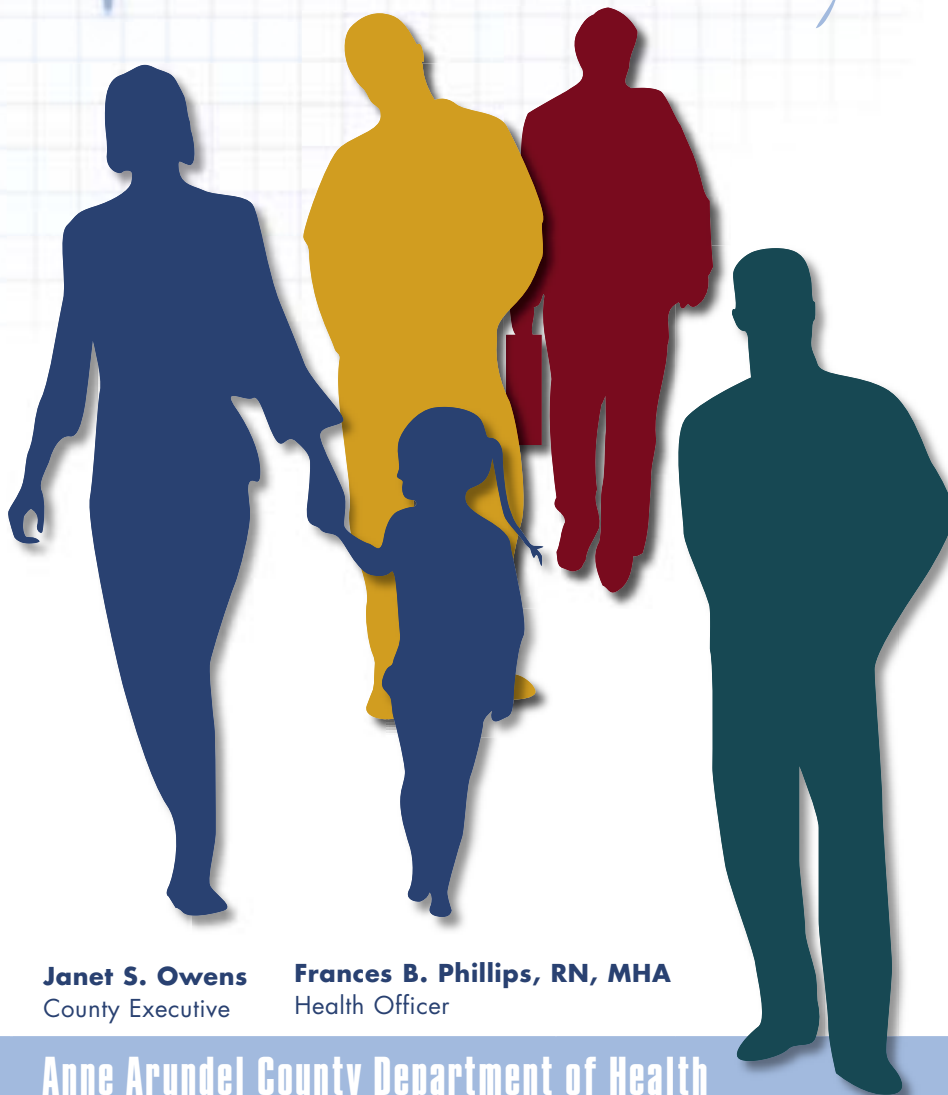


May 2006  
Report Card of Community Health Indicators

Monitoring the  
**Pulse** of the  
Community



**Janet S. Owens**  
County Executive

**Frances B. Phillips, RN, MHA**  
Health Officer

**Anne Arundel County Department of Health**

## Contact Information

**Compiled in 2006 by:**

Johnia J. Curtis, MPH, Epidemiologist

**Editorial Assistance provided by:**

Katherine P. Farrell, MD, MPH, Deputy Health Officer for Public Health

Ronna Gotthainer, Health Planner

Elin Jones, MS, Public Information Officer

**Special thanks to the following individuals for their contributions to this report:**

Praveena Gadam, MPH

Djordje Gikic, MD, MPH

Roy Hoffman, MD, MPH

Joseph Horman, DVM, MPH

Kelly Russo, MD, MPH

Anne Arundel County Department of Health

Office of Planning & Surveillance

3 Harry S. Truman Parkway

Annapolis, MD 21401

(410) 222-7280/7002

hdjcurti@aacounty.org

www.ahealth.org

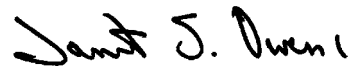
## County Executive's Message

One definition of pulse is "the rate at which the heart beats, usually measured to obtain a quick evaluation of a person's health."

Each year the Anne Arundel County Department of Health checks the pulse of our community. This report serves as that quick evaluation of our vital signs and any symptoms that may affect the quality of life of our residents. Our goal is to achieve a normal rhythm through healthy outcomes.

We must continue to look at these community health indicators in order to improve the health in Anne Arundel County.

Warmest regards,



Janet S. Owens





# Table of Contents

<b>Demographics</b>	1
<b>Selected Indicators</b>	
Leading Causes of Death	3
Cancer Rates	4
Heart Disease	6
Infant Health Indicators	7
Infant Mortality	8
<b>Communicable Diseases</b>	
General Disease Reporting	9
Chlamydia	10
HIV/AIDS	11
Methicillin-resistant Staphylococcus aureus (MRSA)	12
Rabies	13
Influenza Vaccinations	14
<b>Special Health Topics</b>	
Domestic Violence	15
Injuries	16
Liver Disease	18
Bladder Cancer	19
Smoking	20





# Demographics

	Anne Arundel	Maryland	U.S.
<b>Population</b>			
Total Population, 2004 estimate	508,572	5,558,058	293,655,404
Population, 2000 census	489,656	5,296,486	281,421,906
% change 4/1/00 - 7/1/04	3.9%	4.9%	4.3%
% change 1990-2000	14.6%	10.8%	13.1%
Male	48.7%	48.2%	48.9%
Female	51.3%	51.8%	51.1%
<b>Race, Age and Ethnicity, 2004 Estimates</b>			
White	80.5%	63.3%	75.6%
Black	12.9%	28.5%	12.2%
Asian	2.6%	4.7%	4.2%
American Indian/Alaskan Native	0.1%	0.2%	0.8%
Hispanic	3.3%	5.4%	14.2%
Under 5 Years Old	7.2%	6.8%	7.0%
18 Years and Over	74.3%	74.4%	74.5%
65 Years and Over	10.5%	11.0%	12.0%
Median Age	36.7	36.8	36.2
<b>Household and Economic Indicators, 2004</b>			
Average Household Size	2.61	2.61	2.60
Mean travel time to work in mins (workers 16+)	27.3	29.7	24.7
Median Household Income (2004 inflation-adjusted \$)	\$66,986	\$57,424	\$44,684
Families Below Poverty Level	4.9%	5.8%	10.1%
Individuals Below Poverty Level	7.6%	8.8%	13.1%
Unemployed Rate	4.5%	6.1%	7.2%

Data Source: American Community Survey, U.S. Census Bureau; Maryland State Data Center, Maryland Department of Planning.



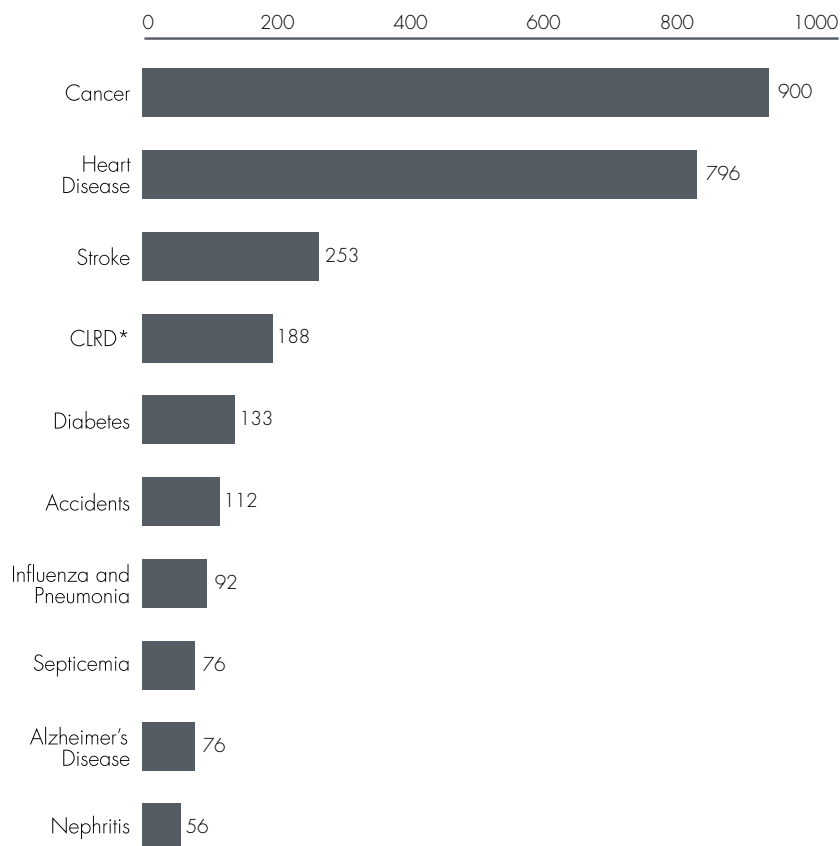




## Leading Causes of Death

In Anne Arundel County for 2004, the leading causes of death were cancer, heart disease, stroke, chronic lower respiratory diseases (CLRD\*), diabetes, unintentional injuries (accidents), influenza and pneumonia, septicemia, Alzheimer's disease and nephritis.

Leading Causes of Death, Anne Arundel County, 2004



\*Chronic lower respiratory diseases include both chronic obstructive pulmonary disease and asthma.  
Data Source: Death Certificate Data, Maryland Division of Health Statistics, Maryland DHMH.



## Cancer Rates

Incidence (1998-2002) and Mortality Rates\* (2000-2002) by Type of Cancer  
Anne Arundel County, Maryland, and U.S.

Incidence (1998 - 2002)				
Type of Cancer	County Number	County Rate	MD Rate	U.S. Rate
All Cancers	10,968	490.8	472.2	469.6
Lung and Bronchus	1,601	74.3	67.9	61.0
Colorectal	1,130	53.0	53.2	52.9
Female Breast	1,676	134.2	128.0	134.4
Prostate	1,636	163.0	179.0	173.8
Oral	271	11.7	10.3	10.5

Mortality (2000 - 2002)				
Type of Cancer	County Number	County Rate	MD Rate	U.S. Rate
All Cancers	2,730	212.7	204.9	196.4
Lung and Bronchus	804	62.3	57.9	55.4
Colorectal	250	19.8	22.2	20.2
Female Breast	220	29.5	28.3	26.1
Prostate	111	26.0	31.4	29.1
Oral	48	3.6	2.9	2.7

\*Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population.  
Data Source: Maryland Cancer Registry, Preliminary Data, Maryland DHMH; Surveillance Epidemiology and End Results (SEER), National Cancer Institute; CDC WONDER.



## Cancer Rates continued

Incidence (1998-2002) and Mortality Rates\* (2000-2002) by Type of Cancer  
Anne Arundel County, Maryland, and U.S.

Incidence (1998 - 2002)				
Type of Cancer	County Number	County Rate	MD Rate	U.S. Rate
Liver	79	3.5	3.9	6.2
Pancreas	237	11.2	10.5	11.0
Lymphomas	428	18.8	18.9	21.8
Testicular	69	5.3	4.5	5.3
Thyroid	178	7.2	8.3	7.6
Esophageal	114	5.2	5.4	4.5
Brain	155	6.5	5.6	6.4
Bladder	483	22.7	19.4	20.3
Larynx	109	4.8	4.6	3.6

Mortality (2000 - 2002)				
Type of Cancer	County Number	County Rate	MD Rate	U.S. Rate
Liver	69	5.2	4.7	4.8
Pancreas	151	11.9	10.6	10.6
Lymphomas	86	6.9	7.8	8.4
Testicular	^	**	**	0.1
Thyroid	^	**	**	0.5
Esophageal	66	4.9	5.0	4.4
Brain	59	4.1	4.0	4.4
Bladder	72	6.1	4.5	4.3
Larynx	24	**	1.7	1.3

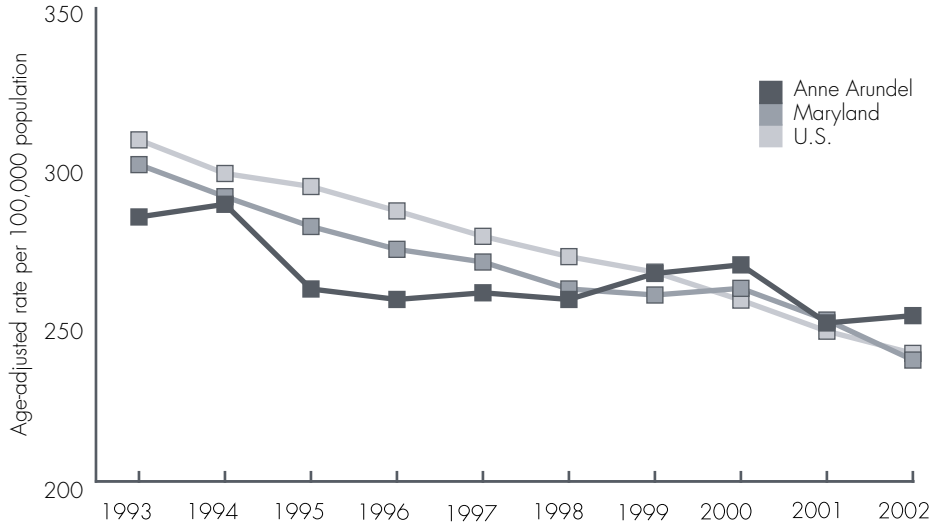
- ^ Cells with 5 or fewer non-zero cases are not presented.  
 \* Rates are per 100,000 and are age-adjusted to 2000 U.S. standard population.  
 \*\* Rates based on cells with 25 or fewer non-zero cases are not presented per DHMH/MCR Data Use Policy.  
 Data Source: Maryland Cancer Registry, Preliminary Data, Maryland DHMH; Surveillance Epidemiology and End Results (SEER), National Cancer Institute; CDC WONDER.



## Heart Disease

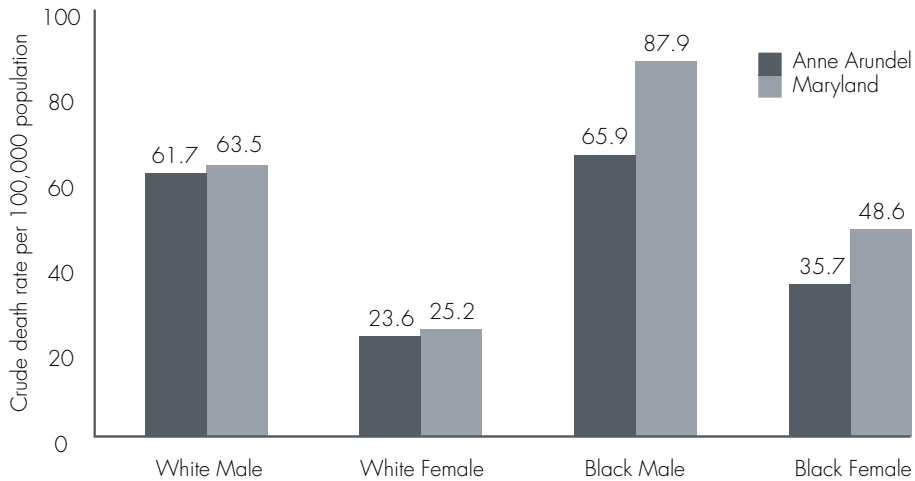
The decrease in heart disease mortality in Anne Arundel County is encouraging but appears to be slowing. Improvements in medical care and reducing risk factors such as smoking, obesity and physical inactivity can contribute to further declines in heart disease deaths, particularly among those under age 65.

### Heart Disease Mortality Rates, 1993–2002



Data Source: CDC WONDER

### Heart Disease Mortality Rate (Persons Under Age 65), 1999–2002



Data Source: CDC WONDER; Division of Cardiovascular Health and Nutrition, Maryland DHMH.



## Infant Health Indicators

	1999	2000	2001	2002	2003	2004
<b>Number of Births (Mother's Race)</b>						
Total	6,660	6,790	6,893	6,785	6,913	6,767
Whites	5,350	5,495	5,568	5,414	5,601	5,400
Blacks	1,032	1,022	1,001	1,026	1,021	1,054
Hispanic, any race	221	302	299	344	470	448
<b>Low Birth Weight per 100 Births<sup>^</sup></b>						
Anne Arundel	7.3	6.9	7.7	8.3	8.2	8.1
Maryland	9.1	8.7	9.0	9.0	9.1	9.4
United States	7.6	7.6	7.6	7.8	7.9	8.1*
<b>Late or No Prenatal Care per 100 Births**</b>						
Anne Arundel	1.9	2.0	2.5	2.0	1.7	2.1
Maryland	3.1	3.1	3.7	3.6	3.8	3.9
United States	3.8	3.9	3.8	3.6	3.5	3.6*
<b>Infant Mortality - All Races per 1,000 Live Births</b>						
Anne Arundel	7.1	6.3	6.4	5.9	8.1	7.7
Maryland	8.3	7.4	8.0	7.6	8.2	8.5
United States	7.1	6.9	6.9	7.0	6.9*	NA
<b>Infant Mortality - Whites per 1,000 Live Births</b>						
Anne Arundel	5.6	5.1	5.4	4.2	5.5	5.9
Maryland	5.1	4.7	5.5	5.4	5.4	5.6
United States	5.8	5.7	5.7	5.8	5.8*	NA
<b>Infant Mortality - Blacks per 1,000 Live Births</b>						
Anne Arundel	15.5	12.7	14.0	13.6	22.6	18.0
Maryland	14.7	13.0	13.6	12.7	14.8	14.9
United States	14.6	14.1	14.2	14.3	14.1*	NA
<b>Births to Women Under 18 Years Old per 100 Births</b>						
Anne Arundel	2.8	2.5	2.0	2.5	2.3	2.2
Maryland	3.9	3.6	3.4	3.3	3.0	3.0
United States	4.4	4.1	3.8	3.6	3.4	3.4*

<sup>^</sup> Defined as <2,500 grams.

\* Preliminary

\*\* Defined as 3rd trimester prenatal care or no care before birth.

NA Not Available

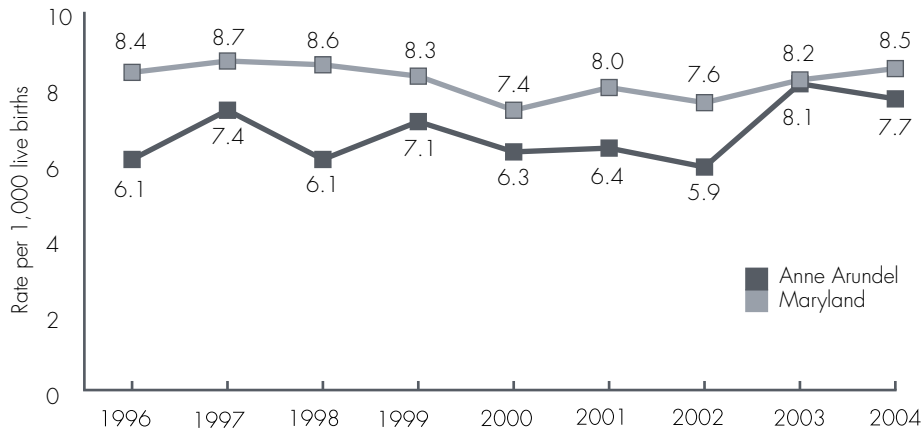
Data Source: Maryland Vital Statistics Reports, Division of Health Statistics, Maryland DHMH; Health, United States, NCHS, CDC.



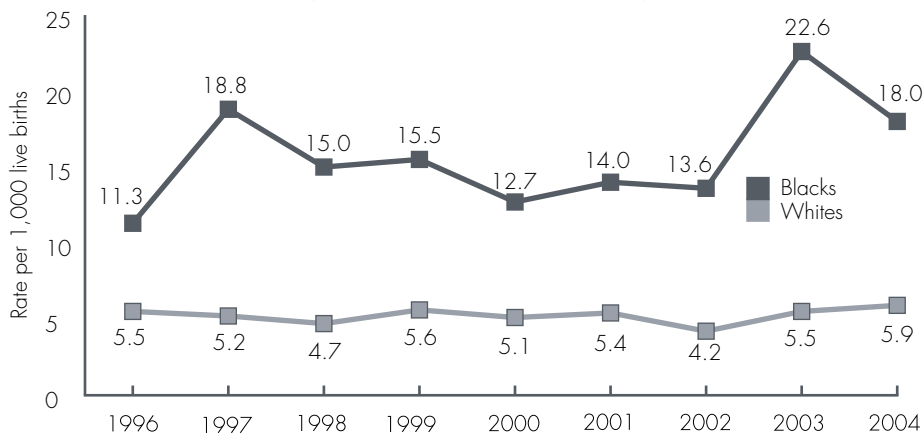
## Infant Mortality

In Anne Arundel County, more than two-thirds of infant deaths occur within the first month after birth. These deaths are mainly due to preterm delivery and low birth weight, birth defects and maternal complications. The infant deaths that occur after the first month mainly result from Sudden Infant Death Syndrome (SIDS), birth defects and unintentional injuries.

Infant Mortality Rates, Anne Arundel County and Maryland, 1996-2004



Infant Mortality Rates by Race, Anne Arundel County 1996-2004



Data Source: Maryland Vital Statistics Reports, Division of Health Statistics, Maryland DHMH; Federal Interagency Forum on Child and Family Statistics.



# Communicable Diseases

## General Disease Reporting

Number of Cases of Selected Reportable Diseases in Anne Arundel County

	2001	2002	2003	2004	2005*	5-year Mean
Campylobacter	40	33	24	39	53	38
E. coli O157:H7	3	3	2	4	7	4
Salmonella	81	77	75	77	84	79
Legionellosis	4	7	10	3	10	7
M. Marinum	6	10	6	14	11	9
M. Tuberculosis	14	12	13	6	15	12
Hepatitis A (infectious)	56	30	19	5	8	24
Hepatitis B - all types**	116	128	101	167	178	138
Hepatitis C - all types**	751	846	652	821	1,022	818
Encephalitis	2	3	4	5	8	4
Meningitis, Bacterial	7	11	5	8	17	10
Meningitis, Fungal	5	4	3	1	1	3
Meningitis, Viral	68	37	47	82	57	58
Meningitis, Meningococcal	5	2	4	0	3	3
Streptococcus A	18	24	34	25	22	24
Streptococcus B	24	19	30	43	36	30
Streptococcus Pneumonia	54	42	66	65	69	57
Ehrlichiosis	1	2	0	1	1	1
Lyme Disease	69	66	77	74	117	80
Rocky Mountain Spotted Fever	0	2	2	8	9	4
Animal Rabies	36	27	20	20	26	26
Human Exposures to Animals	1,181	1,105	1,173	1,274	1,341	1,215
Post-exposure Treatments	152	109	131	107	96	119

\* Provisional data \*\* Types include: Acute, Chronic, Lab Report  
 Data Source: Communicable Diseases Program, Anne Arundel County Department of Health



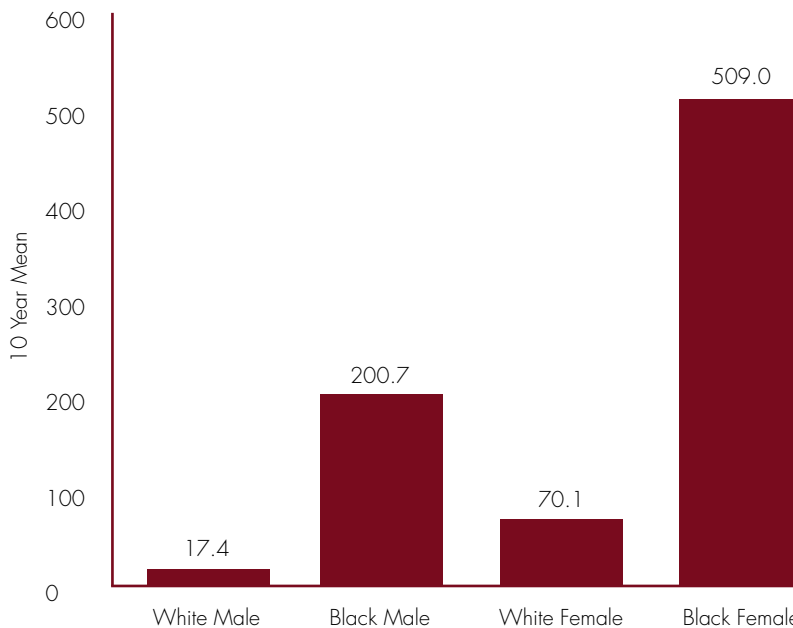
## Chlamydia

Chlamydia is a common sexually transmitted disease caused by the bacterium *Chlamydia trachomatis* and is the most frequently reported notifiable disease in Maryland and Anne Arundel County. Untreated infection can lead to chronic pelvic pain, premature delivery, infertility, infant pneumonia and pink eye in newborns.

A 26% increase of chlamydia cases in Anne Arundel County over the past 5 years mirrors trends in both Maryland (32%) and the United States (28%). This increase is due in part to expanded screening, increased sensitivity of diagnostic tests and improved case reporting.

Chlamydial infection does not affect all age, gender and racial groups equally. In Anne Arundel County in 2005, 75% of reported chlamydia cases occurred in 15-24 year olds and nearly 80% of cases occurred in women. In addition, black women had almost 7 times the infection rate of white women, whereas black men had almost 12 times the rate of white men.

**Chlamydia Incidence Rates in Anne Arundel County by Race and Gender, 1995-2005**  
10 Year Mean Rates per 100,000 population



Data Source: Communicable Diseases Program, Anne Arundel County Department of Health; Centers for Disease Control and Prevention.

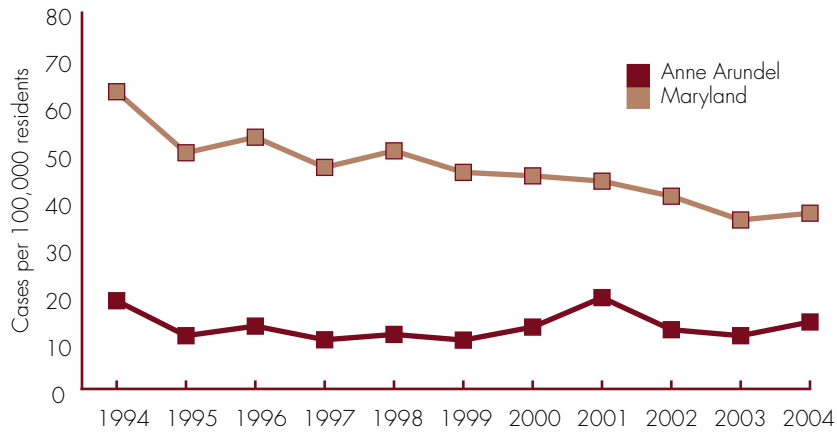


## HIV/AIDS

In 2004, Maryland ranked fourth in the nation for AIDS prevalence with almost 50% of the cases occurring in Baltimore City and 3% in Anne Arundel County. From 1995 to 2004, Maryland AIDS incidence fell by 42% from 44.9 to 26.1 cases per 100,000. Anne Arundel County's AIDS incidence fell by 36% from its 1995 peak of 15 to 10 cases per 100,000 by 2004.

In 2004, the HIV infection rate for blacks in Anne Arundel County was over 12 times that of whites (11 times statewide). County and state HIV cases were approximately 60% male. The AIDS rate for blacks in the County was nearly 23 times that of whites (14 times statewide).

### Comparative Annual HIV Incidence, 1994-2004



Data Source: AIDS Administration, Maryland DHMH.



## **Methicillin-resistant *Staphylococcus aureus* (MRSA)**

*Staphylococcus aureus* is a bacterium that commonly causes skin infections such as folliculitis or cellulitis. Less often, serious and life-threatening illnesses such as bloodstream and bone infections or pneumonia can occur. It is mainly spread through contact with contaminated surfaces or with people who are carriers and normally enters the body through a break in the skin. Methicillin-resistant *Staphylococcus aureus* (MRSA) bacteria are resistant to previously effective common penicillin and penicillin-like medications.

There are two types of MRSA infections: health care-associated and community-associated. Health care-associated (HA-MRSA) occurs in the health care setting, potentially affecting both personnel and patients.

Community-associated MRSA (CA-MRSA) affects the general public. This bacterium has been circulating in the community for years but because it is not reportable, actual numbers of cases are unknown. There have been reports of CA-MRSA infections nationwide affecting young children, sports teams, detention centers and other groups with close contact. Tattooing, IV drug use and rough contact have also been associated with MRSA infections.

Proper hand washing and good hygiene can help prevent infection. Inappropriate use of antibiotics can increase the development of antibiotic-resistant bacteria.

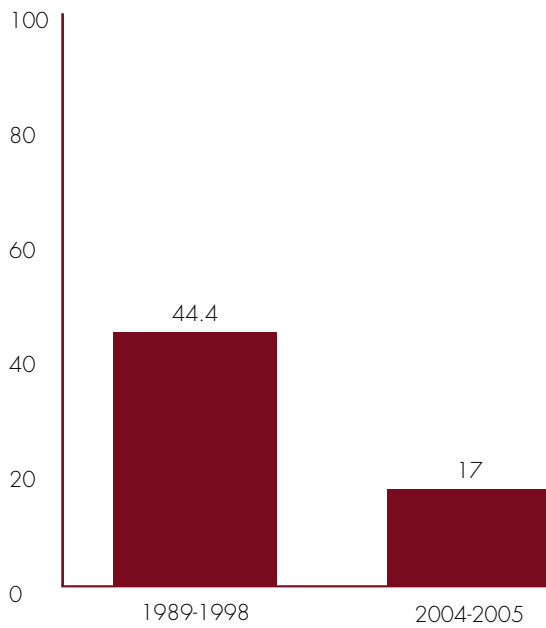


## Rabies

The Anne Arundel County Department of Health initiated an oral rabies vaccination program in October 1998 that targeted rabid raccoons on the Annapolis peninsula. Each year that program has been expanded and the oral rabies vaccine has now been distributed countywide for two full years.

The countywide oral rabies vaccination programs have had a role in reducing terrestrial animal rabies by more than 60%.

### Comparison of Terrestrial Animal Rabies Cases During 10 Years Prior to First ORV Campaign to 2 Full Years of Countywide ORV Campaigns (Annual Average)



Data Source: Zoonotic Disease Program, Anne Arundel County Department of Health.  
Note: Terrestrial animals are those that live on land (excludes bats).



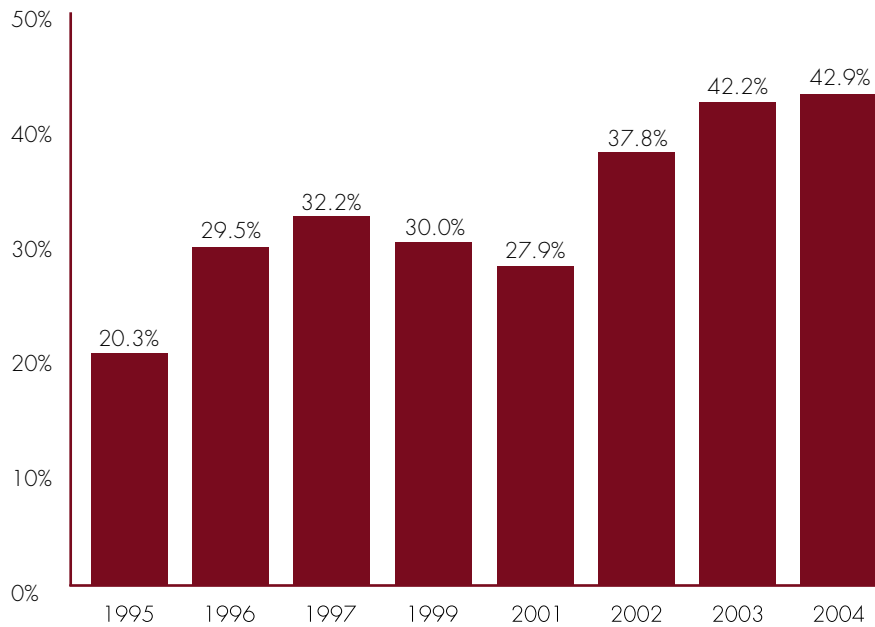
## Influenza Vaccinations

The Anne Arundel County Department of Health has run influenza vaccination clinics for over 25 years. The goal is to decrease the burden of influenza disease.

During the 2005-06 influenza season, almost 15,000 doses of vaccine were distributed in mass clinics. High priority groups are those aged 65 and older, persons with chronic medical conditions, pregnant women, health care workers, and children aged 6 months to 2 years. The public clinics immunize over 12% of the County's 65-year and older age group. Private providers and other commercial sources are clearly playing a role in vaccinating County residents.

The percentage of residents who reported receiving a flu shot has doubled over the past 10 years. However, vaccination levels among health care workers, children and pregnant women may not be optimal.

### Adult residents who had a flu shot in the past year, Anne Arundel County



Note: Includes years available.  
Data Source: Maryland Behavioral Risk Factor Surveillance System.





# Special Health Topics

## Domestic Violence

Domestic violence is a pattern of abusive behaviors within varying relationships. The public health implications of domestic violence are widespread. Abuse is a leading cause of injuries and homicide among women and infants.

Studies have identified associations of domestic violence with several other leading health indicators. Victims of domestic violence are at increased risk of:

- Smoking
- High-risk Alcohol Use
- Mental Health Problems
- Unintended Pregnancy
- Unsafe Sex
- Sexually Transmitted Infections
- Late Entry Into Prenatal Care
- Poor Nutritional Behaviors

In Anne Arundel County, the Domestic Violence Hotline received almost 1,900 calls during Fiscal Year 2005 and more than 3,500 related services were provided to County residents. The number of reported domestic violence crimes has declined since 2000.

### Domestic Violence Crimes, Anne Arundel County, 2000-2004



Data Source: 2004 Uniform Crime Report, Maryland State Police; YWCA Annapolis and Anne Arundel County; Family Violence Prevention Fund.

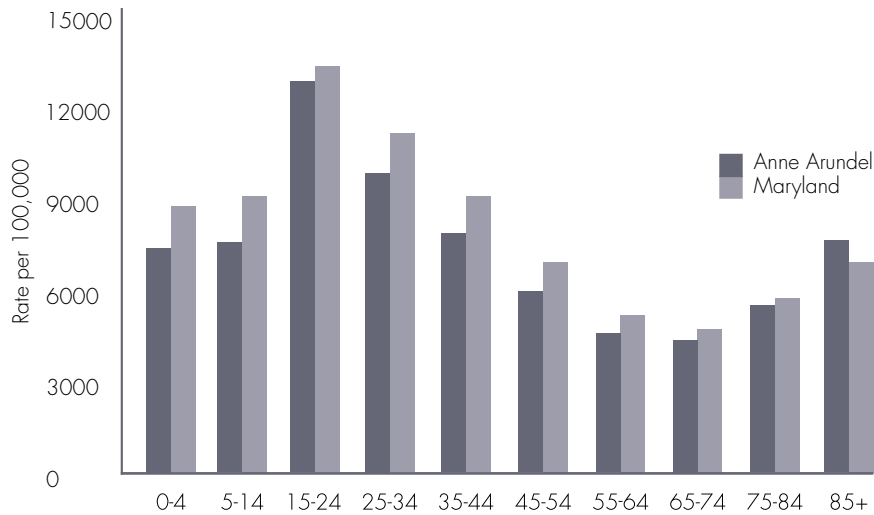


## Injuries

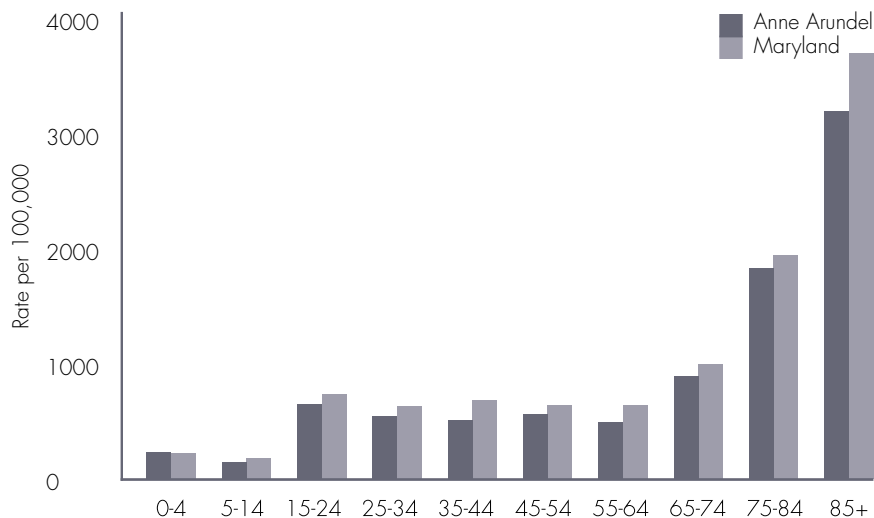
In 2003, falls followed by motor vehicle accidents were the leading causes of injury-related emergency room visits and hospitalizations for Anne Arundel County residents.

Persons between the ages of 15-34 were more likely to visit the emergency department for injuries, however, persons above age 75 were more likely to be admitted to the hospital for their injuries.

### Injury-related Emergency Dept. Visit Rates by Age, 2003



### Injury-related Hospitalization Rates by Age, 2003



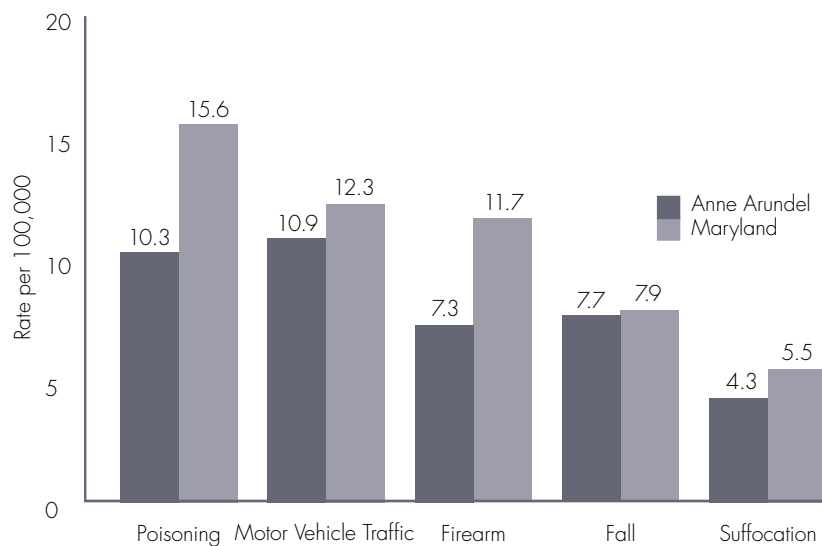
Data Source: Center for Preventive Health Services, Family Health Administration, Maryland DHMH.



## Injuries continued

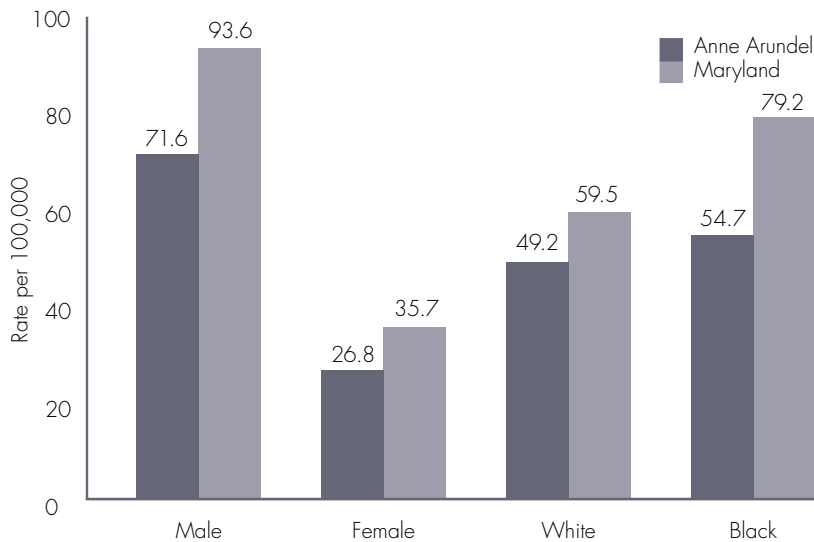
Motor vehicle traffic accidents and poisoning were the leading causes of injury-related deaths among Anne Arundel County residents in 2003. Injury-related death rates were higher among males than females. Injury-related death rates were slightly higher among blacks than whites.

### Leading Causes of Injury-related Death Rates, 2003



Note: Intent of injury may be unintentional, intentional or undetermined.

### Injury-related Death Rates, 2003



Data Source: Center for Preventive Health Services, Family Health Administration, Maryland DHMH.



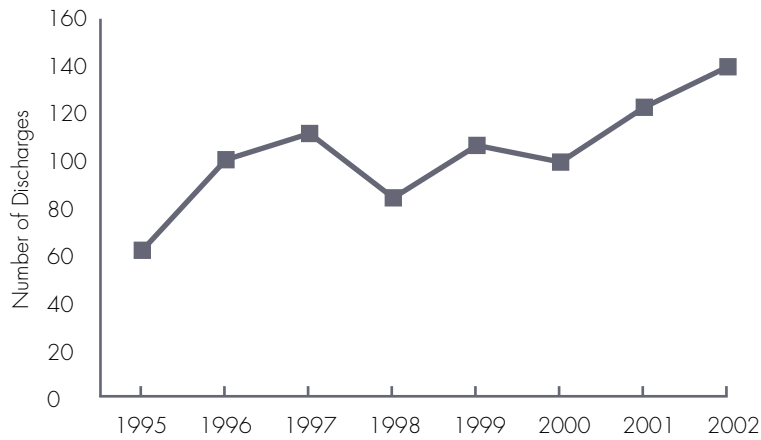
## Liver Disease

Chronic hepatitis C is a viral infection spread by exposure to infected blood. It is a known predisposing factor for cirrhosis and liver cancer. The reported incidence of chronic hepatitis C in Anne Arundel County has almost tripled from 22.9 per 100,000 in 2001 to 62.7 per 100,000 in 2005. This data should be viewed with caution as there are wide variations in reporting practices. Comparable data for Maryland is not available.

Cirrhosis can be a consequence of chronic hepatitis C and lead to liver cancer. The number of hospital discharges with a diagnosis of cirrhosis is increasing along with the number of cases of hepatitis C.

Rates of liver cancer declined in the last decade, from 4.5 per 100,000 to 4.1, reaching a level lower than the state average of 4.4 per 100,000. But when numbers are small they should be interpreted with caution. There may be a 20-year lag between exposure to hepatitis and diagnosis of liver cancer.

### Hospital Discharges with a Diagnosis of Cirrhosis, Anne Arundel County 1995-2002

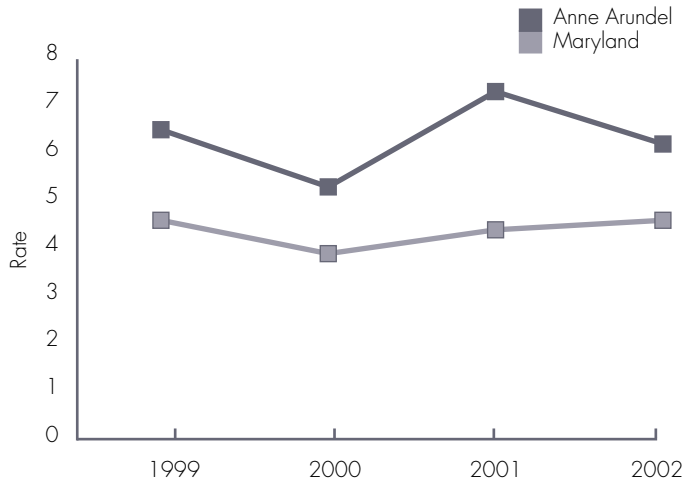


Data Source: Hospital Discharge Data, HSCRC.

## Bladder Cancer

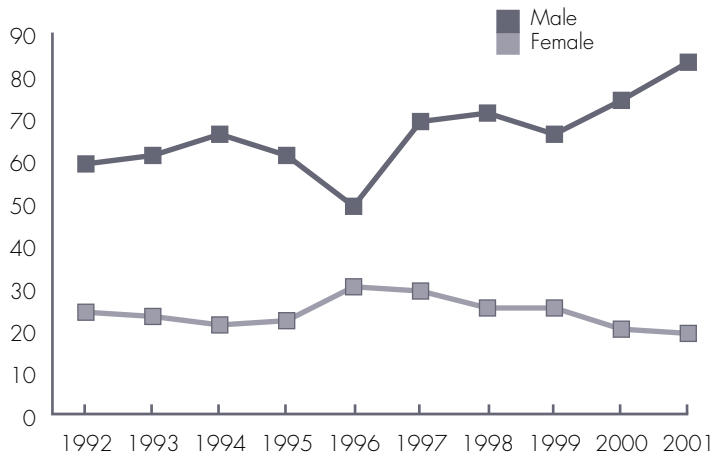
In Anne Arundel County, bladder cancer mortality rates have been consistently higher than the rest of the state. Men are two to three times more likely than women to develop it, however women who develop bladder cancer are more likely to die of it than men. The main preventable risk factor is smoking (including cigarettes, pipes, cigars and marijuana).

### Bladder Cancer Age-Adjusted Mortality Rates, 1999-2002



Note: Rates are per 100,000 and are age adjusted to the 2000 US Standard Population.  
Data Source: CDC Wonder.

### New Cases of Bladder Cancer, Anne Arundel County 1992-2001



Data Source: Maryland Cancer Registry

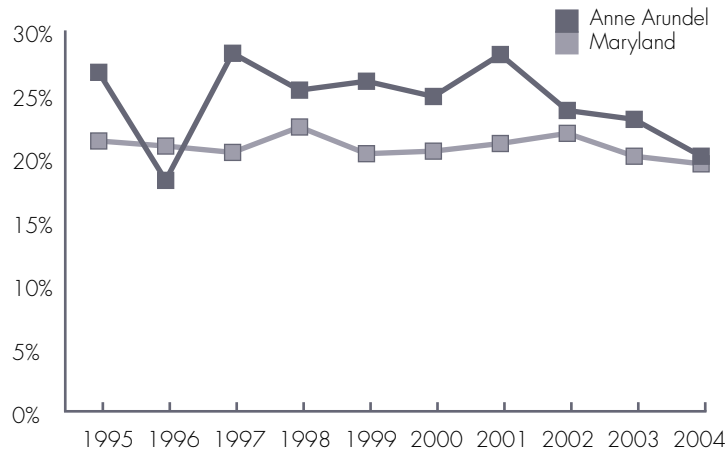


## Smoking

Smoking is a major risk factor for many cancers, heart disease and other chronic diseases. There has been a 25% reduction in smoking rates among Anne Arundel County adults over the last 10 years.

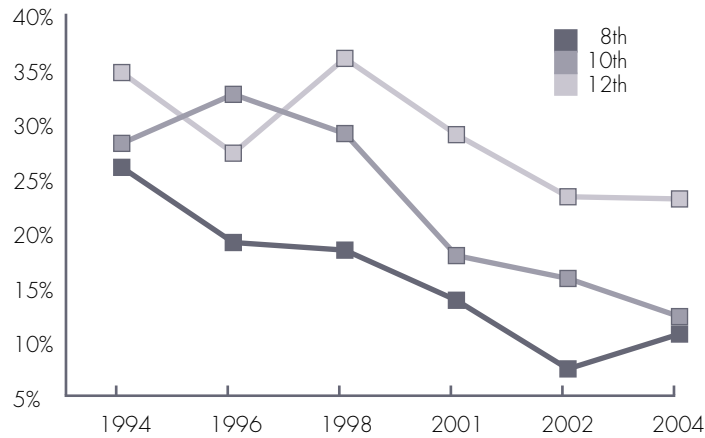
The results of student surveys indicate a decline in cigarette use among 8th, 10th and 12th graders.

### Adults who are Current Smokers



Note: Percent is of total population over 18.  
Data Source: Maryland Behavioral Risk Factor Surveillance System.

### Cigarette Use in the last 30 days, Anne Arundel County



Data Source: Maryland Adolescent Surveys.





M A R Y L A N D

DEPARTMENT OF HEALTH

The services and facilities of the Anne Arundel County Department of Health are available to all regardless of race, color, religion, political affiliation, national origin, age, sex, sexual orientation or disability.