



# Adolescent Suicide

*An Assessment of Adolescent Suicide Behavior  
in Anne Arundel County*

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September 2010

**Anne Arundel County Crisis Warmline**  
**410-768-5522**  
**24 hours every day**

**National Suicide Prevention Hotline**  
**1-800-SUICIDE (784-2433)**

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## Introduction

Suicidal thoughts and behaviors are a complex mental health issue. Adolescence is a stressful developmental period filled with major changes – physical, mental and emotional. Strong feelings of stress, confusion and self-doubt as well as pressure to succeed can influence a teenager’s problem solving and decision making abilities. For some teens, these changes, when accompanied by other conditions or losses can become overwhelming. For them, suicide may appear to be a solution.

In Anne Arundel County, suicide is the second leading cause of death among youth ages 10 to 17, second after unintentional injuries. However, completed suicides do not provide a comprehensive view of the extent of suicide in a community, as many suicide attempts are unreported and self-inflicted injuries may result in minor injury, severe injury or disability rather than death.

In 2007, 13.2 percent of Maryland (14.5 percent of United States) high school students reported that they had seriously considered attempting suicide during the past 12 months and 7.5 percent (6.9 percent in U.S.) reported that they had actually attempted suicide during the same time period. About 2.3 percent (2 percent in U.S.) made a suicide attempt that resulted in an injury, poisoning or overdose that required medical attention.

Suicide attempts are often associated with alcohol and drug use. According to the National Violent Death Reporting System, for those tested for substances, one-third were positive for alcohol and nearly one in five had evidence of opiates, including heroin and prescription pain medication.

The problem of adolescent suicide and suicidal threats is ongoing in Anne Arundel County. It is important to continue to raise awareness of existing County mental health resources available to assist adolescents and families in need to prevent future deaths.



## Suicide and Emergency Room Visits

In Anne Arundel County, suicide is the second leading cause of death among youth ages 10 to 17, second after unintentional injuries. From 2004-2008, there were nine deaths from suicide among youth less than age 18; the median age was 17.

Approximately 475 Anne Arundel County adolescents were treated in an emergency room (ER) for injuries in which suicide was the principal diagnosis (self-injury) over a 5-year period, fiscal years 2004-2008\*; an average of 95 per year; a rate of 1.7 per 1,000 per year. During this time, the rate of ER visits for self-injury was slightly higher among white youth than among black youth. However, over the 5-year period, the percentage of ER visits among black youth, as a proportion of all ER visits, more than doubled. The median age increased from 15 in fiscal year 2004 to 16 in fiscal year 2008.

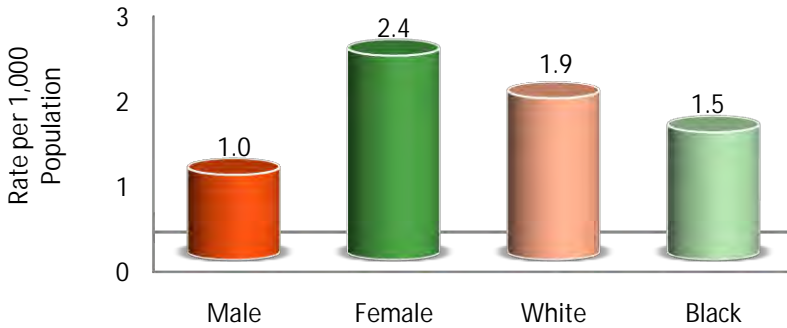
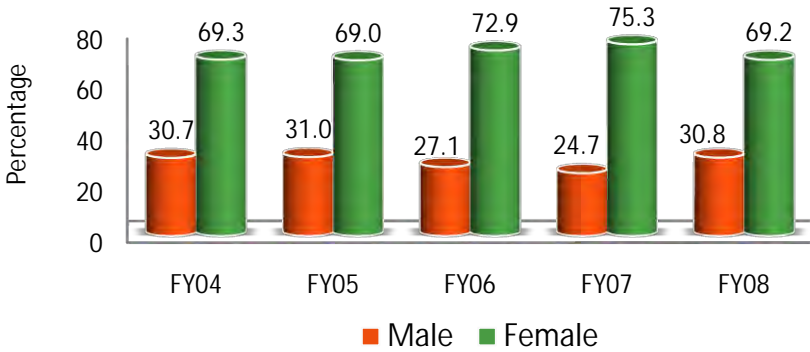
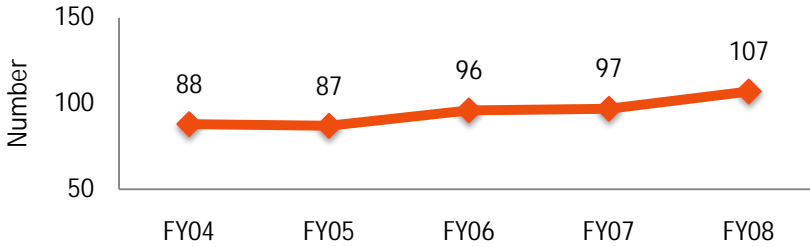
The U.S. Centers for Disease Control and Prevention state that males are more likely to die from suicide but females are more likely to attempt suicide. The greater number of deaths among males is mainly due to the mechanism or method used. Studies have shown that males are more likely to use more violent and fatal methods when attempting suicide, such as hanging or firearms. Among Anne Arundel County youth treated in ERs for self-injury, 71.2 percent of the occurrences were among females and 28.8 percent were among males. The vast majority of ER visits for self-injury among adolescents were for poisoning (60.2 percent), followed by cutting/piercing (31.6 percent).

Over 40 percent of adolescents treated in an ER for self-injury lived in the northern region of the County. Approximately sixty-six percent (66.1 percent) of adolescent ER visits for self-injury were made to Baltimore Washington Medical Center and 22.3 percent were to Anne Arundel Medical Center. The total cost for these emergency room visits was \$377,815 with a median cost of \$758.

\*A fiscal year begins on July 1 of the previous calendar year and ends on June 30 of the year with which it is numbered.



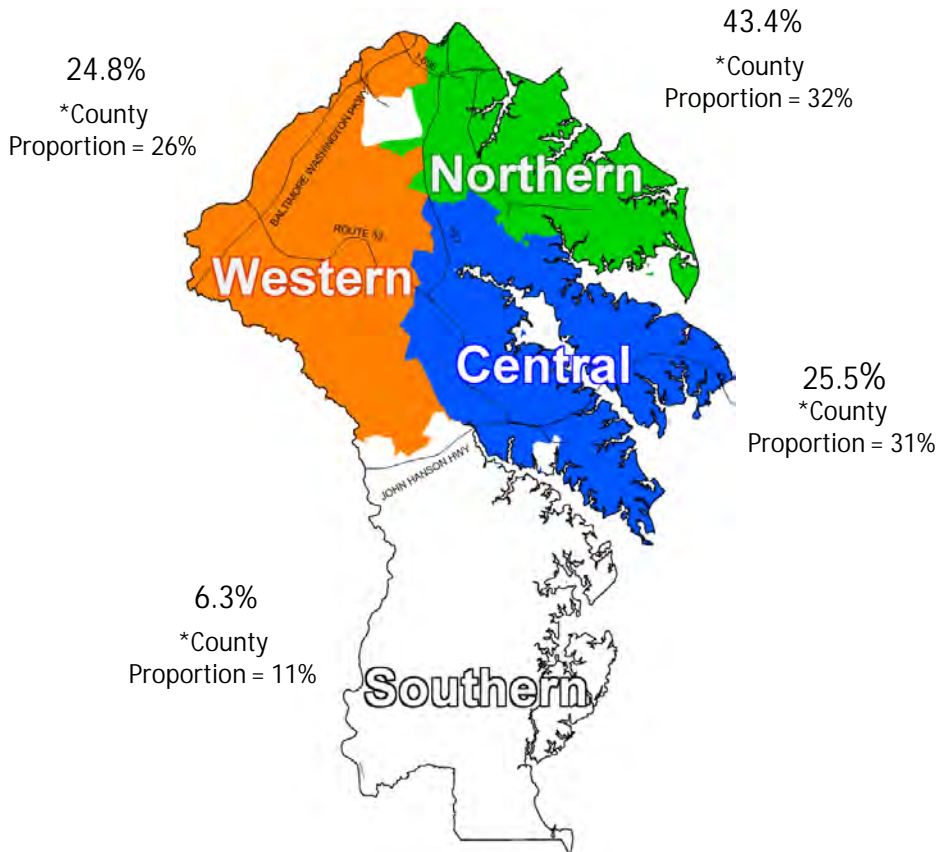
## Emergency Room Visits for Self-Injury among Adolescents in Anne Arundel County by Year, Gender and Race, FY 2004-2008





Among adolescents treated in emergency rooms for self-injury, 43.4 percent lived in the northern region, 25.5 percent in the central region, 24.8 percent in the western region, and 6.3 percent in the southern region of Anne Arundel County. The northern region had a disproportionately higher percentage of self-injuries among its adolescents.

Emergency Room Visits for Self-injury among Adolescents in Anne Arundel County by Region, FY 2004-2008



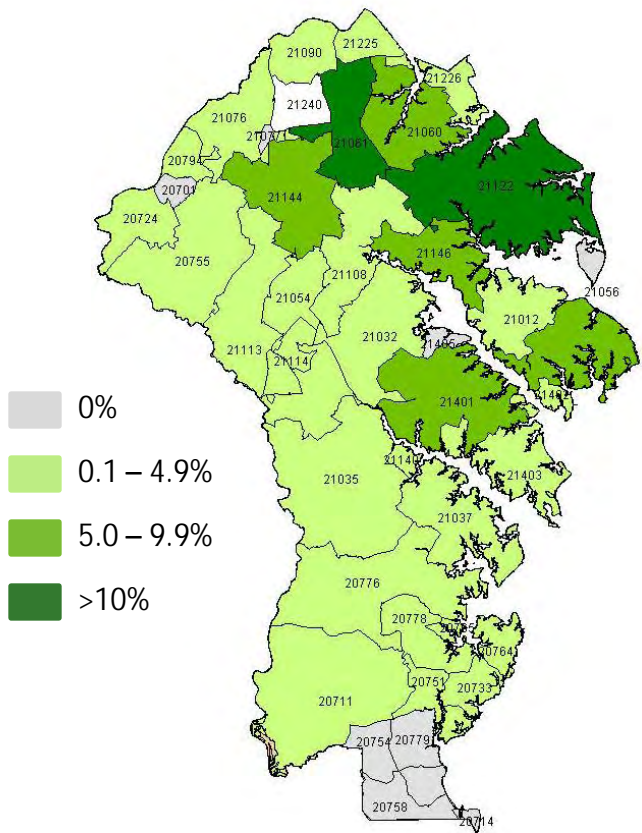
\*Proportion of the County's Total Adolescent Population (10-17 years old) Residing in the Identified Region, 2000 Census.

Data Source: Ambulatory Care Data Set, Health Services Cost Review Commission (HSCRC).



By zip code, 32 percent of adolescents treated in emergency rooms for self-injury resided in Pasadena (21122), Severn (21144) and Severna Park (21146). Another 21 percent of the visits were among adolescents living in Glen Burnie (21060/21061). These percentages are likely reflective of population density rather than actual risk.

### Emergency Room Visits for Self-injury among Adolescents in Anne Arundel County by Zip Code, FY 2004-2008

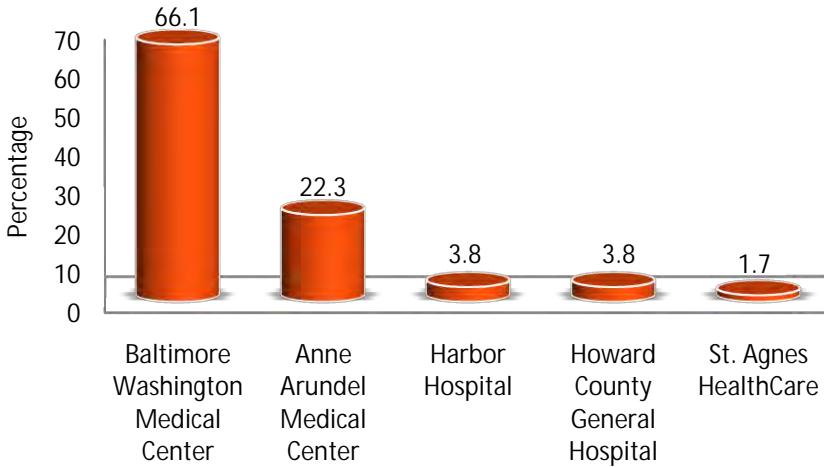


Zip code 21240 – Baltimore/Washington International Thurgood Marshall Airport

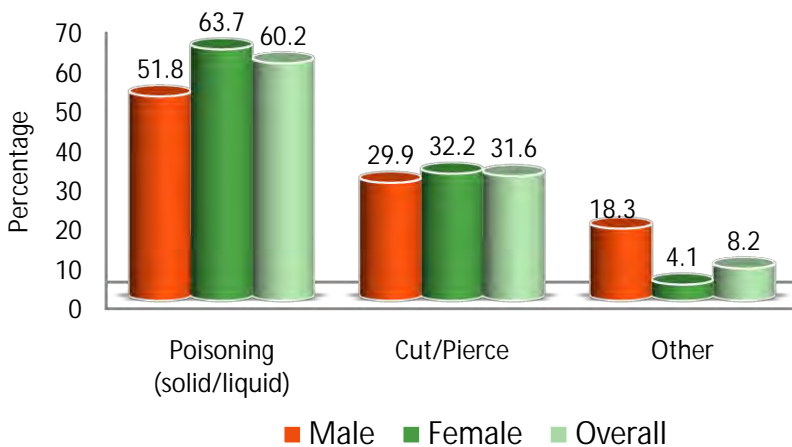
Data Source: Ambulatory Care Data Set, Health Services Cost Review Commission (HSCRC).



### Emergency Room Visits for Self-injury among Adolescents in Anne Arundel County by Hospital, FY 2004-2008



### Emergency Room Visits for Self-Injury among Adolescents in Anne Arundel County by Mechanism, FY 2004-2008



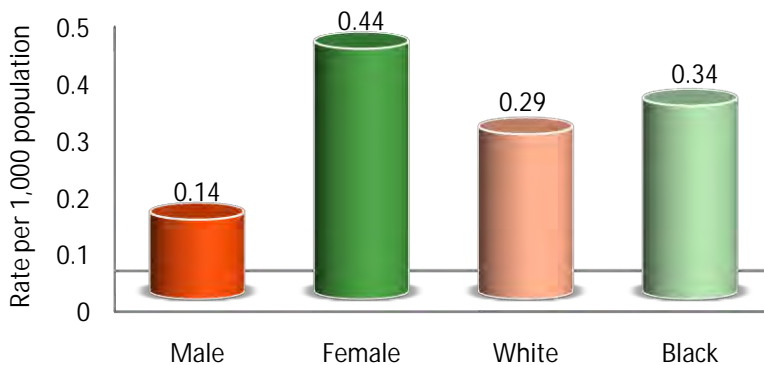
# Inpatient Hospital Stays

There were approximately 50 inpatient hospital discharges for self-injury over the 3-year period, 2006 to 2008, among adolescents less than 18 years of age; a rate of 0.3 per 1,000 per year. Of these, 76.5 percent were admitted through the emergency room and 82.4 percent listed poisoning (solid/liquid) as the mechanism or method used. The median age was 16 and the median length of stay was 2 days. More than half of these adolescents discharged from inpatient hospitalizations were discharged to home or self-care, while 31.4 percent were discharged to a psychiatric facility.

Adolescent females were three times more likely than males to be discharged for self-injury. The rate of discharges by race was similar.

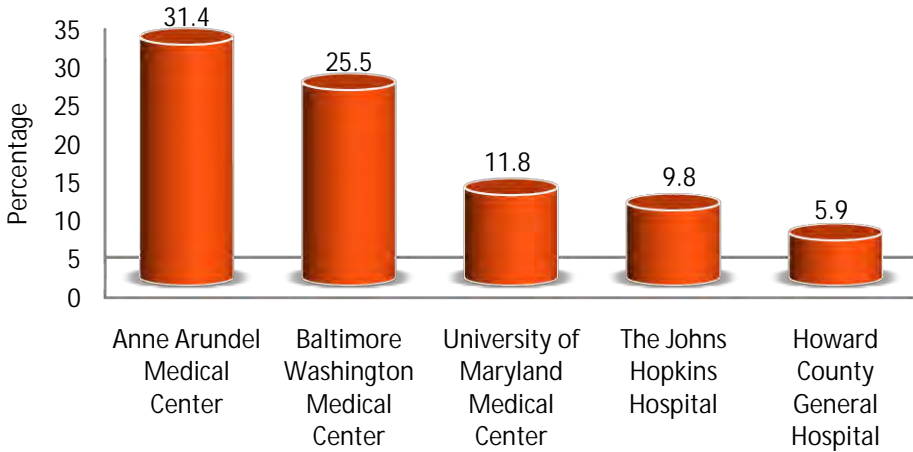
Psychoses and neurotic or other personality disorders were listed as the primary diagnosis for 30 percent of the inpatient stays. The site of injury or mechanism used was listed as the primary diagnosis for 70 percent of the discharges. Total charges for these inpatient stays was \$298,278 with a median cost of \$5,141.

Inpatient Hospital Discharges for Self-injury among Adolescents in Anne Arundel County by Gender and Race, 2006-2008

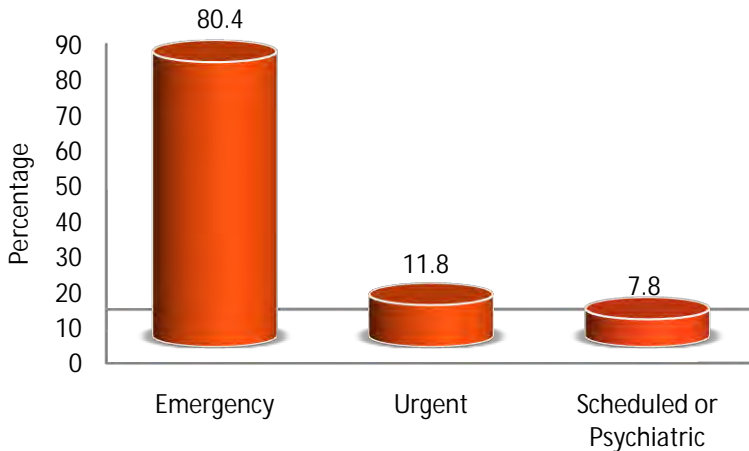




### Inpatient Hospital Discharges for Self-injury among Adolescents in Anne Arundel County by Hospital, 2006-2008



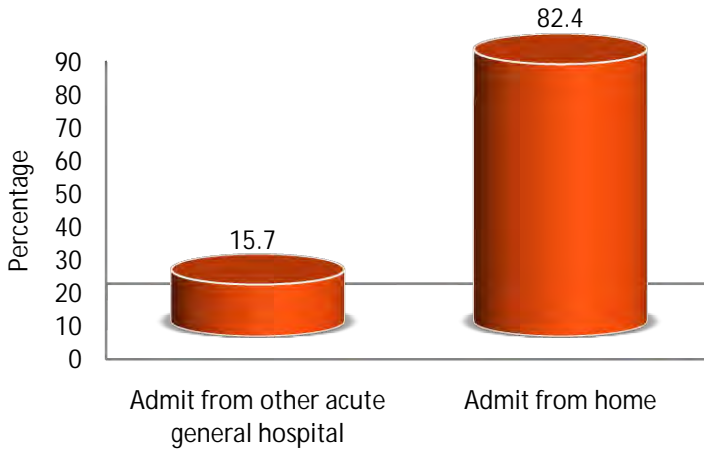
### Inpatient Hospital Discharges for Self-injury among Adolescents in Anne Arundel County by Nature\* of Admission, 2006-2008



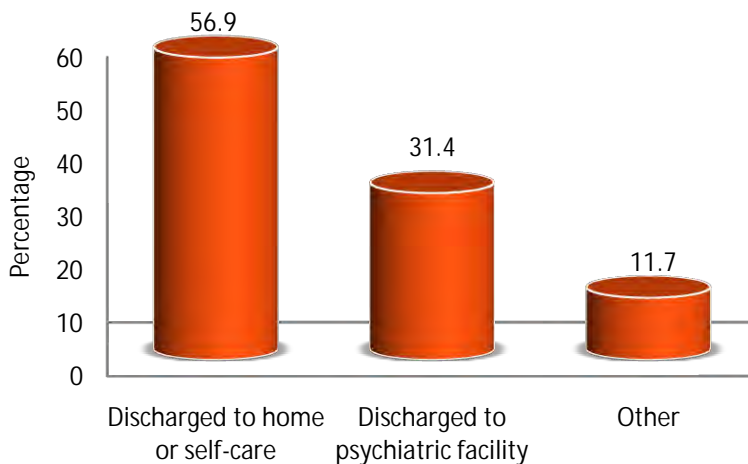
\*Emergency – patient medically requiring admission within 6 hours of request;  
 Urgent – patient medically requiring admission within 6-48 hours of request.



### Inpatient Hospital Discharges for Self-injury among Adolescents in Anne Arundel County by Admission Source, 2006-2008



### Inpatient Hospital Discharges for Self-injury among Adolescents in Anne Arundel County by Patient Disposition\*, 2006-2008



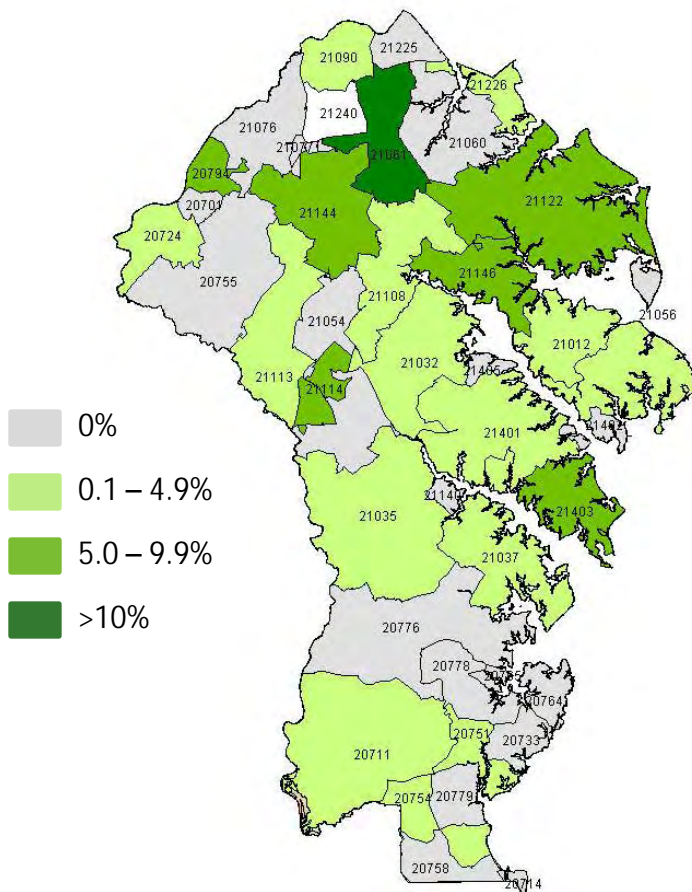
\*Other – May include expired; left against medical advice; not specified or unknown.

Data Source: Inpatient Data Set, Health Services Cost Review Commission (HSCRC).



By zip code, 55 percent of the adolescents discharged from inpatient hospital stays resided in 7 zip codes: Jessup (20794), Severn (21144), Glen Burnie (21061), Pasadena (21122), Severna Park (21146), Crofton (21114) and Eastport (21403).

### Inpatient Hospital Discharges for Self-injury among Adolescents in Anne Arundel County by Zip Code, FY 2004-2008

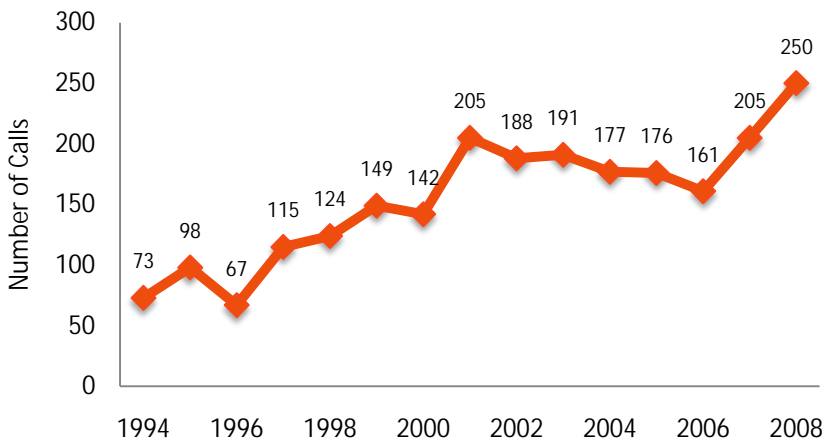


# Emergency Evaluations Reported by Police

From 1994 to 2008, there were approximately 2,300 emergency evaluations reported by Anne Arundel County Police for youth suicidal or out of control behavior. Over a 15-year period, the number of calls to Anne Arundel County Police have increased from 73 in 1994 to 250 in 2008. The median age held steady at 15. More than three-fourths of these were among white adolescents which mirrors the County's demographic distribution.

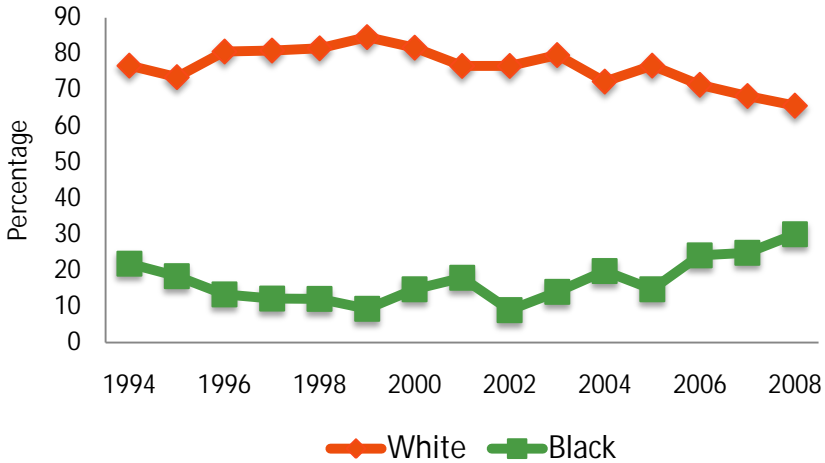
The vast majority of these evaluations involve suicide threats or attempts. In most cases police officers transport youth to a local hospital emergency room for a court ordered Emergency Evaluation by a mental health professional. These reports do not include reports from the City of Annapolis Police or youth brought to the emergency room by private therapists, family or friends.

Emergency Evaluations Reported by Anne Arundel County Police for Youth Suicidal or Out of Control Behavior  
Anne Arundel County, 1994 – 2008

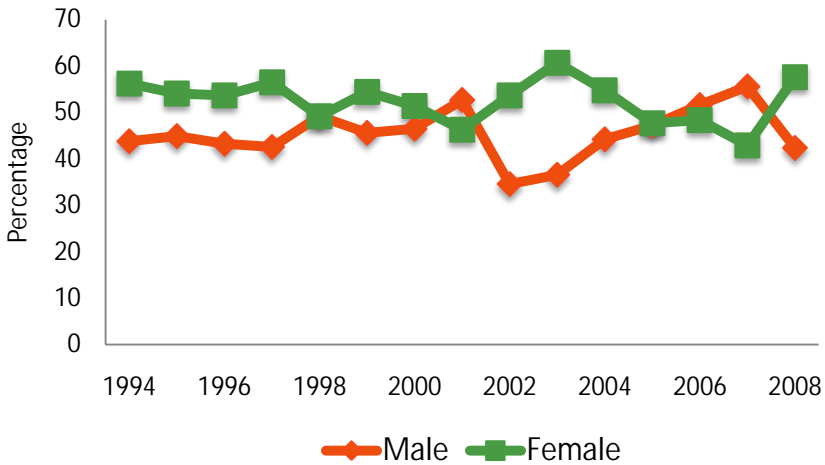




Emergency Evaluations Reported by Anne Arundel County Police for Youth Suicidal or Out of Control Behavior  
Anne Arundel County by Race, 1994 - 2008

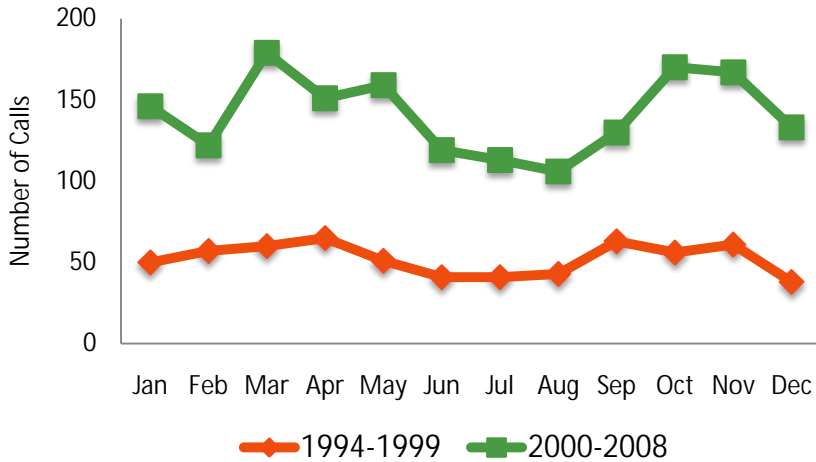


Emergency Evaluations Reported by Anne Arundel County Police for Youth Suicidal or Out of Control Behavior  
Anne Arundel County by Gender, 1994 - 2008





## Emergency Evaluations Reported by Anne Arundel County Police for Youth Suicidal or Out of Control Behavior Anne Arundel County by Month, 1994-2008

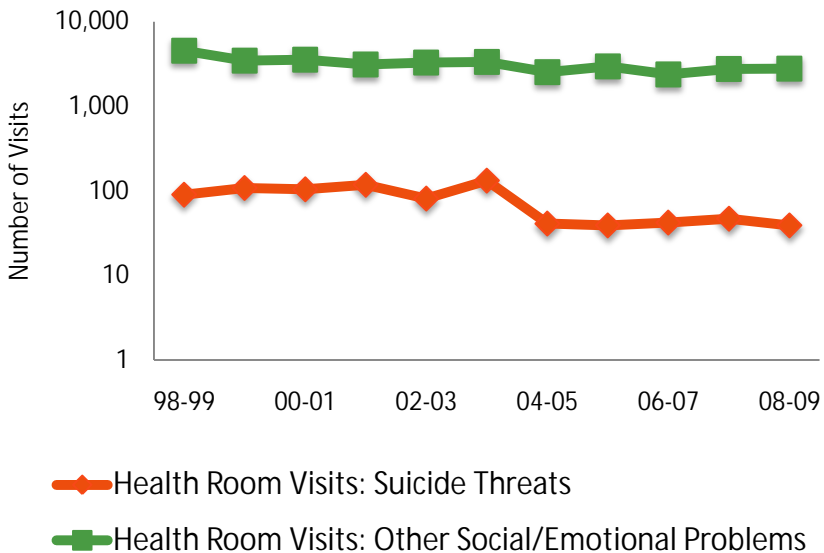



# School Health Room Visits

Anne Arundel County Public Schools have school health rooms that provide health services to students. School health nurses work collaboratively with guidance counselors and other school staff to address students' social, emotional and mental health needs.

During the 2008-2009 school year, 39 students visited school health rooms for suicide threats, and 2,780 students visited school health rooms for other social/emotional problems (unrelated to reproductive health/pregnancy, substance abuse or suicide). The other social/emotional problems include a variety of anxiety issues, for example, family problems or poor peer relationships.

Number of Social/Emotional Health Room Visits in Anne Arundel County Public Schools





## Concluding Thoughts

Adolescent suicide is a serious problem in Anne Arundel County.

Adolescence is a time of dramatic growth and development. Every teenager faces a variety of changes and challenges. These challenges can be compounded by mood disorders, family conflict, substance abuse or grief/loss and become overwhelming. For some youth, suicide appears to be the answer. Becoming aware of the warning signs of suicidal behavior and knowing how and where to seek help can help prevent the loss of life.

Many of the signs and symptoms of suicidal feelings are similar to those for depression and may include:

- Sadness or hopelessness
- Irritability, anger or hostility
- Tearfulness or frequent crying
- Withdrawal from friends and family
- Loss of interest in activities
- Changes in eating and sleeping habits
- Restlessness and agitation
- Feelings of worthlessness and guilt
- Lack of enthusiasm and motivation
- Fatigue or lack of energy
- Difficulty concentrating
- Substance use
- Personality changes including violence and aggressive behavior
- Neglect of personal appearance
- Thoughts of death or suicide

A photograph of a group of people, likely a diverse group of young adults, standing in a circle with their arms around each other's shoulders. They are wearing various colored shirts: orange, blue, green, red, yellow, and black. The image is partially obscured by a semi-transparent yellow banner at the top.

## Data Limitations

This report summarizes available data about adolescent suicidal behavior at the County level. There is no single prospective data source that fully captures suicidal behavior, so this report includes data from a number of different sources. Each of these data sources has its own gaps and limitations, and they are different so they cannot be compared. It is useful to look for changes over time within the same data source. It is difficult to compare County suicide data to state and national data. This report does not distinguish self-injurious behavior in which there is no intent to die.



## County Resources

For more information about how to talk to teens about suicide or for help in accessing mental health services, contact the Anne Arundel County Department of Health's Adolescent and Family Services Program at 410-222-6785 or visit [www.aahealth.org](http://www.aahealth.org).

The Anne Arundel County Mental Health Agency maintains a directory of resources, the Network of Care, at [www.networkofcare.org](http://www.networkofcare.org) and can be reached at 410-222-7858.

The Anne Arundel County Crisis Response Warmline is 410-768-5522. In case of emergency, call 911.



# 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.