s Health Reform Commission*, page 18-19.

³ *Roadmap for Virginia’s Health: A Report of the Governor’s Health Reform Commission*, page 3.

The Virginia State Office of Rural Health (VA-SORH), housed within the DPCRH, was established to create, fund and support quality and sustainable rural health care infrastructure throughout the Commonwealth.

Despite these many efforts, Virginia and its citizenry continue to face challenges with its health care infrastructure, particularly in rural areas. These challenges are exacerbated by the increasing number of uninsured, growing shortages of qualified health care professionals, skyrocketing health care costs, increasing demands for health care accountability and transparency, and the growing aging population. The health care challenges facing rural Virginians are consistent with those facing rural residents across the nation. In spite of that, the Commonwealth remains unwavering in its commitment to ensuring affordable, safe and high quality health care for all Virginians, including those in rural areas.

Authorized by section 4201 of the Balanced Budget Act of 1997 (BBA), Pub. L. 105-33 and reauthorized by Section 405 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Pub. L. 108-173, all states that participate in the Federal Medicare Rural Hospital Flexibility (Flex) Grant Program, are required to develop a State Rural Health Plan (SRHP). As a grantee of the Flex program, Virginia was required by Federal regulations to develop a State Rural Health Plan (SRHP). Virginia developed its first SRHP in 2000. As a result of the Balanced Budget Act of 1997, Virginia is also charged by State *Code* section § 32.1-122.07 to establish a SRHP. Under this section of *Code*, “The Commissioner shall develop and the Board of Health shall approve a rural health care plan for the Commonwealth...the plan shall be developed and revised as necessary or as required.”⁴

The 2000 SRHP was guided by an advisory group called the Critical Access Taskforce (CAT). The work of developing recommendations for this updated Virginia Rural Health Plan (VA-RHP) was divided among four workgroups: access, quality, workforce and data/rural definitions. Members of all four workgroups agreed on a set of ten core guiding principles for improving rural health in Virginia and a set of foundational building blocks for Virginia’s rural health care system; thereby laying the vision for a rural health infrastructure in Virginia. The VA-RHP recommendations are divided into six categories: (1) general; (2) policy; (3) data and rural definitions; (4) quality; (5) health care workforce; and (6) access.

In order to support the vision and purpose of this VA-RHP, Virginia and its partners must collaborate in implementing the following recommendations. These action items, when fully supported and funded, will lead to improvements in health and not solely in the delivery of health care services. Ultimately, these recommendations will strengthen the current and future rural health infrastructure in Virginia.

General: *In order to effectively support the ultimate goal of strengthening the current and future rural health infrastructure in Virginia, the VA-RHP must establish a formalized operational framework that will assist in bolstering partnerships, leveraging resources and providing an avenue for advisory expertise. These recommendations are mostly administrative in nature and will provide for the continuous quality framework of all VA-RHP recommendations.*

- A.1. Ensure and implement an effective and thorough communications plan among VA-RHP partners.
- A.2. Develop a clearinghouse of rural-relevant information that is created in conjunction with the establishment of a rural health data website.

⁴ The Virginia General Assembly, Legislative Information System. *Code of Virginia*. Retrieved on August, 2008 from: <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+32.1-122.07>

- A.3. Promote and market a broader definition of primary care that includes dental/oral health, mental/behavioral health, emergency medical services (EMS), women’s health services, and telehealth.
- A.4. Provide accurate and timely information to rural providers and residents about existing resources related to dental/oral health, pre-natal and pre-conceptional health, mental/behavioral health and EMS.
- A.5. Develop relevant and achievable performance measures for all recommendations.
- A.6. Revisit the status and performance measurements of VA-RHP recommendations annually.
- A.7. Hold annual rural health summits to actively engage VA-RHP partners in strategic planning sessions.
- A.8. Identify potential external funding sources to support and leverage VA-RHP activities.

Policy and Advocacy: *The advancement of the VA-RHP and its recommendations are heavily dependent upon quality and effective public policies, advocacy and favorable legislation. These recommendations are mostly policy and/or policy-related in nature and are most effective if led by rural policy/advocacy partners.*

- B.1. Build data capacity to (1) forecast future workforce needs, (2) assess what services are actually being provided and (3) assess the economic impact of workforce shortages and shortage designations.
- B.2. Assess the current status of mid-level practitioners in Virginia.
- B.3. Identify policy changes that are needed to require data collection on the practice sites of mid-level practitioners.
- B.4. Identify issues related to Medicare reimbursements and the health care market structure in rural areas.
- B.5. Introduce legislation to support the activities of the Virginia Rural Health Resource Center (VRHRC) and to enable the VRHRC to serve as the “gateway” for rural health information in Virginia.

Data and Rural Definitions: *In accordance with the core principles, it is imperative for decision-making to be based on and supported by accurate and timely data. Therefore, the VA-RHP recommendations must promote the collection of relevant data and must base recommendations and findings on such data. Additionally, the VA-RHP must clearly articulate a rural definition that will meet the needs and demands of the Commonwealth.*

- C.1. Establish the Virginia Rural Health Data and Rural Definitions Council.
- C.2. Create a rural health data website/electronic database portal that will provide essential rural health relevant research, statistics, quality indicators and data, and links and references for VA-RHP partners, government and policymakers, researchers and the general public.
- C.3. Incorporate the 32 measures, as recommended by the Data/Rural Definitions workgroup, during the first year of the VA-RHP implementation.

- C.4. Utilize the United States Department of Agriculture, Isserman Model four-level delineation of rurality as the rural definition for framing the development of VA-RHP.
- C.5. Hold roundtable discussions to discuss the feasibility of collaboration/coordination of electronic health records.

Quality: *In accordance with VA-RHP core principles, performance and quality improvement must be central to all rural health care services. Thus, the VA-RHP must provide recommendations that support and promote an increased awareness of and dedication to performance and quality improvement.*

- D.1. Establish the Virginia Rural Health Performance and Quality Advisory Council.
- D.2. Create a database that supports the identification of health inequities and approaches for measuring progress against baseline measures.
- D.3. Host a statewide Rural Health Quality Summit.
- D.4. Establish a plan to improve transitions in care (e.g., from hospital to home).
- D.5. Create a database that supports rural-relevant and meaningful indicators and increased transparency of quality data.
- D.6. Increase the number of health promotion/disease prevention programs through grants to rural communities.
- D.7. Develop common quality measures for program assessment and outcomes.

Health Workforce: *In order to ensure accessible health care services in rural areas, Virginia must carefully examine the current status of the health care workforce in rural areas and be able to project future health care workforce need in those areas. The VA-RHP must thoroughly address the lack of health care professionals in rural areas and examine alternative methods (such as paraprofessionals, educational and training requirements, and the utilization of health information technology for specialty care). These recommendations relate specifically to the health care workforce system in rural areas and include recruitment and retention, mid-levels, allied health, physicians and dentists.*

- E.1. Establish the Virginia Rural Health Workforce Council.
- E.2. Provide retention incentives to providers to remain in rural communities.
- E.3. More aggressively engage the Virginia Community College System (VCCS).
- E.4. Explore health care workforce training models and alternatives for rural areas.
- E.5. Increase communication between the various health professions training programs.
- E.6. Engage academic health and medical institutions in dialogue about alternative solutions and strategies to improving the healthcare workforce in rural areas (such as required rural rotations and rural-related curriculum).
- E.7. Research the concept of dual certificate programs and their feasibility as a more effective approach to the sustainability of the health care workforce in rural communities.
- E.8. Develop and support educational opportunities for integrating primary care with behavioral health.

Access: *Access to quality, affordable and accessible health care services is essential and should be an expectation of all rural residents. Access must not be limited solely to primary and acute care, but must include a greater integration of mental/behavioral health, EMS, dental/oral health, telehealth, women's health services, preventive care and health promotion and education.*

- F.1. Establish the Virginia Rural Health Access Council.
- F.2. Research existing models of care that integrate primary care with mental/behavioral health within Virginia and in other states.
- F.3. Develop pilot projects that focus on the integration of quality systems of care.
- F.4. Assess the presence or absence of referral networks.
- F.5. Update Virginia's 2004 Rural Obstetrical Care report.
- F.6. Identify models of care and best practices from other rural areas around the nation and internationally, including telehealth models.
- F.7. Hold a rural EMS Summit to address rural EMS issues, including availability of EMS services, EMS leadership and management and EMS integration into the rural health care infrastructure.
- F.8. Disseminate and present findings from the 2007 and 2008 Critical Access Hospital (CAH)--EMS assessments upon completion.
- F.9. Update Virginia's statewide dental/oral health plan.
- F.10. Explore the development of rural health care student associations and/or interest groups.
- F.11. Explore ways to strengthen existing and develop new community engagement initiatives.
- F.12. Research school-based health care models in rural areas.
- F.13. Provide expert consultation and training to CAHs on the use of distinct part units (DPUs).
- F.14. Promote a statewide telehealth system for health care (especially mental/behavioral health) and health education.
- F.15. Improve the health information technology infrastructure for rural health providers and patients.

The Virginia Rural Health Plan (2008)

Introduction

The Commonwealth of Virginia is dedicated to improving the quality of health and health care services for all Virginians. In July 2006, the Governor signed Executive Order 31⁵ establishing a Commission on Health Reform to:

- a. Identify and implement national best practices in health care at the state level in terms of access to care, improving quality and safety of care, providing long-term care, and addressing affordability of care;
- b. Work closely with the Joint Commission on Health Care to foster executive—legislative cooperation on health care issues;
- c. Strengthen long-term care;
- d. Form, with appropriate other stakeholders, working groups on the uninsured, quality and safety of care, health care workforce, and long-term care; and
- e. Examine other issues as appropriate.

This report served as a call to action for the Commonwealth, medical professionals, business and community leaders, advocates, policymakers, citizens, public health officials, providers and school leaders. Recommendations from this report were related to workforce, access, prevention, quality, long-term care, infant mortality, obesity, tobacco use and transparency.⁶ The recommendations, if implemented and funded appropriately, would likely increase the state's overall health ranking and ensure "a healthy future for all Virginians."⁷ Ultimately, this monumental report aimed at making Virginia one of the top ten healthiest states in the nation.

In December 2006, the Governor signed Executive Order 42 to strengthen the transparency and accountability of the healthcare system. This order mandated the following:

- a. **Health Information Technology** –The Commonwealth will work with health insurance providers or third party administrators to encourage these companies to use health information technology systems and programs that meet interoperability standards recognized by the Secretary of Health and Human Services as existing at the time the systems are updated or implemented. In exchanging information, patient privacy will be protected as required by law. The Commonwealth will build on the work of the Health Care Information Technology Council to leverage the potential of information technology to improve health care delivery.
- b. **Transparency of Quality Measurements** – In order to support assessment of the quality of care delivered by health care providers, the Commonwealth will encourage health insurance providers or third party administrators with which it contracts to implement programs measuring the quality of services supplied to their enrollees. The Commonwealth will play an active role in bringing

⁵ http://www.governor.virginia.gov/Initiatives/ExecutiveOrders/2006/EO_31.cfm

⁶ *Roadmap for Virginia's Health: A Report of the Governor's Health Reform Commission*, page 18-19.

⁷ *Roadmap for Virginia's Health: A Report of the Governor's Health Reform Commission*, page 3.

stakeholders, including representatives of patients, physicians, hospitals, long-term care providers, pharmacists, payers, and other appropriate stakeholders together to [develop] appropriate metrics for use in Virginia. Quality measurements will be developed in collaboration with similar initiatives in the private and public sectors.

- c. **Transparency of Pricing Information** – In order to support consumer knowledge concerning the cost of care, the State Employee Health Benefits Program will work with its third party administrator(s) to make available to enrollees in state-sponsored health insurance plans the prices paid to providers for health care procedures, drugs, supplies and devices. The Commonwealth will also participate with multi-stakeholder groups in developing information about the overall cost of services for common episodes of care and the treatment of common chronic diseases. Pricing information will be developed thoughtfully, using appropriate stakeholder engagement and consumer research.
- d. **Promoting Quality and Efficiency of Care** – The Commonwealth will examine appropriate opportunities to promote pay- for-performance in health care financing, consistent with its goals of maintaining access, a broad provider network, and quality health services. These efforts will especially focus on chronic disease management. We will also work with our federal and private sector partners to identify opportunities to improve the quality and safety of care across the board, with a particular focus on management of chronic diseases.⁸

In response to the national *Healthy People 2000* and now *2010* initiatives, the Virginia Department of Health (VDH) took the lead in identifying key focus areas and objectives that needed to be addressed in the Commonwealth. The overarching goals for the Healthy Virginians 2010 initiative are the same as those being advanced through the nationwide agenda: (1) increase the quality and years of healthy life and (2) eliminate health disparities. Out of the 28 focus areas and 467 objectives found in *Healthy People 2010*, there were 77 objectives within 24 focus areas that were deemed to be most important to Virginians. Some of those focus areas include:

- **Access to Quality Health Services:** Improving access to comprehensive, high-quality healthcare services.
- **Cancer:** Reducing the number of new cancer cases as well as the illness, disability, and death caused by cancer.
- **Diabetes:** Through prevention programs, reducing the disease and economic burden of diabetes, and improving the quality of life for all persons who have or are at risk for diabetes.
- **Educational and Community-Based Programs:** Increasing the quality, availability, and effectiveness of educational and community-based programs designed to prevent disease and improve health and quality of life.
- **Environmental Health:** Promoting health for all through a healthy environment.
- **Family Planning:** Improving pregnancy planning, spacing and preventing unintended pregnancy.
- **Health Communication:** Using communication strategically to improve health.

⁸ Direct quotation from http://www.governor.virginia.gov/Initiatives/ExecutiveOrders/2006/EO_42.cfm

- **Heart Disease and Stroke:** Improving cardiovascular health and quality of life through the prevention, detection, and treatment of risk factors; early identification and treatment of heart attacks and strokes; and prevention of recurrent cardiovascular events.
- **Human Immunodeficiency Virus (HIV):** Preventing HIV infection and its related illness and death.
- **Immunization and Infectious Diseases:** Preventing disease, disability, and death from infectious diseases, including vaccine-preventable diseases.
- **Injury and Violence Prevention:** Reducing injuries, disabilities, and deaths due to unintentional injuries and violence.
- **Maternal, Infant, and Child Health:** Improving the health and well-being of women, infants, children, and families.
- **Mental Health and Mental Disorders:** Improving mental health and ensuring access to appropriate, quality mental health services.
- **Nutrition and Overweight:** Promoting health and reducing chronic disease associated with diet and weight.
- **Oral Health:** Preventing and controlling oral and craniofacial diseases, conditions, and injuries and improving access to related services.
- **Physical Activity and Fitness:** Improving health, fitness, and quality of life through daily physical activity.
- **Public Health Infrastructure:** Ensuring that Federal, Tribal, State, and local health agencies have the infrastructure to provide essential public health services effectively.
- **Respiratory Diseases:** Promoting respiratory health through better prevention, detection, treatment, and education.
- **Sexually Transmitted Diseases:** Promoting responsible sexual behaviors, strengthening community capacity, and increasing access to quality services to prevent sexually transmitted diseases (STDs) and their complications.
- **Substance Abuse:** Reducing substance abuse to protect the health, safety, and quality of life for all, especially children.
- **Tobacco Use:** Reducing illness, disability, and death related to tobacco use and exposure to secondhand smoke.⁹

Additionally, numerous boards, agencies and organizations have conducted studies, developed initiatives and advocated for funds to create and sustain quality health care services and systems in Virginia. The Virginia Board of Health is dedicated to the following priority public health issues:

- Prevention and control of chronic disease;
- Reduction of disparities in health care and health status;
- Improvement of Virginia’s public health infrastructure; and
- Improvement in the health and well-being of all Virginians.

⁹ Virginia Department of Health. *Healthy Virginians* 2010. Retrieved September, 2008 from: <http://www.vdh.virginia.gov/healthpolicy/HV2010/documents/FObj2010.PDF>

The VDH Office of Minority Health and Public Health Policy (OMHPHP) is dedicated to identifying health inequities, assess their root causes, and addressing them by promoting social justice, influencing policy, establishing partnerships, providing resources and educating the public. The OMHPHP promotes health equity and works to decrease and ultimately eliminate health inequities throughout the Commonwealth through the work of its two Divisions:

- *Division of Health Equity (DHE)* – Promotes a focus on social determinants of health and social justice, in addition to more traditional health promotion, as key strategies to eliminate health inequities that exist by socioeconomic status, race/ethnicity, geography, gender, immigrant status and other social classifications.
- *Division of Primary Care and Rural Health (DPCRH)* – Promotes health equity throughout the Commonwealth by improving access to quality care, supporting the development of models of care and addressing barriers related to rurality.

The Virginia State Office of Rural Health (VA-SORH), housed within the DPCRH, was established to create, fund and support quality and sustainable rural health care infrastructure throughout the Commonwealth. The VA-SORH is charged with:

- Fostering collaboration and leveraging resources across and within various levels of government, communities, and non-profit organizations;
- Collecting and disseminating information to stakeholders;
- Providing technical assistance;
- Assisting the coordination of rural health interests state-wide through assessment and planning efforts; and
- Supporting efforts to improve recruitment and retention of health professionals in rural areas.

The VA-SORH is presently responsible for managing the following federal Office of Rural Health Policy grant programs:

- State Office of Rural Health (SORH) Program;
- Small Rural Hospital Improvement (SHIP) Program;
- Medicare Rural Hospital Flexibility (FLEX) Program; and
- FLEX Critical Access Hospitals - Health Information Technology Network (CAH-HITN) Grants Program.

Despite these many efforts, Virginia and its citizenry continue to face challenges with health care infrastructure, particularly in rural areas. These challenges are exacerbated by the increasing number of uninsured, growing shortages of qualified health care professionals, skyrocketing health care costs, increasing demands for health care accountability and transparency, and the growing aging population (see Appendix C for a profile of rural Virginia).

The health care challenges facing rural Virginians are consistent with those facing rural residents across the nation. The Southwest Rural Health Research Center, located at the School of Rural Public Health at the Texas A&M University System Health Science Center, with grant support from the federal Office of Rural Healthy Policy developed *Rural Healthy People 2010: A Companion Document to Healthy People 2010*

(Volumes 1-3).¹⁰ As part of the development of these documents, in Spring 2001, national and state rural health experts identified the following top priorities for rural health¹¹:

Rural Priorities (identified by 15% or more)	Percent of Respondents (N=44)	
Access to health care (includes one or more of the following):		73%
Access to emergency medical services (EMS)	32%	
Access to health workforce	29%	
Access to health services (general)	29%	
Access to health insurance	26%	
Access to primary care	24%	
Mental health		49%
Oral health		41%
Educational and community-based programs		29%
Diabetes		26%
Injury and violence prevention		26%
Nutrition and overweight		21%
Public health infrastructure		21%
Tobacco		21%
Maternal, infant and child health		18%
Occupational safety and health		18%
Cancer		15%
Environmental health		15%
Heart disease and stroke		15%

Also, as part of the development of these documents, literature reviews were conducted about rural issues and disparities. The following is a summary of those literature reviews:

Access to Quality Health Services in Rural Areas (Insurance)	<ul style="list-style-type: none"> ▪ Persons living in nonmetropolitan areas are more likely to be uninsured than those in metropolitan areas – 20 percent versus 17 percent.
	<ul style="list-style-type: none"> ▪ Health insurance is a critical factor in determining timely access to health care. Persons without health insurance are less likely to have a “regular” or usual health provider, less likely to obtain preventive care, or to obtain needed tests and prescriptions.
	<ul style="list-style-type: none"> ▪ Access to health insurance has been identified by both national and state experts as a rural health priority, and access to quality health services was most frequently selected as a rural health priority in a survey of state and local rural health leaders.
Access to Quality Health Services in Rural Areas (Primary)	<ul style="list-style-type: none"> ▪ There are fewer physicians with the exception of family practitioners and general practitioners, in rural areas in all four regions of the nation.
	<ul style="list-style-type: none"> ▪ Only about 10 percent of physicians in America practice in rural areas despite the fact that one-fourth of the U.S. population lives in these areas.

¹⁰ Southwest Rural Health Research Center, Rural Healthy People 2010 Project. *Rural Healthy People 2010: A Companion Document to Healthy People 2010* (Volumes 1-3). Retrieved on August, 2008 from: <http://www.srph.tamhsc.edu/centers/rhp2010/publications.htm>

¹¹ Taken directly from the Southwest Rural Health Research Center, Rural Healthy People 2010 Project. *Rural Healthy People 2010: A Companion Document to Healthy People 2010*.

Care)	<ul style="list-style-type: none"> As many as 12 percent of all hospitalizations may be avoidable and are disproportionately frequent among the poor and non-white populations.
Access to Quality Health Services in Rural Areas (EMS)	<ul style="list-style-type: none"> Emergency medical services is the umbrella term for a continuum of health services including pre-hospital medical services, emergency services provided at the hospital or health center, and the trauma system that often serves as the network of coordinated trauma care.
Access to Quality Health Services in Rural Areas (Long-term Care)	<ul style="list-style-type: none"> Approximately 75 percent of those over 65 suffer from at least one chronic illness.
	<ul style="list-style-type: none"> Nearly 22 percent of the nation’s elderly reside in rural areas.
	<ul style="list-style-type: none"> Rural elderly represent a larger proportion of the rural population than the urban population.
	<ul style="list-style-type: none"> The elderly in rural areas have access to fewer and a narrower range of long-term care services.
Maternal, Infant and Child Health in Rural Areas	<ul style="list-style-type: none"> Adolescent mortality is higher in rural areas in all four regions of the country.
	<ul style="list-style-type: none"> Infant mortality is higher in rural areas in the South and Western regions.
Mental Health and Mental Disorders in Rural Areas	<ul style="list-style-type: none"> A survey of state and local rural health leaders finds mental health and mental disorders to be the fourth most often identified rural health priority.
	<ul style="list-style-type: none"> The suicide rate among rural males is higher than among their urban counterparts across all regions of the nation.
	<ul style="list-style-type: none"> Among 1,253 smaller rural counties with populations of 2,500 to 20,000, nearly three-fourths of these rural counties lack a psychiatrist, and 95 percent lack a child psychiatrist.
	<ul style="list-style-type: none"> Access to mental health care and concerns for suicide, stress, depression and anxiety disorders were identified as major rural health concerns among state offices of rural health.
Nutrition and Overweight Concerns in Rural Areas	<ul style="list-style-type: none"> Nationally, rural areas have higher self-reported rates of adult obesity than urban areas, but there is considerable variation among men and women across the region.
The State of Rural Oral Health	<ul style="list-style-type: none"> Nationally, rural areas record higher rates of people 65 and older with total tooth loss than do their urban counterparts. Among the four regions, only in the Midwest is this rural rate exceeded by the small metropolitan counties.
	<ul style="list-style-type: none"> Shortages of dentists are much greater in rural areas in all four regions of the country.
	<ul style="list-style-type: none"> Dental visits within the past year tend to be lower among 18-64 year old people in rural areas than in urban areas across all four regions of the country.
	<ul style="list-style-type: none"> Dental shortages were identified as major rural health concerns among state offices of rural health.
Tobacco Use in Rural Areas	<ul style="list-style-type: none"> Rural adolescents (except in the Midwest) are more likely than their urban counterparts to smoke.
	<ul style="list-style-type: none"> Adult men and women in most rural counties, with some variation across the regions, are more likely to smoke than those in urban counties.
Educational and Community-based Programs in Rural Areas	<ul style="list-style-type: none"> School, worksite, health facility, and community-based health promotion, prevention and intervention programs reach large segments of the population; however, these programs may be less prevalent in rural than urban settings.
	<ul style="list-style-type: none"> Smaller employers – the mainstay of rural economies – are less likely than larger employers to offer health promotion and disease prevention programs.

	<ul style="list-style-type: none"> Rural areas may lack the readiness, resources, and technical expertise necessary to develop successful and sustainable educational and community-based programs.
Injury and Violence Prevention in Rural Areas	<ul style="list-style-type: none"> Age-adjusted injury and unintentional injury death rates are higher in rural areas than urban areas.
	<ul style="list-style-type: none"> Unintentional injuries are the fifth leading cause of death and are more prevalent in rural areas.
	<ul style="list-style-type: none"> Motor vehicles deaths and occupational injuries are higher in rural areas.
	<ul style="list-style-type: none"> The 40 percent of agricultural work-related fatalities accounted for by minors far outweighs the small percentage of minors in agriculture, eight percent.
Public Health Infrastructure	<ul style="list-style-type: none"> A majority (69 percent) of local public health agencies serve jurisdictions of less than 50,000 people.
	<ul style="list-style-type: none"> Public Health Infrastructure was identified as the 12th highest ranking rural health concern in a survey of rural stakeholders.
	<ul style="list-style-type: none"> Retaining and recruiting qualified public health professionals to serve in rural areas present barriers to strengthening the rural public health workforce.
	<ul style="list-style-type: none"> More non-metropolitan (41 percent) than metropolitan (26 percent) local public health agencies noted funding was their main challenge.

In spite of these varied and seemingly insurmountable challenges, the Commonwealth remains unwavering in its commitment to ensuring affordable, safe and high quality health care for all Virginians, including those in rural areas.

Background and Purpose

Authorized by section 4201 of the Balanced Budget Act of 1997 (BBA), Pub. L. 105-33 and reauthorized by Section 405 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Pub. L. 108-173 (see Appendix A), all states that participate in the Federal Medicare Rural Hospital Flexibility (Flex) Grant Program, are required to develop a State Rural Health Plan (SRHP). The purpose of the plan is to provide for the: (1) creation of rural health network systems, (2) designation of Critical Access Hospitals, (3) support of CAH and other small rural hospital facilities, (4) integration of Emergency Medical Services (EMS) into an organized system of care, and (5) integration of quality and performance improvement.

As a grantee of the Flex program, Virginia was required by Federal regulations to develop a State Rural Health Plan (SRHP). Virginia developed its first SRHP in 2000. The 2000 SRHP focused on the:

1. Conversion of eligible hospitals to Critical Access Hospital (CAH) status and supporting these hospitals through the conversion process;
2. Identification of other potential hospitals that are eligible for CAH status and assisting with financial feasibility analyses;
3. Development of a taskforce to implement the Flex program; and
4. Development of administrative support for federal and state regulatory requirements of the plan.

As a result of the Balanced Budget Act of 1997, Virginia is also charged by State *Code* section § 32.1-122.07 (see Appendix B) to establish a SRHP. Under this section of *Code*, “The Commissioner shall develop and the Board of Health shall approve a rural health care plan for the Commonwealth...the plan shall be developed

and revised as necessary or as required.”¹² The 2000 SRHP was guided by an advisory group called the Critical Access Taskforce (CAT) and had the following six core goals:

1. Ensure access to hospitals and other health services for residents in rural Virginia;
2. Facilitate the number and quality of rural health networks on a local and regional basis;
3. Create an efficient administrative infrastructure to guide and oversee the state’s CAH program;
4. Educate and assist rural hospitals desiring to convert to CAH status to ensure their sustainability and to promote quality of care;
5. Ensure a regulatory framework supportive of the creation of CAHs; and
6. Educate the Virginia General Assembly and members of the Virginia Hospital and Healthcare Association about the Flex program and CAH designation in order to help them make informed policy choices.

The development of this updated Virginia Rural Health Plan (VA-RHP) occurred in three distinct phases.

Phase One. In December 2004, the OMHPHP partnered with the Virginia Rural Health Association to begin the planning process for updating the 2000 plan. Approximately 50 partners from across the Commonwealth attended the planning meeting. Participants first discussed recurring rural health issues¹³. These included:

<ul style="list-style-type: none"> ▪ Availability of population characteristics and utilization data <ul style="list-style-type: none"> ○ Disease distribution ○ Disease burden ○ Health outcomes 	<ul style="list-style-type: none"> ▪ Availability of an inventory of rural health resources / programs <ul style="list-style-type: none"> ○ Workforce distribution ○ Community infrastructure / programs ○ Telemedicine ○ Transportation ○ Prescription drug availability ○ Mental health ○ Dental ○ Specialty ○ Allied health ○ Lay provider programs ○ Health literacy and early intervention ○ Long-term and elder care ○ English versus other languages/migrants ○ Volunteers ○ Interns, students, service learning
<ul style="list-style-type: none"> ▪ Ability to leverage resources <ul style="list-style-type: none"> ○ Opportunities and incentives for collaboration that would improve both the number and quality of services offered ○ Cultural competency ○ Opportunities to tie the impact of health care into rural economic development 	
<ul style="list-style-type: none"> ▪ Resource inequities <ul style="list-style-type: none"> ○ Reimbursements ○ Healthcare workforce distribution, recruitment and retention 	
<ul style="list-style-type: none"> ▪ Lack of consensus on a definition of rural 	
<ul style="list-style-type: none"> ▪ Health care reform 	
<ul style="list-style-type: none"> ▪ Title I and VI requirements 	
	<ul style="list-style-type: none"> ▪ Effectiveness of programs
	<ul style="list-style-type: none"> ▪ Loan repayment and J1-Waiver programs

¹² The Virginia General Assembly, Legislative Information System. *Code of Virginia*. Retrieved on August, 2008 from: <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+32.1-122.07>

¹³ University of Virginia, School of Nursing, Rural Health Care Research Center – Community Outreach. Retrieved on September, 2008.

Participants then discussed barriers to the provision of care in rural areas, concerns about current rural health care services and questions to be considered¹⁴. These included:

Barriers to the Provision of Rural Health Care	Concerns about Rural Health Care Services	Questions to Consider
<ul style="list-style-type: none"> ○ Lack of specialty care ○ Low health literacy ○ Lack of available and affordable health care services for indigent residents ○ High rate of illiteracy ○ Overutilization of emergency rooms as health clinics 	<ul style="list-style-type: none"> ○ Need to identify gaps in primary care services ○ Need to identify where citizens go for primary care services ○ Need to clearly identify the demographics of rural populations and understand the aging population in rural areas ○ Need to address dental/oral and mental/behavioral health, chronic diseases, utilization of telehealth applications and the emerging immigrant populations 	<ul style="list-style-type: none"> ○ Are there restrictions on the acceptable/preferred definition of rural? ○ How broad or narrow should the definition of rural be? ○ What work has been done with Centers for Medicare & Medicaid Services (CMS) to reduce discrepancies in the definition of rural for reimbursement purposes? ○ What other agencies or organizations are concerned with the rural/urban divide?

After an enthusiastic start, for a variety of reasons, the momentum for the planning process was lost and an updated rural health plan never came to fruition. In 2007, the U.S. Department of Health and Human Services (HHS) Health Resources and Services Administration (HRSA) Office of Rural Health Policy (ORHP) required all states that participated in Flex to revise their original SRHP. By program guidance, states were urged to create a revised SRHP that would be a roadmap toward using grant funds to support CAH facilities, CAH eligibles, and the communities they serve in a strategic fashion that helps support rural health care delivery broadly and that builds on the success of past Flex-supported efforts. Virginia was among the states required to revise its original SRHP.

Phase Two. In July 2007, the OMHPHP organized a Rural Health Strategic Planning Summit. This Planning Summit served two purposes: (1) to strategize and plan for upcoming rural health activities (particularly the upcoming Flex grant activities) and (2) to revive the SRHP planning process, adding new stakeholders and providing greater structure. It was at this Planning Summit that four workgroups were established to work on updates to the VA-RHP.

In order to strategize and plan for the upcoming Flex grant activities during the Planning Summit, stakeholder input was obtained regarding the following four areas: 1) development/implementation of rural health networks, 2) support of existing CAHs and eligible hospitals, 3) improving quality of care, and 4) improvement and integration of EMS. The following were the findings related to these four areas:

¹⁴ University of Virginia, School of Nursing, Rural Health Care Research Center – Community Outreach. Retrieved on September, 2008 from: <http://www.nursing.virginia.edu/Research/rhrc/community>

<p>Development/ Implementation of Rural Health Networks</p>	<ul style="list-style-type: none"> ▪ Rural areas need reliable communications ▪ There is a need to document the tele-communications infrastructure in rural VA as it relates to healthcare providers/healthcare systems ▪ There is a need to understand how well we are connected to each other ▪ These is a need to understand the existing infrastructure and to examine where there are gaps 	<ul style="list-style-type: none"> ▪ There is a need to grow the culture of information sharing ▪ There is need to understand existing resources and capacity ▪ There is a need to develop strategies to get at root causes of problems
<p>Support of Existing CAHs and Eligible Hospitals</p>	<ul style="list-style-type: none"> ▪ There is a need to ensure access to specialty care and to develop seamless integration (getting people to the specialist) ▪ There is a need for EMS training at the advanced and finance level ▪ There is a need for technology support (i.e. tele-radiology, tele-pharmacy and tele-radiology) ▪ There is a need for legislative changes ▪ There is a need to conduct a workforce/economic development study for rural healthcare and to tie this into strategic planning efforts 	<ul style="list-style-type: none"> ▪ These is a need for assistance with health care workforce issues ▪ These is a need to address the cost of insurance and liability ▪ There is a need to address staffing issues in small rural hospitals , looking at physicians vs. nursing ▪ There is a need for a person to provide information technology support among the CAHs
<p>Improving Quality of Care</p>	<ul style="list-style-type: none"> ▪ There is a need to improve quality within the rural health infrastructure ▪ There is a need to conduct an analysis among rural hospitals to assess current quality and performance ▪ There is a need to further develop electronic medical records ▪ There is a need to implement learning sessions around quality, workforce, performance, etc. 	<ul style="list-style-type: none"> ▪ There is a need to develop a rural oriented training for quality improvement ▪ There is a need to have routine quality meetings to keep stakeholders informed and up to date
<p>Improvement and Integration of EMS</p>	<p><i>Improve staffing</i></p> <ul style="list-style-type: none"> ▪ There is a need for focused recruitment campaigns ▪ There is a need for funding to bring experienced providers into rural areas and areas of need ▪ There is a need to provide incentives to providers to bring them into rural areas ▪ There is a need for mentoring programs 	<p><i>Coordination and Collaboration</i></p> <ul style="list-style-type: none"> ▪ There is a need to strategically place EMS in areas needed ▪ There is a need for real time documentation of the availability of locations and resources ▪ There is a need for automatic mutual aid ▪ There is a need for coordination of training

	<ul style="list-style-type: none"> ▪ There is a need for staff leasing/job sharing ▪ There is a need for consolidation of services ▪ There is a need for grant funding to fund physicians <p><i>Integration of information</i></p> <ul style="list-style-type: none"> ▪ There is a need to sharing information between EMS and hospitals ▪ There is a need for more advanced information ▪ There is a need for a greater activation of services 	<p><i>Trauma</i></p> <ul style="list-style-type: none"> ▪ There is a need for team and system development (bring focus of trauma back to rural communities) ▪ There is a need for coordination of training ▪ There is a need for better transportation
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The Planning Summit also resulted in providing a wealth of additional information about health-related needs, issues and priorities in rural Virginia. The following were identified as necessary for improving rural health:

- A seamless continuum of care that integrates all partners and healthcare providers.
- A greater focus on health promotion programs.
- Greater coordination of health care resources.
- EMS to be a reliable and integral part of the continuum of care.
- Ability to link EMS with hospital discharge data to more effectively examine outcomes.
- Quality indicators that are more relevant to small rural hospitals and to Virginia’s rural areas.
- Greater access to health information.
- CAH hospitals to have electronic medical records.
- More stakeholder involvement in Virginia’s rural health planning process, including those representing mental/behavioral and dental/oral health, long-term care, local government officials and rural residents.
- A study of the current Medicaid reimbursements rates and financial health care market structure for small rural hospital facilities and rural EMS agencies.
- Financial management training for small rural hospitals and other rural health care facilities.
- A study of the prevalence of substance abuse and domestic violence in rural areas and the development of prevention and early intervention initiatives to address these issues.
- A statewide database that shows bed availability in real-time for certain medical problems in order to increase efficiency of services.
- A more effective and integrated network system and the ability to share best practices.
- The development of comprehensive community health directories.

- Better data regarding rural health disparities/inequities, including what disparities/inequities exist and where they are most prevalent.

Phase Three. The work of developing recommendations for the updated VA-RHP was divided among four workgroups: access, quality, workforce and data/rural definitions. Although there are many contributing factors to rural health and health care, it was recognized that these four were the top priorities for the first update to the VA-RHP. Each workgroup:

- Was comprised of prominent subject matter experts, community leaders, government and private organizations and advocates.
- Met at least three times from August 2007 to February 2008
- Was informed that the purpose of the updated VA-RHP is to provide a three-to-five year action plan targeted towards the advancement of health and health care services in rural areas, with the ultimate goal of strengthening the overall current and future rural health infrastructure.
- Was informed that the VA-RHP is not to solely focus on the CAH structure because it is imperative to take a broader examination of the rural health infrastructure that is inclusive of both CAH and non-CAH rural localities.
- Was given a particular focus and charge:
 - *Access Work Group* – Examined rural health care access issues related to primary care, specialty care, emergency medical services, and mental and dental health care in order to make recommendations for improving health care access.
 - *Quality Work Group* – Examined rural health care quality issues in order to make recommendations for quality improvement efforts and/or activities.
 - *Data and Rural Definitions Work Group* – examined available rural health data and identified data gaps in order to make recommendations for future data collection efforts and/or activities. This workgroup was also tasked with coming to consensus on a working definition of rural in Virginia (see Appendix C).
 - *Workforce Work Group* – Examined available resources and issues in order to make recommendations for improving the health care workforce in rural Virginia.
- Met independently, but shared meeting notes and summaries across groups.
- Agreed on a set of ten core guiding principles for improving rural health in Virginia.
- Agreed on a set of foundational building blocks for rural Virginia; thereby laying the vision for a rural health infrastructure.

Core Guiding Principles for Improving Rural Health in Virginia

Successful rural health systems hinge on a set of shared core expectations regarding fundamental services. To ensure long-term progress toward assuring strong, healthy and viable rural communities, stakeholders must be willing to ask and address some very difficult questions. These include things like What are the priorities? Who is responsible? How much will it cost? What do we want rural Virginia to look like?

There is strong consensus that all rural residents should have access to affordable and quality treatment,

prevention and health educational resources as close to home as possible, and at a reasonable cost. However, there is a lack of agreement regarding the role of telehealth applications, the use of mid-level providers, the definition of acceptable travel distance for health care, and more. Rural stakeholders within each community must grapple with and come to consensus on the following fundamental questions:

- Should Virginia aim to replicate urban models of care in rural settings? Should rural areas expect to have available the same type and scope of services as are available in large metropolitan areas? In many rural areas, neither the local economy nor the population base can adequately support an urban model of health care. If this is indeed the desired outcome, then economic development must become the number one priority and primary solution to improving rural health and rural health care systems. Taken to its natural conclusion, this would ultimately change the face of rural in Virginia.
- On the flip side, should Virginia aim to develop and/or model innovative approaches that will meet the health care needs of rural residents while trying to maintain and preserve rural culture? What sacrifices, if any, are acceptable to rural stakeholders in order to maintain and preserve rural culture?

Improving rural health requires innovative, creative and integrative strategies that address both individual health-related behaviors and the many social determinants of health. It is imperative for any planning effort to think beyond health care services to the more multifaceted social conditions that impact health. Any discussion about how to improve the health status of a population group, whether rural or non-rural, must acknowledge the unequivocal link between individual health behaviors and health status. The negative effects of poor health behaviors outweigh the positive effects of acute and preventive health care services. There is clearly a need to promote health education, prevention and wellness strategies, as well as parental and personal responsibility. However, the goal of improving the health status of any population group cannot be adequately addressed without consideration of the social determinants of health (SDOH) and their distribution in the population. These social determinants include:

- | | |
|------------------------|-----------------------------------|
| ▪ Socioeconomic status | ▪ Working conditions |
| ▪ Culture | ▪ Built and physical environments |
| ▪ Discrimination | ▪ Social support and capital |
| ▪ Housing | ▪ Health care services |
| ▪ Transportation | ▪ Healthy child development |
| ▪ Food Security | ▪ Democratic participation |

Additional contributors include income, gender, ethnic and cultural norms, educational and employment opportunities and community history. In Virginia and across the nation, these SDOHs are inequitably distributed by race/ethnicity, socioeconomic status and geography. SDOHs affect health by determining behavioral options, levels of stress exposure and exposure to environmental threats across the lifespan. Strategies for mitigating illness and improving individual health can only succeed if they are developed within the context of their broader social framework.

Performance and quality improvement must be central to rural health care services. Quality health care services and health status, as well as the quality of life for rural residents, are core goals of the VA-RHP. All planning efforts must be aimed at improving the ability to define, measure and compare performance and quality improvement. Actions and resources must also align with these improvements. Virginia’s rural health infrastructure will benefit from an established and agreed upon definition of quality. The definition

recommended by the VA-RHP Quality Workgroup and utilized in this plan comes from the Institute of Medicine’s (IOM) report from 2001 and is as follows:

“Quality healthcare is the provision of appropriate services to individuals and populations, that are consistent with current professional knowledge, in a technically competent manner, with good communication, shared decision-making and cultural sensitivity.

Quality healthcare is evidence based; increases the likelihood of desired health outcomes; and addresses six aims: safe, effective, patient-centered, timely, efficient, and equitable – using a systems approach to continuously improve clinical, operational, and financial domains.”¹⁵

This workgroup also recommended the adoption of the six aims for health care quality as objectives for this core definition (taken from the same IOM report). The IOM suggests that services be Safe, Timely, Effective, Efficient, Equitable, and Patient (or Community) Centered (STEEEP).

Aim	Definition
Safe	Avoiding injuries to patients from the care that is intended to help them
Timely	Avoiding waits and sometimes harmful delays for both those who receive and those who give care
Effective	Providing services based on scientific knowledge (evidence-based) to all who could benefit and refraining from providing services to those not likely to benefit (avoiding under-use and over-use, respectively)
Efficient	Avoiding waste, including waste of equipment, supplies, ideas, and energy
Equitable	Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status
Patient-centered	Providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions

Unfortunately, the IOM definition is predominantly health care services oriented. As Virginia continues to examine rural health in a more comprehensive way, it is imperative that quality be examined in terms of performance improvements and in relation to improvements to health and the quality of life. Virginia’s rural areas are diverse and there is significant variability in health status, as well as in performance and quality improvement measures. Virginia must develop a system to compare these differences, both between clusters of rural communities and localities, as well as in comparison with statewide and national population-based indicators.

Rural health must be examined at local, regional and statewide levels. Although many rural localities face similar challenges, Virginia’s rural areas also have characteristics that set them apart from one another. For example, the Shenandoah Valley region is faced with challenges that are very different than those faced on

¹⁵ Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. The Quality of Health Care in the United States. Washington, D.C.: National Academy Press, 2001.

the Eastern Shore. There are no “one-size fits all” solutions that can be applied to all rural communities and regions. There is a need to explore and be sensitive to local and regional conditions.

Rural residents must play a critical role in determining the needs and the strategies for improving the rural health infrastructure. Local communities must take on the primary responsibility for addressing community needs, determining desired models of care, securing resources, as well as the stewardship of such resources. The advancement of community responsibility and ownership is a necessary element in addressing rural community health improvement. However, Federal, State and local governments must also do its share to ensure the availability of a quality rural health infrastructure.

Collaborations and partnerships are necessary for leveraging resources, strengthening the service delivery system and rural health infrastructure, and reducing systems fragmentation. Although local prerogatives must be respected, it is imperative that collaborations and partnerships be developed in rural areas where there is a shortage of manpower and resources. The health system in rural areas must strive for a greater integration of primary care with mental/ behavioral health, EMS, dental/oral health, telehealth, women’s health services, preventive care and health promotion and health education.

A better alignment of funding sources will assist in targeting resources. Federal, State and private resources must be channeled to support projects that are consistent with the recommendations set forth by the VA-RHP.

Models of care and pilot projects that center on community planning and engagement are essential. A broad recurring strategic theme in many of the VA-RHP recommendations is the need to: (1) establish a global vision for rural Virginia; (2) identify related target needs, e.g., major gaps in community needs and identifiable health inequities; and (3) address these issues through the development of community-oriented demonstration projects that build on existing assets. Demonstration or pilot project should have a platform of substantive community participation; clearly identified leadership; demonstrated, multi-party collaboration; a reasonable probability for successful project implementation; and an evaluation strategy. Since there are insufficient resources to support community engagement in all rural areas simultaneously, the greatest return on investment may be from building new projects in communities that have a demonstrated history of collaboration. With that said, it is also important to note that some level of attention must also be directed toward identifying and working with disadvantaged communities that lack the social and economic infrastructure required to engage in large-scale collaborative projects. Frequently, these are the communities with the greatest need for improvements in health and the health care services infrastructure.

Health plays a critical role in sustaining and developing strong rural communities. Rural health is a necessary component of community health and economic development, in that the availability of a healthy workforce is critical in attracting employers. In addition, health service providers (hospitals, community health centers, nursing facilities, pharmacies, home care agencies and others) are oftentimes the major employers in many rural communities. The related expenditures generated by these providers have significant direct and indirect community impacts (i.e., economic multiplier effects). There is a need to clearly articulate the relationships between health, health services and the economic well-being of rural communities. Additionally, there is an undeniable connection between employment (a key social determinant of health) and improved health status. Presently, the linkages between organizations and individuals interested in health, and those interested in economic development, are underdeveloped. Greater understanding and communication between these groups need to be fostered.

Decision-making must be based on, and supported by, accurate and available data, research, timely analysis, and critical thinking. The development of strategies to improve rural health must begin with

data-driven assessments and recommendations. One of the key objectives of the VA-RHP planning process is to ensure that findings and strategies are based on accurate and quality data, and to make recommendations that further enable data-driven and evidence-based decision-making. While the State has multiple data sources, many of these existing data sources are not set up in such a way as to allow analyses by rurality.

Fundamental Building Blocks for Virginia’s Rural Health Care System

There are no universal solutions to the difficult challenges of improving rural health. Notably, there are substantial variations of actual and perceived needs, resources and organizational capacity among communities. These variations are paralleled by significant differences in both overall health status and chronic disease morbidity across rural regions, and are affected by factors such as the extent of “rurality”, seasonality, socioeconomic conditions, the availability of transportation, community history, and associated culture and attitudes.

It is easy to say that rural residents should have ready access to all of the identified services and that referral linkages to more specialized providers and facilities should be in place. However, in many cases neither the local capacity nor the referral resources and linkages are adequate. Priority must be given to establishing the following identified building blocks and securing the resources necessary for their sustainability.

The following set of foundational services and resources were embraced by all stakeholders who participated in the VA-RHP development process. These are not intended to limit the available health care services provided in rural areas, but to serve as a basis for the scope of services that should be provided.

Outpatient, Medical, Surgical, Obstetrical Services

Examples of providers include allopathic and osteopathic physicians and other health professionals to include physician assistants, nurse practitioners, certified advanced practice nurses, school nurses and midwives.

- Primary Care
 - Family Medicine
 - Internal Medicine
 - Pediatrics
 - Obstetrics and General Gynecology
- General Surgery (full-time in most rural hospitals but part-time in some, generally with particular emphasis on outpatient surgery, including endoscopy)
- Orthopedics (full-time in some rural hospitals, at least part-time in most, but this is highly variable by size of service area and service planning requires service-area-specific assessment).
- Other Limited Specialty Services

Emergency/Urgent Care Services

- Mobile Emergency Medical Services (ambulance services, emergency medical technicians, paramedics, and communications systems)

- Hospital Emergency Departments (including an appropriate scope of immediately available medical/surgical/mental health/substance abuse services, as well as triage and referral capabilities, and telehealth linkages)
- Interoperable communications systems
- Clinical education programs for all emergency service providers
- Automatic external defibrillator programs

Ancillary Services

- Diagnostic services (e.g., imaging, lab, endoscopy)
 - Radiology (local and/or remote-teleradiology access)
 - Pathology (local and/or remote access)
- Anesthesia (anesthesiologists or nurse anesthetists)
- Therapeutic services (e.g., occupational therapy, physical therapy, respiratory therapy, speech therapy, and audiology testing)

Inpatient Hospital Services

The sustainable range of inpatient services may vary by community but generally includes the following:

- Basic inpatient care consistent with aforementioned primary care, general surgery, obstetrics and general gynecologic surgery, orthopedics and other specialty services within documented quality standards. Services usually include some form of critical care unit, increasingly with telehealth access to larger hospitals.
- Ancillary services (as indicated above)
- Referral mechanisms for inpatients

In rural areas, inpatient services will usually be provided in the following facilities:

- Critical Access Hospitals
- Hospitals that are small or mid-sized and rural, but that are not CAH or CAH eligible hospitals. There is no fixed size for these hospitals. These hospitals generally serve a larger population and are likely to have more expanded physician resources (a wider range of full-time specialists) and inpatient care.

Education, Prevention, Health Literacy, and Cultural Competency

- Individual and community health education, as well as patient and family health education, that addresses health promotion, prevention, and disease-specific treatment needs
- Screening programs and appropriate follow-up linkages to treatment when necessary
- Immunizations
- Educational initiatives that increase the ability to deliver culturally competent care

Oral Health Services

- Preventive dental services including prophylaxis, appropriate use of fluorides, dental sealants, oral health education and oral health promotion activities
- Basic restorative treatment (i.e., repair of cavities)
- Referral mechanisms to access more specialized treatment services (e.g., orthodontics, other restorative care, oral surgery, prosthodontics [e.g., crowns and bridges])

Primary Behavioral Health Services

- Crisis intervention, diagnosis, primary outpatient treatment, prevention and referral, including services for adults, children, adolescents, and families
- Referral mechanisms to inpatient mental health providers in other communities with referrals back to local community outpatient providers

Primary Substance Abuse Services (Alcohol and Drugs)

- Crisis intervention, detoxification, diagnosis, primary outpatient treatment, prevention and referral, including services for adults, children, adolescents and families
- Well-developed referral mechanisms to inpatient substance abuse providers in other communities with referrals back to local community outpatient providers
- Targeted community education, especially concerning use of illegal drugs and the resulting medical and non-medical community impacts

Home Health Services and Hospice Care

- Home health and hospice services, including nursing care and care attendants; and as appropriate, physical therapy, occupational therapy, speech therapy, durable medical equipment support and other support services, which can include homemaker services

Skilled Nursing Services and Nursing Facility Services

- Skilled nursing and nursing facility services

Non-acute, Assisted Living and Residential Care

- Supportive housing, both private and State/Medicaid funded, providing assistance with meals, medications and clinical services to support independence and health maintenance at pre-hospital and pre-nursing facility levels of care

Pharmacy Services

- Financial and geographic access to prescription drugs as well as associated adverse risk screening and consumer education related to the appropriate use of medications

Eye Care Services

- Ophthalmology (also above as a physician specialty)
- Optometry and Optical Services

Other Services Which May Not Be Considered As Fundamental Building Blocks

- Chiropractic and Alternative or Complementary Medicine Services

Broad Public Health Issues with Particular Individual, Family or Employer Orientations

- Care management systems and chronic disease management programs with effective integration with primary care and other service providers
- Domestic/child violence prevention and intervention
- Teenage pregnancy prevention (and as necessary, maternal and child support where prevention fails)
- Migrant health
- Needs of resident racial and ethnic minority populations and immigrant populations (beyond those associated with migrant workers)
- Occupational health/work risk exposure reduction (with particular attention to agricultural health issues in some areas)
- Immunizations and other personal health risk prevention strategies
- Nutrition
- Tobacco prevention and cessation
- Auto safety
- Physical environments conducive to healthy behaviors (grocery stores with healthy and affordable foods; recreational facilities; no excessive presence of stores providing easy access to inexpensive alcohol, tobacco, and unhealthy foods)

Other Public Health Considerations Necessary to Support Rural Systems

- Sanitation and water supplies
- Communicable disease prevention
- Environmental protection issues
- Bio-terrorism and pandemic disease prevention and mitigation strategies
- Housing
- Transportation
- Access to a competent public health workforce
- Development of multi-community public health strategies
- Appropriate public health policy, laws, regulations and enforcement
- Rural health research

Recommendations

These action items, when fully supported and funded, will lead to improvements in health, not solely in the delivery of health care services. Ultimately, these recommendations will strengthen the current and future rural health infrastructure in Virginia.

General: *In order to effectively support the ultimate goal of strengthening the current and future rural health infrastructure in Virginia, the VA-RHP must establish a formalized operational framework that will assist in bolstering partnerships, leveraging resources and providing an avenue for advisory expertise. These recommendations are mostly administrative in nature and will provide for the continuous quality framework of all VA-RHP recommendations.*

- A.1. Ensure and implement an effective and thorough communications plan among VA-RHP partners.
- A.2. Develop a clearinghouse of rural-relevant information that is created in conjunction with the establishment of a rural health data website.
- A.3. Promote and market a broader definition of primary care that includes dental/oral health, mental/behavioral health, emergency medical services (EMS), women’s health services, and telehealth.
- A.4. Provide accurate and timely information to rural providers and residents about existing resources related to dental/oral health, pre-natal and pre-conceptual health, mental/behavioral health and EMS.
- A.5. Develop relevant and achievable performance measures for all recommendations.
- A.6. Revisit the status and performance measurements of VA-RHP recommendations annually.
- A.7. Hold annual rural health summits to actively engage VA-RHP partners in strategic planning sessions.
- A.8. Identify potential external funding sources to support and leverage VA-RHP activities.

Policy and Advocacy: *The advancement of the VA-RHP and its recommendations are heavily dependent upon quality and effective public policies, advocacy and favorable legislation. These recommendations are mostly policy and/or policy-related in nature and are most effective if led by rural policy/advocacy partners.*

- B.1. Build data capacity to (1) forecast future workforce needs, (2) assess what services are actually being provided and (3) assess the economic impact of workforce shortages and shortage designations.
- B.2. Assess the current status of mid-level practitioners in Virginia.
- B.3. Identify policy changes that are needed to require data collection on the practice sites of mid-level practitioners.
- B.4. Identify issues related to Medicare reimbursements and the health care market structure in rural areas.
- B.5. Introduce legislation to support the activities of the Virginia Rural Health Resource Center (VRHRC) and to enable the VRHRC to serve as the “gateway” for rural health information in Virginia.

Data and Rural Definitions: *In accordance with the core principles, it is imperative for decision-making to be based on and supported by accurate and timely data. Therefore, the VA-RHP recommendations must promote the collection of relevant data and must base recommendations and findings on such data. Additionally, the VA-RHP must clearly articulate a rural definition that will meet the needs and demands of the Commonwealth.*

- C.1. Establish the Virginia Rural Health Data and Rural Definitions Council.
- C.2. Create a rural health data website/electronic database portal that will provide essential rural health relevant research, statistics, quality indicators and data, and links and references for VA-RHP partners, government and policymakers, researchers and the general public.
- C.3. Incorporate the 32 measures, as recommended by the Data/Rural Definitions workgroup, during the first year of the VA-RHP implementation.
- C.4. Utilize the United States Department of Agriculture, Isserman Model four-level delineation of rurality as the rural definition for framing the development of VA-RHP.
- C.5. Hold roundtable discussions to discuss the feasibility of collaboration/coordination of electronic health records.

Quality: *In accordance with VA-RHP core principles, performance and quality improvement must be central to all rural health care services. Thus, the VA-RHP must provide recommendations that support and promote an increased awareness of and dedication to performance and quality improvement.*

- D.1. Establish the Virginia Rural Health Performance and Quality Advisory Council.
- D.2. Create a database that supports the identification of health inequities and approaches for measuring progress against baseline measures.
- D.3. Host a statewide Rural Health Quality Summit.
- D.4. Establish a plan to improve transitions in care (e.g., from hospital to home).
- D.5. Create a database that supports rural-relevant and meaningful indicators and increased transparency of quality data.
- D.6. Increase the number of health promotion/disease prevention programs through grants to rural communities.
- D.7. Develop common quality measures for program assessment and outcomes.

Health Workforce: *In order to ensure accessible health care services in rural areas, Virginia must carefully examine the current status of the health care workforce in rural areas and be able to project future health care workforce need in those areas. The VA-RHP must thoroughly address the lack of health care professionals in rural areas and examine alternative methods (such as paraprofessionals, educational and training requirements, and the utilization of health information technology for specialty care). These recommendations relate specifically to the health care workforce system in rural areas and include recruitment and retention, mid-levels, allied health, physicians and dentists.*

- E.1. Establish the Virginia Rural Health Workforce Council.
- E.2. Provide retention incentives to providers to remain in rural communities.
- E.3. More aggressively engage the Virginia Community College System (VCCS).

- E.4. Explore health care workforce training models and alternatives for rural areas.
- E.5. Increase communication between the various health professions training programs.
- E.6. Engage academic health and medical institutions in dialogue about alternative solutions and strategies to improving the healthcare workforce in rural areas (such as required rural rotations and rural-related curriculum).
- E.7. Research the concept of dual certificate programs and their feasibility as a more effective approach to the sustainability of the health care workforce in rural communities.
- E.8. Develop and support educational opportunities for integrating primary care with behavioral health.

Access: *Access to quality, affordable and accessible health care services is essential and should be an expectation of all rural residents. Access must not be limited solely to primary and acute care, but must include a greater integration of mental/behavioral health, EMS, dental/oral health, telehealth, women’s health services, preventive care and health promotion and education.*

- F.1. Establish the Virginia Rural Health Access Council.
- F.2. Research existing models of care that integrate primary care with mental/behavioral health within Virginia and in other states.
- F.3. Develop pilot projects that focus on the integration of quality systems of care.
- F.4. Assess the presence or absence of referral networks.
- F.5. Update Virginia’s 2004 Rural Obstetrical Care report.
- F.6. Identify models of care and best practices from other rural areas around the nation and internationally, including telehealth models.
- F.7. Hold a rural EMS Summit to address rural EMS issues, including availability of EMS services, EMS leadership and management and EMS integration into the rural health care infrastructure.
- F.8. Disseminate and present findings from the 2007 and 2008 Critical Access Hospital (CAH)-- EMS assessments upon completion.
- F.9. Update Virginia’s statewide dental/oral health plan.
- F.10. Explore the development of rural health care student associations and/or interest groups.
- F.11. Explore ways to strengthen existing and develop new community engagement initiatives.
- F.12. Research school-based health care models in rural areas.
- F.13. Provide expert consultation and training to CAHs on the use of distinct part units (DPUs).
- F.14. Promote a statewide telehealth system for health care (especially mental/behavioral health) and health education.
- F.15. Improve the health information technology infrastructure for rural health providers and patients.

Next Steps and Future Direction

In order to support the vision and purpose of this VA-RHP, Virginia and its partners must collaborate to implement the recommendations found in this document. The OMHPHP will be partnering with the Virginia Rural Health Resource Center to promote a two-pronged campaign. The first part of the campaign will be to raise the awareness of rural stakeholders to the existence of the VA-RHP and to engage more stakeholders to become active supporters.



The second part of the campaign will be to encourage individuals, agencies/organizations and associations to officially “adopt” one or more of the recommendations from the VA-RHP and to work toward the implementation of that/those recommendation(s) over the course of the next 12 – 24 months. A mechanism will be put in place to track progress for each of the recommendations and to re-visit each of the recommendations on an annual basis during a spring Rural Health Summit.

This updated VA-RHP focuses primarily on four areas of rural health: performance and quality improvement, access, data/rural definitions and health care workforce. It is anticipated that in future updates, other areas of need will surface. Some of the areas that contribute to rural health that were only minimally touched on in this document include:

- Long-term care/aging,
- Health Information technology,
- Rural health funding,
- Education,
- Transportation and
- Economic development.

Appendix A: Sec. 1820. [42 U.S.C. 1395i-4]

- (a) Establishment.—Any State that submits an application in accordance with subsection (b) may establish a medicare rural hospital flexibility program described in subsection (c).
- (b) Application.—A State may establish a medicare rural hospital flexibility program described in subsection (c) if the State submits to the Secretary at such time and in such form as the Secretary may require an application containing—
 - (1) assurances that the State—
 - (A) has developed, or is in the process of developing, a State rural health care plan that—
 - (i) provides for the creation of 1 or more rural health networks (as defined in subsection (d)) in the State;
 - (ii) promotes regionalization of rural health services in the State; and
 - (iii) improves access to hospital and other health services for rural residents of the State; and
 - (B) has developed the rural health care plan described in subparagraph (A) in consultation with the hospital association of the State, rural hospitals located in the State, and the State Office of Rural Health (or, in the case of a State in the process of developing such plan, that assures the Secretary that the State will consult with its State hospital association, rural hospitals located in the State, and the State Office of Rural Health in developing such plan);
 - (2) assurances that the State has designated (consistent with the rural health care plan described in paragraph (1)(A)), or is in the process of so designating, rural nonprofit or public hospitals or facilities located in the State as critical access hospitals; and
 - (3) such other information and assurances as the Secretary may require.¹⁶

¹⁶ Direct quotation from the United States Social Security Administration. *Compilation of the Social Security Laws: Social Security Act (Volume I)*.


Appendix B: Code of Virginia § 32.1-122.07

Authority of Commissioner for certain health planning activities; rural health plan; designation as a rural hospital.

- A. The Commissioner, with the approval of the Board, is authorized to make application for federal funding and to receive and expend such funds in accordance with state and federal regulations.
- B. The Commissioner shall administer section 1122 of the United States Social Security Act if the Commonwealth has made an agreement with the United States Secretary of Health and Human Services pursuant to such section.
- C. In compliance with the provisions of the Balanced Budget Act of 1997, P.L. 105-33, and any amendments to such provisions, the Commissioner shall submit to the appropriate regional administrator of the Centers for Medicare & Medicaid Services (CMS) an application to establish a Medicare Rural Hospital Flexibility Program in Virginia.
- D. The Commissioner shall develop and the Board of Health shall approve a rural health care plan for the Commonwealth to be included with the application to establish a Medicare Rural Hospital Flexibility Program. In cooperation and consultation with the Virginia Hospital and Health Care Association, the Medical Society of Virginia, representatives of rural hospitals, and experts within the Department of Health on rural health programs, the plan shall be developed and revised as necessary or as required by the provisions of the Balanced Budget Act of 1997, P.L. 105-33, and any amendments to such provisions. In the development of the plan, the Commissioner may also seek the assistance of the regional health planning agencies. The plan shall verify that the Commonwealth is in the process of designating facilities located in Virginia as critical access hospitals, shall note that the Commonwealth wishes to certify facilities as "necessary providers" of health care in rural areas, and shall describe the process, methodology, and eligibility criteria to be used for such designations or certifications. Virginia's rural health care plan shall reflect local needs and resources and shall, at minimum, include, but need not be limited to, a mechanism for creating one or more rural health networks, ways to encourage rural health service regionalization, and initiatives to improve access to health services, including hospital services, for rural Virginians.
- E. Notwithstanding any provisions of this chapter or the Board's regulations to the contrary, the Commissioner shall, in the rural health care plan, (i) use as minimum standards for critical access hospitals, the certification regulations for critical access hospitals promulgated by the Centers for Medicare & Medicaid Services (CMS) pursuant to Title XVIII of the Social Security Act, as amended; and (ii) authorize critical access hospitals to utilize a maximum of ten beds among their inpatient hospital beds as swing beds for the furnishing of services of the type which, if furnished by a nursing home or certified nursing facility, would constitute skilled care services without complying with nursing home licensure requirements or retaining the services of a licensed nursing home administrator. Such hospital shall include, within its plan of care, assurances for the overall well-being of patients occupying such beds.
- F. Nothing herein or set forth in Virginia's rural health care plan shall prohibit any hospital designated as a critical access hospital from leasing the unused portion of its facilities to other health care organizations or reorganizing its corporate structure to facilitate the continuation of the nursing home beds that were licensed to such hospital prior to the designation as a critical access hospital. The health

care services delivered by such other health care organizations shall not be construed as part of the critical access hospital's services or license to operate.

G. Any medical care facility licensed as a hospital shall be considered a rural hospital on and after September 30, 2004, pursuant to 42 U.S.C. § 1395ww(d)(8)(E)(ii)(II), if (i) the hospital is located in an area defined as rural by federal statute or regulation; (ii) the Board of Health defines, in regulation, the area in which the hospital is located as a rural health area or the hospital as a rural hospital; or (iii) the hospital was designated, prior to October 1, 2004, as a Medicare-dependent small rural health hospital, as defined in 42 U.S.C. § 1395ww(d)(5)(G)(iv).¹⁷



¹⁷ Direct quotation from the Virginia General Assembly, Legislative Information System. *Code of Virginia*.

Appendix C: Profile of Rural Virginia

Population Characteristics: In 2006, the U.S. Census Bureau reported that Virginia had an estimated population of 7,642,884, which is an increase of 563,854, or eight percent, since the year 2000.¹⁸ Seventy-three percent of the population is White. The largest minority group is African American/Black (19.9%). About six percent (6.3%) of the population are Hispanics, and 4.8 percent of the population is Asian. Ten percent of Virginians are considered foreign born.¹⁹

Virginia's older population is growing more racially and ethnically diverse. The population of Virginians age 60 and older is expected to grow to almost 25 percent by 2025 when there will be more than 2 million Virginians in this age group.²⁰ By 2025, the number of persons age 85 and older will increase five times faster than the state's total population.²¹

Federal Poverty Level: Nine and one-half percent of the Virginia population had incomes below the federal poverty level (FPL) in 2004.²² There were higher percentages of minorities (Blacks – 18%, Latinos – 11.8%, and American Indian - 9.9%) whose incomes were below the FPL than Whites (7.6%) in 2005.²³ Poverty rates increased from 7.8 percent in the largest metropolitan counties to 17.6 percent in the smallest, most rural counties.²⁴

Health Care Coverage: The U.S. Census Bureau reported that 86.7 percent of Virginia's population (7,538,000) had a regular source of health care coverage in 2006.²⁵ This was higher than the U.S. coverage of 84.2 percent. Seventy-two percent of the total health care coverage was provided through the private sector in which 77 percent was employment-based insurance.

In 2006, there were approximately 1,006,000 uninsured persons in Virginia. From 2002 to 2006, the state uninsured population increased by 0.06 percent (104,000 persons). The Virginia Health Care Insurance and Access Survey reported that those who are between 19-and 24 years old, individuals living below 150% FPL, single adults, individuals with less than a high school education, unemployed

¹⁸ Virginia QuickFacts, U.S. Census Bureau. Retrieved on March 14, 2008 from: <http://quickfacts.census.gov/qfd/states/51000.html>

¹⁹ Virginia QuickFacts, U.S. Census Bureau. Retrieved on March 14, 2008 from: <http://quickfacts.census.gov/qfd/states/51000.html>

²⁰ Demographic Trends, Virginia Department of Aging. Retrieved on March 15, 2008 from: <http://www.vda.virginia.gov/demographic.asp>

²¹ Demographic Trends, Virginia Department of Aging. Retrieved on March 15, 2008 from: <http://www.vda.virginia.gov/demographic.asp>

²² Virginia QuickFacts, U.S. Census Bureau. Retrieved on March 14, 2008 from: <http://quickfacts.census.gov/qfd/states/51000.html>

²³ Quick Facts about Minorities in Virginia, Virginia Department of Health. Retrieved on March 15, 2008 from: <http://www.vdh.virginia.gov/healthpolicy/healthequity/quickfacts.htm>

²⁴ Quick Facts about Minorities in Virginia, Virginia Department of Health. Retrieved on March 15, 2008 from: <http://www.vdh.virginia.gov/healthpolicy/healthequity/quickfacts.htm>

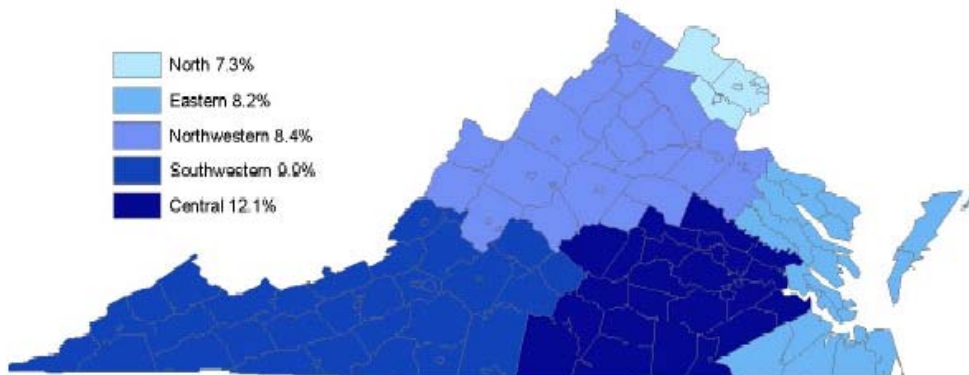
²⁵ Health Insurance Historical Table 4. U.S. Census Bureau. Retrieved on March 15, 2008 from: <http://www.census.gov/hhes/www/hlthins/historic/hihistt4.html>

individuals, and/or self-employed, part-time, temporary and/or seasonal workers are the most likely to be uninsured. In addition, African-Americans and Hispanics had significantly higher rates of uninsured persons (11.1% and 27.4%, respectively) compared to Whites.²⁶ Accomack (20.3%) and Northampton (20.0%) Counties had the highest uninsured rates in 2000.

More than three-quarter (84%) of the rural uninsured are working or have workers in their families, and of these families, 73 percent have at least one full-time worker. Among the uninsured who are poor, 47 percent of those in rural areas are from families with full-time workers compared to 38 percent of the poor urban uninsured. Rural residents (24%) between the ages of 45 and 64 are more likely to be uninsured than urban residents (19%).

Medical Care Research and Review reported that when health insurance is offered by employers, enrollment rates were similar for rural and urban workers at 68 percent.²⁷ However, rural residents are less likely to have job-based coverage because their employers are less likely to offer them health insurance. This is primary due to the types of business/industry employer located in rural areas. Small businesses that do not offer health insurance are very common in rural areas, such as farming, general labor, service, and repair work. One-third of rural workers are employed in firms with less than 25 employees and a third of these workers are self-employed. These combinations of small size businesses with lower wages are the major factors that contributed to the lower levels of job-based coverage.

Virginia Uninsured Rates by Geographic Location: 2004²⁸



²⁶ 2004 Virginia Health Care Insurance and Access Survey: Select Results. *State Health Access Data Assistance Center*. Retrieved on March 15, 2008 from: http://gunston.doit.gmu.edu/chpre/pdf/Virginia_Final_Report_03_24_05.pdf

²⁷ Fast Facts. The Kaiser Commission on Medicaid and the Uninsured (2001). *The Kaiser Family Foundation*.

²⁸ 2004 Virginia Health Care Insurance and Access Survey: Select Results.

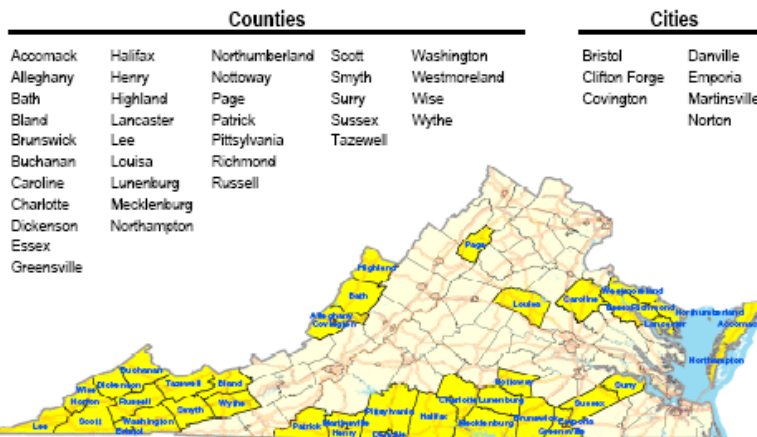
Health Care Work Force: The 2004 *Health Resources and Services Administration (HRSA) State Health Profiles* reported that there were more than 257,000 people employed in the health sector in Virginia in 2000, 7.5 percent of Virginia’s total workforce. Virginia was ranked 38th among the states in per capita health services employment.²⁹ There was an increase of 24.33 physicians per 100,000 population between 2000 (191/100,000) and 2004 (215.33/100,000).³⁰⁻³¹ The physician/population ratio increase for primary care physicians was not as large (2000 – 66/100,000 and 2004 – 78.27/100,000).³³⁻³⁴ Both the physician/population and primary care/population ratios for Virginia were slightly higher than the national ratios of 214.00 and 76.60, respectively, in 2004. The midlevel practitioner/population ratio for physician assistants and nurse practitioners also increased during five period (physician assistants: 2000 – 10.1/100,000 and 2004 – 12.25/100,000 and nurse practitioners: 2000 – 42/100,000 and 2004 – 64.85/100,000).³³⁻³⁴

In 2004, the Virginia physician assistant ratio was lower than the national ratio of 16.87 and nurse practitioner ratio was significantly higher than the national ratio of 42.04. During the five year period, the registered nurse/population ratio increased by 47.3 per 100,000 population (2000 – 708.7/100,000 and 2004 - 756.0/100,000).³³⁻³⁴ However, it was significantly lower than the national ratio of 802/100,000.

Even though there were increases in health professionals in the Virginia, these increases have not closed the practitioner/population ratio gaps between rural and urban. One of the health care challenges of Virginia is the recruitment and retention of health professionals to meet the health services needs of rural residents. For those rural areas with low population density, one significant barrier to establishing medical practices and/or health care facilities is a lack of an economic base to support health practitioners and facilities.

Virginia Medically Underserved Areas VMUAs

Updated 09/01/2006

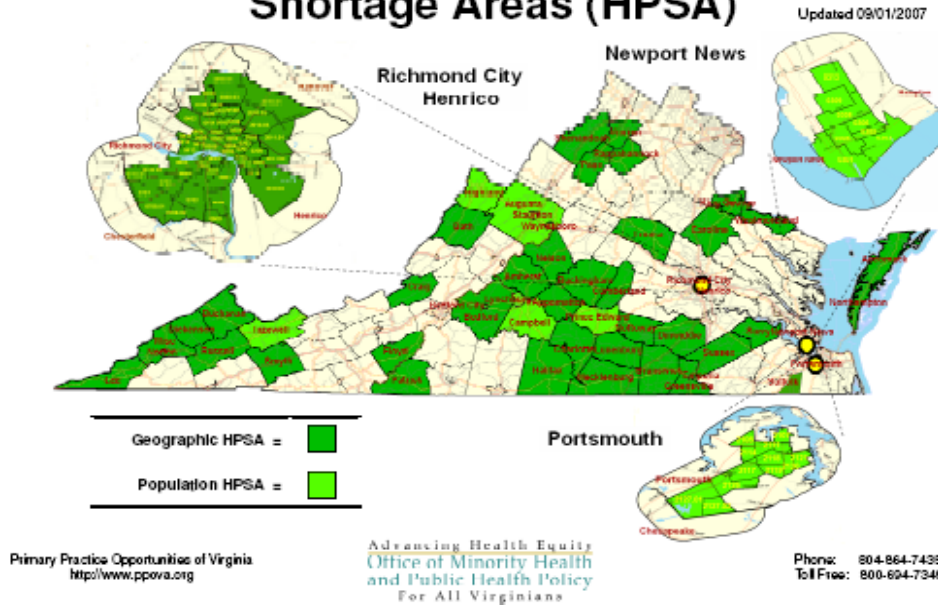


²⁹ The Virginia Health Workforce: Highlight from the Health Workforce Profile (2004). *National Center for Health Workforce Analysis*. Retrieved on March 15, 2008 (<http://bhpr.hrsa.gov/healthworkforce/reports/statesummaries/virginia.htm>)

³⁰ The Virginia Health Workforce: Highlight from the Health Workforce Profile (2004). *National Center for Health Workforce Analysis*. Retrieved on March 15, 2008 (<http://bhpr.hrsa.gov/healthworkforce/reports/statesummaries/virginia.htm>)

³¹ The United States Health Workforce Profile (October 2006). *The New York Center for Health Workforce Studies*

Virginia Dental Health Professional Shortage Areas (HPSA)



Health Status: Virginia health statistics have consistently shown that racial and ethnic minorities and rural communities are vulnerable populations. Racial and ethnic minorities at all stages of life suffer poorer health and higher rates of premature death when compared to the majority population.³² For example, the Virginia Department of Health has reported that state's overall infant mortality and teenage pregnancy rates have shown downward trends in the last decade, yet, the gap in these rates between minority populations and Whites has continued.³³ In 2004, the life expectancy for White Virginians was 78.6 years, compared to 73.4 years for African Americans/Blacks.³⁴

Rural Health: Rural areas frequently pose different and, in some instances, greater challenges than urban areas in addressing a number of health care issues. There are rural-urban disparities in health conditions associated with particular preventable or chronic diseases and inequities in infrastructure or professional capacity to address health needs. There is ample evidence that some important rural-urban health inequities exist with respect to, for example, shortages of some types of primary care physicians (obstetricians and pediatricians), shortages of specialized mental health providers and oral health providers, prevalence of rural occupational and chronic health problems and delays in health screening.

Rural Virginians face a unique combination of factors that create disparities in health status and wellbeing when compared to urban areas. Particular conditions such as economic factors, cultural and

³² Primary Care Workforce and Health Access Initiatives Annual Report: June 1, 2004 to June 30, 2005. *Virginia Department of Health, Office of Health Policy & Planning*

³³ Primary Care Workforce and Health Access Initiatives Annual Report: June 1, 2004 to June 30, 2005. *Virginia Department of Health, Office of Health Policy & Planning*

³⁴ Quick Facts about Minorities in Virginia, Virginia Department of Health. Retrieved on March 15, 2008 from: <http://www.vdh.virginia.gov/healthpolicy/healthequity/quickfacts.htm>

social differences, education limitations, geographic isolation, lack of transportation systems, lack of access to specialty services, lack of health insurance, lack of adequate support to maintain quality of medical care, and limited rural health infrastructure present obstacles to both rural residents seeking services and providers who would deliver them.

Access to insurance to support health care continues to be a problem in rural areas—a problem associated with a lower paid workforce reliant upon small employers that are less likely than larger employers to offer health insurance. Although access to timely and effective primary care is deemed critical to avoiding hospitalizations for ambulatory care sensitive conditions, health workforce shortages and the recruitment and retention of primary care providers continue to be identified as major rural health concerns for Virginia. In 2005, of the 10 counties with the highest hospital discharge rates for ambulatory care sensitive conditions, nine were rural.³⁵

Rural-Urban Population Changes: Trend data shows that there have been demographic shifts, including a rapid change in population age distributions in rural Virginia. These changes are likely to significantly influence the demand for various health care services. Virginia has already experienced the reduction of obstetrical services due to the closure of several hospital obstetrical programs in rural areas. This can be attributed to both the costly nature of such services and 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 for the Aging clearly describe the forecasted shifts in the overall distribution of metropolitan and non-metropolitan (rural) populations [normalized to Census 2000 definitions of Metropolitan and Non-Metropolitan (including Micropolitan) Areas]. The shifting orientation of rural areas towards the metropolitan areas (conurbation) as more and more towns, villages, and housing developments are affiliated with a larger urban market and potential employment center is beginning to dominate rural health care needs assessments.

³⁵ Virginia QuickFacts, U.S. Census Bureau. Retrieved on March 14, 2008 (<http://quickfacts.census.gov/qfd/states/51000.html>)

Appendix D: Defining Rural

It is increasingly difficult to characterize rural due to the multiple and conflicting definitions of rural. Virginia sought to adopt a definition that would make intuitive sense when defining the rurality of a governmental jurisdiction to allow reasonable comparisons of health indicators. The Data and Rural Definitions Work Group reviewed many of the most common rural definitions that are currently utilized throughout the country, compared their strengths and weaknesses, and considered how well each definition incorporates Virginia’s unique governmental entity structure of counties and cities (Table 2.6).

In addition, the U.S. Department of Health and Human Services (HHS) Health Resources and Services Administration (HRSA) use the definition of “frontier” for federal funding purposes. “Frontier” differs from “rural” in that it may apply to much more sparsely populated areas than those that fit under “rural.” These sparsely populated areas include those living in remote areas of rural counties, such as those living on Native American reservations. There is only one county in Virginia, Highland County, which has been designated as a Frontier County by the U.S. Census Bureau.

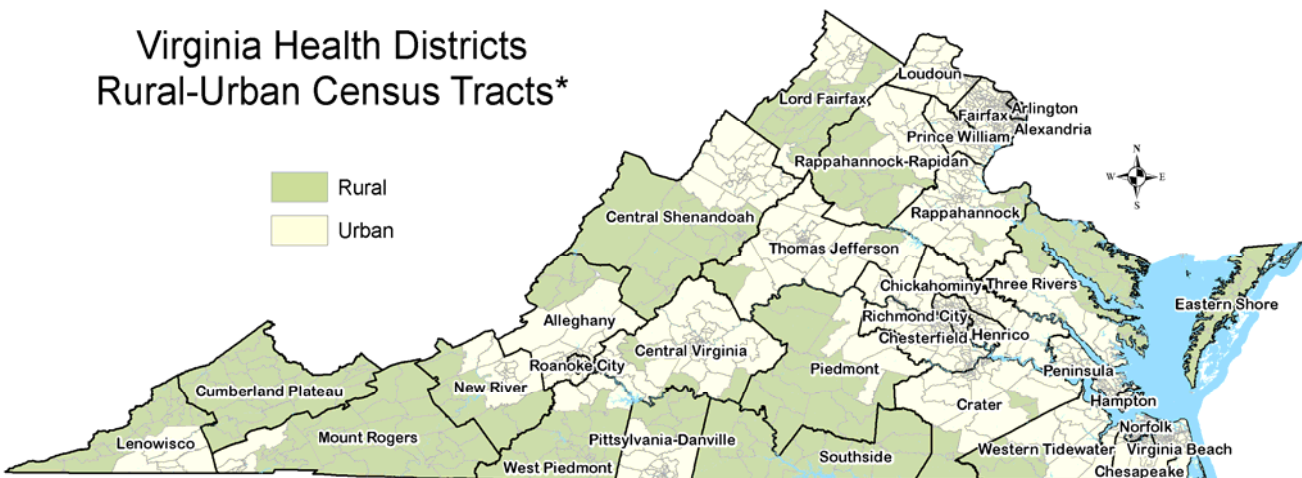
The following four maps show rural and urban comparisons based on definitions of the Virginia Census 2000 Rural and Urban Areas, the University of Washington Rural Urban Community Areas (RUCAs), the OMB Office of Management and Budget) Core Based Statistical Areas, and the U.S. Department of Agriculture, Isserman Model. Map 1.1 shows Virginia’s rural areas by VDH health districts using the Rural-Urban Commuting Areas (RUCAs) definition of rural.

Commonly Used Rural Definitions ³⁶

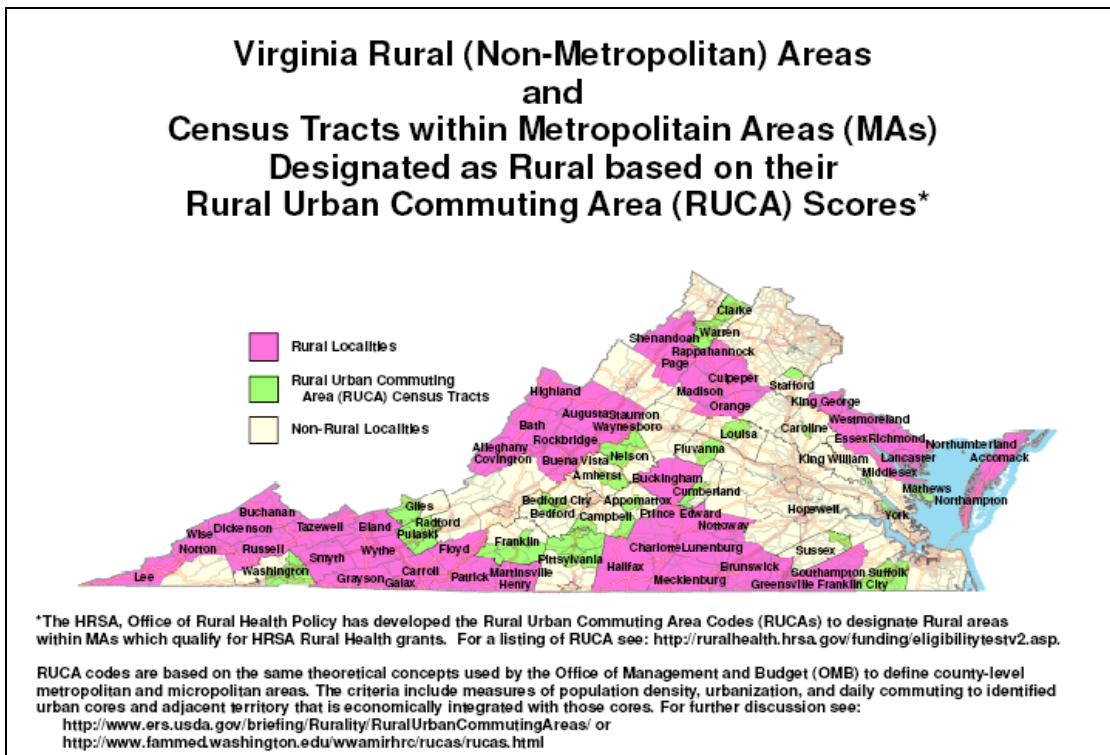
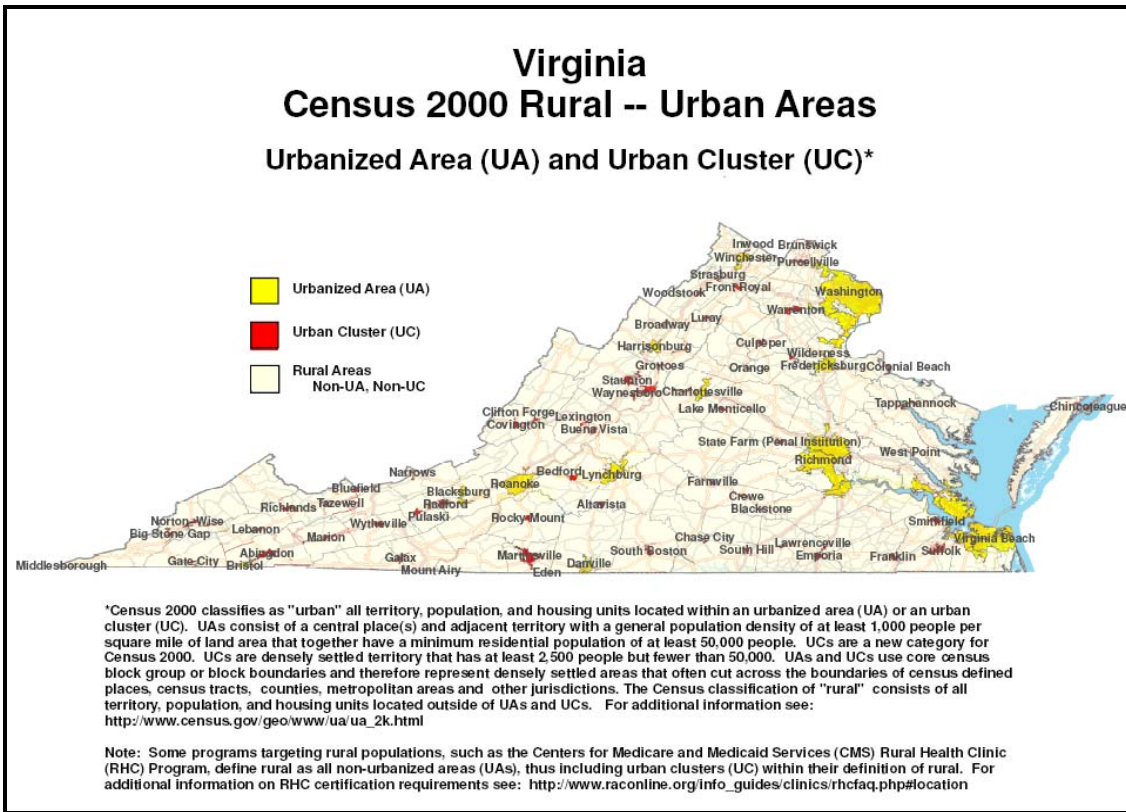
Definition	Definition Description	Geographic Unit Used
U.S. Census Bureau: Urban and Rural Areas	The Census Bureau’s classification of rural consists of all territory, population, and housing units located outside of urbanized areas and urban clusters. Urbanized areas include populations of at least 50,000, and urban clusters include populations between 2,500 and 50,000. The core areas of both urbanized areas and urban clusters are defined based on population density of 1,000 per square mile and then certain blocks adjacent to them are added that have at least 500 persons per square mile.	Census Block and Block Groups
Economic Research Service, U.S. Department of Agriculture & WWAMI Rural Health Research Center: Rural-Urban Commuting Areas (RUCAs)	This classification scheme utilizes the U.S. Census Bureau’s urbanized area and cluster definitions and work commuting information. The RUCA categories are based on the size of settlements and towns as delineated by the Census Bureau and the functional relationships between places as measured by tract-level work commuting data. This taxonomy defines 33 categories of rural and urban census tracts.	Census Tract, ZIP Code approximation available

³⁶Rural Policy Research Institute. *Choosing Rural Definitions: Implications for Health Policy*. Retrieved on January, 2008 from: <http://www.rupri.org/Forms/RuralDefinitionsBrief.pdf>

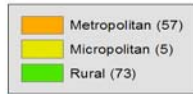
<p>U.S. Office of Management and Budget (OMB): Core Based Statistical Areas (i.e., Metropolitan and Nonmetropolitan areas)</p>	<p>A metropolitan area must contain one or more central counties with urbanized areas. Nonmetropolitan counties are outside the boundaries of metropolitan areas and are subdivided into two types, micropolitan areas and noncore counties. Micropolitan areas are urban clusters of 10,000 or more persons.</p>	<p>County</p>
<p>Economic Research Service, U.S. Department of Agriculture: Rural-Urban Continuum Codes (Beale Codes)</p>	<p>This classification scheme distinguishes metropolitan counties by the population size of their metropolitan area, and nonmetropolitan counties by degree of urbanization and adjacency to a metropolitan area or areas. All counties and county equivalents are grouped according to their official OMB metropolitan-nonmetropolitan status and further subdivided into three metropolitan and six nonmetropolitan groupings.</p>	<p>County</p>
<p>Economic Research Service, U.S. Department of Agriculture: Urban Influence Codes</p>	<p>This classification scheme subdivides the OMB metropolitan and nonmetropolitan categories into 2 metropolitan and 10 nonmetropolitan categories. Metropolitan counties are divided into two groups by the size of the metropolitan area. Nonmetropolitan-micropolitan counties are divided into three groups by their adjacency to metropolitan areas. Nonmetropolitan-noncore counties are divided into seven groups by their adjacency to metropolitan or micropolitan areas and whether they have their “own town” of at least 2,500 residents.</p>	<p>County</p>
<p>Office of Rural Health Policy, U.S. Department of Health and Human Services: RUCA Adjustment to OMB Metropolitan and Nonmetropolitan Definition</p>	<p>This method uses RUCAs 4-10 to identify small towns and rural areas within large metropolitan counties. In addition, census tracts within metropolitan areas with RUCA codes 2 and 3 that are larger than 400 square miles and have population density of less than 30 people per square mile are also considered rural.</p>	<p>Census Tract within OMB Metropolitan Counties</p>



* Based on 2000 Rural-Urban Commuting Area (RUCA) Codes, <http://www.ers.usda.gov/briefing/Rurality/RuralUrbanCommutingAreas/>.



OMB's Core Based Statistical Area (Metro/Micropolitan/Rural)

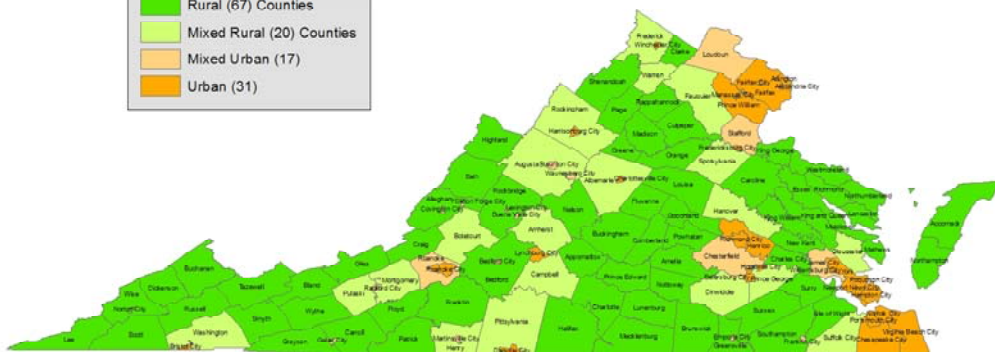


Data Source: OMB



Maps Created on February 7, 2008
Center for Rural Health Policy, Education and Research

Isserman County Based Definition*



*Note: Dr. Isserman was contracted by the USDA to create a new definition that integrated the 2000 census tract population into the OMB county based definition and the Census rural/urban continuum codes.

Data Sources: article "In the National Interest: Defining the Rural and Urban Correctly in Research and Public Policy" by Andrew M. Isserman, Professor of Urban and Regional Planning University of Pennsylvania

A Rural County is one in which the county's population density is less than 500 people/Sq. mile, and 90% of the county population is in rural areas or the county has no urban area with population of 10,000 or more.



Maps Created on February 7, 2008
Center for Rural Health Policy, Education and Research

For the purposes of the VA-RHP, the Data and Rural Definitions Workgroup recommended the utilization of the Isserman rural definition because it seemed to be the most acceptable to describe the rural and urban characteristics of Virginia’s unique governmental entity of counties and cities. The definition can be used to identify rural and urban health related disparities. It is also a definition favored by the Center and Council for Rural Virginia, an organization that deals primarily with rural economic development in the state.

The Isserman definition uses four county geographical classifications: (1) rural, (2) mixed rural, (3) mixed urban, and (4) urban.³⁷ A rural county is one in which the county’s population density is less than 500 people/square mile, and 90 percent of the county population is in a rural area or the county has no urban area with population of 10,000 or more. An urban county is one in which the county’s population density is at least 500 people per square mile, 90 percent of the county population lives in urban areas, the county’s population in urbanized areas is a least 50,000 or 90 percent of the county population. A mixed rural county is one which meets neither the urban nor the rural county criteria, and its population density is less than 320 people per square mile. A mixed urban county is one which meets neither the urban nor the rural county criteria, and its population density is at least 320 people per square mile.

A summary of the rural, mixed rural, mixed urban, and urban counties and cities in Virginia based on the Isserman definition can be found below:

Isserman Rural and Urban Geographical Classification Summary³⁸

Rural			
Accomack County	Cumberland County	Lancaster County	Prince Edward County
Alleghany County	Dickenson County	Lee County	Rappahannock County
Amelia County	Essex County	Louisa County	Richmond County
Appomattox County	Floyd County	Lunenburg County	Rockbridge County
Bath County	Fluvanna County	Madison County	Russell County
Bedford County	Franklin County	Mathews County	Scott County
Bland County	Giles County	Mecklenburg County	Shenandoah County
Brunswick County	Goochland County	Middlesex County	Smyth County
Buchanan County	Grayson County	Nelson County	Southampton County
Buckingham County	Greene County	New Kent County	Surry County
Caroline County	Greensville County	Northampton County	Sussex County
Carroll County	Halifax County	Northumberland County	Tazewell County
Charles City County	Highland County	Nottoway County	Westmoreland County
Charlotte County	Isle of Wight County	Orange County	Wise County
Clarke County	King and Queen County	Page County	Wythe County
Craig County	King George County	Patrick County	Norton city
Culpeper County	King William County	Powhatan County	

³⁷ Isserman, A.M. (2005). *In the National Interest: Defining Rural and Urban Correctly in Public Policy*, *International Regional Science Review*, 28, 4:465-499.

³⁸ Center for Rural Health Policy Education and Research

Mixed Rural			
Albemarle County	Dinwiddie County	Henry County	Rockingham County
Amherst County	Fauquier County	Montgomery County	Spotsylvania County
Augusta County	Frederick County	Pittsylvania County	Warren County
Botetourt County	Gloucester County	Prince George County	Washington County
Campbell County	Hanover County	Pulaski County	Suffolk city
Mixed Urban			
Chesterfield County	Stafford County	Covington City	Lexington City
James City County	Bedford City	Emporia City	Martinsville City
Loudoun County	Buena Vista City	Franklin City	Radford City
Roanoke County	Clifton Forge City	Galax City	Staunton City
			Waynesboro City
Urban			
Arlington County	Charlottesville City	Harrisonburg City	Poquoson City
Fairfax County	Chesapeake City	Hopewell City	Portsmouth City
Henrico County	Colonial Heights City	Lynchburg City	Richmond City
Prince William County	Danville City	Manassas City	Roanoke City
York County	Fairfax City	Manassas Park City	Salem City
Alexandria City	Falls Church City	Newport News City	Virginia Beach City
Bristol City	Fredericksburg City	Norfolk City	Williamsburg City
	Hampton City	Petersburg City	Winchester City

Of Virginia’s 135 counties or county-equivalents, 87 (64.4%) are considered rural or mixed-rural. Because of the multiple rural definitions and available data, it is currently difficult to understand many health-related issues without good comparative data that differentiates rural and mixed-rural characteristics from other population segments.

