

# HEALTHY VIRGINIA COMMUNITIES

A Report on Year 2000 Health Status and Risk Reduction  
Indicators for the Commonwealth of Virginia  
and Health Districts

December 1997





December, 1997

Dear Friends of Public Health:

The Virginia Department of Health is pleased to provide you with this copy of *Healthy Virginia Communities, A Report on Year 2000 Health Status and Risk Reduction Indicators* for the Commonwealth of Virginia and Health Districts. It is a document designed to help you and other interested citizens identify and understand some of the key health-related issues that confront the citizens of our State as we approach the turn of the century.

With the rapid changes in the health care field that our society is experiencing, there is a growing need for useful information. Our agency is in the forefront of a developing nationwide effort among states to ensure that our citizens have access to data that can help them make better and more informed decisions about the quality of their lives. *Healthy Virginia Communities* is intended to objectively assess where we stand on some important issues, and to enable us to measure our progress in comparison to others across the State, as well as at the national level.

You will note as you read the report that we have purposefully presented the information in a way that relates it to both the public and private sectors. We strongly believe that it will require the best collaborative efforts of all of us working together to successfully address and resolve the problems that face us collectively. It is toward this end that I commend this publication to your review and utilization.

Thank you for your interest in helping us ensure that we do have healthy Virginia communities.

Sincerely,

Randolph L. Gordon, M.D., M.P.H.  
State Health Commissioner

## Introduction

In its 1988 report, *The Future of Public Health*, the Institute of Medicine identified assessment, policy development, and assurance as the core functions of public health agencies. The fulfillment of these responsibilities is critical if we are to successfully promote conditions in which the citizens of Virginia can be healthy.

The assessment function is, by definition, the foundation upon which the other two functions must be built. It requires that public health agencies regularly and systematically collect, assemble, analyze, and make available information on the health of the communities they serve. These facts become the basis upon which a community can determine its health needs and how to use its resources to prevent and reduce disease and disability. This data-driven approach to problem-solving ensures that a scientific knowledge base undergirds efforts to improve the public's health.

To facilitate the assessment process, the U.S. Department of Health and Human Services (DHHS) established targets for the nation in its report, *Healthy People 2000*, a compilation of national health promotion and disease prevention objectives for the turn of the century. Thousands of citizens and health professionals, more than three hundred private organizations, and all state health departments spent three years developing a national consensus on health priorities.

The national report presents a vision of an increase in the span of healthy life for our nation's citizens, significantly reduced disparities in health status among the population groups in our society, and access to preventive services for all Americans. It offers a broad spectrum of health status, risk reduction, and services and protection objectives that address the multiplicity of issues faced by states and localities.

In setting forth 22 priority areas and 300 objectives in the national report, its authors were being deliberately comprehensive so that individual states and local communities could be selective in identifying the objectives which are relevant to their own most pressing needs. For the Commonwealth, this would require concentration on a limited number of priority prevention issues in order to ensure the greatest possible effectiveness in the deployment of resources.

Deciding where to focus has not been a simple task. Although all the objectives outlined in the national report are important, we wanted to choose for Virginia those which are considered the most critical given our current health status and needs. The selection process has involved the formation of a task team (see Appendix F for a list of members) in the Virginia Department of Health (VDH) which examined the original *Healthy People 2000* report as well as last year's *Midcourse Review and 1995 Revisions* and determined the key issues for Virginians. In some cases the task team identified additional objectives based on data which do not appear in the national reports. The selected targets, therefore, include national level as well as state level objectives, all of which are identified as *Virginia 2000 Objectives*.

The list of health status and health risk indicators is grouped under three separate priority goals:

- Improve Pregnancy Outcomes
- Decrease the Burden of Chronic Disease
- Protect Virginians from Communicable Diseases and Environmental Health Hazards

Under each of these goals, baseline measurements of health status and/or factors that put individuals at increased risk of premature death are stated in conjunction with specific objectives. Where the data are available for a period of years, a trend line depicts the State's progression on that measure during the given time frame. Bar graphs also show the data for a number of the measures by Health Maintenance Organization (HMO) region, in accordance with the "Commonwealth of Virginia by HMO Regions" map which appears in Appendix A. A related effort to show the linkage between the selected objectives and Health Plan Employer Data and Information Set (HEDIS) performance standards used by managed care organizations appears in Appendix C, "Relationship of Virginia 2000 Objectives and HEDIS 3.0 Measures."

In addition, the data compiled from VDH vital statistics, the reportable disease surveillance system, and the Office of Epidemiology have been presented as charts (the data source for each chart is the same as that used for the corresponding trend line and bar graph; unless otherwise indicated, the figures reflect the total population rather than just those individuals

served by the health department). These charts depict how each of Virginia's thirty-five health districts compares with the other districts, the United States and the *Virginia 2000 Objective* for the most recent year for which the figures are available. In the few instances where there are indicators for which there are no corresponding national data, we show only the most recent state figure and a *Virginia 2000 Objective*. In most cases, the latter figure targets an improvement level of 7.5% above the most recent state figure as a realizable objective by the year 2000.

When reviewing data for the health districts, rates based on a single year can be deceptive; a district's situation might be substantially different in another year based on a different set of circumstances. Publication of subsequent annual reports will establish trend lines over an extended period of time.

Segmenting of the data into quartiles provides an overview of all the health districts, in the hope that those with obvious needs might be able to replicate some of the successful approaches to problem resolution employed in comparable districts. Where districts have the same rates, they have been grouped in the higher quartile. Rates can be misleading if based on small numbers since unique events can significantly impact such rates. The reader is encouraged to check *Virginia Health Statistics 1995* and *Reportable Disease Surveillance in Virginia, 1995* for more information relating to population sizes and numbers of events or reported cases. These documents can also be used by health districts or HMOs to develop the same data for the individual counties or cities within their area.

Data from the 1995 annual Behavioral Risk Factor Surveillance System (BRFSS) are only available at the State or regional level due to sample size. Beginning with the publication of the 1997 results, the BRFSS data will also become available for many of these measures at the health district level as the survey sample size is increased.

Where the information is provided according to race, the data are presented only for "white" and "black" because of the small numbers for all other categories. To use these small numbers to calculate rates for other minorities for individual jurisdictions would result in unreliable figures. Information on the racial groups, Asians/Pacific Islanders and Native American/American Indians, and the ethnic group Hispanics/Latino is not

available for this report. To address this issue, VDH is examining ways to report information on all racial and ethnic minorities, such as collapsing smaller minority population figures at the city/county level into regional figures. The result would be denominators large enough to permit the calculation of more reliable rates. It is our goal to have such enhanced information in future VDH reports.

Based on the available information, there are often significant disparities between the health status of blacks and whites, as evidenced in the separate charts for several objectives (e.g., Infant Mortality) for these racial groupings. In spite of the disparate baseline data, the task team decided that it is important to have the same targets for all Virginians, even though it will require more effort to achieve equity when there are large differences in current rates between racial groups.

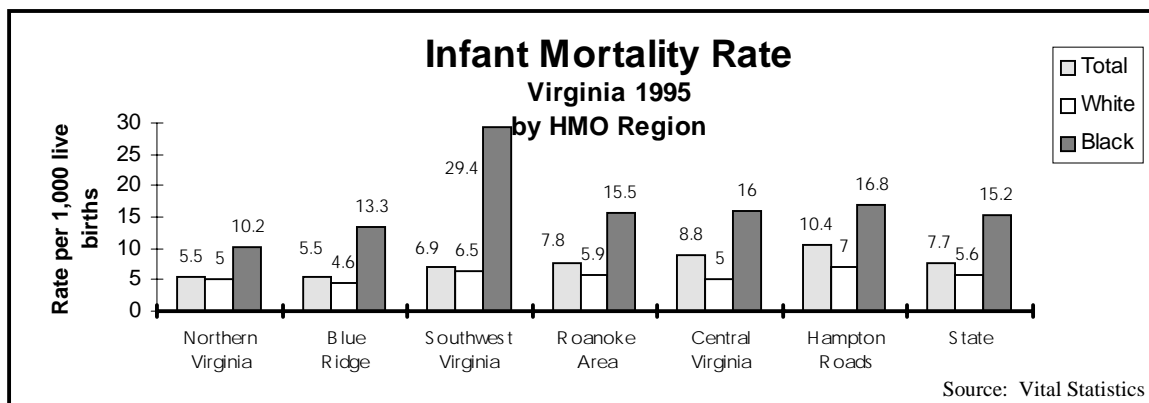
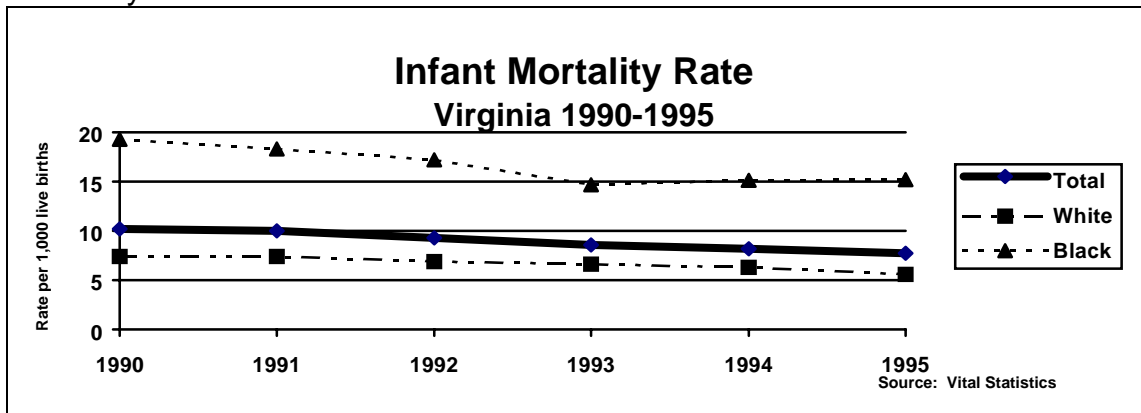
In adopting this position, the task team noted that racial and ethnic factors alone do not cause ill health. Race and ethnicity correlate with other determinants of health status, such as behaviors, access to quality health care and poverty. If we are to achieve the objectives set forth in this report, far-reaching strategies designed to improve the health and overall well-being of minorities must become a guiding priority for our efforts.

This report is designed to help focus the attention of the public, in general, and health districts, in particular, on a limited number of health-related priorities in the Commonwealth. Regular updates of the report will enable the citizens of Virginia and health care professionals to track the progress being made in their respective areas and, in concert with one another, to devise prevention-oriented approaches to local problems. The report will have served its intended purpose if it is used in this way to help promote healthy Virginia communities.

# Infant Mortality

**Objective:** *Reduce the infant mortality rate to no more than 7 per 1,000 live births.*

The infant mortality rate is a reliable indicator of overall infant health and is frequently used as a reference point for defining a society's quality of life. Defined as the number of infants who die between birth and one year of age per 1,000 live births, the total infant mortality rate in Virginia has continued to drop in recent years. In 1995 it was down to 7.7, an all time low for the Commonwealth. While this total rate was just below the United States' provisional rate for that year, the rate for blacks in Virginia has actually risen slightly since 1993, while the rate for whites has continued to decline. Should this trend continue, the disparity between the 1995 rate for the white population of 5.6 and the rate for the black population of 15.2 would become even greater. In order to effectively address this situation, we must do more than rely on the kinds of advances in technology that have been responsible for much of the progress in the reduction of infant mortality during the twentieth century. Continued gains will require the development of increasingly innovative health promotion programs which involve affected constituencies and improved access to care for the most vulnerable members of society.



**Infant Mortality Rate  
by Health District, Total Population, Virginia 1995**

<b>FIRST QUARTILE</b>	Chesterfield	3.3	
	Hanover	3.7	
	Loudoun	4.0	
	Central Shenandoah	4.7	
	West Piedmont	4.8	
	Fairfax	4.9	
	Lenowisco	5.1	
	Lord Fairfax	5.1	
	Thomas Jefferson	5.5	
	<hr/>		
<b>SECOND QUARTILE</b>	Rappahannock/Rapidan	5.8	
	Alleghany	5.8	
	Eastern Shore	5.9	
	Mount Rogers	6.3	
	Prince William	6.3	
	Virginia Beach	6.4	
	Arlington	6.4	
	Roanoke	6.6	
	Rappahannock	6.9	
	<hr/>		
<b>THIRD QUARTILE</b>	Alexandria	7.1	
	Piedmont	7.7	
	Cumberland Plateau	8.2	
	New River	8.4	
	Henrico	8.5	
	Chesapeake	9.1	
	Hampton	9.6	
	Three Rivers	9.6	
	Western Tidewater	9.7	
	<hr/>		
<b>FOURTH QUARTILE</b>	Pittsylvania/Danville	10.6	
	Southside	11.1	
	Central Virginia	11.4	
	Portsmouth	11.9	
	Crater	13.2	
	Norfolk	13.8	
	Peninsula	14.1	
	Richmond	15.2	

<b>Virginia 2000 Objective</b>
<b>7.0 per 1,000</b>

<b>Virginia Rate 1995</b>
<b>7.7 per 1,000</b>

<b>U.S. Rate 1993</b>
<b>8.4 per 1,000</b>

**Infant Mortality Rate  
By Health District, Black Population, Virginia 1995**

<b>FIRST QUARTILE</b>	Hanover	0.0	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Virginia 2000 Objective</b>   <b>7.0 per 1,000</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Virginia Rate** 1995</b>   <b>7.7 per 1,000</b> </div> <div style="border: 1px solid black; padding: 5px;"> <b>U.S. Rate 1993</b>   <b>8.4 per 1,000</b> </div>
	Loudoun	0.0	
	Cumberland Plateau	0.0	
	New River	0.0	
	Chesterfield	3.2	
	Thomas Jefferson	8.2	
	Central Shenandoah	8.2	
	Eastern Shore	8.5	
	Fairfax	9.0	
	<hr/>		
<b>SECOND QUARTILE</b>	Prince William	11.3	
	Virginia Beach	11.3	
	Henrico	11.7	
	Western Tidewater	12.4	
	Rappahannock	12.5	
	West Piedmont	12.5	
	Piedmont	13.1	
	Three Rivers	14.2	
	Rappahannock/Rapidan	14.2	
	<hr/>		
<b>THIRD QUARTILE</b>	Arlington	14.6	
	Roanoke	14.9	
	Portsmouth	15.0	
	Alexandria	15.9	
	Pittsylvania/Danville	16.5	
	Norfolk	16.6	
	Southside	16.7	
	Hampton	17.2	
	Crater	18.6	
	<hr/>		
<b>FOURTH QUARTILE</b>	Richmond	20.0	
	Central Virginia	20.3	
	Chesapeake	21.7	
	Mount Rogers	23.3	
	Peninsula	24.3	
	Lord Fairfax	30.3	
	Alleghany	36.4	
	Lenowisco	76.9	

Rates per 1,000 live births / Rates or total population

**Infant Mortality Rate  
by Health District, White Population, Virginia 1995**

<b>FIRST QUARTILE</b>	West Piedmont	2.7	
	Lord Fairfax	2.9	
	Alexandria	3.0	
	Chesterfield	3.4	
	Piedmont	3.5	
	Roanoke	3.6	
	Eastern Shore	3.7	
	Loudoun	4.1	
	Lenowisco	4.1	
<b>SECOND QUARTILE</b>		Chesapeake	4.2
		Hampton	4.2
		Hanover	4.4
		Central Shenandoah	4.6
		Rappahannock/Rapidan	4.6
		Fairfax	4.7
		Alleghany	4.7
		Richmond	4.8
	Thomas Jefferson	5.1	
<b>THIRD QUARTILE</b>		Virginia Beach	5.2
		Prince William	5.7
		Pittsylvania/Danville	5.9
		Southside	5.9
		Mount Rogers	6.0
		Arlington	6.0
		Rappahannock	6.5
		Henrico	7.7
	Crater	7.8	
	Western Tidewater	7.8	
<b>FOURTH QUARTILE</b>		Three Rivers	8.0
		Portsmouth	8.1
		Peninsula	8.2
		Cumberland Plateau	8.4
		Central Virginia	8.9
		New River	9.1
		Norfolk	12.0

**Virginia 2000  
Objective**  
  
**7.0 per 1,000**

**Virginia Rate  
1995\*\***  
  
**7.7 per 1,000**

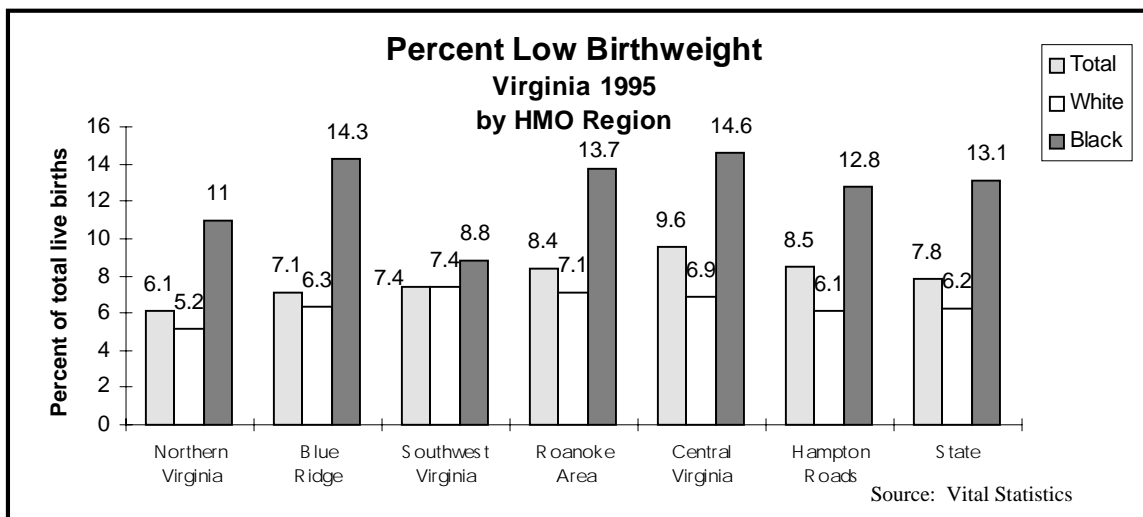
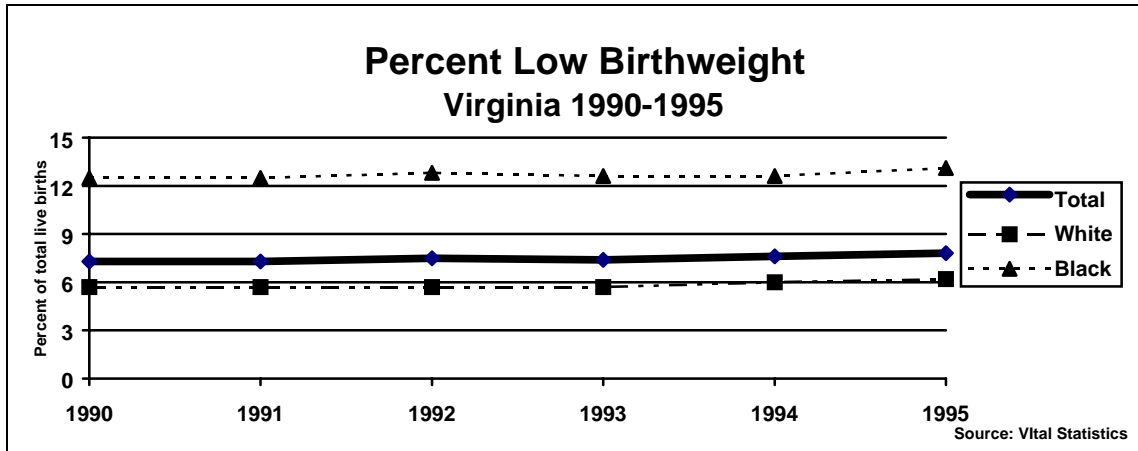
**U.S. Rate  
1993**  
  
**8.4 per 1,000**

Rates per 1,000 live births / Rate for total population

# Low Birthweight

**Objective:** Reduce low birthweight to an incidence of no more than 5% of live births.

Low birthweight is an indicator of limited access to health care and a major predictor of infant mortality. It refers to infants weighing less than 2,500 grams or 5½ pounds at birth regardless of the length of the pregnancy. In 1995, 7.8% of the live births in Virginia, or 7,151 infants, began life in this precarious condition. Of these, the percentage of low weight births for blacks (13.1%) was more than double that for whites (6.2%). Many of these newborns, if they survive their first year of life, are highly susceptible to a wide range of disorders, including neuro-developmental disabilities, learning disorders, behavior problems, and lower respiratory tract infections. Reducing the low birthweight rate can result in significant savings in health care costs associated with these conditions, but it will necessitate an emphasis on prevention that focuses on early prenatal care.



**Percent of Low Weight Live Births  
by Health District, Virginia 1995**

		<b>Virginia 2000 Objective</b>	
		<b>5.0%</b>	
<b>FIRST QUARTILE</b>	Loudoun	5.8	
	Arlington	5.9	
	Prince William	5.9	
	Fairfax	6.0	
	Lord Fairfax	6.4	
	Chesterfield	6.5	
	Alleghany	6.6	
	Mount Rogers	6.6	
	Rappahannock	6.7	
	Alexandria	6.7	
<b>SECOND QUARTILE</b>	Rappahannock/Rapidan	6.9	<b>U.S. 1994</b>
	Chesapeake	7.0	
	Virginia Beach	7.2	<b>7.3%</b>
	Central Shenandoah	7.2	
	Central Virginia	7.2	<b>Virginia 1995</b>
	New River	8.0	
	Henrico	8.1	
	Lenowisco	8.1	
<b>THIRD QUARTILE</b>	Peninsula	8.2	<b>7.8%</b>
	Thomas Jefferson	8.3	
	Cumberland Plateau	8.4	
	Hampton	8.5	
	Eastern Shore	8.5	
	Roanoke	8.5	
	Western Tidewater	8.6	
	Three Rivers	8.8	
	Hanover	9.4	
<b>FOURTH QUARTILE</b>	West Piedmont	9.7	
	Southside	9.9	
	Crater	10.1	
	Norfolk	10.5	
	Piedmont	10.5	
	Pittsylvania/Danville	11.7	
	Portsmouth	11.8	
Richmond	13.8		

**Percent of Low Weight Live Births by Health District  
Black Population, Virginia 1995**

<b>FIRST QUARTILE</b>	Cumberland Plateau	7.1	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>Virginia 2000 Objective</b>   <b>5.0%</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>U.S. 1994</b>   <b>7.3%</b> </div> <div style="border: 1px solid black; padding: 5px;"> <b>Virginia 1995</b>   <b>7.8%*</b> </div>
	Alleghany	7.3	
	Lenowisco	7.7	
	Chesterfield	8.3	
	Rappahannock	9.2	
	Mount Rogers	9.3	
	Roanoke	9.7	
	Prince William	9.8	
	Rappahannock/Rapidan	10.8	
	<hr/>		
<b>SECOND QUARTILE</b>	Arlington	11.1	
	Chesapeake	11.4	
	Eastern Shore	11.5	
	Western Tidewater	11.6	
	Alexandria	11.7	
	Loudoun	11.8	
	Hampton	11.9	
	Fairfax	12.1	
	Virginia Beach	12.4	
	<hr/>		
<b>THIRD QUARTILE</b>	Peninsula	12.7	
	Crater	13.0	
	West Piedmont	13.1	
	Southside	13.1	
	New River	13.2	
	Norfolk	13.5	
	Three Rivers	13.6	
	Henrico	13.9	
	Central Virginia	14.7	
	Hanover	14.7	
<hr/>			
<b>FOURTH QUARTILE</b>	Portsmouth	15.2	
	Piedmont	15.3	
	Central Shenandoah	15.6	
	Lord Fairfax	16.2	
	Richmond	16.9	
	Pittsylvania/Danville	17.3	
	Thomas Jefferson	18.0	

\*Based on total population

**Percent of Low Weight Live Births by Health District, White  
Population, Virginia 1995**

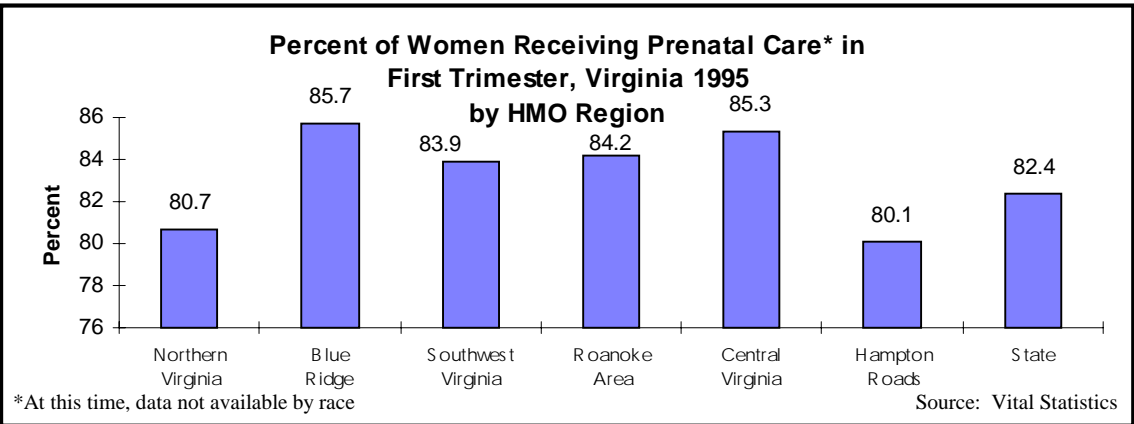
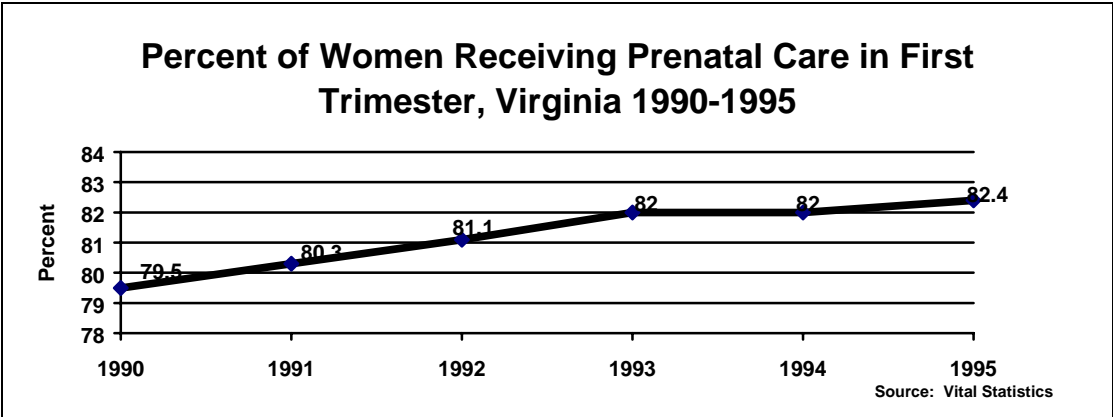
<b>FIRST QUARTILE</b>	Alexandria	4.5	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Virginia 2000 Objective</b>   <b>5.0%</b> </div>
	Arlington	4.7	
	Central Virginia	4.9	
	Prince William	5.1	
	Fairfax	5.1	
	Chesapeake	5.2	
	Loudoun	5.4	
	Virginia Beach	5.8	
	Peninsula	5.9	
	Lord Fairfax	5.9	
	<b>SECOND QUARTILE</b>	Rappahannock/Rapidan	
Eastern Shore		6.0	
Chesterfield		6.2	
Thomas Jefferson		6.2	
Hampton		6.2	
Rappahannock		6.3	
Western Tidewater		6.3	
Mount Rogers		6.5	
<b>THIRD QUARTILE</b>	Alleghany	6.6	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>U.S. 1994</b>   <b>7.3%</b> </div>
	Richmond	6.7	
	Southside	6.8	
	Piedmont	6.8	
	Central Shenandoah	6.9	
	Henrico	7.2	
	Three Rivers	7.2	
	Pittsylvania/Danville	7.2	
	Crater	7.2	
<b>FOURTH QUARTILE</b>	Norfolk	7.5	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Virginia 1995</b>   <b>7.8%*</b> </div>
	Portsmouth	7.6	
	New River	8.0	
	Roanoke	8.2	
	Lenowisco	8.2	
	Cumberland Plateau	8.4	
	Hanover	8.6	
	West Piedmont	8.8	

\*Based on total population

# Prenatal Care

**Objective:** *Increase to at least 90% the proportion of all pregnant women who receive prenatal care in the first trimester of pregnancy.*

An expectant mother who receives no prenatal care is three times more likely to deliver a low birthweight baby. Conversely, high quality prenatal care that is initiated in the first trimester is associated with improved pregnancy outcomes and the physical and emotional support needed during gestation. This is especially important for women at increased medical and/or social risk, such as those from low income households, those with less than a high school education, those who become pregnant as teenagers, and those with a large number of children. It is critical that such individuals be targeted for the most influential components of prenatal care, including early identification and management of medical risk factors, lifestyle behavioral risk reduction (improved diet, cessation of smoking, alcohol and/or drug use), and referral to other needed services. Effectively addressing such issues for these high-risk populations will enable the Commonwealth to go a long way towards realization of its objective in this area.



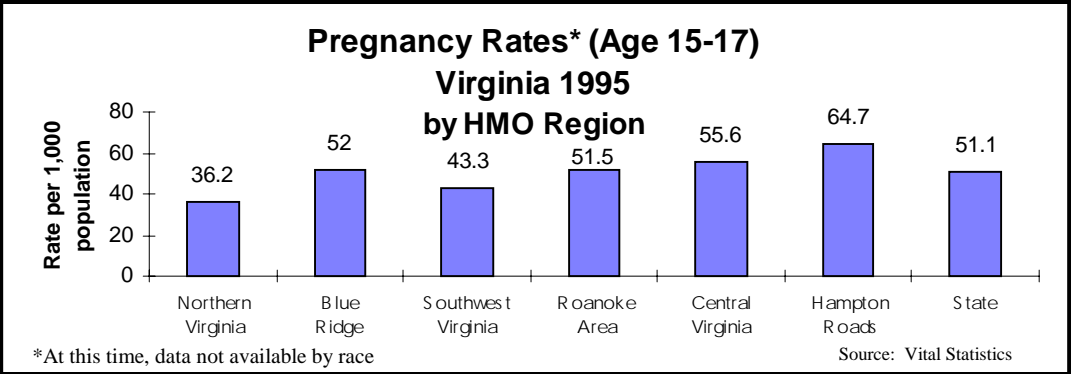
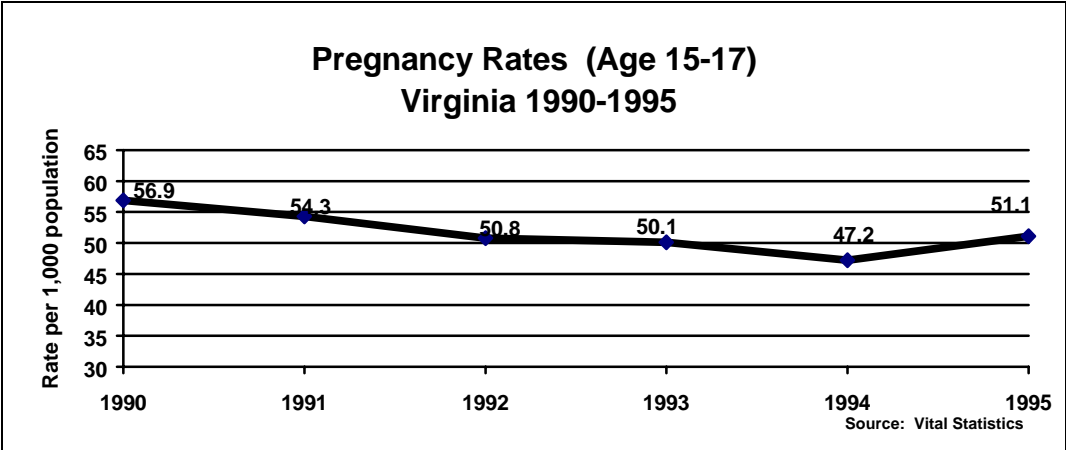
**Percent of Pregnant Women Who Receive Prenatal Care in the First Trimester by Health District, Virginia 1995**

<b>FIRST QUARTILE</b>	Hanover	93.5	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Virginia 2000 Objective</b>   <b>90.0%</b> </div>
	Henrico	91.4	
	Alleghany	91.3	
	Chesterfield	91.0	
	Loudoun	90.0	
	Roanoke	88.3	
	Mount Rogers	87.4	
	Thomas Jefferson	87.3	
	Chesapeake	86.5	
<b>SECOND QUARTILE</b>	Central Virginia	86.3	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Virginia 1995</b>   <b>82.4%</b> </div>
	Lord Fairfax	86.0	
	Rappahannock	85.1	
	Central Shenandoah	84.8	
	Rappahannock/Rapidan	84.7	
	Virginia Beach	83.9	
	New River	83.5	
	Lenowisco	83.3	
	Western Tidewater	82.8	
<b>THIRD QUARTILE</b>	Peninsula	82.2	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>U.S. 1994</b>   <b>80.2%</b> </div>
	Norfolk	82.2	
	Pittsylvania/Danville	82.2	
	Prince William	82.1	
	Fairfax	81.5	
	Three Rivers	81.1	
	Piedmont	80.9	
	Cumberland Plateau	79.8	
	West Piedmont	78.4	
<b>FOURTH QUARTILE</b>	Hampton	78.3	
	Richmond	78.2	
	Crater	77.6	
	Portsmouth	73.8	
	Alexandria	70.1	
	Arlington	68.9	
	Eastern Shore	67.7	
Southside	66.4		

# Pregnancy Among Females Aged 15 -17

**Objective:** *Reduce pregnancies among females aged 15 - 17 to no more than 50 per 1,000 adolescents.*

Teen pregnancy is a critical public health issue which affects the health, educational, social and economic future of the mother and child. The majority of these pregnancies are unintended and about half of them end in abortion. Adolescents are less likely to seek out prenatal care because they are afraid or embarrassed. This phenomenon and the immature physical nature of adolescents result in higher rates of low birthweight babies than other age groups. As the offspring of adolescent mothers grow, they are more apt than children born to older women to have health and cognitive problems, and to be the victims of neglect or abuse. Virginia's 1995 pregnancy rate of females aged 15-17 was the highest it's been in the past four years.



**Pregnancy Rates\* of Females aged 15-17  
by Health District, Virginia 1995**

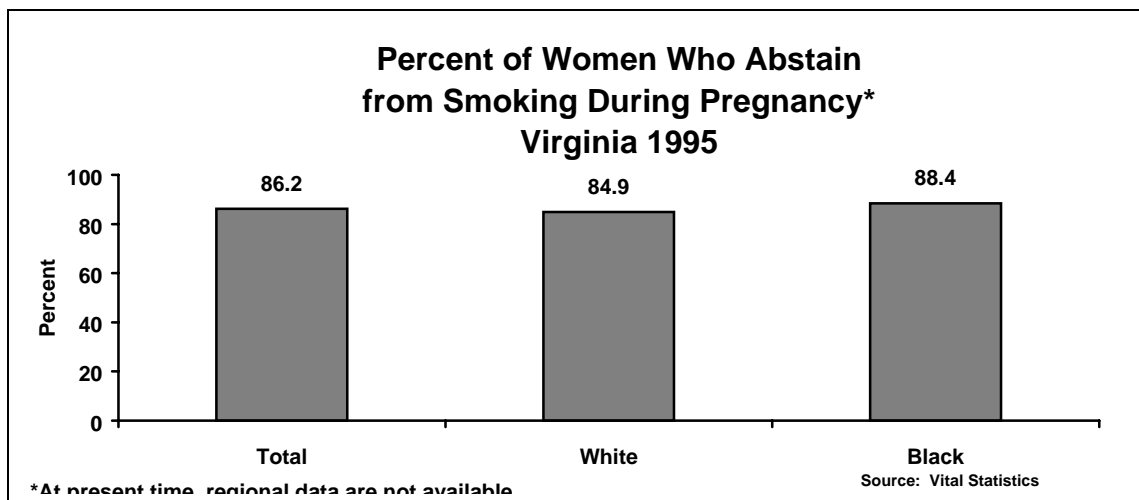
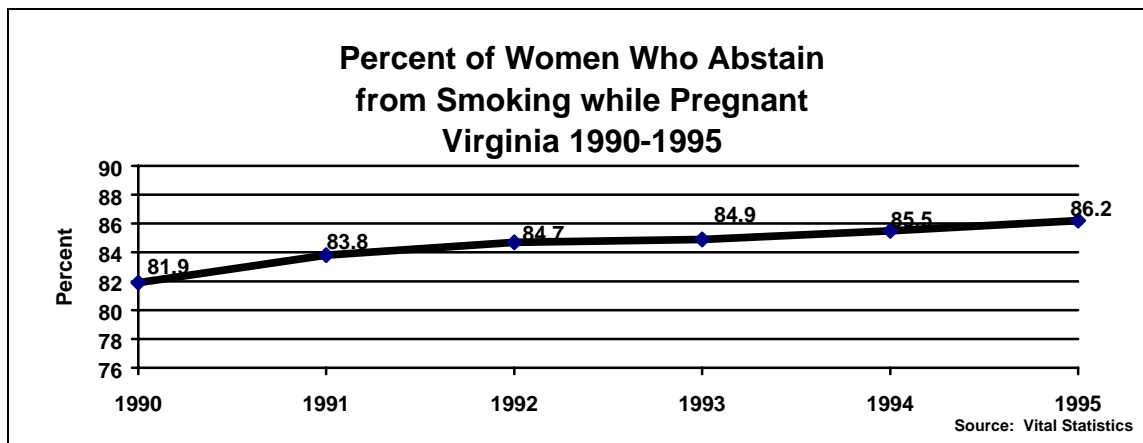
<b>FIRST QUARTILE</b>	Fairfax	23.0	
	Alleghany	28.4	
	Hanover	29.5	
	Loudoun	33.7	
	Chesterfield	37.1	
	Chesapeake	37.1	
	Cumberland Plateau	40.2	
	Lenowisco	43.8	
	Henrico	45.3	
<b>SECOND QUARTILE</b>	Lord Fairfax	46.2	
	Three Rivers	46.3	
	Mount Rogers	47.3	
	Central Shenandoah	47.9	
	New River	48.0	
	Southside	49.1	
	Pittsylvania/Danville	49.5	
	Arlington	50.2	<b>Virginia 2000 Objective</b>  <b>50 per 1,000</b>
	Prince William	50.4	
Virginia Beach	50.9		
<b>THIRD QUARTILE</b>	Rappahannock	51.4	<b>Virginia Rate 1995</b>  <b>51.1 per 1,000</b>
	Piedmont	53.2	
	Central Virginia	53.5	
	West Piedmont	55.6	
	Rappahannock/Rapidan	56.0	
	Thomas Jefferson	58.2	
	Western Tidewater	58.2	
	Peninsula	59.3	
	Eastern Shore	69.2	<b>U.S. Rate 1992</b>  <b>74.6 per 1,000</b>
Crater	69.6		
Hampton	76.2		
Norfolk	98.6		
Portsmouth	99.2		
Roanoke	99.8		
Alexandria	101.3		
Richmond	109.9		

\*Rate per 1,000 adolescents, based on extrapolation of population

# Smoking During Pregnancy

**Objective:** *Increase the percentage of women who abstain from smoking while pregnant to at least 90%*

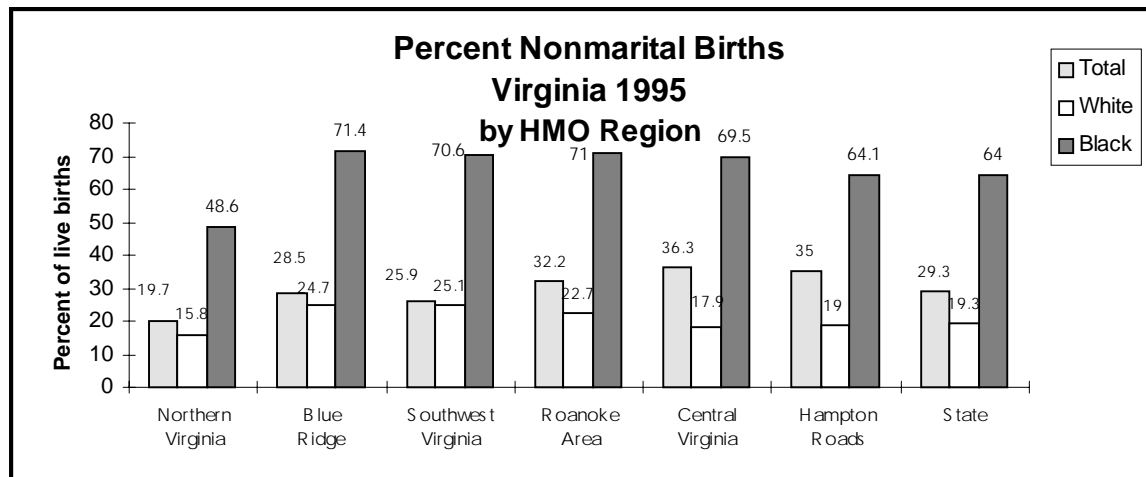
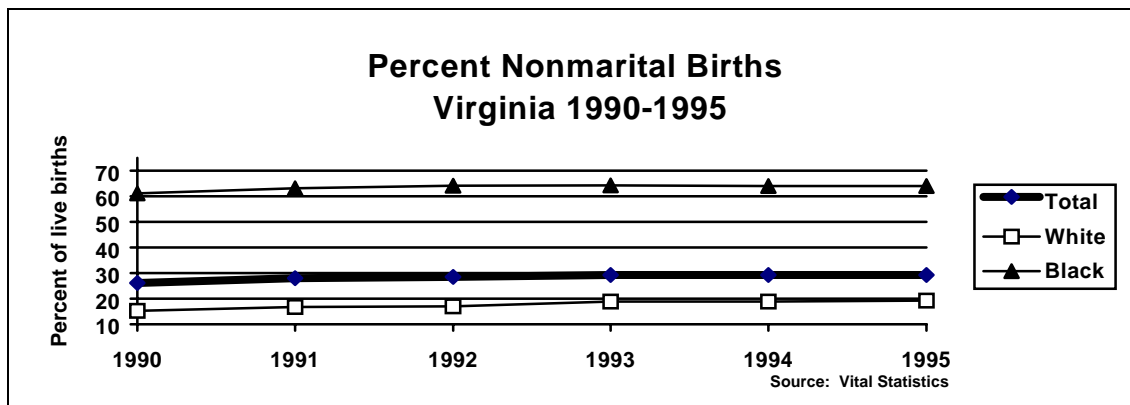
The health implications associated with active and passive smoking are especially significant for pregnant women and infants. Cigarette smoking during gestation increases the woman's risk for miscarriage and other complications of pregnancy and is detrimental to the health of the fetus. It puts infants at increased risk for stillbirth, low birthweight, respiratory distress syndrome, sudden infant death syndrome, and even impaired cognitive development. The earlier a woman stops smoking during pregnancy, the greater the reduction of risk to her baby. Despite these facts, nearly 14% of all pregnant women in Virginia continue to smoke during pregnancy. As the data below indicate, however, the proportion of women in Virginia who abstain from smoking while pregnant continues to rise. Programs which help women abstain from smoking during pregnancy have the potential to improve maternal and child health.



# Nonmarital Births

**Objective:** *Reduce the percentage of nonmarital births to 21.8% of total live births.*

Births to unmarried parents in Virginia accounted for almost three out of every ten live births in 1995. Nearly two-thirds (64%) of black births were to unmarried parents. Studies show that nonmarital childbearing is related to increased risks for both mothers and children. These include the following: mother is less likely to obtain adequate prenatal care; mother is more likely to engage in behavioral risks during pregnancy (e.g., greater use of alcohol, tobacco and narcotic drugs); baby is more likely to have a low birthweight; baby is more likely to die during infancy, child is more likely to be abused; and the child is more likely to have health, and emotional and/or behavioral problems. Addressing the issue of nonmarital births is seen as a key component in the Commonwealth's efforts to deal effectively with the problems of poverty, crime, and poor education and health outcomes.



**Percent of Nonmarital Births,  
by Health District, Total Population, Virginia 1995**

<b>FIRST QUARTILE</b>	Loudoun	12.1	<b>Virginia 2000 Objective</b>  <b>21.8%</b>
	Fairfax	16.5	
	Hanover	18.4	
	Alleghany	21.4	
	Prince William	22.7	
	Chesterfield	23.3	
	Mount Rogers	23.6	
	Virginia Beach	23.8	
	New River	24.4	
<b>SECOND QUARTILE</b>	Cumberland Plateau	24.5	<b>Virginia 1995</b>  <b>29.3 %</b>
	Arlington	24.6	
	Rappahannock	25.4	
	Henrico	26.0	
	Thomas Jefferson	26.9	
	Chesapeake	27.0	
	Central Shenandoah	27.9	
	Rappahannock/Rapidan	29.1	
	Lord Fairfax	29.9	
<b>THIRD QUARTILE</b>	Lenowisco	30.2	<b>U.S. 1995</b>  <b>32.0 %</b>
	Alexandria	31.3	
	Central Virginia Peninsula	32.7	
	West Piedmont	33.6	
	Three Rivers	34.0	
	Western Tidewater	35.3	
	Hampton	38.1	
	Roanoke	38.1	
	Pittsylvania/Danville	42.3	
<b>FOURTH QUARTILE</b>	Piedmont	42.5	
	Southside	44.6	
	Norfolk	44.7	
	Crater	46.6	
	Portsmouth	49.3	
	Eastern Shore	52.7	
	Richmond	54.9	
	61.9		

**Percent of Nonmarital Births,  
by Health District, Black Population, Virginia 1995**

<b>FIRST QUARTILE</b>	Prince William	43.8	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Virginia 2000 Objective</b>   <b>21.8%</b> </div>
	Loudoun	44.8	
	Fairfax	45.0	
	Virginia Beach	46.8	
	Chesterfield	51.6	
	Rappahannock	54.9	
	Arlington	56.0	
	Alexandria	57.2	
<b>SECOND QUARTILE</b>	Henrico	57.5	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Virginia 1995</b>   <b>29.3%</b> </div>
	Chesapeake	57.7	
	Hanover	58.7	
	Hampton	60.3	
	Peninsula	63.7	
	New River	64.5	
	Lord Fairfax	64.6	
	Alleghany	65.5	
<b>THIRD QUARTILE</b>	Mount Rogers	67.4	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>U.S. 1995</b>   <b>32.0 %</b> </div>
	Pittsylvania/Danville	68.2	
	Western Tidewater	68.4	
	Lenowisco	69.2	
	Thomas Jefferson	70.0	
	Norfolk	70.3	
	West Piedmont	70.7	
	Piedmont	70.9	
<b>FOURTH QUARTILE</b>	Central Shenandoah	72.1	
	Southside	72.3	
	Crater	72.7	
	Rappahannock/Rapidan	73.1	
	Three Rivers	73.3	
	Central Virginia	74.1	
	Portsmouth	74.3	
Roanoke	75.2		
Cumberland Plateau	78.6		
Richmond	79.2		
Eastern Shore	86.4		

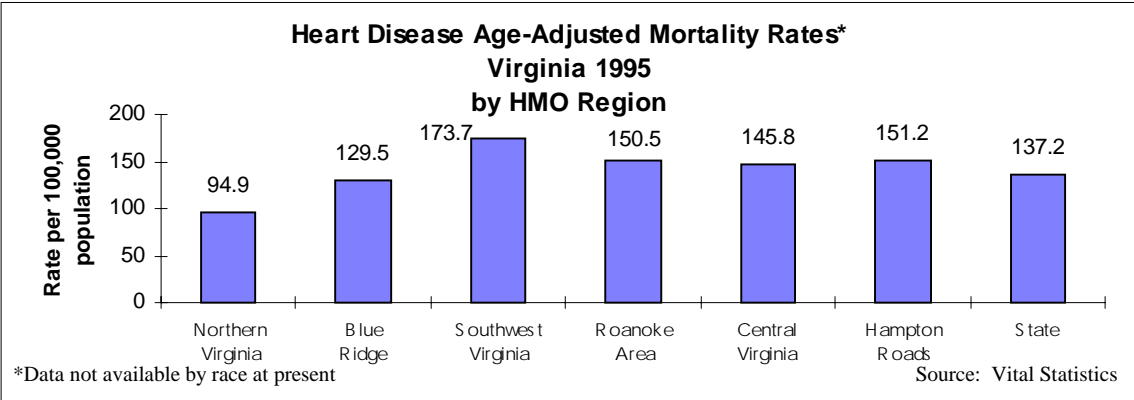
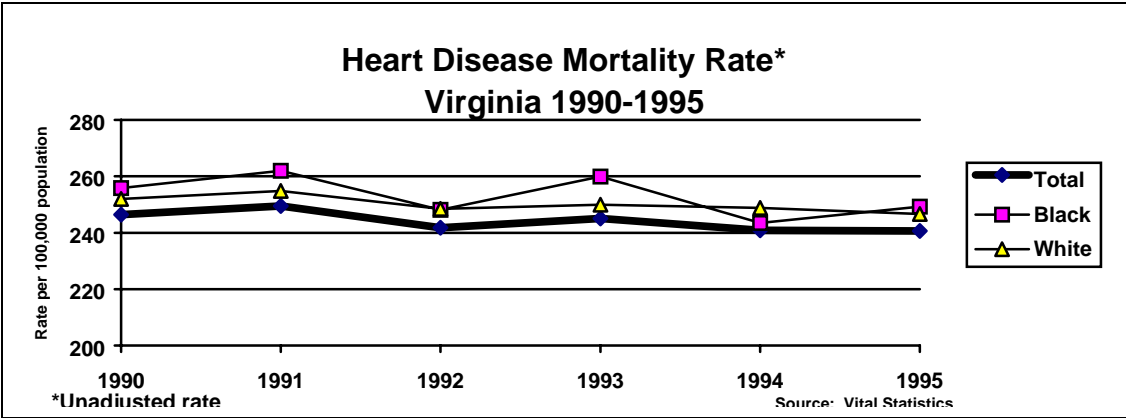
**Percent of Nonmarital Births,  
by Health District, White Population, Virginia 1995**

<b>FIRST QUARTILE</b>	Loudoun	9.9	
	Hanover	12.1	
	Fairfax	13.2	
	Alleghany	14.1	
	Prince William	14.1	
	Chesterfield	14.6	
	Mount Rogers	15.3	
	Virginia Beach	17.6	
	New River	17.6	
<b>SECOND QUARTILE</b>	Cumberland Plateau	17.8	
	Arlington	18.6	
	Rappahannock	19.0	
	Henrico	19.1	
	Thomas Jefferson	19.8	
	Chesapeake	20.3	
	Central Shenandoah	20.4	
	Rappahannock/Rapidan	21.0	
	Lord Fairfax	21.6	
<b>THIRD QUARTILE</b>	Lenowisco	22.0	<b>Virginia 2000 Objective</b>  <b>21.8%</b>
	Central Virginia	22.0	
	Peninsula	22.3	
	Three Rivers	22.3	
	Western Tidewater	22.6	
	Hampton	23.2	
	Roanoke	23.7	
	Pittsylvania/Danville	23.8	
	Piedmont	24.1	
West Piedmont	24.1		
<b>FOURTH QUARTILE</b>	Southside	24.4	<b>Virginia 1995</b>  <b>29.3 %</b>
	Crater	25.1	
	Portsmouth	25.7	
	Norfolk	27.7	
	Eastern Shore	28.4	<b>U.S. 1995</b>  <b>32.0%</b>
	Alexandria	29.7	
Richmond	30.4		

# Coronary Heart Disease Deaths

**Objective:** *Reduce coronary heart disease deaths to no more than 100 per 100,000 people (age-adjusted).*

The leading cause of death in Virginia is heart disease, with 30% of all resident deaths recorded in 1995 attributable to this factor. Mortality rates for heart disease have declined in recent years. However, the age-adjusted rate in 1995 of 137.2 per 100,000 population is still significantly above the objective for the year 2000 of 100 per 100,000 per population. Age-adjusting is a statistical procedure that takes into account the differences in the age distribution of the population, thereby allowing for better comparison of rates for conditions that are associated with age. The first chart below shows unadjusted rates because age-adjusted rates are not available for years prior to 1995. Major risk factors for coronary heart disease include smoking, age, family history, uncontrolled high blood pressure, diabetes mellitus, obesity, elevated LDL cholesterol and decreased HDL cholesterol levels.



**Coronary Heart Disease Age-Adjusted Death Rates\*  
by Health District, Virginia 1995**

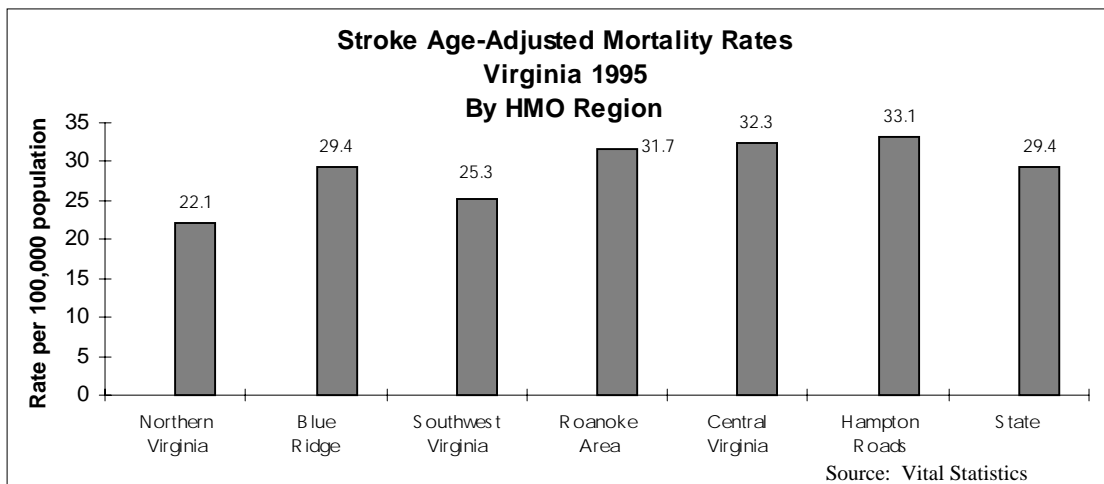
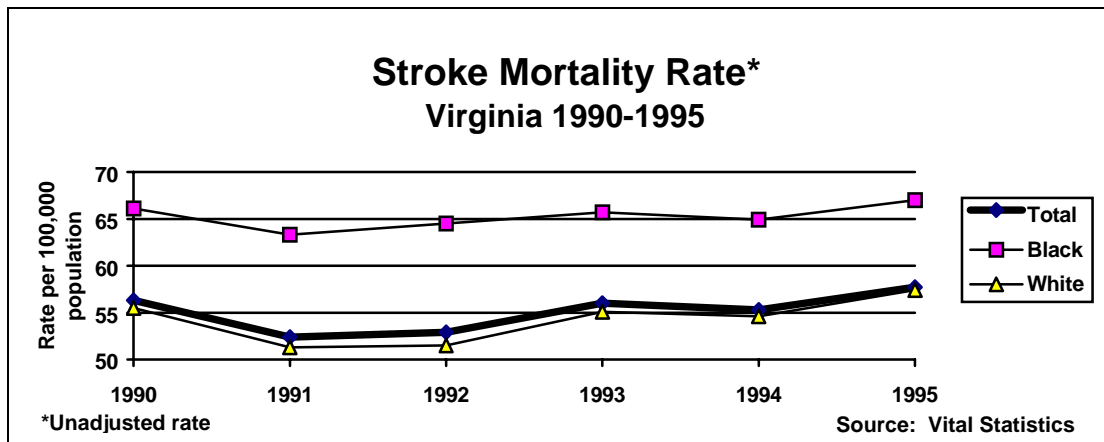
	Fairfax	81.7	<b>Virginia 2000 Objective</b>
	Arlington	96.9	
<b>FIRST QUARTILE</b>	Alexandria	106.8	<b>100 per 100,000</b>
	Chesterfield	107.7	
	Virginia Beach	118.8	<b>U.S. Rate 1993</b>
	Loudoun	121.3	
	Rappahannock/Rapidan	126.5	
	Henrico	127.9	
	Thomas Jefferson	128.2	
		Three Rivers	
	Prince William	132.9	
<b>SECOND QUARTILE</b>	Lord Fairfax	134.8	
	Central Shenandoah	136.8	
	Central Virginia	137.4	
	Rappahannock	138.6	
	Alleghany	141.0	
	Hanover	142.2	
	Peninsula	143.0	
		Hampton	146.0
	New River	146.2	
<b>THIRD QUARTILE</b>	West Piedmont	154.7	
	Mount Rogers	157.0	
	Eastern Shore	159.8	
	Portsmouth	168.9	
	Western Tidewater	169.9	
	Richmond	170.2	
	Piedmont	171.9	
		Chesapeake	173.7
	Roanoke	177.8	
<b>FOURTH QUARTILE</b>	Lenowisco	178.1	
	Crater	179.2	
	Pittsylvania/Danville	180.7	
	Cumberland Plateau	181.3	
	Southside	181.9	
	Norfolk	190.5	

\* Rates per 100,000 population

# Stroke Deaths

**Objective:** *Reduce stroke deaths to no more than 20 per 100,000 people (age-adjusted).*

Although the national death rate for stroke has dropped 60% during the past twenty years, Virginia's rate of 57.7 deaths per 100,000 people in 1995 is higher than it was at the beginning of the decade. Stroke is also a major cause of disability that creates severe physical, emotional and financial hardship for survivors and their families. The major risk factor of all strokes is high blood pressure. People with this condition have up to seven times the risk of experiencing a stroke compared to individuals with normal blood pressures. Persons who smoke and those with a family history of stroke are also at increased risk. Elevated blood cholesterol levels may also contribute to the risk of stroke.



**Stroke Age-Adjusted Death Rates\*  
by Health District, Virginia 1995**

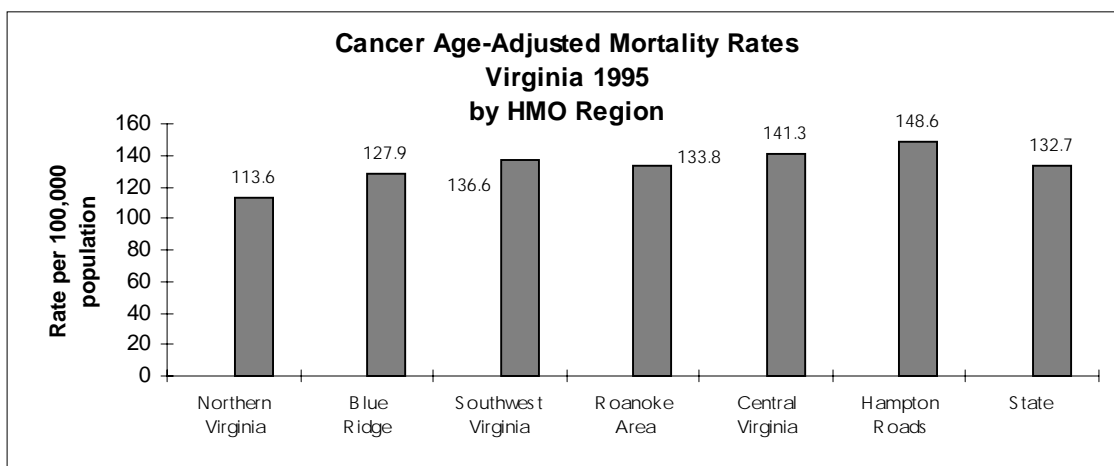
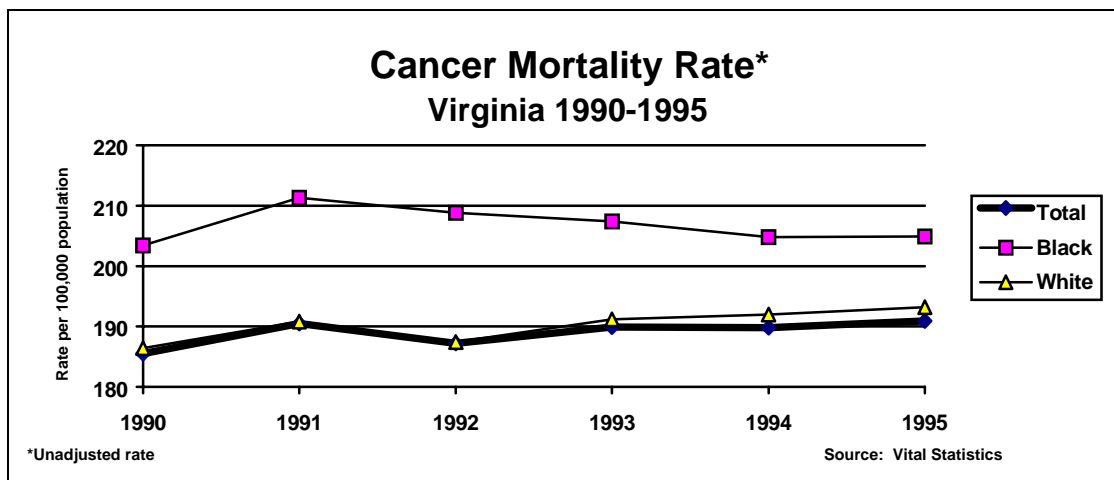
<b>FIRST QUARTILE</b>	Fairfax	19.8	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Virginia 2000 Objective</b>   <b>20 per 100,000</b> </div>	
	Lenowisco	20.9		
	Arlington	23.1		
	Alexandria	23.2		
	West Piedmont	23.8		
	Cumberland Plateau	23.8		
	Loudoun	25.4		
	Rappahannock	26.8		
	Virginia Beach	27.0		
	Central Shenandoah	27.0		
<b>SECOND QUARTILE</b>	Chesterfield	28.5	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>U.S. Rate 1994</b>   <b>26.7 per 100,000</b> </div>	
	Alleghany	29.1		
	Mount Rogers	29.6		
	New River	29.8		
	Three Rivers	29.9		
	Lord Fairfax	30.2		
	Hampton	30.2		
	Henrico	30.5		
	Richmond	30.5		
	<b>THIRD QUARTILE</b>	Peninsula		30.6
Prince William		30.7		
Rappahannock/Rapidan		30.7		
Piedmont		30.9		
Thomas Jefferson		32.2		
Central Virginia		34.5		
Western Tidewater		35.0		
Chesapeake		35.4		
<b>FOURTH QUARTILE</b>		Pittsylvania/Danville	35.7	
		Hanover	36.4	
	Roanoke	38.7		
	Norfolk	39.0		
	Crater	39.5		
	Eastern Shore	40.4		
	Portsmouth	43.5		
	Southside	44.0		

\*Rates per 100,000 population

# Cancer Deaths

**Objective:** Achieve a cancer death rate (age-adjusted) of no more than 130 per 100,000 people.

Cancer is the second leading cause of death in Virginia, accounting for almost one out of four mortalities each year, and claiming 12,510 residents as its victims in 1995. It is a disease that strikes more frequently with advancing age, but many cancer deaths are premature. Lifestyle, environmental, and genetic factors, individually or in combination, can increase a person's risk of developing cancer. Early detection and intervention can significantly decrease cancer mortality, but dietary modifications and reductions in tobacco use appear to be the most promising strategies to achieve long-range improvement levels.



**Cancer Age-Adjusted Death Rates\*  
by Health District, Virginia 1995**

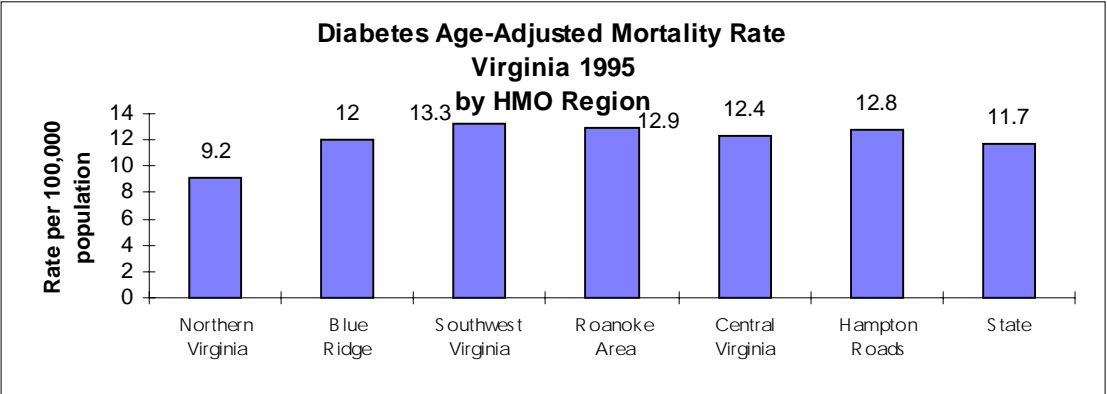
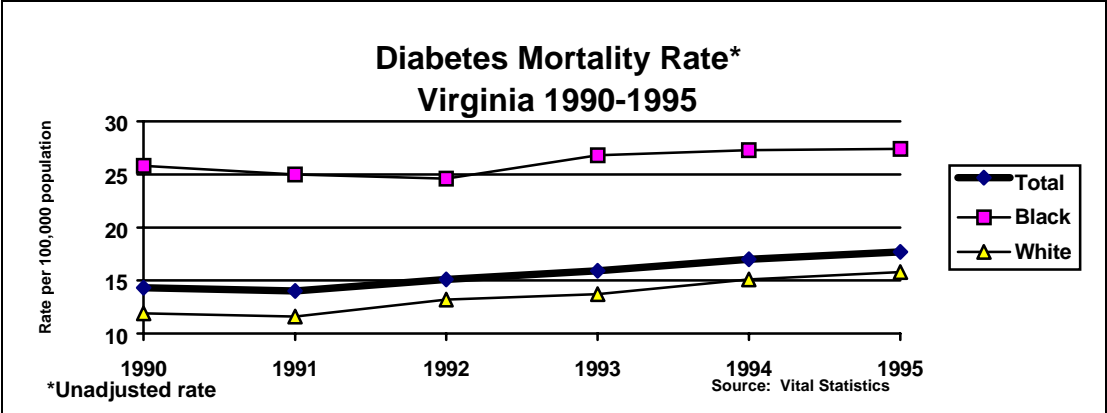
	Fairfax	103.3	
	Arlington	109.1	
	New River	109.3	
	Alexandria	117.4	
<b>FIRST QUARTILE</b>	Chesterfield	121.1	
	Rappahannock/Rapidan	121.3	
	Central Shenandoah	121.7	
	Virginia Beach	123.6	
	West Piedmont	125.5	
	Loudoun	126.8	
	Thomas Jefferson	128.5	
	Cumberland Plateau	129.7	<b>Virginia 2000 Objective</b>  <b>130 per 100,000</b>
Henrico	132.1		
<b>SECOND QUARTILE</b>	Mount Rogers	132.5	<b>U.S. Rate 1993</b>  <b>132 per 100,000</b>
	Lord Fairfax	134.6	
	Alleghany	135.0	
	Hanover	135.4	
	Central Virginia	135.8	
	Peninsula	138.9	<b>Virginia Rate 1995</b>  <b>132.7 per 100,000</b>
	Rappahannock	139.2	
<b>THIRD QUARTILE</b>	Southside	143.1	
	Prince William	147.2	
	Lenowisco	150.8	
	Chesapeake	151.0	
	Piedmont	151.3	
	Western Tidewater	153.1	
	Pittsylvania/Danville	156.9	
	Three Rivers	158.6	
<b>FOURTH QUARTILE</b>	Crater	159.1	
	Roanoke	160.3	
	Hampton	161.5	
	Richmond	162.7	
	Norfolk	165.4	
	Portsmouth	169.7	
	Eastern Shore	176.5	

\*Rates per 100,000 population

# Diabetes Deaths

**Objective:** *Reduce diabetes-related deaths to no more than 11 per 100,000 people (age-adjusted).*

Diabetes is a chronic, metabolic disease characterized by high blood glucose levels caused by a deficiency in insulin production and/or impairment of insulin action. Although diabetes affects people of all ages, the majority of those with the disease are over thirty-five years old. Over 220,000 adult Virginians are estimated to have diagnosed diabetes, with an equal number undiagnosed. A total of 1,159 residents of the Commonwealth died from diabetes as the underlying (immediate) cause in 1995. However, death is only one measure of the seriousness of this disease. It is a risk factor for cardiovascular disease and neuropathy, and the leading cause of lower extremity amputation, blindness, and end-stage renal disease. Because of the chronic nature of diabetes and the far-reaching complications associated with it, the costs to society are enormous. It is estimated that the direct costs of medical care, coupled with the indirect costs of lost productivity and premature mortality in Virginia in 1992 exceeded \$2.8 billion.



**Diabetes Mellitus Age-Adjusted Death Rates\* by  
Health District, Virginia 1995**

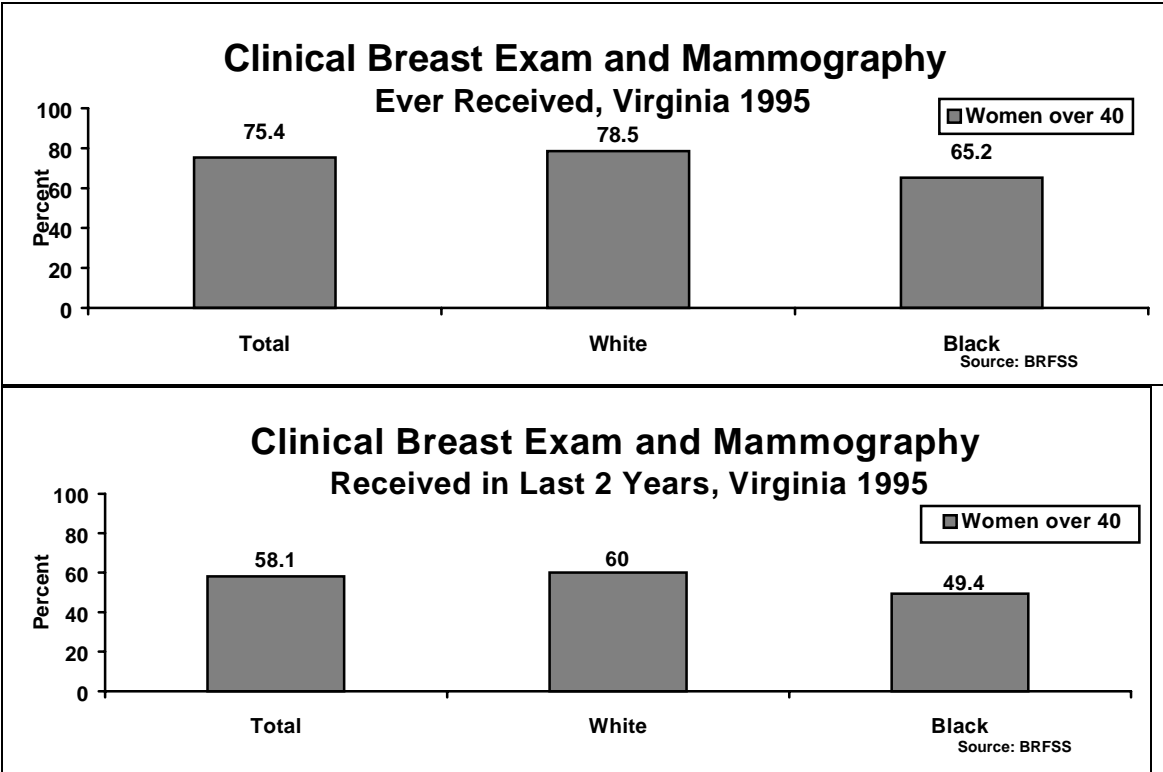
<b>FIRST QUARTILE</b>	Arlington	6.9	<table border="1"> <tr> <td align="center"><b>Virginia 2000 Objective</b></td> </tr> <tr> <td align="center"><b>11.0 per 100,000</b></td> </tr> </table>	<b>Virginia 2000 Objective</b>	<b>11.0 per 100,000</b>
	<b>Virginia 2000 Objective</b>				
	<b>11.0 per 100,000</b>				
	Fairfax	7.3			
	Chesterfield	8.0			
	Three Rivers	8.6			
	Shenandoah	10.0			
	Lord Fairfax	10.4			
	New River	11.4			
	Chesapeake	11.4			
Virginia Beach	11.6				
Alleghany	11.6	<table border="1"> <tr> <td align="center"><b>Virginia Rate 1995</b></td> </tr> <tr> <td align="center"><b>11.7 per 100,000</b></td> </tr> </table>	<b>Virginia Rate 1995</b>	<b>11.7 per 100,000</b>	
<b>Virginia Rate 1995</b>					
<b>11.7 per 100,000</b>					
<b>SECOND QUARTILE</b>	Hampton		11.8		
	Hanover		11.9		
	Mount Rogers		11.9		
	Peninsula		11.9		
	Rappahannock		12.1		
	Henrico		12.5		
	Alexandria		12.9		
	Thomas Jefferson	13.0			
	Lenowisco	13.0			
	<b>THIRD QUARTILE</b>	Southside	13.2		
Pittsylvania/Danville		13.3			
Piedmont		13.4			
Central Virginia		13.5			
Crater		13.7			
West Piedmont		13.8			
Cumberland Plateau		14.4			
Western Tidewater		15.6			
<b>FOURTH QUARTILE</b>	Portsmouth	15.8			
	Rappahannock/Rapidan	16.3			
	Loudoun	16.4			
	Prince William	16.6			
	Norfolk	16.8			
	Richmond	17.1			
	Roanoke	19.0			
	Eastern Shore	19.7			

\* Rates per 100,000 population

# Clinical Breast Examinations and Mammography

**Objective:** *Increase to at least 80% the proportion of women aged 40 and over who have ever received a clinical breast examination and a mammogram, and to at least 60% those aged 50 and older who have received them within the preceding one to two years.*

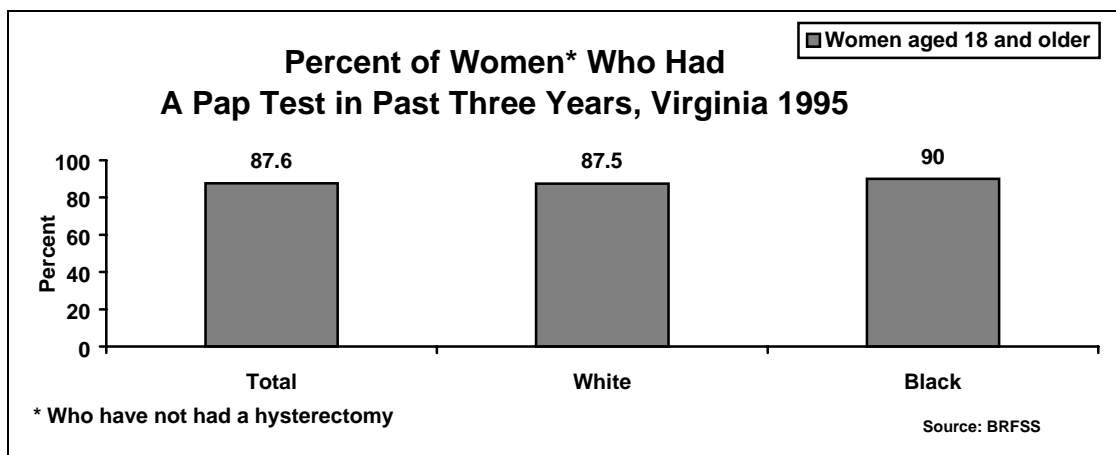
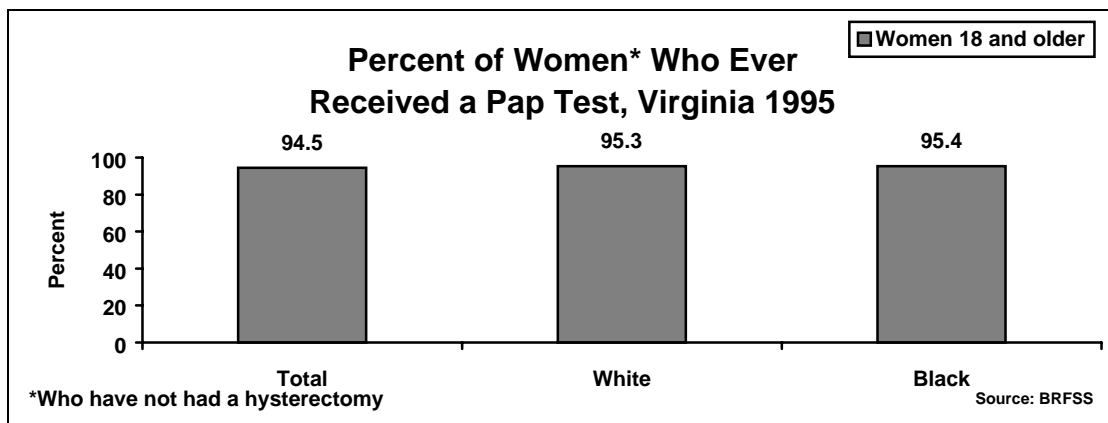
The American Cancer Society (ACS), in a 1997 report, estimates that cancer of the breast accounts for approximately 30.2% of the number of new cancer cases among U.S. women. The ACS has also stated that one in nine women will develop breast cancer in her lifetime. These kinds of statistics, while unnerving, are no longer accompanied by the fear and fatalism that a few years ago was so pervasive. The difference is that educational campaigns have been at work to inform the public that the risk of death due to breast cancer can be significantly reduced when adequate preventive measures are taken. With the current technology available for screening and improved treatment, women with early-stage breast cancer now have a survival rate of over 90%. Early detection through breast examinations and mammography is a primary objective and as indicated below, there is still a need, particularly among black women, to promote early screening programs.



## Pap Tests

**Objective:** *Increase to at least 95% the proportion of women aged 18 and older who have ever received a Pap test and to at least 85% those who have received a Pap test in the preceding three years.*

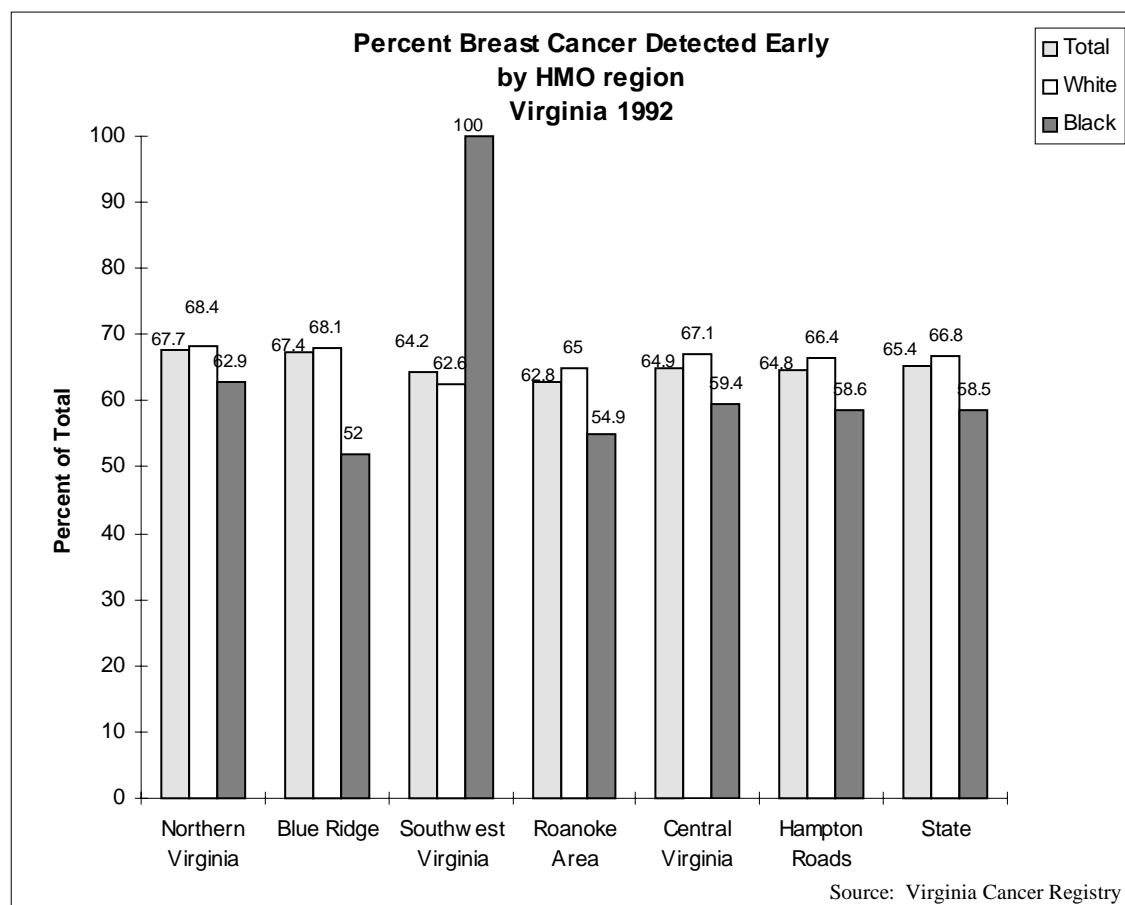
The Pap test is the procedure used to screen for cervical cancer. Because it is so effective in detecting pre-cancerous lesions, invasive cervical cancer is a preventable disease and deaths from this cancer are avoidable. Generally, annual Pap tests are recommended for women 18 years of age and older and sexually active women of all ages. In addition to detecting cancer, the Pap test can assist in the diagnosis of cervical infections and certain sexually transmitted diseases, such as genital warts and human papillomavirus. Women less likely to have a Pap test within the last three years include older and rural women. Such individuals who do not have routine Pap tests are more likely to have cervical cancer diagnosed at a later, less treatable stage. The data for Virginia indicate that this is an area in which great strides have been made. We must now work hard to sustain and improve upon our accomplishments to date.



## Stage of Breast Cancer at Diagnosis

**Objective:** *Increase the percent of breast cancer that is diagnosed in the early stages to at least 72.9% .*

The American Cancer Society (ACS) reports a national increase in breast cancer incidence during the 1980s, which has since leveled off. While still the second most frequent cancer cause of death among women, the mortality rates are declining for white women and younger black women. In both instances this is attributed to increased screening efforts and the detection of many breast cancers before they have become clinically apparent. The ACS estimates that 90 to 95% of all breast cancers can be detected through mammography. In Virginia, nearly two-thirds of all breast cancers reported for 1992 were diagnosed in the early stages, although the percentage for black women (58.5%) lagged behind that for white women (66.8%). Increased use of mammography facilities, frequency of women performing regular breast self-examination, and frequency of clinical breast exams can raise these percentages and thereby further decrease morbidity and mortality.



**Percent Breast Cancer Diagnosed Early by  
Health District, Virginia 1992**

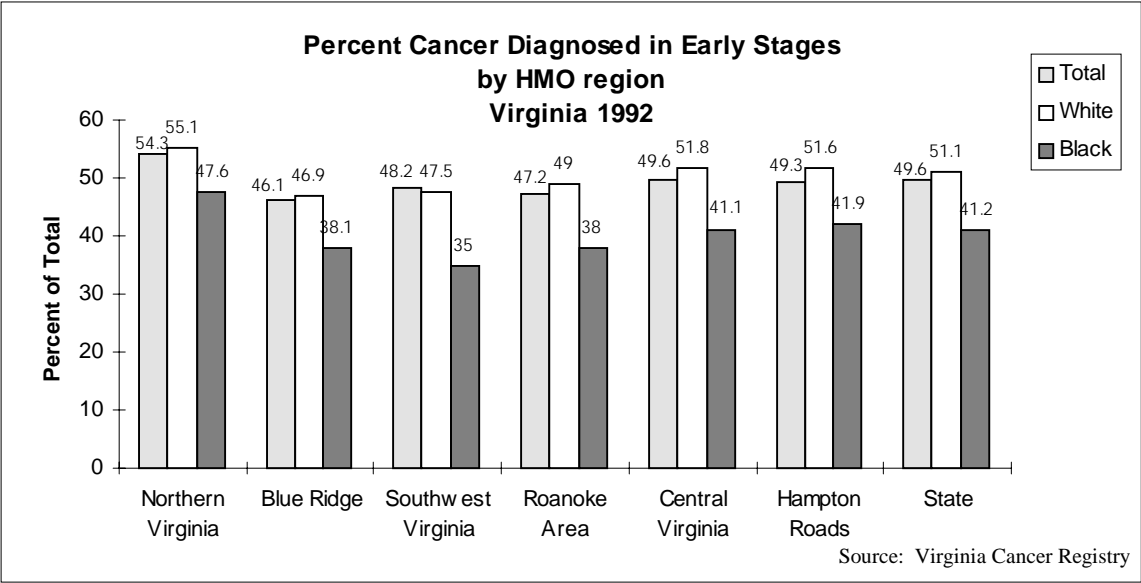
<b>FIRST QUARTILE</b>	Loudoun	75.0	<b>Virginia 2000 Objective</b>  <b>73.1%</b>
	Arlington	73.5	
	Roanoke	72.7	
	West Piedmont	72.0	
	Thomas Jefferson	70.4	
	Chesterfield	70.3	
	Rappahannock	69.4	
	Alleghany	68.9	
	Fairfax	67.6	
	Central Virginia	67.6	
<b>SECOND QUARTILE</b>	Peninsula	67.0	<b>Virginia 1992</b>  <b>65.6%</b>
	Mount Rogers	66.9	
	Three Rivers	66.7	
	Prince William	66.3	
	Portsmouth	66.3	
	Virginia Beach	66.3	
	Hanover	66.2	
	Lenowisco	65.4	
	Alexandria	65.3	
<b>THIRD QUARTILE</b>	Henrico	65.1	
	Central Shenandoah	64.8	
	Lord Fairfax	64.2	
	Chesapeake	63.9	
	Hampton	63.5	
	Norfolk	63.4	
	Western Tidewater	63.1	
	Rappahannock/Rapidan	61.7	
	Crater	60.6	
<b>FOURTH QUARTILE</b>	Richmond	59.8	
	Piedmont	58.5	
	Pittsylvania/Danville	58.4	
	Cumberland Plateau	58.3	
	New River	49.3	
	Southside	47.2	
	Eastern Shore	45.5	

# Stage of Cancer at Diagnosis

**Objective:** *Increase the percent of all cancer that is diagnosed in the early stages to at least 57.1%*

The percentage of cancers which are first detected in the early stages serves as an indicator of the quantity, quality, and effectiveness of screening efforts. At the time of initial diagnosis, cancer is considered in the early stages of development if it has not spread beyond its organ of origin. Staging information helps guide treatment selection and planning, by relating an individual patient’s prognosis to the outcomes experienced by previous patients with cancers detected at the same point of development and treated with various methods. Generally, early stage cancers have the most favorable outcomes. Therefore, by increasing the percentage of all cancers that are detected before progressing to a later stage of development, cancer mortality should decrease. Since an early-stage cancer often causes no symptoms, its detection is almost always through some sort of screening effort, either self-examination (e.g., breast) or clinical screening (e.g., mammography).

The Virginia Cancer Registry in the Virginia Department of Health collects information on the stage of cancer at diagnosis. Of all cancers reported for 1992, 49.6% were diagnosed in the early stages (*in situ* and local). The white population had a higher proportion of cancers diagnosed in the early stages (51%) than the black population (41.3%). Increased screening can raise the percentage diagnosed in early stages which should decrease the cancer mortality and overall morbidity.



**Percent Cancer Diagnosed Early by  
Health District, Virginia 1992**

		<b>Virginia 2000 Objective</b>
<b>FIRST QUARTILE</b>	Loudoun	56.0
	Prince William	55.6
	Alexandria	55.5
	Fairfax	55.2
	West Piedmont	54.6
	Virginia Beach	54.5
	Chesterfield	54.3
	Rappahannock	53.6
	Thomas Jefferson	52.9
	Henrico	52.9
<b>SECOND QUARTILE</b>	Arlington	51.5
	Portsmouth	51.4
	Lenowisco	51.0
	Norfolk	50.7
	Piedmont	50.5
	Hanover	49.7
	Chesapeake	49.4
	Peninsula	49.1
	New River	49.0
	Alleghany	48.9
<b>THIRD QUARTILE</b>	Hampton	48.7
	Mount Rogers	48.3
	Roanoke	47.3
	Cumberland Plateau	47.2
	Pittsylvania/Danville	47.0
	Central Virginia	45.1
	Three Rivers	44.6
	Richmond	44.3
	Shenandoah	43.6
	Rappahannock/Rapidan	43.3
<b>FOURTH QUARTILE</b>	Lord Fairfax	42.3
	Crater	41.7
	Southside	41.0
	Western Tidewater	40.2
	Eastern Shore	33.3

**Virginia 2000  
Objective**

**57.1%**

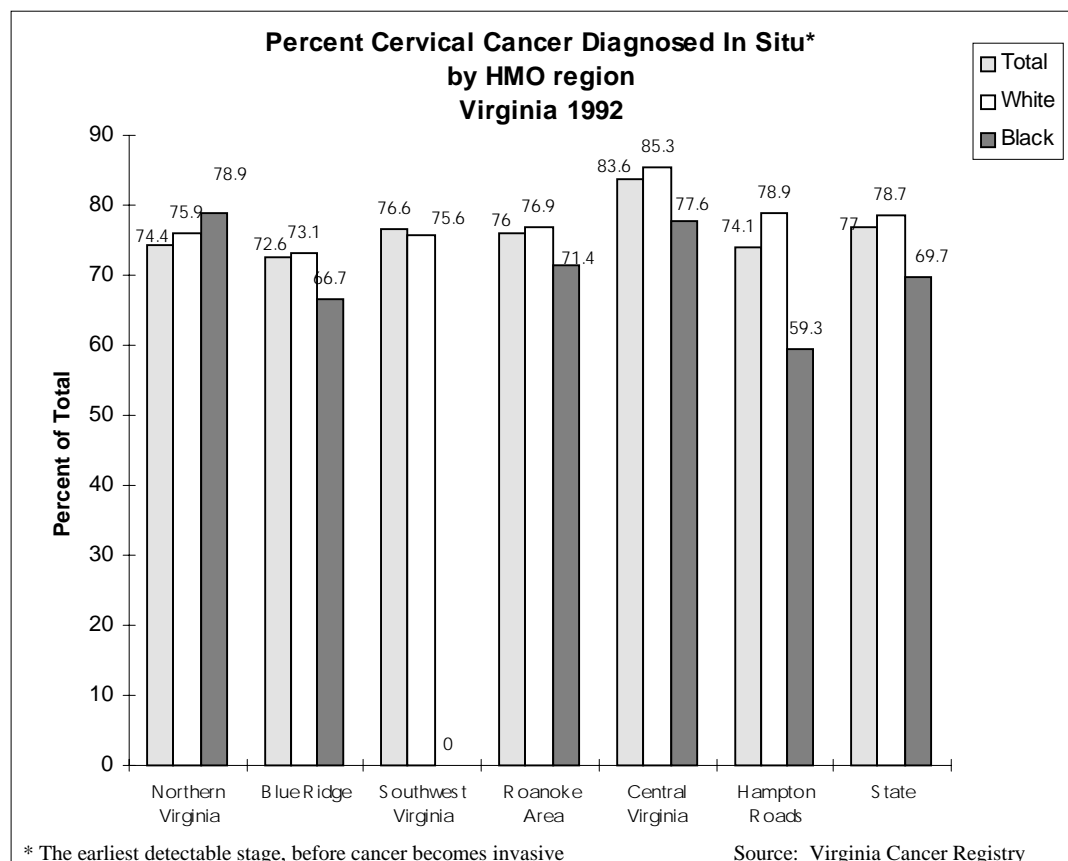
**Virginia  
1992**

**49.6%**

## Stage of Cervical Cancer at Diagnosis

**Objective:** *Increase the percent of cervical cancer that is diagnosed in the in situ stage to at least 84.5%.*

Nationally, cervical cancer incidence and mortality rates were roughly cut in half during the 1970s and 1980s, due in large part to Pap screening. The role of screening in reducing cervical cancer mortality is unmistakable, as cervical cancers diagnosed in the earliest invasive stage, local, can be very successfully treated, with a 5-year survival rate of 91%. Low socioeconomic status, multiple sex partners, early age at first intercourse, and cigarette smoking have been associated with high cervical cancer rates. Cervical cancers are now most often detected in the in situ stage, which is prior to becoming invasive and is the earliest stage detectable. In Virginia, 77% of all cervical cancers reported for 1992 were diagnosed in this stage, although white women were more often diagnosed while still in this early stage than black women (78.7 to 69.7%).



**Percent Cervical Cancer Diagnosed *In Situ*  
by Health District, Virginia 1992**

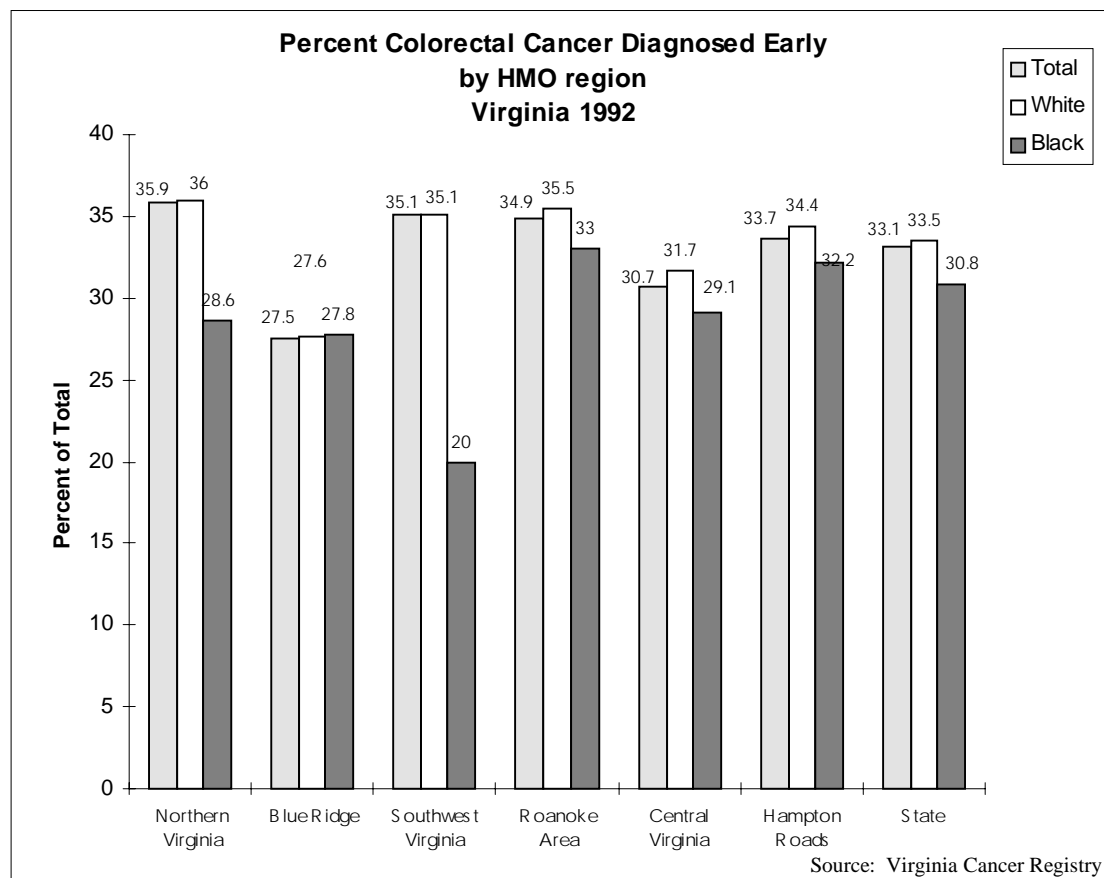
<b>FIRST QUARTILE</b>	Chesterfield	92.6	<b>Virginia 2000 Objective</b>  <b>84.3%</b>
	Rappahannock	92.3	
	Piedmont	90.0	
	Alexandria	87.5	
	Richmond	87.3	
	Thomas Jefferson	87.1	
	Cumberland Plateau	85.0	
	Virginia Beach	83.5	
	Norfolk	82.2	
<b>SECOND QUARTILE</b>	Central Virginia	80.5	<b>Virginia 1992</b>  <b>76.8%</b>
	Henrico	79.3	
	Hanover	79.3	
	West Piedmont	79.2	
	Lenowisco	77.8	
	Three Rivers	77.3	
	Rappahannock/Rapidan	76.0	
	Prince William	75.0	
Alleghany	75.0		
<b>THIRD QUARTILE</b>	New River	74.2	
	Crater	74.2	
	Mount Rogers	72.2	
	Southside	71.4	
	Central Shenandoah	70.7	
	Roanoke	70.6	
	Arlington	70.0	
	Chesapeake	70.0	
	Portsmouth	69.6	
<b>FOURTH QUARTILE</b>	Fairfax	69.2	
	Pittsylvania/Danville	66.7	
	Hampton	66.7	
	Peninsula	58.5	
	Loudoun	50.0	
	Western Tidewater	46.7	
	Lord Fairfax	44.0	
	Eastern Shore	0.0*	

\*Only 2 cases of cervical cancer diagnosed

## Stage of Colorectal Cancer at Diagnosis

**Objective:** *Increase the percent of colorectal cancer that is diagnosed in the early stage to at least 40.6%.*

According to the American Cancer Society, cancers of the colon or rectum account for about 9% of all cancer cases in the United States. People with colorectal cancers diagnosed in a localized stage can be treated with great success and have a 5-year survival rate of 91%. Unfortunately, only 37% of all colorectal cancers are discovered in the local stage, and the survival rate plummets as the cancer has the opportunity to advance. Early detection of colorectal cancers occurs through digital rectal exams at a physician's office, fecal occult blood testing, and sigmoidoscopy (fiberoptic inspection of the rectum and lower colon). Recommended guidelines suggest that these tests should be conducted annually beginning with age 40, annually beginning with age 50, and every 3 to 5 years after age 50, respectively. With only one-third of all colorectal cases in Virginia detected early in 1992, there is a marked need to improve screening efforts to significantly raise this percentage.



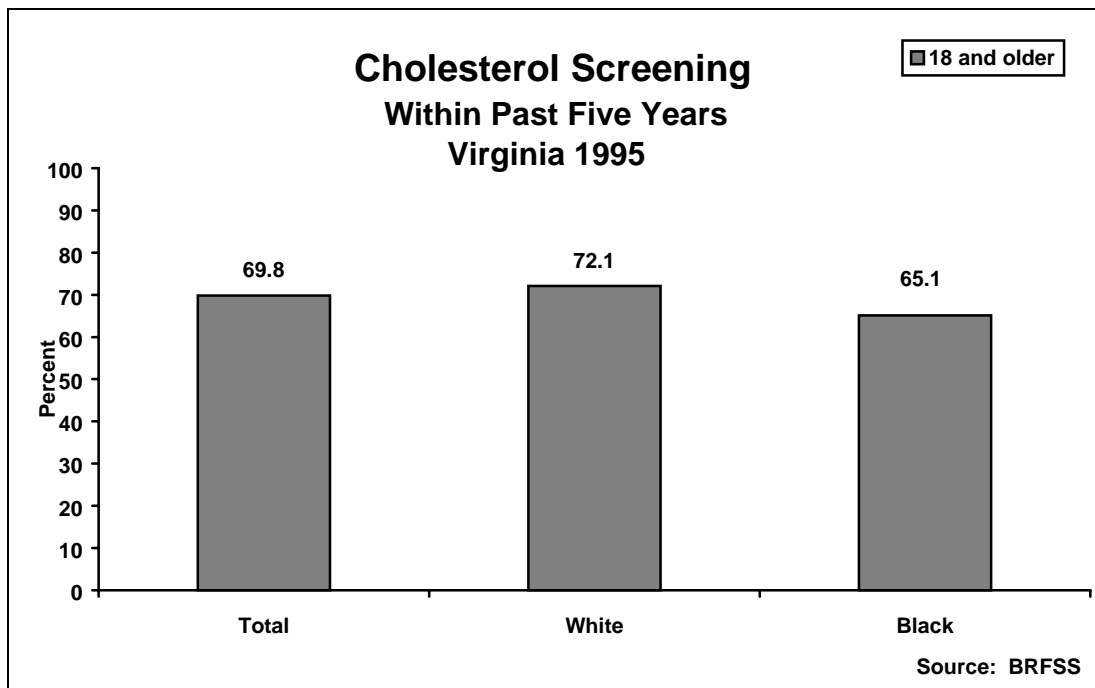
**Percent Colorectal Cancer Diagnosed Early  
by Health District , Virginia 1992**

<b>FIRST QUARTILE</b>	Prince William	50.9	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Virginia 2000 Objective</b>   <b>40.8%</b> </div>
	West Piedmont	50.0	
	Rappahannock	46.0	
	Chesterfield	44.0	
	New River	43.9	
	Peninsula	40.7	
	Portsmouth	40.6	
	Alexandria	40.4	
	Virginia Beach	37.8	
<b>SECOND QUARTILE</b>	Roanoke	36.8	<div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>Virginia 1992</b>   <b>33.3%</b> </div>
	Cumberland Plateau	36.4	
	Mount Rogers	35.0	
	Piedmont	34.6	
	Hampton	34.5	
	Norfolk	34.1	
	Pittsylvania/Danville	34.0	
	Lenowisco	33.3	
	Chesapeake	33.3	
<b>THIRD QUARTILE</b>	Lord Fairfax	32.8	
	Fairfax	32.6	
	Arlington	31.5	
	Alleghany	31.0	
	Central Shenandoah	30.5	
	Crater	30.4	
	Hanover	29.2	
	Henrico	28.0	
	Central Virginia	27.1	
<b>FOURTH QUARTILE</b>	Eastern Shore	26.9	
	Richmond	26.4	
	Rappahannock/Rapidan	25.0	
	Thomas Jefferson	24.1	
	Loudoun	23.8	
	Southside	20.8	
	Western Tidewater	17.9	
Three Rivers	15.6		

## Cholesterol Screening

**Objective:** *Increase to at least 75% the proportion of adults who have had their blood cholesterol checked within the preceding five years.*

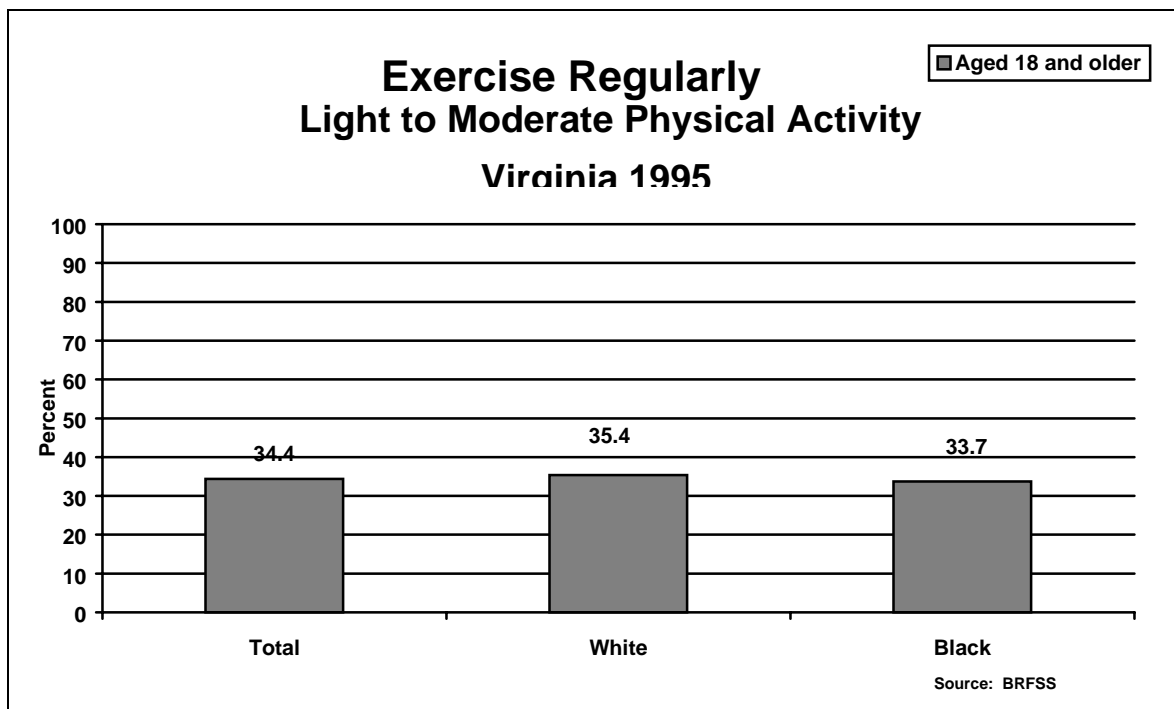
The National Heart, Lung, and Blood Institute regards a blood cholesterol level below 200 mg/dL as desirable, since levels above that are associated with increased rates of coronary heart disease. Yet the mean cholesterol level for Americans is 213 mg/dL and three out of every ten adult citizens of Virginia have not had their blood cholesterol screened within the past five years to determine whether they are at risk. Early detection of high blood cholesterol, more specifically increased levels of low density lipoproteins (LDL) and decreased levels of high density lipoproteins (HDL), is critical because it enables individuals to change to more healthy lifestyles. Although more study is needed, it is thought that most people can lower their high blood cholesterol by reducing their intake of saturated fat, total fat, and dietary cholesterol, and by normalizing their weight and increasing their physical activity. Medications are available for those whose blood cholesterol levels remain significantly elevated despite dietary and lifestyle modifications.



## Physical Activity

**Objective:** Increase to at least 40% the proportion of people aged 18 and older who engage regularly, preferably daily, in light to moderate physical activity for at least 30 minutes per session.

The relationships between physical activity and health outcomes are numerous and complex, but there is good epidemiologic evidence that regular physical activity promotes health and reduces the risk of many diseases, including coronary heart disease, hypertension, cancer, osteoporosis, and noninsulin-dependent diabetes mellitus. There are also positive effects on individuals' mental well-being to be gained, such as the alleviation of depression and anxiety. Unfortunately, only about one-third of Virginians surveyed in 1995 indicated that they exercised on a regular basis (3+ times a week, 20+ minutes per session, and at more than 50% of capacity). The benefits to be gained by increasing physical activity are not just personal ones; employers too stand to profit from a healthier workforce. Physically fit adults have a 33% lower work absentee rate than their unfit counterparts and cost approximately \$130 less per year in medical insurance claims. Clearly, one of our most important public health challenges is moving our society from a sedentary one to a more physically active one.

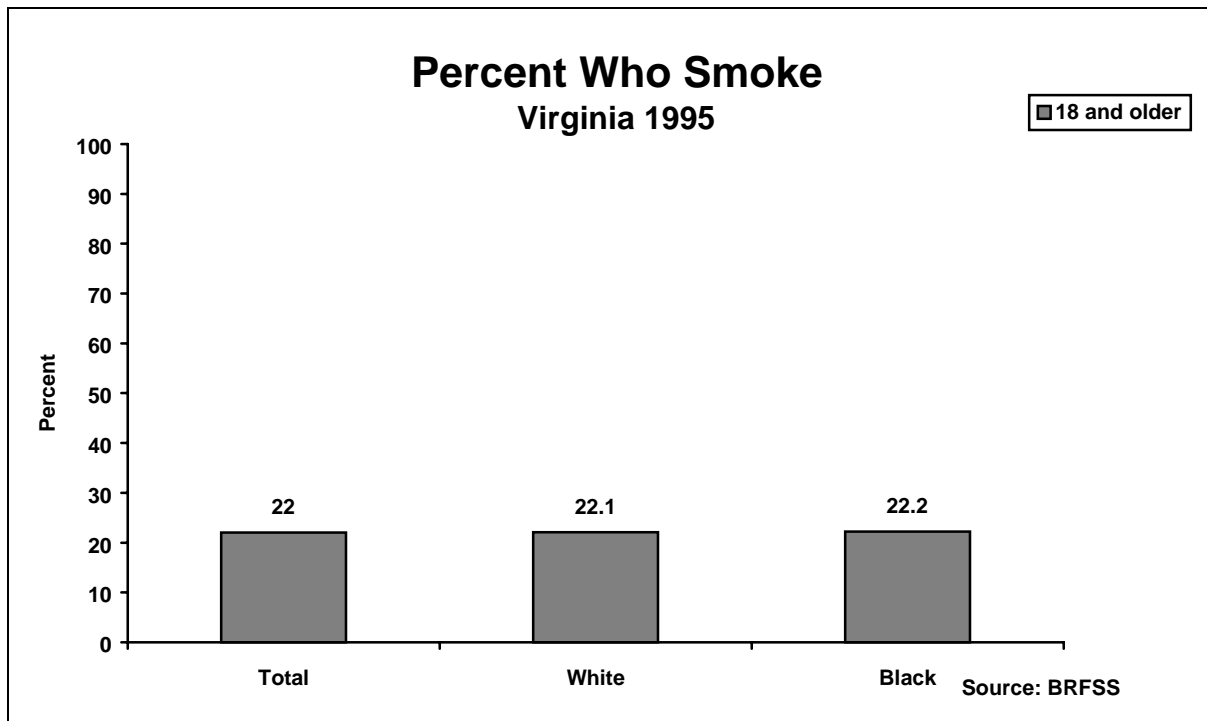


## Tobacco Use

---

**Objective:** *Reduce cigarette smoking to a prevalence of no more than 15% among people aged 18 and older.*

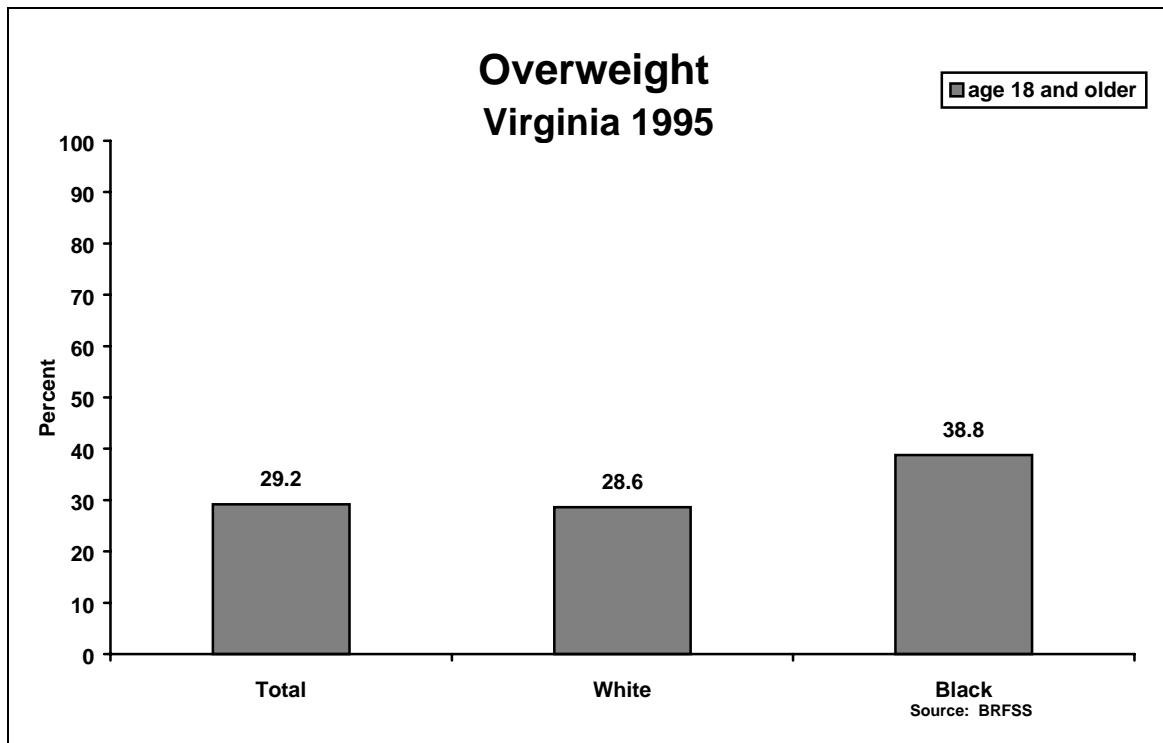
Tobacco use is the most important single preventable cause of death in the United States, accounting for an estimated 500,000 lost lives per year - more than alcohol, cocaine, heroin, homicide, suicide, car accidents, fires, and AIDS *combined*. It is a major risk factor for diseases of the heart and blood vessels; chronic bronchitis and emphysema; cancers of the lung, larynx, pharynx, oral cavity, esophagus, pancreas, and bladder; and other problems such as respiratory infections and stomach ulcers. Direct medical costs attributable to smoking in Virginia in 1993 were estimated to be \$829 million. Despite these staggering numbers and an increasing public awareness of the health consequences of tobacco use, an estimated 22% of the Commonwealth's citizens aged 18 and older still smoke. Cutting that number by roughly one-third by the turn of the century is the challenge we face.



# Overweight

**Objective:** *Reduce overweight to a prevalence of no more than 20% among people aged 18 and older.*

Overweight is defined as weight that exceeds the recommended weight for height by 20%. Based on 1995 survey responses, about three of every ten adult Virginians classified themselves in this category. It should be noted, however, that males are more likely than females to report themselves as overweight, so it is possible that the numbers are even higher. The problem is a serious one, for overweight is associated with elevated blood cholesterol levels, elevated blood pressure, and noninsulin-dependent diabetes mellitus, and is an independent risk factor for coronary heart disease. Overweight is particularly prevalent in minority populations, especially minority women. The potential benefits to be derived from a reduction in the prevalence of overweight, especially in terms of decreasing body fat, are of considerable public health importance. Programs to reduce weight and body fat require a regimen of increased physical activity combined with dietary caloric restrictions, particularly calories from dietary fat.

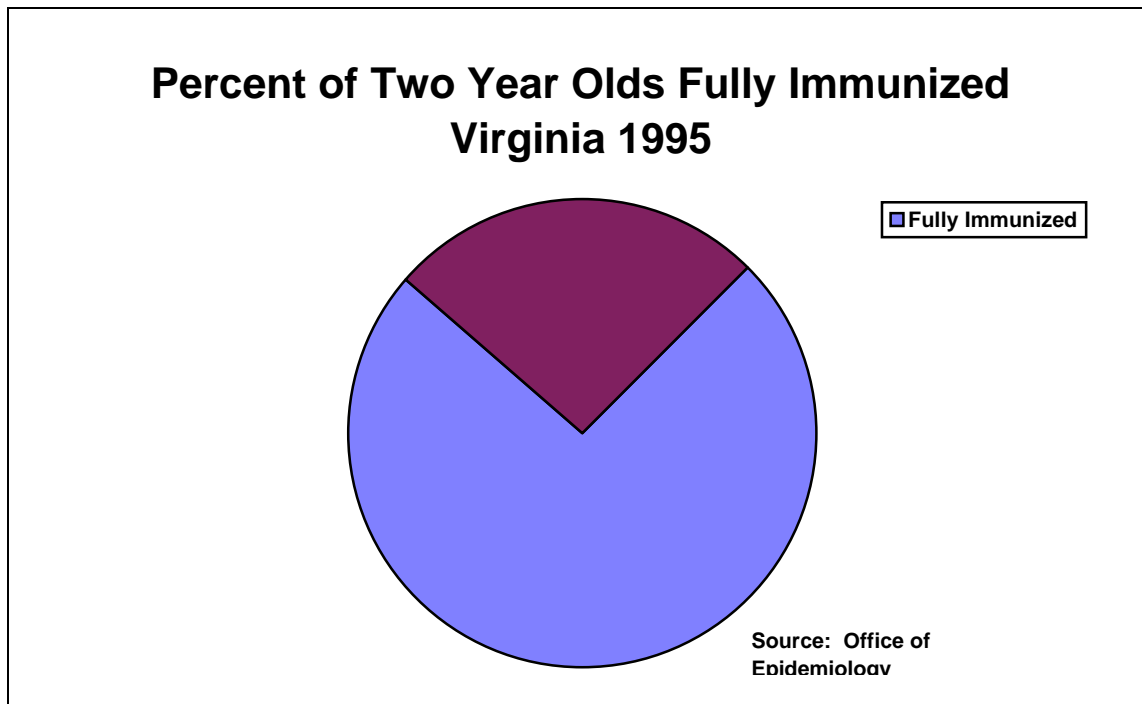


## Immunization Levels of 2 Year Olds

---

**Objective:** *Increase the basic immunization series among children aged 2 years to at least 90%.*

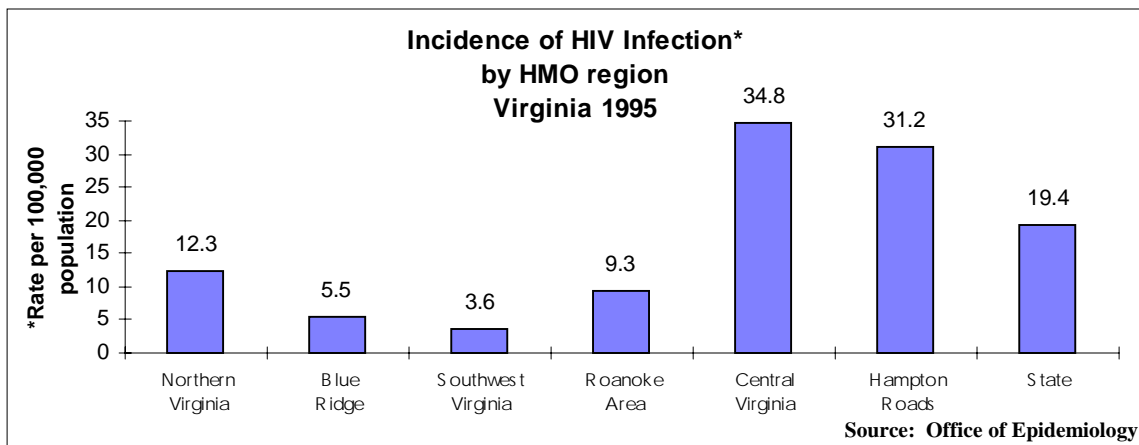
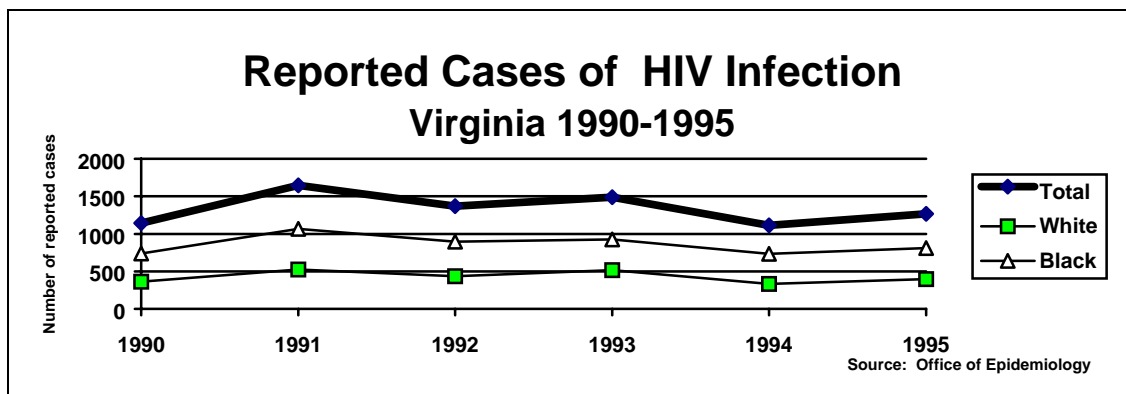
More than 90,000 children are born each year in Virginia. The vast majority of these babies (80-90%) receive one or more vaccines and virtually all children are immunized by age 6. However, only about three out of every four children (74%) complete the basic vaccination series by two years of age, a critical period for childhood disease prevention. This is noteworthy because even though childhood vaccine-preventable diseases (diphtheria, hepatitis B, *Hemophilus influenzae-type B*, measles, mumps, pertussis, poliomyelitis, rubella, and tetanus) have declined dramatically, they remain problems among certain high-risk, under-immunized groups. Vaccines are among the safest and most effective measures for the prevention of infectious and communicable diseases. For every dollar spent on immunizations, a savings of \$10 to \$14 is realized in later health care costs. To reach our objective in Virginia, we must routinely assess the immunization status of our young children and assure that those needing vaccines receive them from their health care provider.



# Sexually Transmitted Diseases: Human Immunodeficiency Virus (HIV) Infection

**Objective:** *Confine the incidence of HIV infection to no more than 11.9 per 100,000 people.*

The human immunodeficiency virus (HIV) is the etiologic agent that causes Acquired Immunodeficiency Syndrome (AIDS), the disease that is now the eighth leading cause of death in Virginia. During 1995 there were 1,268 new HIV infections reported throughout the state, a 12.8% increase over the previous year. Trends in HIV infection are important because they are likely to be predictive of future AIDS trends. It is also worth noting that localities with large prison populations reflect higher incidence rates of HIV infections. People who are at special risk for HIV include intravenous drug abusers and their sex partners; people with large numbers of sex partners; men who have sex with men, and their female partners; people who exchange sex for money or drugs; and the infants of HIV-infected mothers. Many HIV-infected people do not know that they have the virus, making increased efforts to educate the public on risks and precautions essential to slowing the spread of the disease.



**Incidence of HIV Infection\*  
by Health District, Virginia 1995**

<b>FIRST QUARTILE</b>	West Piedmont	0.0	
	Loudoun	1.0	
	Lenowisco	1.1	
	Alleghany	2.5	
	Mount Rogers	3.4	
	Central Shenandoah	3.5	
	New River	3.8	
	Cumberland Plateau	5.1	
	Rappahannock	5.2	
<b>SECOND QUARTILE</b>	Lord Fairfax	5.8	
	Rappahannock/Rapidan	6.2	
	Pittsylvania/Danville	7.4	
	Prince William	7.7	
	Thomas Jefferson	8.0	
	Fairfax	9.9	
	Three Rivers	11.2	
	Central Virginia	13.2	<b>Virginia 2000 Objective</b>  <b>11.9 per 100,000</b>
	Chesterfield	15.1	
<b>THIRD QUARTILE</b>	Chesapeake	18.7	
	Henrico	19.3	
	Virginia Beach	19.6	
	Peninsula	19.8	
	Eastern Shore	20.1	
	Western Tidewater	20.2	
	Piedmont	20.9	
	Hanover	21.1	
	Southside	22.3	
<b>FOURTH QUARTILE</b>	Arlington	30.8	
	Hampton	31.9	
	Alexandria	39.4	
	Roanoke	40.0	
	Crater	43.9	
	Portsmouth	46.4	
	Norfolk	71.5	
	Richmond	102.0	

**Virginia 2000  
Objective**  
  
**11.9 per 100,000**

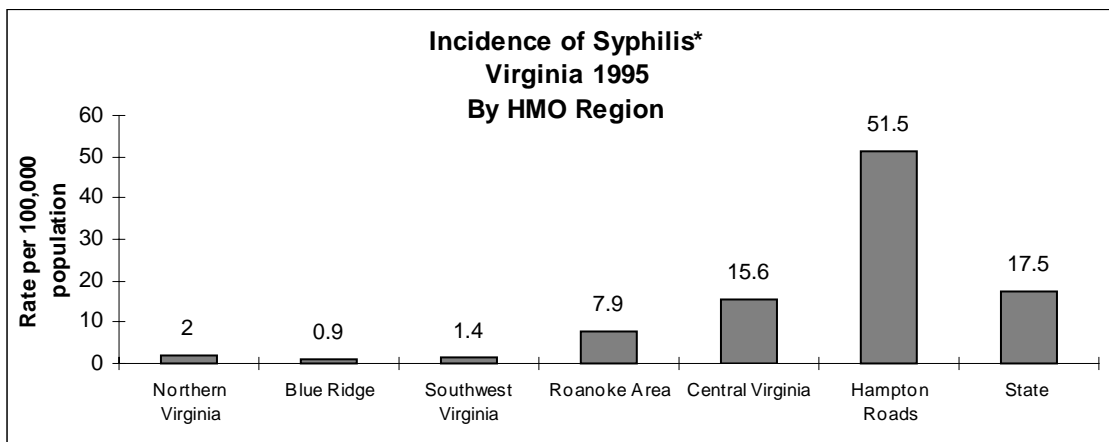
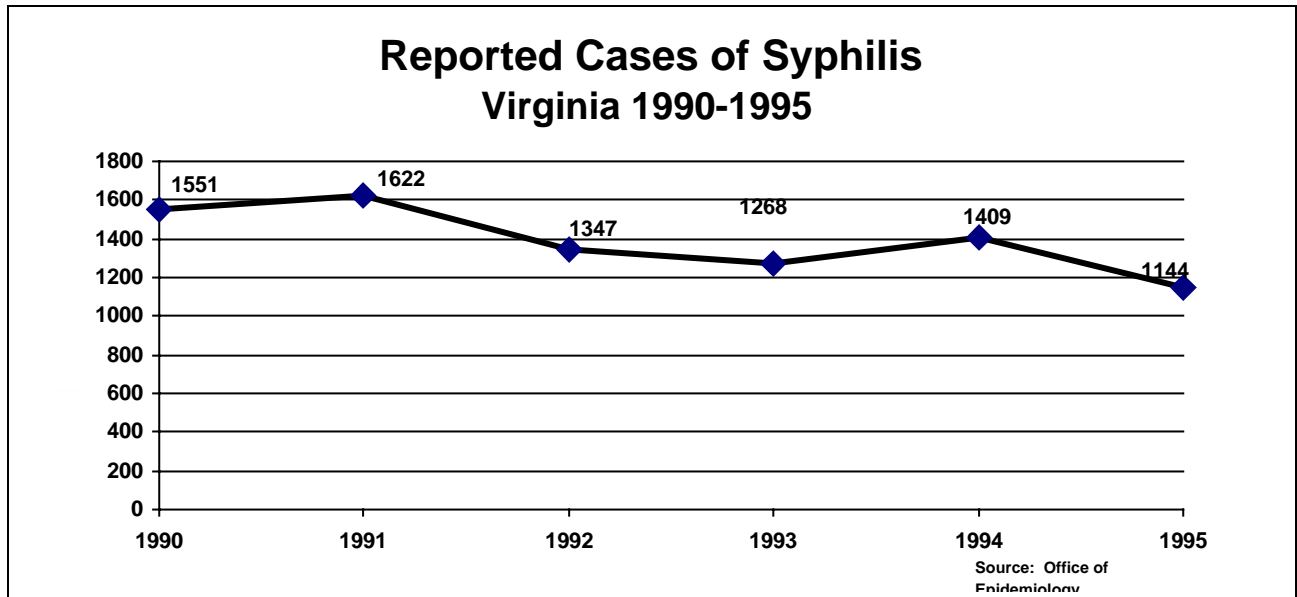
**Virginia Rate  
1995**  
  
**19.4 per 100,000**

\*Rate per 100,000 population

# Sexually Transmitted Diseases: Syphilis

**Objective:** *Reduce primary and secondary syphilis to an incidence of no more than 4 cases per 100,000 people*

Sexually transmitted diseases (STDs) are a group of infections with the common characteristic of being transmitted from person to person during sexual contact. These diseases are major public health problems because they can cause enormous human suffering, cost hundreds of millions of dollars, and impose huge demands on health care providers. Syphilis is a bacterial infection which typically causes relatively mild symptoms at the time of initial infection but which can result in progressive tissue damage in multiple organs over a lifetime if left untreated. Syphilis was the first STD for which control measures were developed and the number of cases reached a low point nationally in the mid-1980s before starting to climb again. Although the data for 1995 show a promising drop in Virginia's rate, we still have a long way to go to meet our objective, particularly in the eastern part of the state.



\*Primary, secondary, and early latent, rate per 100,000 population

Source: Office of Epidemiology

**Incidence of Syphilis\* by  
Health District, Virginia 1995**

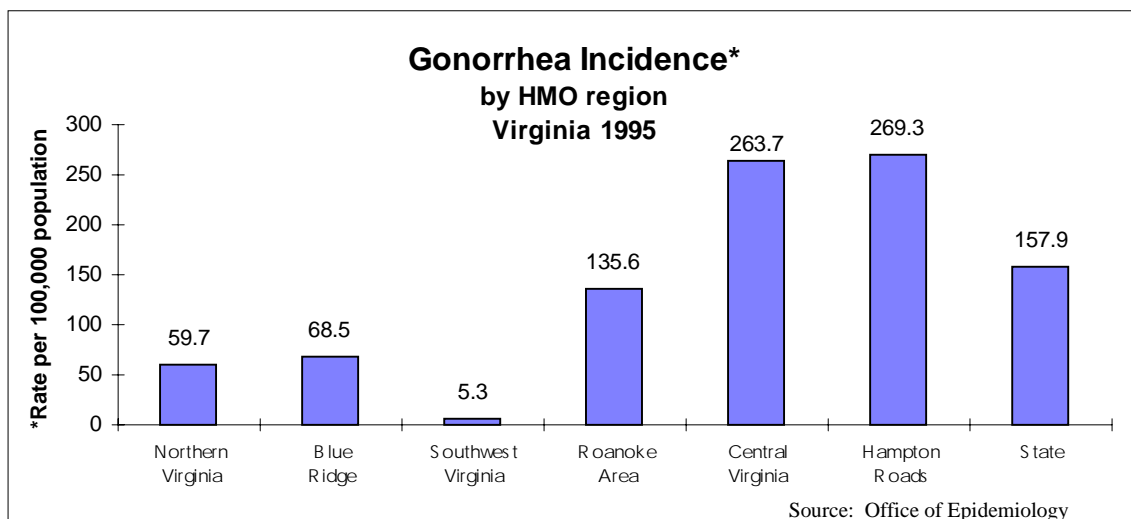
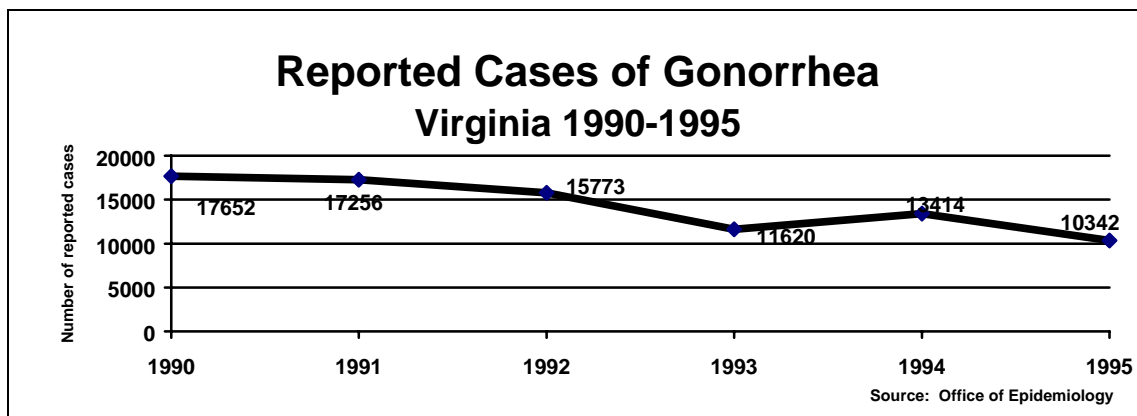
<b>FIRST QUARTILE</b>	New River	0.0	
	Central Shenandoah	0.4	
	Lord Fairfax	0.6	
	Alleghany	0.6	
	Rappahannock/Rapidan	0.8	
	Loudoun	1.0	
	Mount Rogers	1.1	
	Lenowisco	1.1	
	Fairfax	1.2	
<b>SECOND QUARTILE</b>	West Piedmont	1.5	
	Cumberland Plateau	1.7	
	Thomas Jefferson	1.7	
	Hanover	1.9	
	Prince William	2.1	
	Rappahannock	2.6	
	Henrico	3.9	
	Arlington	4.0	<b>Virginia 2000 Objective</b>
	Piedmont	5.8	<b>4.0 per 100,000</b>
<b>THIRD QUARTILE</b>	Alexandria	6.0	
	Southside	6.2	
	Chesterfield	6.6	
	Pittsylvania/Danville	7.4	
	Three Rivers	8.0	<b>U.S. Rate 1994</b>
	Virginia Beach	8.4	<b>8.1 per 100,000</b>
	Roanoke	20.0	
	Central Virginia	21.2	
	Crater	29.0	<b>Virginia Rate 1995</b>
<b>FOURTH QUARTILE</b>	Peninsula	29.9	<b>17.5 per 100,000</b>
	Chesapeake	33.9	
	Hampton	43.5	
	Richmond	54.0	
	Eastern Shore	91.5	
	Norfolk	92.8	
	Western Tidewater	120.9	
	Portsmouth	164.4	

\*Primary, secondary and early latent.  
Rate per 100,000 population

## Sexually Transmitted Diseases: Gonorrhea

**Objective:** Reduce gonorrhea to an incidence of no more than 100 cases per 100,000 people.

Gonorrhea is a bacterial infection which typically causes infection of the lower urinary and genital tract in men and a more extensive infection of the reproductive organs in women. Long-term complications, which occur more commonly in women, include sterility and ectopic pregnancy. It is a disease that puts low income youth and minority populations at particular risk, with 57% of Virginia's 10,342 cases in 1995 occurring in the 15-to-24 year age group, and 79% of the cases involving blacks. The encouraging news is that Virginia, like the rest of the nation, has experienced a downward trend in gonorrhea morbidity in recent years, with the total number of cases in 1995 reflecting a 23% drop from the previous year and the lowest number of cases in any of the last ten years. Disease intervention efforts that have focused on identifying and treating infected individuals and their partners, and expanded screening for the disease are the main reasons for the decline.



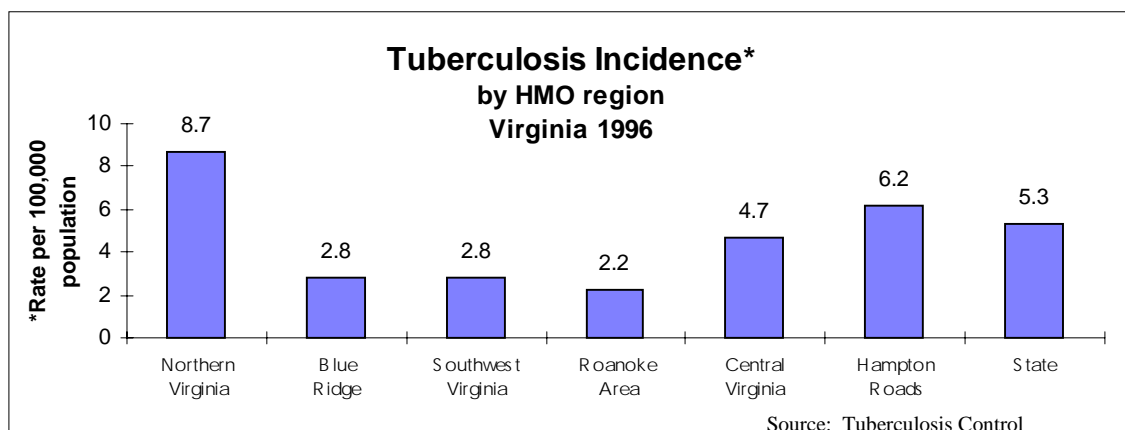
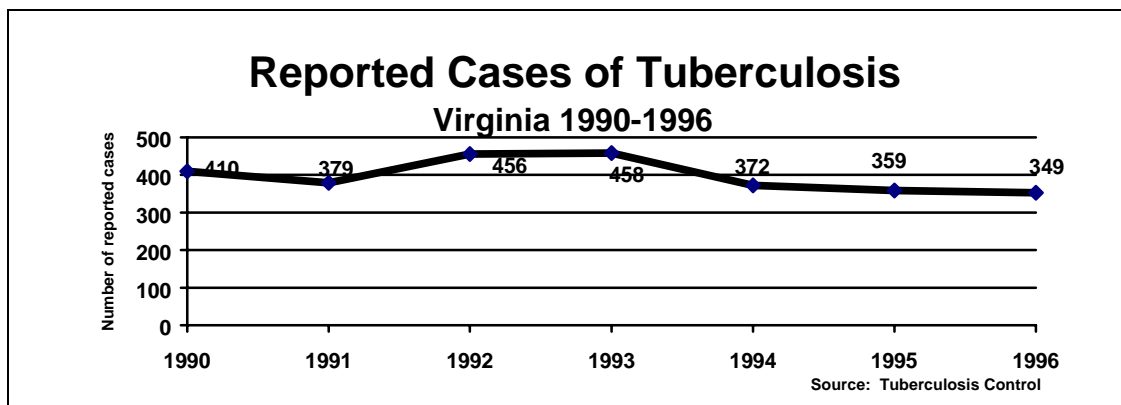
**Incidence Rate of Gonorrhea\*  
by Health District, Virginia 1995**

<b>FIRST QUARTILE</b>	Lenowisco	3.3	
	Cumberland Plateau	4.2	
	Mount Rogers	6.2	
	Alleghany	17.6	
	Loudoun	18.1	
	Central Shenandoah	21.2	
	New River	26.9	
	Chesterfield	30.6	
	Fairfax	32.2	
<b>SECOND QUARTILE</b>	Henrico	34.8	
	Lord Fairfax	60.6	
	Arlington	75.8	
	Rappahannock/Rapidan	77.1	
	Prince William	81.5	
	Rappahannock	81.9	
	Hanover	84.4	
	Virginia Beach	86.9	
Three Rivers	92.0		
<b>THIRD QUARTILE</b>	Thomas Jefferson	119.4	<b>Virginia 2000 Objective</b>  <b>100 per 100,000</b>
	West Piedmont	121.1	
	Central Virginia	130.3	
	Piedmont	135.2	<b>Virginia Rate 1995</b>  <b>157.9 per 100,000</b>
	Crater	147.9	
	Southside	160.8	
	Alexandria	210.9	<b>U.S. Rate 1994</b>  <b>168 per 100,000</b>
	Western Tidewater	212.6	
	Chesapeake	212.9	
<b>FOURTH QUARTILE</b>	Eastern Shore	214.1	
	Peninsula	217.6	
	Hampton	249.9	
	Roanoke	301.4	
	Pittsylvania/Danville	415.3	
	Portsmouth	590.8	
	Norfolk	649.3	
Richmond	1197.9		

# Tuberculosis

**Objective:** *Reduce tuberculosis to an incidence of no more than 3.5 cases per 100,000 people*

Pulmonary tuberculosis (TB) is an infectious disease that is transmitted through the air indiscriminately. Infection occurs when a person breathes air laden with bacteria expelled by someone with the disease. Factors determining the likelihood of infection include the length of exposure, the infectiousness of the diseased person and the environment in which the exposure occurs. Once infection occurs, the disease may never develop, but the risk of acquiring it in the future always exists. The top priorities of a TB control program are the early identification of infectious TB, the initiation of effective treatment and the completion of therapy as prescribed. These activities shorten the period of infectiousness and promote cure. By interrupting transmission, new infections are prevented, reducing the number of individuals with the potential for contracting the disease. Virginia's 349 reported cases of TB in 1996 represents a 24% drop in the last three years and marks a low point for the decade of the nineties.



**Tuberculosis Incidence Rate\* by  
Health District, Virginia 1996**

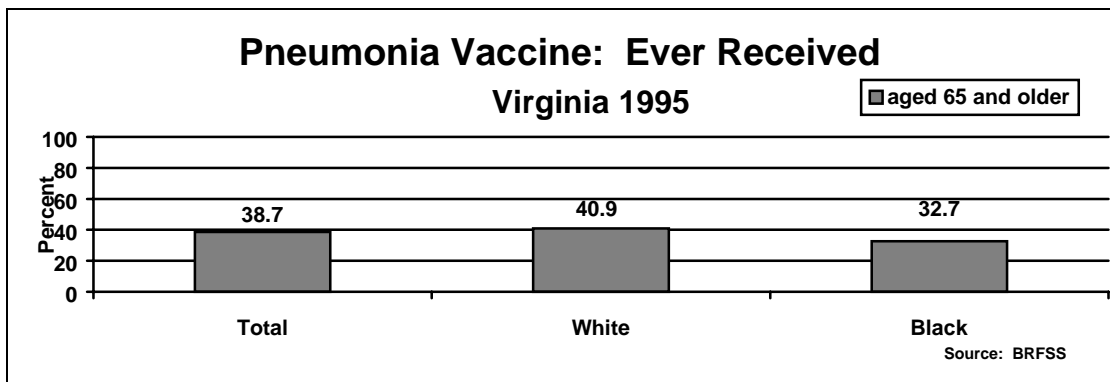
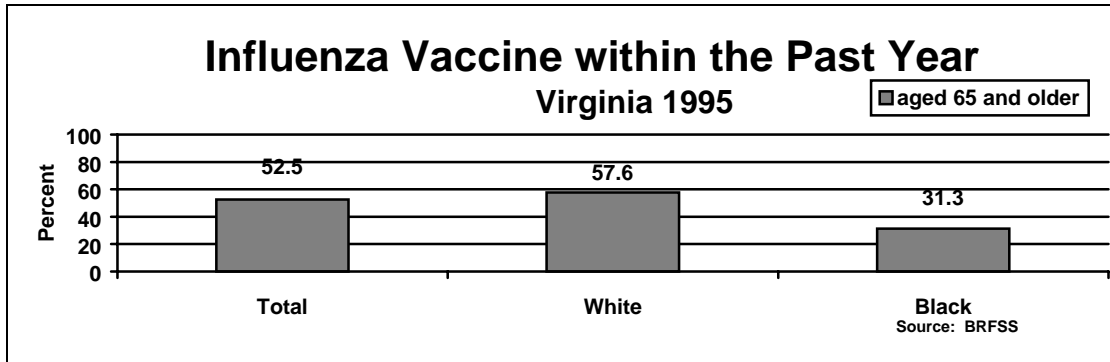
<b>FIRST QUARTILE</b>	Rappahannock/Rapidan	0.0	
	West Piedmont	0.0	
	Central Virginia	0.9	
	Prince William	1.4	
	Three Rivers	1.6	
	New River	1.9	
	Loudoun	2.0	
	Mount Rogers	2.8	
	Chesterfield	3.0	
	Henrico	3.0	
<b>SECOND QUARTILE</b>	Alleghany	3.1	
	Lenowisco	3.3	
	Virginia Beach	3.4	<b>Virginia 2000 Objective  3.5 per 100,000</b>
	Lord Fairfax	3.5	
	Pittsylvania/Danville	3.7	
	Hanover	3.8	
	Portsmouth	3.9	
	Thomas Jefferson	4.0	
Chesapeake	4.1		
Peninsula	4.2		
<b>THIRD QUARTILE</b>	Roanoke	4.2	
	Alexandria	4.3	
	Central Shenandoah	4.3	<b>Virginia Rate  5.3 per 100,000</b>
	Hampton	4.3	
	Southside	4.9	
	Rappahannock	5.7	
	Crater	6.4	
	Richmond	7.6	
Norfolk	7.7		
Piedmont	8.2		
<b>FOURTH QUARTILE</b>	Cumberland Plateau	8.4	
	Western Tidewater	9.2	<b>U.S. Rate 1994  9.4 per 100,000</b>
	Fairfax	10.7	
	Eastern Shore	13.4	
	Arlington	18.2	

\*Rate per 100,000 population

# Delivery of Influenza and Pneumococcal Vaccine to the Elderly

**Objective:** *Increase levels of pneumococcal pneumonia and influenza immunization among noninstitutionalized high risk populations to at least 60 %.*

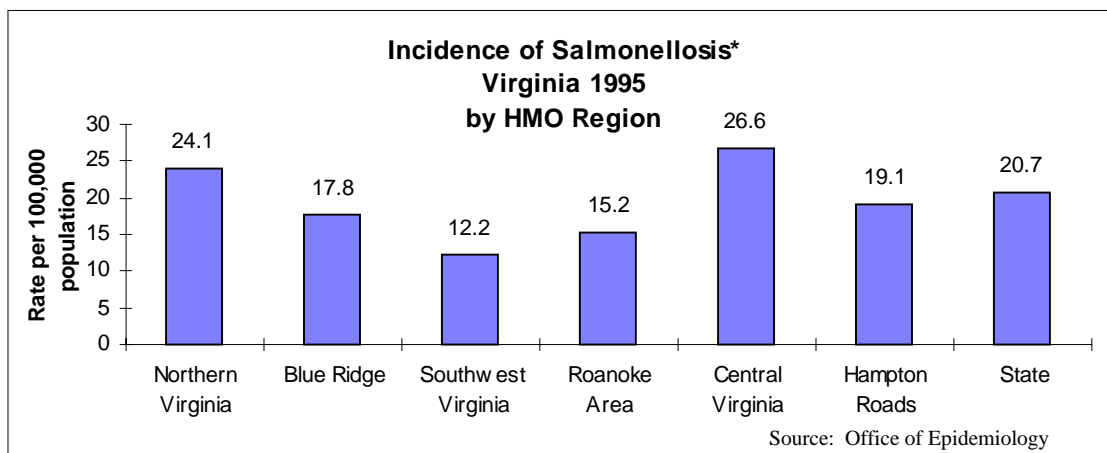
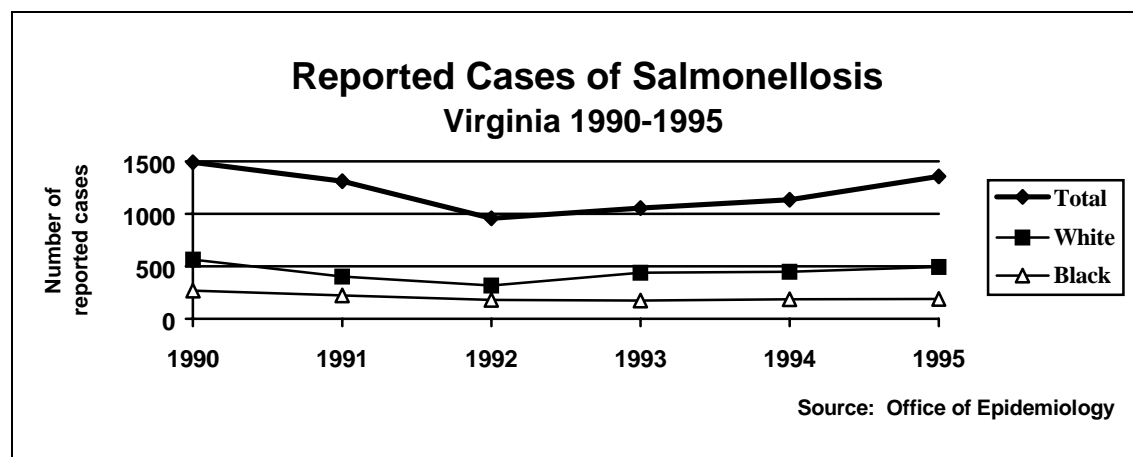
Influenza is a viral disease that can affect people of all ages. Although most people are ill for only a few days, some have a much more serious condition and may have to be hospitalized. Thousands of people die each year from influenza-related illnesses and most of these deaths occur in elderly people. Pneumococcal disease is caused by a bacterium that is associated with much illness and mortality in the United States each year. Anyone can get pneumococcal disease, however, persons over age 65 and those with diabetes or other chronic diseases have the greatest risk of complications. It is recommended that the elderly receive the influenza vaccine annually and the pneumococcal vaccine only once (for most individuals) as an effective means of reducing morbidity and mortality in this age group as well as the hospital and medical costs associated with these diseases. As indicated below, the discrepancy between the influenza immunization levels of the white and black elderly of Virginia is significant and needs to be redressed.



## Foodborne Disease: Salmonellosis

**Objective:** Reduce the rate of salmonellosis to no more than 16 cases per 100,000 population.

Salmonellosis is a disease caused by bacteria called *Salmonella* and is characterized by diarrhea, fever, headache, abdominal pain and nausea. The rate of salmonellosis in an area may serve as an indicator of the level of food safety. Disease incidence may be reduced through the proper use of food handling techniques by consumers and food service professionals, and through careful attention to hygiene by all citizens in order to prevent the spread of disease from person to person. In 1995, there were 1,358 cases of salmonellosis reported in Virginia, for a rate of 20.7 per 100,000 population, as compared to a national rate of 17.5. The rate of disease was highest in infants, followed by children aged 1-9 years. Race is often not reported, but among those for whom it was known, the risk of the disease was higher among the black population than among whites.



## Incidence of Salmonellosis\* by Health District, Virginia 1995

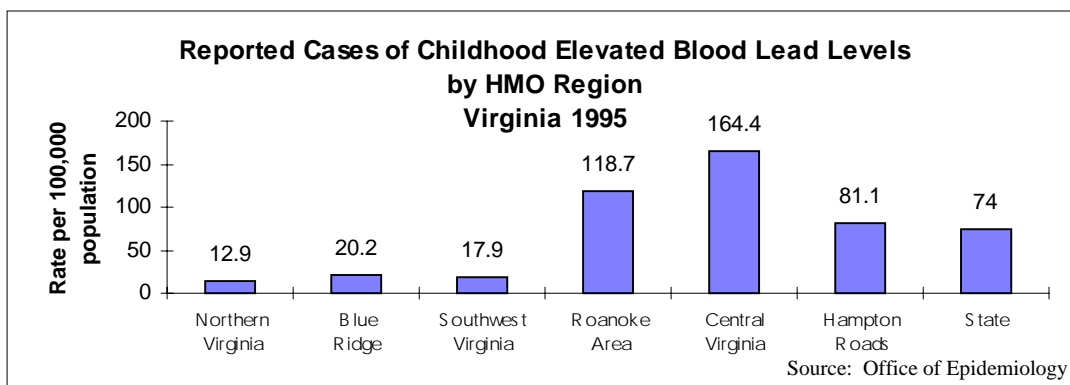
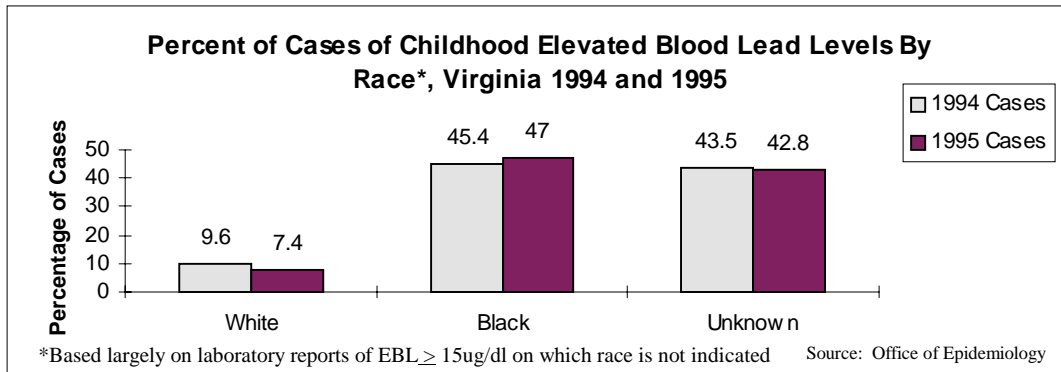
	Cumberland Plateau	8.4		
	Rappahannock/Rapidan	9.3		
	Alleghany	9.4		
<b>FIRST QUARTILE</b>	Mount Rogers	10.1		
	Hampton	11.6		
	New River	12.2		
	Western Tidewater	12.8		
	Norfolk	13.5		
	Three Rivers	14.4		
	<hr/>			
		West Piedmont	14.5	
	Virginia Beach	14.6	<b>Virginia 2000 Objective</b>  <b>16 per 100,000</b>	
	Pittsylvania/Danville	16.6		
<b>SECOND QUARTILE</b>	Crater	17.0		
	Rappahannock	17.0		
	Lenowisco	17.8		
	Lord Fairfax	18.1		
	Loudoun	18.1		
	Central Shenadoah	18.2		
	<hr/>			
		Prince William		18.5
	Central Virginia	18.8	<b>Virginia Rate 1995</b>  <b>20.7 per 100,000</b>	
	Chesapeake	19.3		
<b>THIRD QUARTILE</b>	Portsmouth	19.3		
	Southside	19.8		
	Thomas Jefferson	20.7		
	Fairfax	21.6		
	Peninsula	25.7		
	Roanoke	26.4		
	<hr/>			
		Chesterfield		27.3
	Richmond	29.3		
<b>FOURTH QUARTILE</b>	Arlington	29.6		
	Henrico	30.9		
	Hanover	32.6		
	Piedmont	36.1		
	Alexandria	66.0		
	Eastern Shore	89.2		
	<hr/>			

\*Rate per 100,000 people

# Lead Poisoning

**Objective:** *Reduce the incidence of children ages nine years and younger with blood lead levels exceeding 15µg/dl to 13 per 100,000.*

Concern about the health effects of environmental contaminants is at an all-time high. Of particular interest is lead poisoning, one of the most preventable childhood health problems because lead sources in a child's environment can be identified and removed. Even so, it is estimated that 25,000 children under six years of age are lead poisoned in Virginia, i.e., they have an elevated blood lead level (EBL) at or above 10 micrograms per deciliter (µg/dl). Virginia's poor inner-city children, most of whom are minorities, are especially vulnerable because of the presence of lead-based paint in many older dwellings. Childhood lead poisoning has been associated with increased risk of attention deficit disorder, developmental delays, reduced educational attainment and lifelong income levels, as well as increased risk for juvenile delinquency. Childhood lead poisoning prevention is a cost-effective public health program, avoiding \$4 in special education and medical costs for every dollar spent on an array of educational, clinical and environmental interventions.



**Lead Poisoning Rate\* for Children Age 0-9 Years  
by Health District, Virginia 1995**

<b>FIRST QUARTILE</b>	Loudoun	0.0	<b>Virginia 2000 Objective  13.0 per 100,000</b>
	Fairfax	2.4	
	Lord Fairfax	3.8	
	Virginia Beach	6.8	
	Lenowisco	8.8	
	Prince William	13.9	
	Mount Rogers	14.4	
	Chesterfield	16.6	
	Central Shenandoah	17.5	
<b>SECOND QUARTILE</b>	New River	18.3	<b>Virginia Rate 1995  74.0 per 100,000</b>
	Southside	19.2	
	Rappahannock/Rapidan	21.8	
	Chesapeake	23.6	
	Cumberland Plateau	25.7	
	West Piedmont	30.8	
	Rappahannock	35.1	
	Three Rivers	36.7	
	Thomas Jefferson	38.5	
<b>THIRD QUARTILE</b>	Alexandria	44.6	<b>Virginia Rate 1995  74.0 per 100,000</b>
	Arlington	46.5	
	Hampton	47.8	
	Western Tidewater	50.6	
	Peninsula	51.8	
	Henrico	55.8	
	Alleghany	59.9	
	Hanover	77.1	
	Piedmont	80.8	
<b>FOURTH QUARTILE</b>	Central Virginia**	133.1	<b>Virginia Rate 1995  74.0 per 100,000</b>
	Norfolk**	213.4	
	Pittsylvania/Danville	220.9	
	Portsmouth**	260.5	
	Crater**	401.8	
	Roanoke	433.2	
	Eastern Shore	546.6	
	Richmond**	583.1	

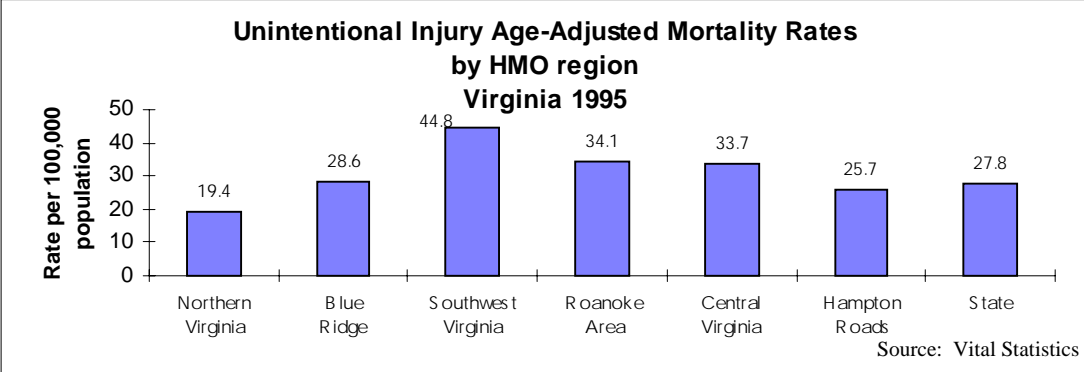
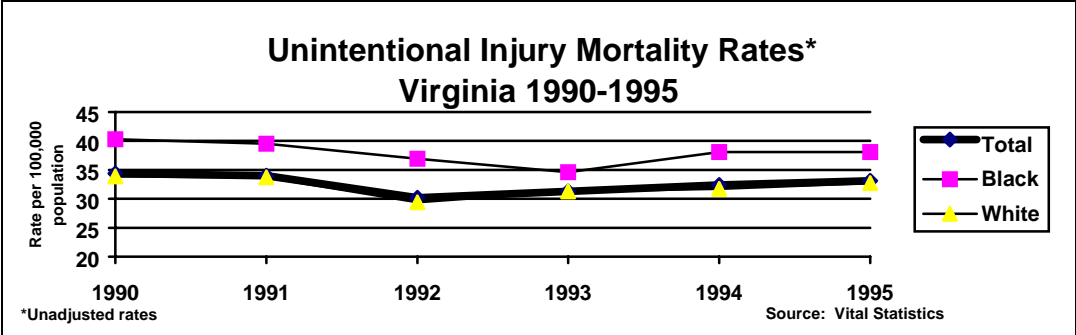
\*Rates per 100,000 children age 0-9 reported with blood lead levels  $\geq$  15 ug/dl

\*\*Recipients of federal funds for lead poisoning prevention programs; these districts have increased screening levels.

# Unintentional Injury Deaths

**Objective: Reduce deaths caused by unintentional injuries to no more than 29.3 per 100,000 people (age-adjusted).**

In recent years, injury has begun to receive long overdue attention as a major public health problem. This is due in large measure to the fact that injuries affect children and young adults disproportionately, and are the leading cause of years of potential life lost, measure of premature death. Unintentional injuries took the lives of 2,170 Virginians in 1995, making this the state's fifth leading cause of death. Motor vehicle crashes account for approximately four out of every ten of these fatalities, with falls, accidental discharge of firearms, poisoning, drowning and fires also claiming significant numbers of lives. Most injuries are predictable and potentially preventable by using basic public health science to determine appropriate and targeted prevention strategies. Although Virginia has already exceeded its objective for the year 2000 for unintentional injury deaths, it should continue to aggressively pursue strategies that will facilitate further progress. This will require the full participation of both the public and private sectors in the fields of health, education, transportation, law, engineering, architecture, and safety sciences.



**Unintentional Injury Age-Adjusted Death Rates\*  
by Health District, Virginia 1995**

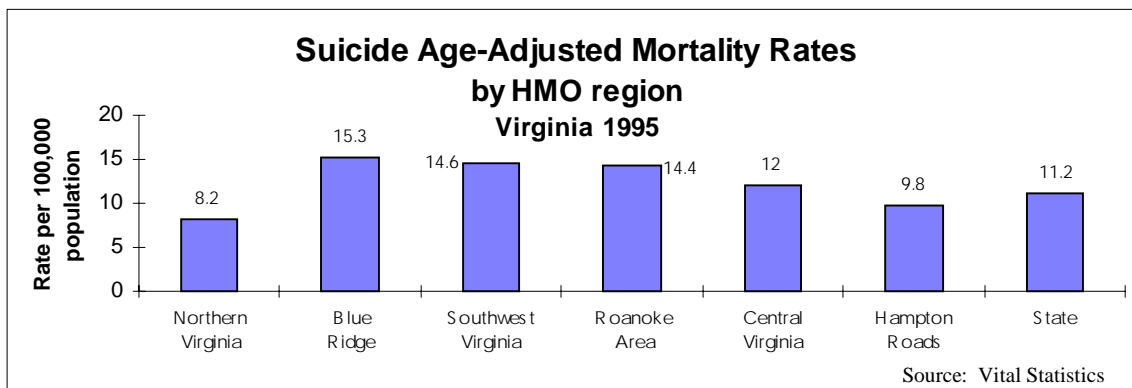
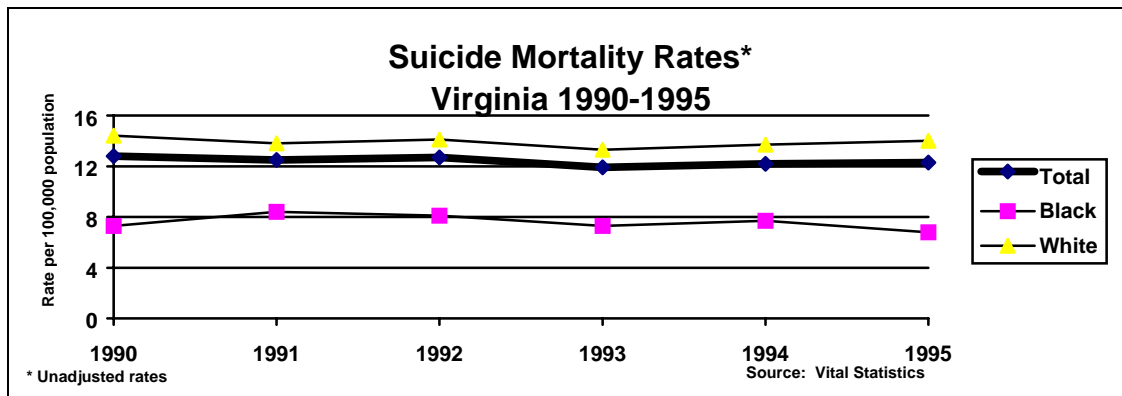
<b>FIRST QUARTILE</b>	Virginia Beach	14.9	
	Arlington	16.2	
	Fairfax	16.9	
	Peninsula	20.0	
	Loudoun	21.5	
	Prince William	21.9	
	Alexandria	22.0	
	Hampton	22.5	
	Chesterfield	23.4	
<b>SECOND QUARTILE</b>	Rappahannock/Rapidan	25.5	
	Hanover	25.8	
	Central Shenandoah	26.9	
	Henrico	27.4	
	Chesapeake	27.4	
	Alleghany	27.5	
	New River	30.5	
	Lord Fairfax	30.8	
	Roanoke	31.0	
<b>THIRD QUARTILE</b>	Central Virginia	31.4	
	Thomas Jefferson	32.5	
	Norfolk	33.0	
	Rappahannock	33.6	
	Portsmouth	36.3	
	Mount Rogers	37.6	
	Pittsylvania/Danville	37.8	
	West Piedmont	38.0	
	Three Rivers	38.1	
<b>FOURTH QUARTILE</b>	Eastern Shore	40.5	
	Richmond	40.8	
	Western Tidewater	42.4	
	Crater	46.4	
	Lenowisco	50.7	
	Cumberland Plateau	51.1	
	Piedmont	57.0	
	Southside	58.3	
			<b>Virginia Rate 1995</b> <b>27.8 per 100,000</b>
			<b>Virginia 2000 Objective</b> <b>29.3 per 100,000</b>
			<b>U.S. Rate 1994</b> <b>29.8 per 100,000</b>

\* Rate per 100,000 population

# Intentional Injury Deaths, Self Inflicted: Suicide

**Objective:** *Reduce deaths caused by suicide to no more than 10.5 per 100,000 people (age-adjusted).*

About 30,000 Americans each year, including more than 5,000 under the age of 25, take their own lives. The number of suicide deaths in Virginia in 1995 totaled 809, for a rate of 11.2 for every 100,000 people. Suicide is clearly the most serious potential outcome of mental disorders. Mental health can be affected by environmental stresses, chronic pressures, life events or genetic defects. Depression and associated affective/mood disorders, which affect approximately five percent of the population at any one time, are also major risk factors for suicide. However, primary care physicians often fail to recognize the symptoms of depression in their patients, as these often mimic the symptoms of physical illness. Approximately 80% of patients with depression can be successfully treated, yet less than half of these are accorded treatment by a health care provider. Interventions must be directed at increasing the availability of helpful resources for individuals as early as possible, and by enhancing their coping skills through education and social support. For those needing more aggressive attention, medical interventions must be made available.



**Suicide Age-Adjusted Death Rates\*  
by Health District, Virginia 1995**

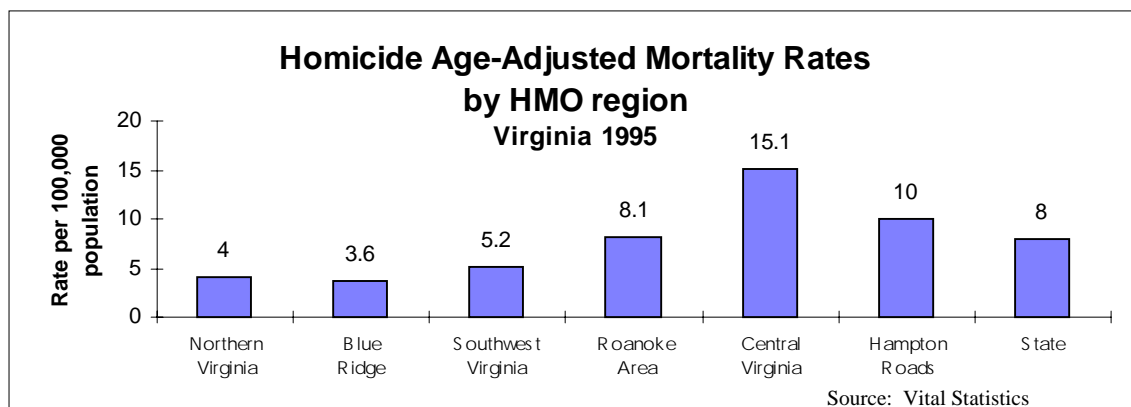
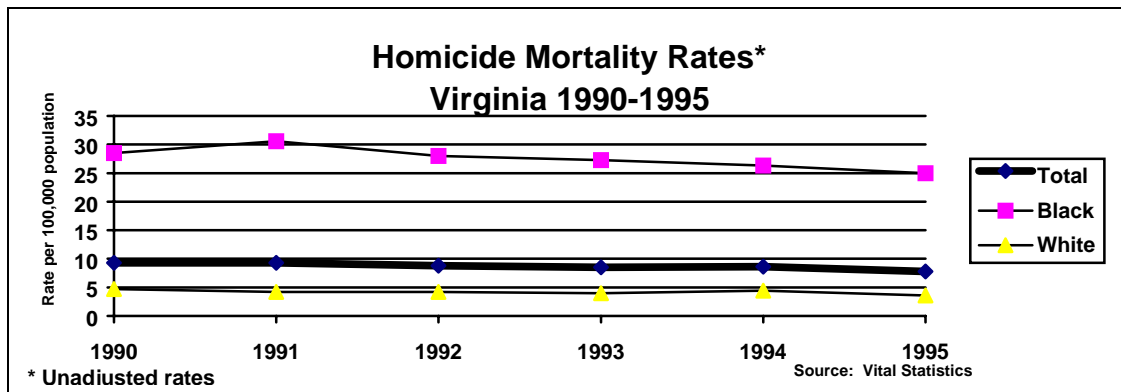
<b>FIRST QUARTILE</b>	Eastern Shore	5.4	
	Fairfax	6.9	
	Alexandria	7.4	
	Prince William	7.7	
	Peninsula	7.8	
	Virginia Beach	8.3	
	Western Tidewater	8.8	
	Rappahannock/Rapidan	8.9	
	Pittsylvania/Danville	9.2	
<b>SECOND QUARTILE</b>	Arlington	9.4	<b>Virginia 2000 Objective</b>
	Three Rivers	10.0	
	Rappahannock	10.4	<b>10.5 per 100,000</b>
	Chesterfield	10.5	
	Hampton	10.6	<b>Virginia Rate 1995</b>
	Piedmont	10.6	
	Henrico	10.9	<b>11.2 per 100,000</b>
	Portsmouth	11.2	
	Lenowisco	11.4	
<b>THIRD QUARTILE</b>	Alleghany	11.5	<b>U.S. Rate 1994</b>
	Crater	11.8	
	Mount Rogers	11.8	
	Lord Fairfax	12.6	<b>11.6 per 100,000</b>
	West Piedmont	12.9	
	Norfolk	13.1	
	Richmond	14.0	
	Southside	14.6	
	New River	15.0	
<b>FOURTH QUARTILE</b>	Hanover	15.3	
	Chesapeake	16.1	
	Loudoun	16.5	
	Thomas Jefferson	16.6	
	Central Shenandoah	18.3	
	Central Virginia	19.1	
	Cumberland Plateau	19.4	
Roanoke	23.9		

\* Rate per 100,000 population

## Intentional Injury Deaths, Other Inflicted: Homicide

**Objective:** *Reduce deaths caused by homicide to no more than 7.2 per 100,000 people (age-adjusted).*

Because of its rapidly growing prominence as a source of the leading health problems experienced by Americans, violent and abusive behavior has been increasingly recognized as an important public health issue. Approximately 500 people were homicide victims in Virginia in 1995, and although the rate has dropped 16% since the start of the decade, almost 10 residents of the state each week are murdered. The reasons for this violent behavior are many and varied, with alcohol and other drug abuse, and the availability of weapons seen as major contributing factors. Other related factors include poverty, lack of opportunity, social isolation, dysfunctional family structures, the acceptance of violence as a cultural norm, a dearth of non-violent role models, and positive reinforcement of violent behaviors in the media. It has become apparent that a reduction in violent deaths will require commitment, participation and joint initiatives by groups who have traditionally not worked closely together, including public health agencies, law enforcement organizations, social services providers, children's services organizations, mental health providers, legal and judicial entities and others.



**Homicide Age-Adjusted Mortality Rates\*  
by Health District, Virginia 1995**

<b>FIRST QUARTILE</b>	Alleghany	1.7	
	Loudoun	2.4	
	Lord Fairfax	2.7	
	Three Rivers	2.9	
	Hanover	2.9	
	Fairfax	3.3	
	Cumberland Plateau	3.5	
	Central Shenandoah	3.6	
	Virginia Beach	3.9	
	Chesterfield	3.9	
<b>SECOND QUARTILE</b>	Alexandria	4.0	
	Western Tidewater	4.2	
	Rappahannock/Rapidan	4.2	
	Arlington	4.8	
	Prince William	5.2	
	Rappahannock	5.6	
	New River	5.7	
	Thomas Jefferson	6.6	
<b>THIRD QUARTILE</b>	Lenowisco	6.8	
	Mount Rogers	6.8	
	Central Virginia	7.1	7.2 per 100,000
	Chesapeake	7.8	
	Pittsylvania/Danville	7.9	Virginia Rate 1995
	Peninsula	8.9	
	Henrico	9.4	
	Eastern Shore	9.6	8.0 per 100,000
	Piedmont	10.9	
	West Piedmont	11.6	U.S. Rate 1993
<b>FOURTH QUARTILE</b>	Crater	12.1	
	Hampton	12.3	
	Roanoke	15.7	10.6 per 100,000
	Norfolk	17.0	
	Southside	18.2	
	Portsmouth	30.6	
	Richmond	49.6	

\*Rate per 100,000 population

**Health Districts and Cities/Counties by HMO Region\***

**Northern Virginia HMO Region**

Alexandria Health District  
    Alexandria City  
Arlington Health District  
    Arlington County  
Fairfax Health District  
    Fairfax City  
    Fairfax County  
    Falls Church City  
Loudoun Health District  
    Loudoun County  
Prince William Health District  
    Manassas City  
    Manassas Park City  
    Prince William County  
Rappahannock Health District\*  
    Fredericksburg City  
    Spotsylvania County  
    Stafford County

**Blue Ridge HMO Region**

Central Shenandoah Health District\*  
    Augusta County  
    Harrisonburg City  
    Highland County  
    Rockingham County  
    Staunton City  
    Waynesboro City  
Lord Fairfax Health District  
    Frederick County  
    Clarke County  
    Page County  
    Shenandoah County  
    Warren County  
    Winchester City  
Rappahannock/Rapidan Health District  
    Culpeper County  
    Fauquier County  
    Madison County  
    Orange County  
    Rappahannock County

Thomas Jefferson Health District\*

Albemarle County  
Charlottesville City  
Greene County  
Nelson County

**Southwest Virginia HMO Region**

Cumberland Plateau Health District

Buchanan County  
Dickenson County  
Russell County  
Tazewell County

Lenowisco Health District

Lee County  
Norton City  
Scott County  
Wise County

Mount Rogers Health District\*

Bland County  
Bristol City  
Galax City  
Grayson County  
Smyth County  
Washington County  
Wythe County

**Roanoke Area HMO Region**

Alleghany Health District

Alleghany County  
Botetourt County  
Clifton Forge City  
Covington City  
Craig County  
Roanoke County  
Salem City

Central Shenandoah Health District\*

Bath County  
Buena Vista City  
Lexington City  
Rockbridge County

Central Virginia Health District

Amherst County  
Appomattox County  
Bedford City  
Bedford County  
Campbell County  
Lynchburg City

Mount Rogers Health District\*

Carroll County

New River Health District

Floyd County

Giles County

Montgomery County

Pulaski County

Radford City

Piedmont Health District\*

Amelia County

Buckingham County

Charlotte County

Cumberland County

Lunenburg County

Nottoway County

Prince Edward County

Pittsylvania/Danville Health District

Danville City

Pittsylvania County

Roanoke City Health District

Roanoke City

Southside Health District\*

Halifax County

South Boston City

West Piedmont Health District

Franklin County

Henry County

Martinsville City

Patrick County

**Central Virginia HMO Region**

Chesterfield Health District

Chesterfield County

Colonial Heights City

Powhatan County

Crater Health District\*

Dinwiddie County

Greensville County

Emporia City

Hopewell City

Petersburg City

Prince George County

Hanover Health District

Charles City County

Goochland County

Hanover County

New Kent County  
Henrico Health District  
Henrico County  
Rappahannock Health District\*  
Caroline County  
King George County  
Richmond City Health District  
Richmond City  
Southside Health District\*  
Brunswick County  
Mecklenburg County  
Thomas Jefferson Health District\*  
Fluvanna County  
Louisa County  
Three Rivers Health District\*  
Essex County  
King and Queen County  
King William County  
Lancaster County  
Northumberland County  
Richmond County  
Westmoreland County

**Hampton Roads HMO Region**

Chesapeake Health District  
Chesapeake City  
Crater Health District\*  
Surry County  
Sussex County  
Eastern Shore Health District  
Accomack County  
Northampton County  
Hampton Health District  
Hampton City  
Norfolk Health District  
Norfolk City  
Peninsula Health District  
James City County  
Newport News City  
Poquoson City  
Williamsburg City  
York County  
Portsmouth Health District  
Portsmouth City

Three Rivers Health District\*

Gloucester County

Mathews County

Middlesex County

Virginia Beach Health District

Virginia Beach City

Western Tidewater Health District

Franklin City

Isle of Wight County

Southampton County

Suffolk City

\* Indicates health districts that have cities/counties in two different HMO regions.

## Relationship of Virginia 2000 Objectives and HEDIS 3.0 Measures

HEDIS (Health Plan Employer Data and Information Set) 3.0 is a set of standardized performance measures designed to assure that purchasers and consumers of health care insurance have the information they need to reliably compare the performance of managed health care plans. It is sponsored, supported and maintained by the National Committee for Quality Assurance (NCQA).

The HEDIS 3.0 standards are grouped into Reporting Set Measures on which health plans are currently expected to provide information, and Testing Set Measures on which they may be expected to provide information in the future. Both sets of measures include performance domains which categorize the type of assessment as being related to one of the following areas (#4 and #8 are not included in the Testing Set Measures):

- (1) Effectiveness of care
- (2) Accessibility and availability of care
- (3) Satisfaction with the experience of care
- (4) Stability of the health plan
- (5) Use of services
- (6) Cost of care
- (7) Informed health care choices
- (8) Plan descriptive information

In the interest of enabling those in the managed care industry to quickly discern the extent to which the objectives in *Healthy Virginia Communities* are related to the NCQA standards, we have constructed a table which, while not exhaustive, does present a comprehensive overview of the relationship between the Virginia 2000 Objectives and the HEDIS 3.0 Reporting Set Measures. For the sake of brevity, the table does not include applicable Testing Set Measures, as these have not yet been implemented. Following the table, however, a list of these measures is provided so that the reader can see for himself what the future linkages may be.

In addition to the measures listed in the table, there are several crosscutting measures that are applicable to virtually all of the Virginia 2000 Objectives. In order to conserve space, these measures are listed here only, rather than being repeated under each of the cited objectives:

### Crosscutting HEDIS 3.0 Measures

- Availability of primary care providers (Reporting Set 2)
- Adults' access to preventive/ambulatory services (applies to all adult-related measures; Reporting Set 2)
- Availability of language interpretation services (Reporting Set 2)
- Language translation services (Reporting Set 7)
- Arrangements with public health, educational and social service organizations (Reporting Set 8)
- Preventive care and health promotion (Reporting Set 8)
- Case management (Reporting Set 8)

It is our hope that the table will be a useful tool for initiating discussions between local health departments and HMOs as they seek to identify issues on which they can work together.

The table indicates where there is correlation between the objectives in the report and the HEDIS 3.0 Reporting Set Measures (the number in parentheses refers to the performance domain referenced on the preceding page).

Virginia 2000 Objective	HEDIS 3.0 Measures	Reporting Set (Domain)
Reduce the infant mortality rate to no more than 7 per 1,000 live births	<ul style="list-style-type: none"> <li>• Childhood immunization status</li> <li>• Prenatal care in the first trimester</li> <li>• Low birthweight babies</li> <li>• Advising smokers to quit</li> <li>• Availability of obstetrical and prenatal care providers</li> <li>• Initiation of prenatal care</li> <li>• Low birthweight deliveries at facilities for high-risk deliveries and neonates</li> <li>• Frequency of ongoing prenatal care</li> <li>• Weeks of pregnancy at time of enrollment</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li>   <li>• Reporting Set (8)</li> </ul>
Reduce low birthweight to an incidence of no more than 5% of live births	<ul style="list-style-type: none"> <li>• Prenatal care in the first trimester</li> <li>• Low birthweight babies</li> <li>• Advising smokers to quit</li> <li>• Availability of obstetrical and prenatal care providers</li> <li>• Initiation of prenatal care</li> <li>• Low birthweight deliveries at facilities for high-risk deliveries and neonates</li> <li>• Frequency of ongoing prenatal care</li> <li>• Weeks of pregnancy at time of enrollment</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li>   <li>• Reporting Set (8)</li> </ul>
Increase to at least 90% the proportion of all pregnant women who receive prenatal care in the first trimester	<ul style="list-style-type: none"> <li>• Prenatal care in the first trimester</li> <li>• Availability of obstetrical/ prenatal care providers</li> <li>• Initiation of prenatal care</li> <li>• Frequency of ongoing prenatal care</li> <li>• Weeks of pregnancy at time of enrollment</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li>   <li>• Reporting Set (8)</li> </ul>
Reduce pregnancies among females aged 15-17 to no more than 50 per 1,000 adolescents	<ul style="list-style-type: none"> <li>• Check-ups after delivery</li> <li>• Children's access to primary care providers</li> <li>• Availability of mental health/chemical dependency providers</li> <li>• Adolescent well-care visit</li> <li>• Pediatric mental health network</li> <li>• Chemical dependency services</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (2)</li>   <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> </ul>

Virginia 2000 Objective	HEDIS 3.0 Measures	Reporting Set (Domain)
Increase the percentage of women who abstain from smoking while pregnant to at least 90%	<ul style="list-style-type: none"> <li>• Advising smokers to quit</li> <li>• Availability of obstetrical/ prenatal care providers</li> <li>• Initiation of prenatal care</li> <li>• Frequency of ongoing prenatal care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> </ul>
Reduce the percentage of nonmarital births to 21.8% of total live births	<ul style="list-style-type: none"> <li>• Check-ups after delivery</li> <li>• Children's access to primary care providers</li> <li>• Availability of mental health/chemical dependency providers</li> <li>• Adolescent well-care visit</li> <li>• Pediatric mental health network</li> <li>• Chemical dependency services</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> </ul>
Reduce coronary heart disease deaths to no more than 100 per 100,000 people (age-adjusted)	<ul style="list-style-type: none"> <li>• Advising smokers to quit</li> <li>• Beta blocker treatment after a heart attack</li> <li>• Flu shots for older adults</li> <li>• Ambulatory care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (5)</li> </ul>
Reduce stroke deaths to no more than 20 per 100,000 people (age-adjusted)	<ul style="list-style-type: none"> <li>• Advising smokers to quit</li> <li>• Ambulatory care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (5)</li> </ul>
Achieve a cancer death rate (age-adjusted) of no more than 130 per 100,000 people	<ul style="list-style-type: none"> <li>• Advising smokers to quit</li> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> <li>• Ambulatory care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (5)</li> </ul>
Reduce diabetes-related deaths to no more than 11 per 100,000 people (age-adjusted)	<ul style="list-style-type: none"> <li>• Advising smokers to quit</li> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> <li>• Ambulatory care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (5)</li> </ul>
Increase to at least 80% the proportion of women aged 40 and over who have ever received a clinical breast examination and a mammogram, and to at least 60% those aged 50 and older who have received them within the preceding one to two years	<ul style="list-style-type: none"> <li>• Breast cancer screening</li> <li>• Availability of obstetrical/prenatal care providers</li> <li>• Ambulatory care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> </ul>

Virginia 2000 Objective	HEDIS 3.0 Measures	Reporting Set (Domain)
Increase the percent of all cancer that is diagnosed in the early stages to at least 57.1%	<ul style="list-style-type: none"> <li>• Cervical cancer screening</li> <li>• Breast cancer screening</li> <li>• Availability of obstetrical/prenatal care providers</li> <li>• Ambulatory care</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> </ul>
Increase the percent of breast cancer that is diagnosed in the early stages to at least 72.9%	<ul style="list-style-type: none"> <li>• Breast cancer screening</li> <li>• Availability of obstetrical/prenatal care providers</li> <li>• Ambulatory care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (5)</li> </ul>
Increase the percent of cervical cancer that is diagnosed in the in situ stage to at least 84.5%	<ul style="list-style-type: none"> <li>• Cervical cancer screening</li> <li>• Availability of obstetrical/prenatal care providers</li> <li>• Ambulatory care</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> </ul>
Increase the percent of colorectal cancer that is diagnosed in the early stage to at least 40.6%	<ul style="list-style-type: none"> <li>• Ambulatory care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (5)</li> </ul>
Increase to at least 75% the proportion of adults who have had their blood cholesterol checked within the preceding five years	<ul style="list-style-type: none"> <li>• Ambulatory care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (5)</li> </ul>
Reduce cigarette smoking to a prevalence of no more than 15% among people aged 18 and older	<ul style="list-style-type: none"> <li>• Advising smokers to quit</li> <li>• Initiation of prenatal care</li> <li>• Availability of obstetrical/prenatal care providers</li> <li>• Adolescent well-care visit</li> <li>• Frequency of ongoing prenatal care</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li>   <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> </ul>

Virginia 2000 Objective	HEDIS 3.0 Measures	Reporting Set (Domain)
Increase to at least 40% the proportion of people aged 18 and older who engage regularly, preferably daily, in light to moderate physical activity for at least 30 minutes per session	<ul style="list-style-type: none"> <li>• The health of seniors</li> <li>• Adolescent well-care visit</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (5)</li> </ul>
Reduce overweight to a prevalence of no more than 20% among people aged 18 and older	<ul style="list-style-type: none"> <li>• The health of seniors</li> <li>• Adolescent well-care visit</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (5)</li> </ul>
Increase the basic immunization series among children aged two years to at least 90%	<ul style="list-style-type: none"> <li>• Childhood immunization status</li> <li>• Children's access to primary care providers</li> <li>• Well-child visits in the first 15 months of life</li> <li>• Ambulatory care</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> </ul>
Confine the incidence of HIV infection to no more than 11.9 per 100,000 people	<ul style="list-style-type: none"> <li>• Children's access to primary care providers</li> <li>• Availability of obstetrical/prenatal care providers</li> <li>• Adolescent well-care visit</li> <li>• Pediatric mental health network</li> <li>• Chemical dependency services</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> </ul>
Reduce primary and secondary syphilis to an incidence of no more than 4 cases per 100,000 people	<ul style="list-style-type: none"> <li>• Children's access to primary care providers</li> <li>• Availability of obstetrical/prenatal care providers</li> <li>• Adolescent well-care visit</li> <li>• Pediatric mental health network</li> <li>• Chemical dependency services</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> </ul>

Virginia 2000 Objective	HEDIS 3.0 Measures	Reporting Set (Domain)
Reduce gonorrhea to an incidence of no more than 100 cases per 100,000 people	<ul style="list-style-type: none"> <li>• Children's access to primary care providers</li> <li>• Availability of obstetrical/prenatal care providers</li> <li>• Adolescent well-care visit</li> <li>• Pediatric mental health network</li> <li>• Chemical dependency services</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> </ul>
Reduce tuberculosis to an incidence of no more than 3.5 cases per 100,000 people	(see crosscutting measures)	(see crosscutting measures)
Increase levels of pneumococcal pneumonia and influenza immunization among noninstitutionalized high risk populations to at least 60%	<ul style="list-style-type: none"> <li>• The health of seniors</li> <li>• Flu shots for older adults</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> </ul>
Reduce the incidence of children ages nine years and younger with blood lead levels exceeding 15 $\mu$ g/dl to 13 per 100,000	<ul style="list-style-type: none"> <li>• Children's access to primary care providers</li> <li>• Well-child visits in the first 15 months of life</li> <li>• Well-child visits in the third, fourth, fifth and sixth year of life</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> </ul>
Reduce deaths caused by unintentional injuries to no more than 29.3 per 100,000 people (age-adjusted)	<ul style="list-style-type: none"> <li>• Check-ups after delivery</li> <li>• Follow-up after hospitalization for mental illness</li> <li>• Children's access to primary care providers</li> <li>• Availability of mental health/chemical dependency providers</li> <li>• Well-child visits in the first 15 months of life</li> <li>• Well-child visits in the third, fourth, fifth and sixth year of life</li> <li>• Adolescent well-care visit</li> <li>• Chemical dependency utilization - inpatient discharges and average length of stay</li> <li>• Chemical dependency utilization - percentage of members receiving inpatient, day/night care and ambulatory services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> </ul>

Virginia 2000 Objective	HEDIS 3.0 Measures	Reporting Set (Domain)
	<ul style="list-style-type: none"> <li>• Readmission for chemical dependency</li> <li>• Pediatric mental health network</li> <li>• Chemical dependency services</li> <li>• Family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> </ul>
<p>Reduce deaths caused by suicide to no more than 10.5 per 100,000 people (age-adjusted)</p>	<ul style="list-style-type: none"> <li>• Check-ups after delivery</li> <li>• Follow-up after hospitalization for mental illness</li> <li>• Children’s access to primary care providers</li> <li>• Availability of mental health/chemical dependency providers</li> <li>• Adolescent well-care visit</li> <li>• Mental health utilization - percentage of members receiving inpatient day/night and ambulatory services</li> <li>• Readmission for specified mental health disorders</li> <li>• Chemical dependency utilization - inpatient discharges and average length of stay</li> <li>• Chemical dependency utilization - percentage of members receiving inpatient, day/night care and ambulatory services</li> <li>• Mental health utilization - inpatient discharges and average length of stay</li> <li>• Readmission for chemical dependency</li> <li>• Pediatric mental health network</li> <li>• Chemical dependency services</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting Set (1)</li> <li>• Reporting Set (1)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (2)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (5)</li> <li>• Reporting Set (8)</li> <li>• Reporting Set (8)</li> </ul>

## Testing Set Measures

### (1) Effectiveness of care

- Number of people in the plan who smoke
- Smokers who quit
- Flu shots for high-risk adults
- Cholesterol management of patients hospitalized after coronary heart disease
- Aspirin treatment after a heart attack
- Outpatient care of patients hospitalized for heart failure
- Controlling high blood pressure
- Prevention of stroke in people with atrial fibrillation
- Colorectal cancer screening
- Follow-up after an abnormal Pap smear
- Follow-up after an abnormal mammogram
- Stage at which breast cancer was detected
- Assessment of how breast cancer therapy affects the patient's ability to function
- Continuity of care for substance abuse patients
- Substance counseling for adolescents
- Availability of medication management and psychotherapy for patients with schizophrenia
- Patient satisfaction with mental health care
- Family visits for children 12 years of age or younger
- Failure of substance abuse treatment
- Screening for chemical dependency
- Appropriate use of psychotherapeutic medications
- Continuation of depression treatment
- Monitoring diabetes patients
- Chlamydia screening
- Prescription of antibiotics for the prevention of HIV-related pneumonia
- Use of appropriate medications for people with asthma

### (2) Accessibility and availability of care

- Problems with obtaining care

### (3) Satisfaction with the experience of care

- The Member Satisfaction Survey (numerous measures)
- Survey descriptive information

### (4) Use of services

- Use of behavioral services

### (5) Cost of care

- Health plan costs per member per month

### (6) Informed health care choices

- Counseling women about hormone replacement therapy

### Deaths from 10 Leading Causes Number and Age Adjusted Rates, 1995

Leading Causes of Death - Virginia	<u>Virginia</u> Age-Adjusted		<u>US</u> Age Adjusted
	<u>Number</u>	<u>Rate</u>	<u>Rate</u>
1. Diseases of the Heart	15,766	137.2	138.3
2. Malignant Neoplasms	12,510	132.7	129.9
3. Cerebrovascular Diseases	3,781	29.4	26.7
4. Chronic Obstructive Pulmonary Diseases	2,247	20.5	20.8
5. Unintentional Injury	2,170	27.8	30.5
6. Pneumonia and Influenza	1,873	13.3	12.9
7. Diabetes Mellitus	1,159	11.7	13.3
8. HIV/AIDS	811	11.4	15.6
9. Suicide	809	11.2	11.2
10. Septicemia	712	6.4	4.1
Deaths from all causes	52,507	504.5	503.9

### Leading Causes of Death - US

	<u>Number</u>
1. Diseases of the Heart	761,085
2. Malignant Neoplasms	416,509
3. Cerebrovascular Diseases	170,225
4. Unintentional Injuries	105,718
5. Chronic Obstructive Pulmonary Diseases	56,050
6. Pneumonia and Influenza	54,619
7. Diabetes Mellitus	34,851
8. Chronic Liver Disease and Cirrhosis	30,583
9. Atherosclerosis	29,449
10. Suicide	26,869
Deaths from all causes	1,989,841

## Resource Publications

1. U. S. Department of Health and Human Services. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*, Public Health Service, 1990.
2. U. S. Department of Health and Human Services. *Healthy People 2000: Midcourse Review and 1995 Revisions*, Public Health Service, 1996.
3. Virginia Department of Health, Center for Health Statistics. *Virginia Health Statistics 1995*. Also, *Virginia Vital Statistics Annual Reports (1990 - 1994)*.
4. Virginia Department of Health, Division of STD/AIDS. *Division of STD/AIDS Surveillance Quarterly*, Volume 4, Number 2&3.
5. Virginia Department of Health, Office of Epidemiology. *Reportable Disease Surveillance in Virginia 1995*.
6. Virginia Department of Health, Office of Epidemiology. *1995 Annual Report Summary of Surveillance Data for Virginia Children with Elevated Blood Lead Levels*.

## Healthy Virginia Communities Task Team

The following staff of the Virginia Department of Health, as members of the Healthy Virginia Communities Task Team, contributed to this report:

Paul W. Matthias (Chairman)  
Planner Senior  
Office of Health Policy

Janice M. Hicks, PhD  
Policy Analyst  
Office of Family Health Services

Carl W. Armstrong, MD, FACP  
Acting Deputy Commissioner  
Public Health

Robert W. Hicks, BS, MSA  
Director, Office of Environmental  
Health Services

L. Robert Bolling  
Director  
Office of Minority Health

Ronald S. Hyman  
Director  
Center for Health Statistics

Thomas R. Coleman, MD, MS  
District Director  
Southside Health District

Linda J. Redman, MPH, MA  
Prevention Specialist  
Office of Family Health Services

Karen W. Connelly, RN, MPA  
Director  
Public Health Nursing

Lynn M. Warren, RN, MPH  
Executive Assistant to the  
State Health Commissioner

Scott E. Daniels, PhD  
Assistant Commissioner  
Office of Health Policy

C. Diane Woolard, PhD, MPH  
Director, Division of Surveillance  
and Investigation

### Other Contributors

Special thanks are also extended to the following:

Randolph L. Gordon, MD, MPH, State Health Commissioner - For meeting on several occasions with the members of the Healthy Virginia Communities Task Team to share his vision and ideas regarding its roles and responsibilities.

William Slater, graduate student from Virginia Commonwealth University, who devoted several weeks of his time to developing the data and the layout for this report.

Alison Croke, graduate student from Virginia Commonwealth University, who assisted with the final preparation of the document.

## Additional Information

For additional information pertaining to this report, the following contacts are suggested:

### General Information

Paul W. Matthias  
Office of Health Policy  
Virginia Department of Health  
P. O. Box 2448 - Room 227  
Richmond, VA 23218  
(804)371-2909 (804)371-0116 (FAX)  
Internet: pmatthias@vdh.state.va.us

The report will be available on the Virginia Department of Health's web page at:  
vdh@state.va.us

### Health Statistics

Ronald S. Hyman  
Director, Center for Health Statistics  
Virginia Department of Health  
P. O. Box 2448  
Richmond, VA 23218  
(804)786-6206 (804)371-4800 (FAX)  
Internet: rhyman@vdh.state.va.us

### Reportable Disease Surveillance / Virginia Cancer Registry

C. Diane Woolard, PhD, MPH  
Director, Division of Surveillance and Investigation  
Virginia Department of Health  
P. O. Box 2448  
Richmond, VA 23218  
(804)786-6261 (804)786-1076 (FAX)  
Internet: dwoolard@vdh.state.va.us

### Behavior Risk Factor Surveillance System (BRFSS)

Linda J. Redman, MPH, MA  
Prevention Specialist  
Office of Family Health Services  
Virginia Department of Health  
P. O. Box 2448  
Richmond, VA 23218  
(804)371-0478 (804)692-0184 (FAX)  
Internet: lredman@vdh.state.va.us