

Annual Report

Fiscal Year 2016

July 1, 2015 – June 30, 2016



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A Message from Anne Arundel County Executive Steven Schuh



The Department of Health's Fiscal Year 2016 Annual Report reflects the Department's efforts to implement innovative and effective solutions to Anne Arundel County's most pressing health issues, including:

- Obesity
- Cancer
- Substance abuse

Carrying excessive weight can lead to secondary issues such as diabetes and heart disease, which are leading causes of death in the county. In 2013, 32.6 percent of county adults were overweight and 30.5 percent of adults were obese. The Department of Health's *Learn To Live* program provides tobacco cessation classes, information on cancer prevention, and tips for healthy eating and fitness that help residents to live healthier lives.

Cancer continues to be a leading cause of death. In 2012, there were 2,703 new cases of cancer and 949 deaths caused by cancer in Anne Arundel County. Although cancer mortality has decreased in the county over the past decade, the 177.3 cancer deaths per 100,000 people in 2012 still exceeds the U.S. Centers for Disease Control and Prevention's Healthy People 2020 goal of 161.4 deaths per 100,000. In order to close this gap, the Department of Health educates residents on cancer prevention activities, such as smoking cessation and sun protection. Residents can receive screenings through the Department of Health's Breast and Cervical Cancer Program from a network of private providers. Screening is key to detecting cancer in early, treatable stages.

Addiction to heroin and other opioids touches every aspect of this community. I continue to serve as chair of the Heroin Action Taskforce, which finalized recommendations in March 2015 to tackle the county's heroin problem. Despite the great efforts of the taskforce, we still have a tough fight against addiction. Between 2010 and 2014, we saw an 87 percent increase in opioid poisoning-related emergency department visits. Spearheaded by the Department of Health, the new program Overdose Survivors' Outreach Services partners with county hospitals to help opioid users and overdose survivors access treatment and recovery services. Under my leadership, Anne Arundel County remains committed to expanding treatment options. This year we are opening the Department of Health's Annapolis treatment center to help fill a void for residents of central and south county. We also helped to support the opening of Gaudenzia's treatment center in Crownsville.

I am pleased with the Department of Health's progress and I look forward to supporting the Department's skilled and dedicated staff in continuing to address our county's most pressing health issues.

A Message from Health Officer Jinlene Chan, MD, MPH



On behalf of the Anne Arundel County Department of Health, I am pleased to present this overview of the county health status and the Department's accomplishments during fiscal year (FY) 2016. This is the final annual report under our FY 2014-2016 strategic plan, and I am proud of what the Department has achieved toward our strategic goals over the last three years.

The Department continues to provide high quality programs focused on chronic and infectious disease prevention. We are committed to ensuring access to public health services and reducing health disparities for all populations. Along with our community partners, the Department continues to meet our county's pressing health challenges.

An alarming increase in infant deaths related to unsafe sleeping practices was seen this year. The Department developed a campaign to educate parents and caregivers about safe sleep by convening community partners to coordinate a holistic response to the crisis.

Mosquitoes transmit Zika virus, which can cause devastating birth defects when pregnant women are infected. The Department joined with the Maryland Department of Agriculture this summer to reduce mosquito populations in the county and educate the community on mosquito reduction strategies. Fortunately, and perhaps partially due to this MDA partnership, no local transmission has been reported.

Opioid overdoses remain a public health emergency in Anne Arundel County. The Department has responded to the opioid epidemic by providing leadership to the Heroin Action Taskforce, a countywide work group convened to implement prevention activities and expand treatment opportunities. The Department also developed new initiatives to fit our residents' needs, including the Denial Is Deadly multimedia outreach campaign that addressed treatment and recovery resources, free naloxone training for the public, year-round prescription drop-off sites, and ways to monitor one's prescription medicine.

Our work would not be successful without the collaboration with other county agencies, local hospitals and health care providers, community and faith-based organizations, educational institutions, businesses and many others who partner with the Department to ensure healthier communities. We also extend thanks to our dedicated staff. Many of them volunteered to work outside in the heat this summer in order to inform county residents about effective mosquito control.

The Department recently completed a new strategic plan to guide our efforts during FY 2017-2019. For additional information about the strategic plan, programs and services, please visit www.aahealth.org.

Anne Arundel County Department of Health - Introduction

The Department of Health is the government agency responsible for improving the health of Anne Arundel County. By State of Maryland and county authority, the Department of Health is charged with enforcement of certain federal, state and county laws and regulations.

In addition to regulatory and enforcement work, the Department of Health directly provides mandated, delegated and locally-initiated public health services. The Anne Arundel County Council, which also serves as the County Board of Health; the Conquer Cancer Advisory Council; and several advisory councils help the Department of Health establish its work.

Nearly 700 Department of Health employees — physicians, nurses, social workers, sanitarians, counselors, therapists and other allied health and support personnel — bring compassion and commitment to their work and a concern for continually improving the quality of the Department's services.



1 in 3

County residents are served directly by a Department of Health program each year.



More than 184,000

Residents receive direct health or screening services through Department programs.



41,000

Residents and businesses receive permits, inspections and other environmental services annually.

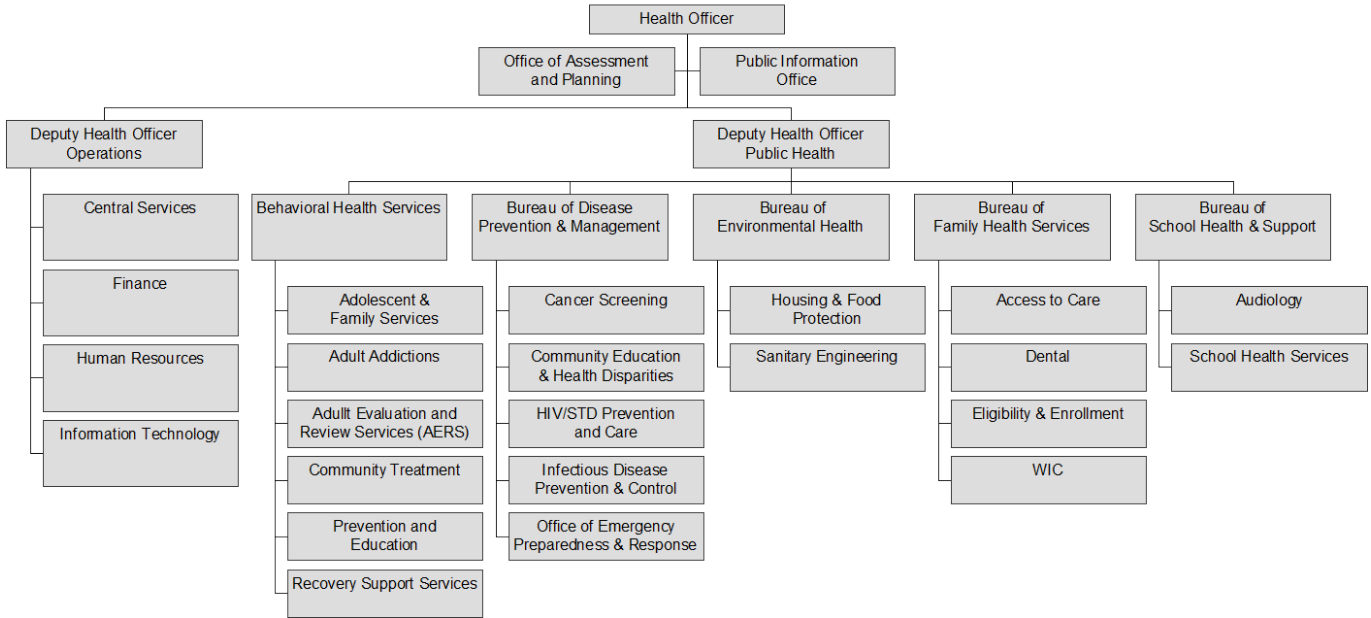
Vision: A vibrant Anne Arundel County with healthy people in healthy communities.

Mission: The Department of Health's mission is to preserve, promote and protect the health of all people who live, work and play in Anne Arundel County. Critical to achieving our vision and mission are strong, sustainable partnerships with individual residents, public sector agencies, community-based organizations, health care providers and insurers, academic institutions, businesses and other private sector agencies.

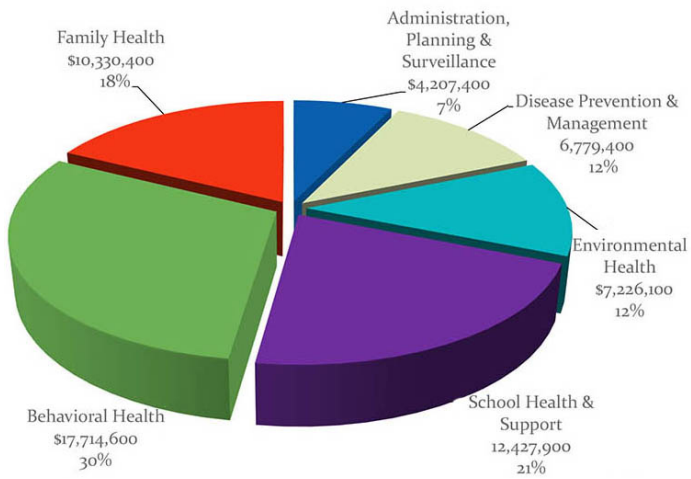
Core Values: Core values reflect principles that our Department, comprised of diverse public health professionals, exhibit as we interact with co-workers, agency partners, the community, businesses and the public. Our core values are **Integrity, Excellence, Collaboration, Innovation and Respect.**

About this report: This report is presented to the Anne Arundel County Board of Health in October 2016. It reflects the context in which the Department of Health works, the status of health issues in the county, as well as the Department's select fiscal year 2016 accomplishments against its FY2013-FY2015 strategic plan. Please note that some of the data used in the report does not reflect 2015 data as it has not yet been made available for analysis.

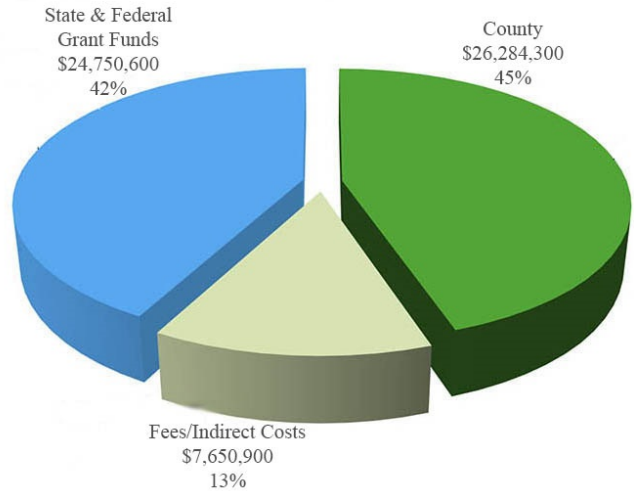
Anne Arundel County Department of Health Organization Chart



**ANNE ARUNDEL COUNTY DEPARTMENT OF HEALTH
APPROVED EXPENSE BUDGET - FISCAL YEAR 2016
TOTAL: \$58,685,800**



**ANNE ARUNDEL COUNTY DEPARTMENT OF HEALTH
APPROVED BUDGET SOURCES - FISCAL YEAR 2016
TOTAL: \$58,685,800**



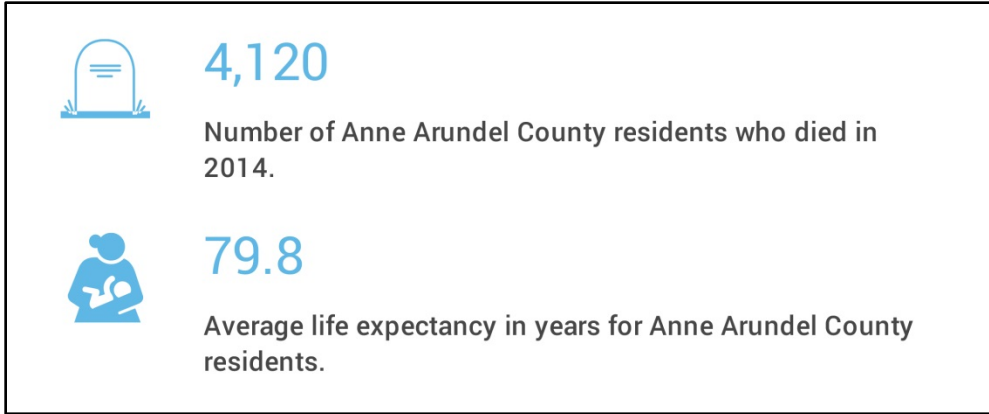
The Health of the County

In order to ensure the Department of Health is responsive to the needs of the changing community, the Department of Health closely monitors demographics and health trends. In 2014, the estimated population of Anne Arundel County was 564,195, representing a 15 percent increase since 2000. While over two-thirds of Anne Arundel County residents are non-Hispanic White, the Hispanic population has tripled since the year 2000 to 7.3 percent in 2014.

The median income in Anne Arundel County in 2015 was \$89,031, significantly higher than the median incomes estimated for Maryland and the country. Even though the median income is high, the income gap between wealth and poverty has continued to widen since 2010.

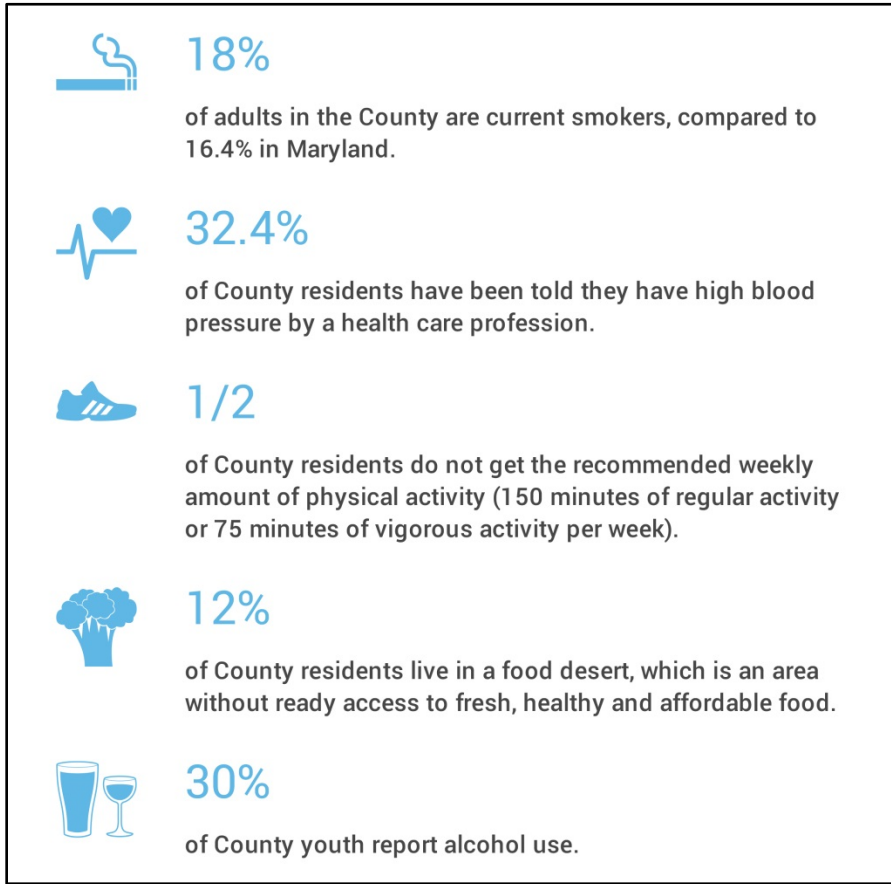
2015 Estimates	Anne Arundel County	Maryland	United States
Population			
Total Population	564,195	6,006,401	321,418,820
Male	49.6%	48.5%	49.2%
Female	50.4%	51.5%	50.8%
Race, Ethnicity and Age			
White, non-Hispanic (NH)	69.5%	52.0%	61.6%
Black, NH	16.3%	29.4%	12.4%
Hispanic	7.3%	9.5%	17.6%
Asian, NH	3.9%	6.4%	5.4%
American Indian and Alaska Native, NH	0.3%	0.2%	0.7%
Others	2.7%	2.5%	2.3%
Under 5 Years Old	6.3%	6.1%	6.2%
18 Years and Over	77.5%	77.6%	77.1%
65 Years and Over	13.7%	14.1%	14.9%
Median Age (Years)	38.1	38.4	37.8
Household and Economic Indicators			
Median Household Income	\$89,031	\$74,149	\$53,482
Families Below Poverty Level	3.9%	6.9%	11.5%
Individuals Below Poverty Level	5.9%	10.0%	15.6%
Unemployment Rate, June 2016*	4.0%	4.3%	4.9%
Uninsured	7.0%	9.9%	14.2%

Data Source: U.S. Census Bureau: State and County Quick Facts; 2015 Population Estimates; 2014 American Community Survey 5-year Estimates and 1-year Estimates; United States Department of Labor; Bureau of Labor Statistics (*not seasonally adjusted unemployment rates); National BRFSS, CDC; Maryland BRFSS, DHMH.



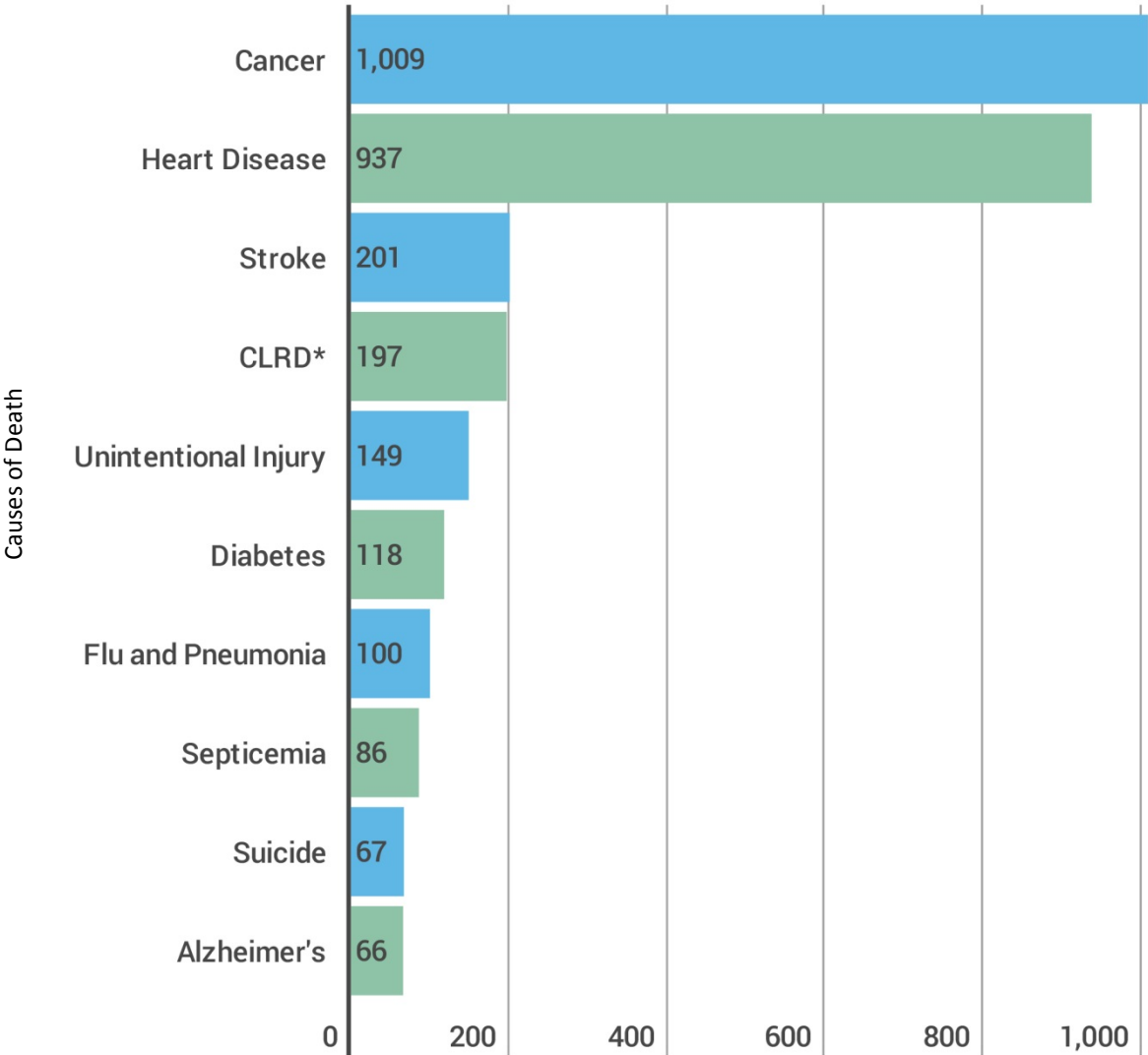
Data Source: Maryland Vital Statistics Annual Report, Vital Statistics Administration, Maryland DHMH.

Several modifiable risk factors contribute to the leading causes of death, including smoking, high blood pressure, obesity, physical inactivity, poor diet and excessive alcohol consumption. Leading a healthy lifestyle can reduce the burden of long-term disability and premature death.



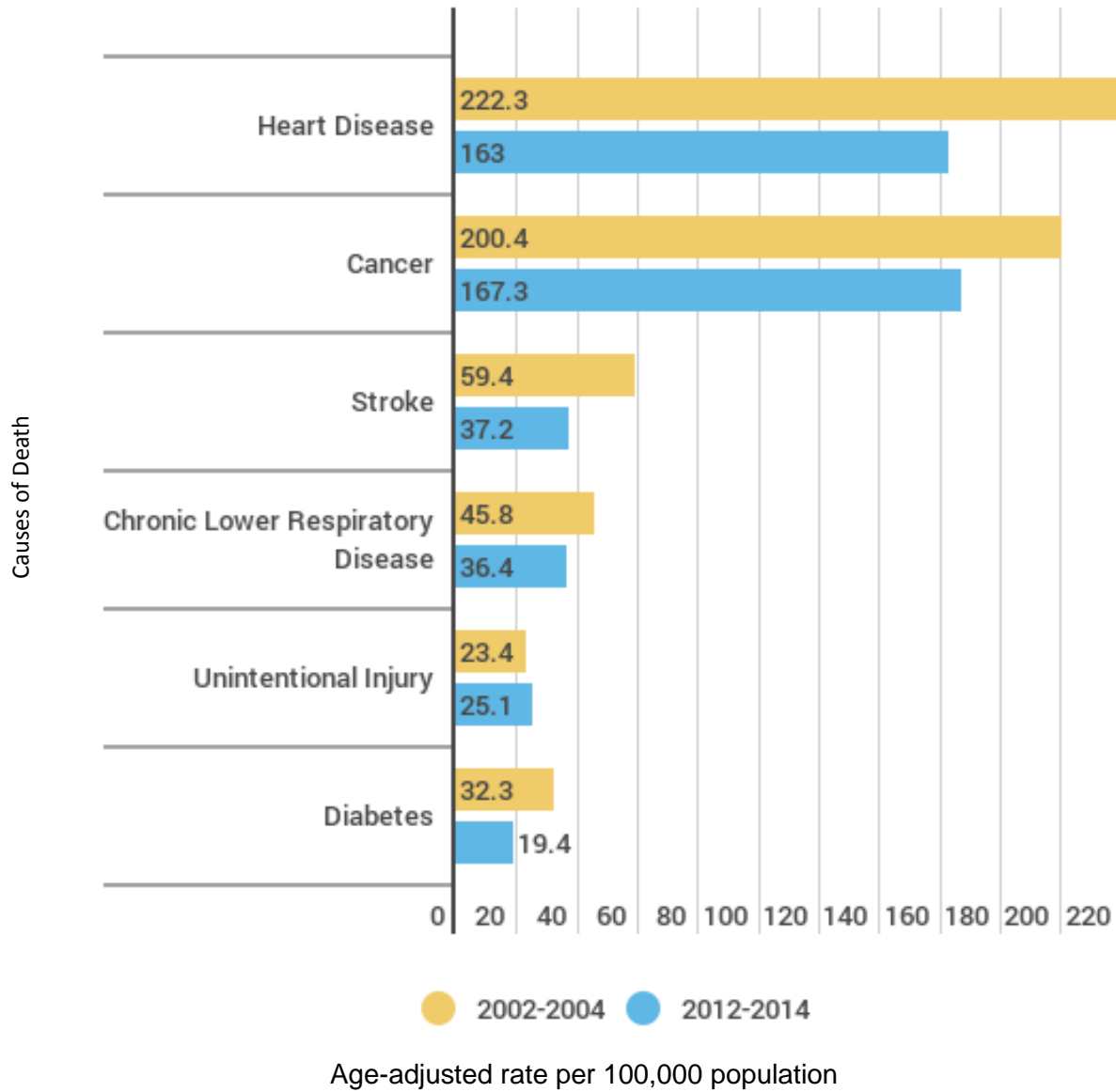
Data Source: BRFSS 2013, USDA Food Access Atlas, YRBS 2014.

Leading Causes of Death in Anne Arundel County, 2014



*Chronic lower respiratory diseases include chronic obstructive pulmonary disease and asthma.
Data Source: Maryland Vital Statistics Annual Report, Vital Statistics Administration, Maryland DHMH.





















Changes in Age-Adjusted Mortality Rates for Leading Causes of Death in Anne Arundel County over a Decade



Data Source for all mortality graphs: Maryland Vital Statistics Annual Reports, Vital Statistics Administration, Maryland DHMH.

Healthy People 2020

At the start of each decade, the U.S. Department of Health and Human Services provides a set of 10-year national objectives for improving health. The Healthy People 2020 goals help guide Anne Arundel County’s ongoing efforts toward building a healthier community. The county has already met some of the 2020 goals and continues to work toward others.

Indicator	Anne Arundel County	HP 2020 Goal	Status Key	
			 Needs Improvement	 Making Progress
Mortality (age-adjusted rates per 100,000 population)				
Coronary Heart Disease*	163.0	103.4		
Stroke*	37.2	34.8		
Diabetes*	19.4	66.6		
Unintentional Injuries*	25.1	36.4		
All Cancer*	167.3	161.4		
Lung/Bronchus Cancer**	53.4	45.5		
Female Breast Cancer**	23.7	20.7		
Homicide*	2.5	5.5		
Suicide*	10.5	10.2		
Maternal and Infant Health				
First Trimester Prenatal Care	68.5%	77.9%		
Low Weight Births***	8.1%	7.8%		
Infant Mortality Rate per 1,000 Live Births	5.7	6.0		
Risk Factors				
Cigarette Smoking by Adults	15.5%	12.0%		
Healthy Weight in Adults	29.5%	33.9%		
Obesity in Adults	33.0%	30.5%		
Health Access and Screening				
Mammography Screening in Past 2 Yrs. (Age 50+)	84.7%	81.1%		
Colorectal Cancer Screening (Age 50+)	74.8%	70.5%		
Health Insurance	96.8%	100%		

*Rates based on latest three-year average data from 2012 to 2014.

**Rates based on latest five-year average data from 2008 to 2012.

***Low birth weight is defined as <2,500 grams or approximately 5.5 pounds.

Data Source: Maryland Vital Statistics Annual Reports, Vital Statistics Administration, Maryland DHMH; 2015 Cancer Report, Cigarette Restitution Fund Program, Maryland DHMH; Healthy People 2020, U.S. DHHS.

Progress Toward Strategic Goals (July 2015-June 2016)

In order to address the health needs of the county, the Department identified six priority areas of focus in the Department’s FY2014-FY2016 Strategic Plan. This section describes the Department’s accomplishments toward strategic goals between July and December 2015.

1. Strategic Priority: Obesity Prevention

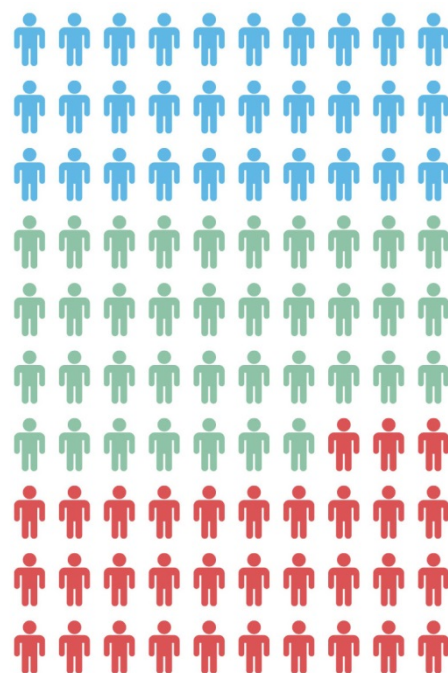
Many factors play a role in weight, including lifestyle, surrounding environment, genetics and certain diseases. Being overweight or obese increases the risk of diabetes, heart disease, cancer, stroke, high cholesterol, high blood pressure, sleep disorders, respiratory problems and other health issues. Overweight and obesity are determined using weight and height to determine a BMI or “body mass index” measure. BMI is measured as weight (pounds) multiplied by 703 divided by height (inches) squared. Data from 2011 and later cannot be compared with previous years’ data due to changes in data collection methodology.

Obesity is a major health issue in the county; only 30 percent of county residents were considered a healthy weight in 2014. Anne Arundel County residents were more likely to be obese or overweight than the average population of Maryland. Both overweight and obesity increased in Anne Arundel County from 2012 to 2014.

Goal 1: Provide resources to achieve a healthy weight among people who live, work and play in Anne Arundel County.

- **Healthy events and meetings.** The Department gave county agencies, organizations and community groups information by distributing approximately 100 guidelines, checklists and sample policies. (Obj 1a)*
- **Summer Food Program.** In order to promote summer meals, the Department partnered with Anne Arundel County Public Schools (AACPS) by providing information to over 30 community organizations that serve high-risk families. In addition, the Department provided nutrition education information for the 2015 Summer Food Program, which served 87,362 nutritious meals (increased by 2,701 from previous year) at 13 schools, a library, two mobile meal buses, 34 on-site programs and 18 off-site programs. (Obj 1a)

Proportion of Overweight and Obesity in Anne Arundel County

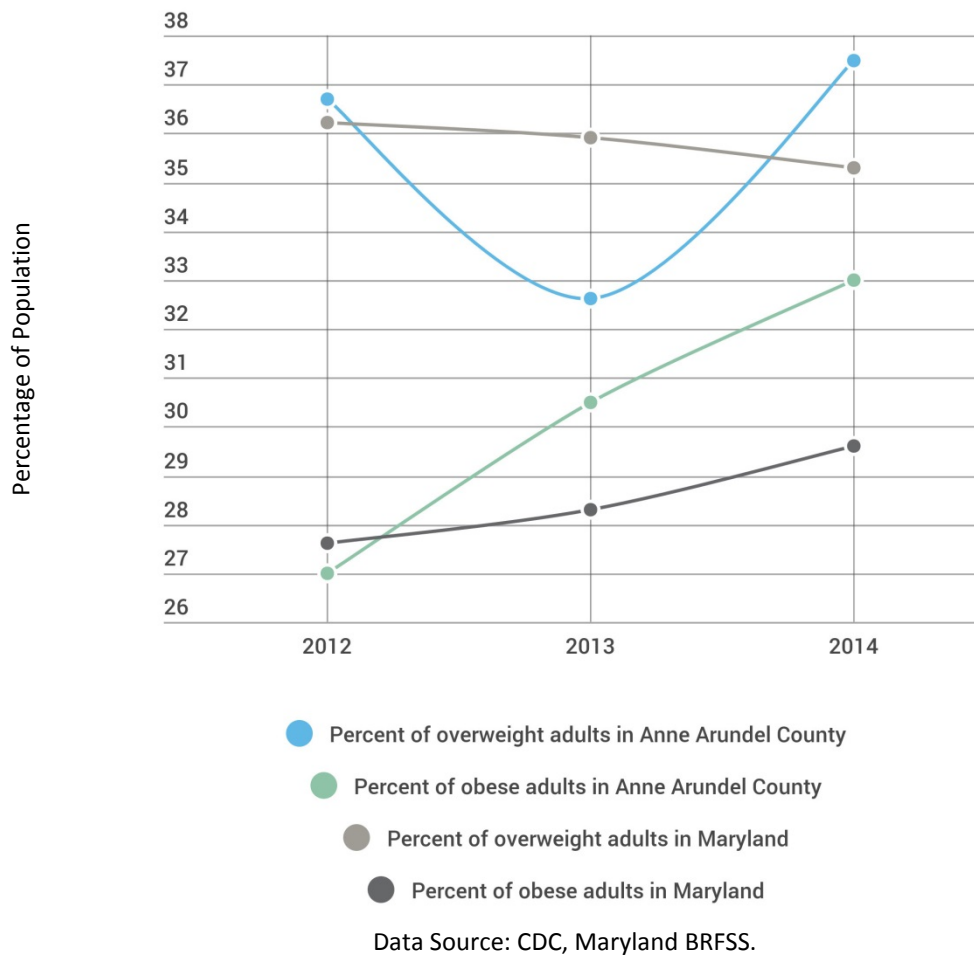


● Healthy Weight ● Overweight
● Obese

Data Source: Centers for Disease Control and Prevention (CDC), Maryland BRFSS, 2014.

* The Goal and Obj notations correspond with the goals and objectives in the Department’s Strategic Plan FY 2014–FY 2016.

Percentage of Overweight and Obese in Anne Arundel County and Maryland, 2012-2014



- **Healthy Anne Arundel, Make Health Happen.** In coordination with community partners, the Department planned and implemented the Make Health Happen Health Fair with 150 participants. (Obj 1b)
- **Food Environment, Access to Healthy Foods.** The Department created a Food Environment fact sheet, which will raise awareness of issues related to access to healthy foods and provide guidance of next steps and data for grants and evidence-based policies, systems and environmental change strategies. (Obj 1b)
- **School Health Nutrition and Lifestyle Education.** School Health Services school nurses gave more than 100 educational presentations to nearly 30,000 students on topics including nutrition, portion distortion, healthy eating, healthy choices, sugar content of beverages, the importance of physical activity, the importance of breakfast, health promotion and disease prevention. In partnership with AACPS, electronic resources, educational materials and learning tools are available for nurses and teachers to target over 80,000 students with prevention lessons and messages. (Obj 1c)

2. Strategic Priority: Behavioral Health

Behavioral health, co-occurring disorders of mental health and substance abuse, is a major area of focus for the county. In 2015, County Executive Steven Schuh declared a countywide heroin public health emergency. Under his call to action, a Heroin Taskforce was established and has released recommendations to address the heroin and opioid overdose epidemic.

Goal 1: Provide leadership to promote a local integrated behavioral health system.

- **Continuation of integration meetings.** The Department continued to co-lead monthly behavioral health integration meetings between the Anne Arundel County Department of Health and the Anne Arundel County Mental Health Agency, Inc. (Obj 1a)
- **Crisis Response Team Assessor.** A Department of Health substance use assessor has been placed with the Crisis Response System. (Obj 1b)

Goal 2: Decrease morbidity and mortality associated with behavioral health conditions.

- **Denial Is Deadly.** The Department released a media campaign, “Denial Is Deadly,” to promote awareness of the opioid misuse and overdose epidemic through TV, radio, print and social media. (Obj 2c)
- **School Health Services receive opioid overdose training.** In order to help prevent overdoses in school, School Health Services partnered with the Behavioral Health Bureau to provide opioid overdose prevention and naloxone administration training to all School Health Services school nurses. (Obj 2c)
- **First school health program to be a training entity for Overdose Response Program.** As of April 2016, Anne Arundel County School Health Services was the only school health program in Maryland to be designated as an authorized training entity for the Overdose Response Program under the Maryland DHMH/Behavioral Health Administration. All School Health Services staff have been trained in the overdose response core curriculum, and intranasal naloxone (Narcan) has been placed in every AACPS health room to prevent death by opioid overdose. (Obj 2c)
- **Education toolkits for prescribers and pharmacists.** A workgroup is developing toolkits for prescribers and pharmacists to assist in educating patients. (Obj 2c)
- **Overdose Survivors’ Outreach Services (ODSOS).** In August 2015, the Department of Health was awarded a federal grant of \$227,908 to provide high risk opioid users with access to medication-assisted treatment (MAT). The program, ODSOS began as a partnership between the University of Maryland - Baltimore Washington Medical Center (BWMC) and the Department to provide outreach to opioid overdose survivors. In December 2015, two peer support specialists and a nurse coordinator were hired to provide outreach and connect patients to an MAT clinic.
- **ODSOS began offering services July 11, 2016.** In Spring 2016, the Department was awarded additional funding to expand the ODSOS program to Anne Arundel Medical Center.

For more data regarding the heroin epidemic, visit aahealth.org/heroin.

Peer Support Program Provides Recovery Resources and Hope

Ben* was 14 years old when he began using marijuana and alcohol. Within three years, he had progressed to prescription narcotics and was addicted to heroin and cocaine by the age of 27. Ben's life spiraled out of control as his marriage fell apart and he eventually became an absentee father living on the streets of Baltimore City. Ben was also in and out of prison for crimes committed to support his habit. The last prison sentence was to the Ordnance Road Correctional Center in Anne Arundel County for a period of 10 months.

In February 2016, Ben met his peer support specialist, Jessica, while at Ordnance Road Correctional Center. The Department's Peer Support program utilizes the life experience of individuals to encourage clients to be advocates for their own recovery. Through mentoring and role modeling, the peer shows the client that success is possible.

Ben met with Jessica often because, "she was available whenever I needed to talk," he said. Jessica assisted Ben with getting into a sober living home in July 2016 upon his release from the correctional center. She educated Ben on Vivitrol (also called naltrexone), a medicine used to prevent relapse in people who've become dependent on opioids and have stopped using. When used as part of a treatment program, Vivitrol can help people from feeling the urge to use opioids. Ben started Vivitrol while housed at the correctional facility and continues to receive Vivitrol injections through the Department of Health's treatment program.

Today, Ben has been in recovery for 11 months. He continues to live in a sober home and is working two jobs. Ben and Jessica continue to meet every other week for peer support. Ben said, "The difference today is that I made recovery a priority that I focus on day to day." Ben has a sponsor and he chairs Narcotics Anonymous meetings. Ben described Vivitrol as an added tool to help him control cravings for substances. Ben is now involved in his children's lives and is a positive example of strength and determination for them.

In FY16, the peer support program provided services to 369 people. To help meet the county's need for recovery services, the number of Department of Health peer support staff has doubled since 2015. The future goal of the program is to make peer support accessible to all recovering individuals through the continuum of care, from the point of entry into treatment through early recovery.

*Names have been changed to protect identity.

3. Strategic Priority: Access to Care

The Affordable Care Act (ACA) has increased access and expectations for health care. However, in many commercial plans, high deductibles and co-pays have burdened some individuals. Even though Medicaid eligibility and enrollment have expanded in the past few years, Medicaid insurance is still not accepted by several private primary care physicians' offices, often restricting outpatient care options for Medicaid recipients. Also of note, the ACA does not include dental benefits for adults as an essential health benefit, so dental insurance plans that are offered through Medicaid are limited in the number of benefits.



84,616

Number of Medicaid enrollments in Anne Arundel County in December 2014



-21.6%

Percent fewer primary care physicians in Anne Arundel County compared to Maryland per 100 population



-8.5%

Percent fewer dentists in Anne Arundel County compared to Maryland per 100 population

Data Source: Maryland Department of Health and Mental Hygiene, 2015, Anne Arundel County Health Rankings and Roadmaps, 2015.

Goal 1: Increase access to health care services for Anne Arundel County residents.

- **Maryland Health Connection.** The Department's Bureau of Family Health Services educated county residents about health insurance options available through the Maryland Health Connection during two informational sessions held at the Anne Arundel County Workforce Development Corporation. (Obj 1a)
- **Health Coverage Assistance Center.** From July 2015 through December 2015, the Department's Health Coverage Assistance Center in Annapolis assisted 5,319 county residents. (Obj 1a)
- **Medical Assistance/HealthChoice.** Presently, 84,757 residents of Anne Arundel County receive Maryland Medical Assistance/HealthChoice, and 44,503 are children ages 0-20. These numbers reflect a 3.8 percent increase in the total number of MA recipients in our county within the past year. (Obj 1b)

School Health Nurses Make a Positive Difference in Young Lives

Kristen Lupinek started as a school health nurse in 2009. Like all of Anne Arundel County's school nurses and school health assistants, Kristen brings compassion, respect and knowledge to her job. This year, Kristen provided assistance to a homeless family with four children attending her school. The children became known to the health room when they were seen with head lice. Kristen worked with the parent and principal to provide treatment at school. When Kristen discovered that the students weren't eating meals outside of school, she sought help to provide additional food for the kids. The children came to the health room every morning to brush their teeth with toothbrushes provided by Kristen. She also brushed and braided the girls' hair.



Nurse Lupinek and Kirra, a student who receives daily medications for her type 1 diabetes in the school health room

Kristen has a special interest in ensuring that students are receiving appropriate dental care. She will not only provide information about dental clinics when needed, but has also called for the parent to schedule urgent care appointments. One student in particular had a large visible cavity that was causing a lot of pain. She was able to get the student a same day appointment.

To further strengthen the bond between the school and the health room, Kristen jumps in to help staff members, whether they are Board of Education or DOH School Health Bureau staff. She has even volunteered as a face-painter during an afterschool event!

Like many other school nurses, Kristen has touched many lives over her years in the schools. She treats every student and their family, no matter their situation, with respect and dignity.

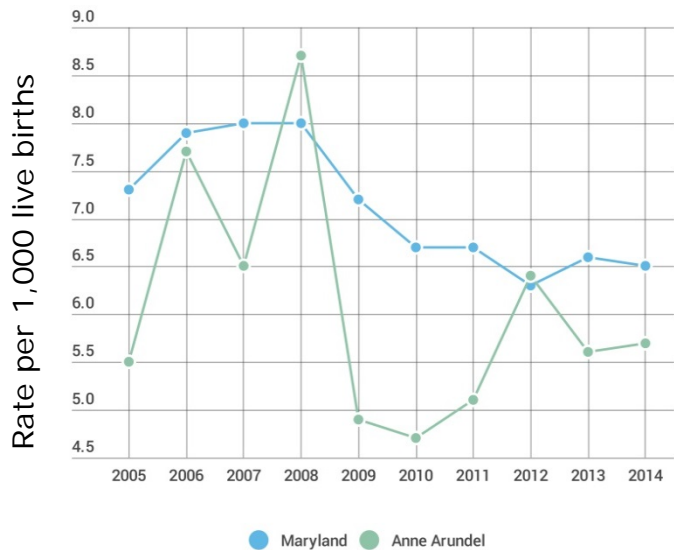
Goal 2: Decrease barriers to accessing health care services among underserved populations.

- **Community Health Needs Assessment.** The Department collaborated with partners to complete the 2015 Community Health Needs Assessment, which examined the provider capacity needs of the county. The assessment found that the county needs to increase provider capacity to care for residents. Compared to Maryland, Anne Arundel County has 21.6 percent fewer primary care physicians and 8.5 percent less dentists per 100 population. (Obj 2b)
- **First Adult Oral Health Taskforce.** The Department launched its first Adult Oral Health Taskforce in June 2016 to address the lack of resources and providers available to uninsured and underinsured county adults. The taskforce will address barriers to care and develop action plans to increase provider capacity. (Obj 2b)
- **Access to affordable healthcare through REACH.** The REACH program has provided access to affordable healthcare to over 913 members in FY16. Each member receives care coordination. This program has been successful in reducing hospital emergency department usage by REACH members by 80 percent. The program has also been successful in increasing access to dental health services, with more than 670 appointments for uninsured adults completed in FY16. (Obj 2c)
- **FluMist clinics in AACPS.** School Health Services school nurses held FluMist clinics in the 16 AACPS Title I elementary schools throughout the county administering a total of 2,386 student doses. Title I is a federal program that provides funds to high-poverty schools within a district so the schools can provide additional support to the students. (Obj 2c)

Infant health data are widely used as a proxy to assess and compare health status and access for different populations. In 2014, there were 6,968 births in Anne Arundel County: 64 percent non-Hispanic (NH) White, 18 percent non-Hispanic (NH) Black and 12 percent Hispanic. Many factors affect pregnancy and childbirth including the mother's pre-pregnancy health status, mother's age at birth, access to health care and socioeconomic status. Even though Anne Arundel County performs better than Maryland and the United States on several infant health indicators, similar racial and ethnic disparities seen at the state and national level still exist. In 2014, non-Hispanic Blacks were more likely to give birth to a preterm or low birth weight infant and less likely to receive prenatal care in the first trimester than NH Whites or Hispanics. These are all contributing factors to the overall infant mortality among NH Black residents of 12.7 deaths per 1,000 live births, a rate 3.3 times higher than White infants.

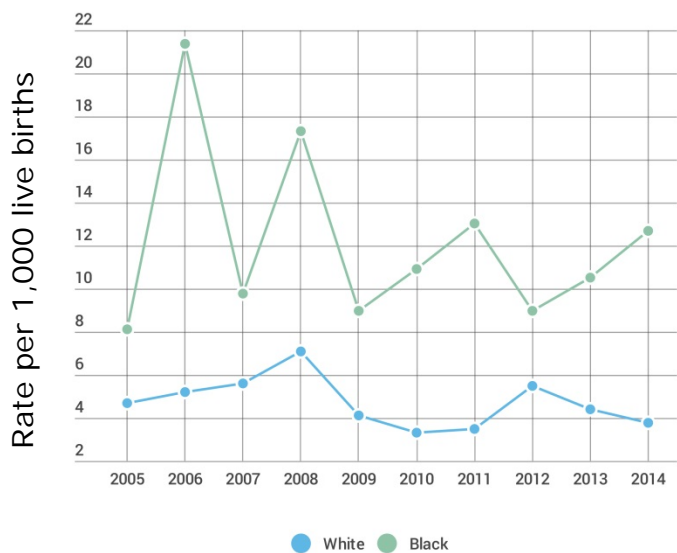
Infant Health: Anne Arundel County Compared to Maryland, 2010 vs. 2014		
	2010	2014
Low Birth Weight (<2500g)		
Anne Arundel	8.2%	8.1%
Maryland	8.8%	8.6%
Women Receiving First Trimester Prenatal Care		
Anne Arundel	78.2%	68.5%
Maryland	69.0%	66.6%
Teen Birth Rate		
Anne Arundel	25.8	13.9
Maryland	27.2	17.8

Infant Mortality Rates, Anne Arundel County vs. Maryland, 2005-2014



Infant Health: Anne Arundel County by Race/Ethnicity, 2010 vs. 2014		
	2010	2014
Low Birth Weight (<2500g)		
White, NH	6.9%	6.9%
Black, NH	13.3%	13.8%
Hispanic, Any	7.3%	6.9%
Women Receiving First Trimester Prenatal Care		
White, NH	82.0%	77.3%
Black, NH	69.1%	63.8%
Hispanic, Any	68.0%	56.1%
Teen Birth Rate		
White, NH	18.2	10.5
Black, NH	45.9	20.4
Hispanic, Any	56.7	33.1

Infant Mortality Rates by Race, Anne Arundel County, 2005-2014



First trimester is defined as the first twelve weeks of pregnancy. Teen birth rate is the number of births to adolescent females ages 15-19 per every 1,000 adolescent females ages 15-19.

Data Source: Vital Statistics Administration, Maryland DHMH.

Healthy Start Program Supports Mom and Baby

When Judy* became pregnant with her second child, she knew it was time to make some changes, but she needed help. Judy struggled with mental illness, substance abuse, tobacco dependency and legal troubles. When she became pregnant, she was not taking medication to help manage her bipolar disorder, and she had recently lost custody of her older child while incarcerated. Judy heard about the Healthy Start program through her OB/GYN, who referred her after assessing her as a high-risk client.

Through monthly home visits from a Healthy Start nurse during her pregnancy, Judy was provided with education regarding prenatal care, labor and delivery, smoke-free homes, safe sleep, infant nutrition, infant growth and development, child safety, and immunizations. The nurse also connected her with a variety of services to support her health and the health of her baby. Through Healthy Start, Judy received referrals for mental health providers, social workers, nutritional support, smoking cessation, legal resources, baby pantries and pediatricians. She was also provided with Medicaid transportation to ensure she was able to attend pre- and ante- natal doctor's visits.

With the help of Healthy Start, Judy turned her life around in time for her son's birth. Her baby was born healthy and has met all growth and development milestones. Judy sees a psychiatrist regularly, and is no longer experiencing symptoms of bipolar disorder. She continues to refrain from substance abuse, has decreased her smoking habits and does not smoke near the baby. Judy is employed part time and taking online classes to become a nurse. She and her son's father live together in a clean, well-furnished apartment with all baby supplies and toys provided by a baby's pantry. The Healthy Start nurse observed Judy playing on the floor with the baby ("tummy time") and has called Judy a nurturing and attentive mother.

The Department of Health's Healthy Start program provides case management and education for 1,500 women per year. Through regular nurse home visits that offer education and referral services, Healthy Start helps to ensure babies and mothers stay healthy.

*Names have been changed to protect identity.

4. Strategic Priority: Cancer Prevention

Cancer continued to be the leading cause of death in Anne Arundel County. All-cause cancer incidence remained higher in the county than all-cause cancer incidence in Maryland and the United States. Despite the higher number of new cancer diagnoses in the county, all-cause cancer mortality decreased significantly over the last decade. Deaths due to colorectal cancer almost halved in that time period, largely due to high rates of screening. In 2014, over three-quarters of Anne Arundel County residents aged 50 and older reported undergoing at least one colorectal cancer screening, a contributing factor to the early detection and reduced mortality of colorectal cancer in the county. The Department is committed to reducing the morbidity and mortality caused by cancer in the county by addressing health disparities and increasing access to prevention education.

Age-Adjusted Cancer Incidence Rates per 100,000 Population				
Cancer Type	Case Count	Anne Arundel County	Maryland	United States
All Sites	13,374	471.9	447.0	454.8
Cervical	93	6.6	6.7	7.7
Colorectal (Total)*	954	34.5	38.1	41.9
Male	490	39.0	43.6	48.3
Female	463	30.8	33.8	36.6
Female Breast	2,015	129.8	128.1	123.0
Lung/Bronchus (Total)*	1,797	65.8	58.7	63.7
Male	888	72.8	67.9	76.6
Female	904	60.6	52.0	54.1
Melanoma	895	31.4	20.9	19.9
Prostate	2,067	146.4	138.3	131.9

Age-Adjusted Cancer Mortality Rates per 100,000 Population				
Cancer Type	Death Count	Anne Arundel County	Maryland	United States
All Sites	4,803	177.3	171.8	171.2
Cervical	32	2.2	2.2	2.3
Colorectal (Total)*	382	14.3	15.4	15.5
Male	216	18.0	18.9	18.6
Female	166	11.3	12.8	13.1
Female Breast	358	23.7	23.8	21.9
Lung/Bronchus (Total)*	1,446	53.4	46.3	47.2
Male	759	63.5	56.9	59.8
Female	687	45.9	38.5	37.8
Melanoma	93	3.4	2.7	2.7
Prostate	207	20.1	22.5	21.4

*Total also includes unknown gender cases.

Data Source: 2014 Cancer Report, Cigarette Restitution Fund Program, Maryland DHMH; National Center for Health Statistics, CDC WONDER.

Early detection greatly increases the opportunity for successful cancer treatment. The recommendations to help prevent cancer include not using tobacco, maintaining a healthy weight, being physically active, eating a healthy diet and limiting the consumption of alcohol.



1 in 10

Women will develop breast cancer in her lifetime.



79.2%

Of women in Anne Arundel County over the age of 50 had a mammography in the past 2 years



1 in 156

Women will develop cervical cancer in her lifetime.





83.8%

Of women in Anne Arundel County over the age of 18 had a Pap smear in the past three years.

Data Source: American Cancer Society, Maryland BRFSS.

Smoking is the leading risk factor for lung cancer and also increases the risk of other health problems, including chronic lower respiratory disease, respiratory infections, heart problems, premature birth and sudden infant death syndrome (SIDS). Although the rate has decreased over the past decade, lung cancer incidence was 12 percent higher in Anne Arundel County compared to Maryland in 2011. Lung cancer remained the leading cause of cancer deaths at both the county and state levels.

Trends in Adult Tobacco Use, Anne Arundel County, 2011-2014

	2011	2012	2013	2014	Trend
Current Smokers	22.9%	18.1%	18.0%	15.5%	
Never Smoked	53.4%	50.8%	56.8%	59.8%	

Data Source: Maryland BRFSS, 2011-2014

For more detailed county-level cancer data, read the 2016 cancer report on the www.aahealth.org statistics and reports page.

Goal 1: Reduce cancer morbidity and mortality in Anne Arundel County.

- **Breast and cervical cancer screening.** The Department initiated a women’s health campaign to emphasize the importance of breast cancer and cervical cancer prevention through screening. There were over 3,000 requests for web-based information from Learn To Live. (Obj 1a)
- **Environmental tobacco smoke.** Staff met with 62 family day care providers to provide information and training regarding environmental tobacco smoke. (Obj 1b)
- **Community groups to conduct tobacco use prevention activities.** The Department provided small grant opportunities to 20 community groups and churches to conduct tobacco use prevention activities to over 9,500 youth and adults. (Hispanic teens are more likely to use tobacco products than non-Hispanic teens.) The Department invited 72 Hispanic leaders to a meeting to address the importance of tobacco-use prevention education and provide them with educational materials and tools to use in their community. Information was disseminated about emerging tobacco products, electronic nicotine devices and vaping devices. (Obj 1b)
- **AACPS anti-tobacco activities.** A partnership with AACPS staff and the Department’s School Health nurses provided materials to help conduct 89 anti-tobacco activities educating 42,026 students. (Obj 1b)
- **Tobacco cessation classes.** 233 people attended free tobacco cessation classes provided by the Department. Of those who completed the classes, 47 percent quit smoking. (Obj 1b)
- **Annual Tobacco-Free Kids Week.** This event was held April 10-16, 2016, had 157 groups registered and over 69,000 kids participating in anti-tobacco activities. (Obj 1b)
- **Learn To Live Health Notes and Building Blocks.** Learn To Live Health Notes, which included an article for outdoor workers, was distributed to over 1,300 county residents. A Building Blocks newsletter, which targets child care providers, was created with an emphasis on sun safety and distributed to nearly 700 child care providers. (Obj 1c)

5. Strategic Priority: Healthy Communities

The Department of Health is committed to working with community partners to ensure that Anne Arundel County is a safe, pleasant place to live, work and play. This work includes promoting a clean environment and preventing the spread of communicable diseases.

Number of Selected Reportable Diseases in Anne Arundel County							
	2011	2012	2013	2014	2015	2016*	5-Year Mean 2011-2015
Salmonella	97	99	79	81	141	31	99
Vibrio	6	13	11	9	4	4	9
<i>M. tuberculosis</i>	7	10	6	3	10	5	7
Hepatitis B**	80	83	77	103	75	45	93
Hepatitis C**	622	554	543	548	473	326	613
Meningitis, meningococcal	0	0	0	0	0	0	0
Pertussis	17	37	29	42	27	7	30
Chlamydia	1,674	1,439	1,392	1,681	1,696	903	1,576
Gonorrhea	213	230	274	322	337	249	275
Syphilis***	19	15	18	27	24	23	21
Lyme Disease	90	109	99	115	102	72	103
Animal Rabies	7	19	40	36	35	6	27
Outbreaks: Gastrointestinal	10	15	9	8	13	2	11
Outbreaks: Respiratory	5	1	11	14	18	5	49

*Cases reported through June 30, 2016.

**Includes both acute and chronic cases.

***Includes primary and secondary.

Data Source: Bureau of Disease Prevention and Management, Anne Arundel County Department of Health.

County's First Drive-Through Influenza Vaccination Clinic



Residents receive the flu shot at the county's first drive-through clinic.

On October 21, 2015, the Department of Health, in partnership with the Annapolis Office of Emergency Management, Anne Arundel Medical Center and the Maryland Emergency Management Agency, held the first drive-through influenza "flu" vaccination clinic at the Navy-Marine Corps Stadium in Annapolis. Roughly 1,100 doses of vaccine were administered to participants during the six hour event, 260 of which were administered in the first hour alone.

The Centers for Disease Control and Prevention recommends the flu vaccine for all individuals aged six months and older.

Flu season typically runs from October through May, with cases peaking in late January into February. Vaccination is encouraged by December to ensure an adequate immune response before the peak of the season is reached.

Although the severity of the flu can fluctuate from year to year, flu vaccination coverage is consistently an influential factor on the disease burden in the community annually. Even when flu activity is low, specific populations, such as young children, the elderly and pregnant women, are at an increased risk of developing severe complications (e.g., pneumonia) if they contract the virus.

One major role of the Department is curbing such disease burden in Anne Arundel County. Over 50 Department volunteers participated in the drive-through clinic in a variety of roles, including: nurse vaccinators, support staff, logistics, triage, communication and command. According to a survey after the event, Department staff was overwhelmingly pleased with the operations of the event, a sentiment also echoed by most of the public in attendance, especially considering this event was the first of its kind in the county. Furthermore, even though there was such a large turnout, no safety issues related to clinic operations were reported. Almost all (96%) of the Department employees surveyed said they would work at another drive-through clinic in the future.

In addition to providing flu vaccinations to the community, the event served the dual purpose as a point of dispensing (POD) exercise. PODs are areas in the county that can be used to distribute medications or provide mass inoculations during a health emergency. The valuable feedback from this clinic will be used in future emergency preparedness planning activities.

Ultimately, the vaccination clinic was a showcase of successful collaboration between the City of Annapolis and county government agencies for the benefit of the community.

Goal 1: Promote healthy communities in Anne Arundel County.

- **Community Housing Inspection Program (CHIP) assessment in Belle Grove.** The Environmental Health Bureau completed a CHIP assessment in the Belle Grove community and achieved reductions of four targeted public health indicators. The program achieved reductions of 58 percent in rodent violations, 60 percent in trash and refuse, 100 percent for structures open to casual entry and 85 percent for stagnant water. The Department distributed roadside sign notices and brochures throughout the community. This notified residents and tenants about the survey and the risk of illness and disease from health and safety hazards resulting from public health nuisances, unhealthy housing and inadequate property maintenance. (Obj 1a)
- **Nitrogen-reduction with Best Available Technology (BAT) and public sewer connections.** The Environmental Health Bureau provided grants for 225 BAT installations and two public sewer connections that reduce the amount of nitrogen from septic systems and improves surface and ground water quality in the Chesapeake Bay watershed. An additional 86 BAT units were approved for installation in the county. (Obj 1b)
- **Public health alerts inform county residents of zoonotic diseases.** The Environmental Health Bureau and Public Information Office issued 13 public health alerts to inform county residents of the exposure risks to rabies and other zoonotic diseases in connection with 30 animal rabies cases involving 5 raccoons, 23 bats and 2 cats. (Obj 1c)
- **Raccoon Oral Rabies Vaccination (ORV) Program distributes baits countywide.** The Environmental Health Bureau distributed 85,740 baits during a countywide Raccoon ORV program and provided 3,556 doses of rabies vaccine that reduce the human and pet exposure risk to the rabies virus. (Obj 1c)
- **Zika education for county residents.** The Department provided 850 Zika prevention kits to OB/GYN providers and pregnant women, developed a Zika webpage, disseminated educational materials and held a Zika town hall meeting at Anne Arundel Community College for county residents. (Obj 1c)
- **Mosquito control education and assessment.** The Department collaborated with the Maryland Department of Health and Mental Hygiene and the Department of Agriculture in the distribution of educational materials, assessment of stagnant water conditions and need to reduce the mosquito population in 12 communities identified at risk for the transmission of the Zika virus. (Obj 1c)
- **Maryland Department of Agriculture (MDA) assists in mosquito control.** Anne Arundel County authorized additional funding and the use of five county trucks by the MDA to be outfitted for additional spraying and larviciding activities that will help reduce the transmission of mosquito-borne diseases by expanding services into communities currently on a waitlist. (Obj 1c)

Housing Inspections Promote Healthy Neighborhoods

The Anne Arundel County Department of Health's Community Housing Inspection Program (CHIP) conducts community assessments in areas of the county with the highest numbers of housing complaints. Residents living in these areas tend to suffer worse health outcomes compared to the rest of the county. CHIP was created with the goal of improving public health in those areas by targeting four public health hazards: rodents, refuse and trash, vacant structures open to casual entry, and stagnant water. The Belle Grove Community was identified as a CHIP target community. To notify the community in advance of the assessment, a brochure was sent to residents. English and Spanish roadside signs were posted in various locations throughout the community two weeks prior to the assessment.

At the initial assessment, the exterior of each property in the Belle Grove Community was inspected by teams targeting the four public health standards. The knowledgeable and experienced staff teams provided educational materials to property owners and tenants, and door hangers with assessment information specific to the property. A trash container program was also developed to help CHIP area residents receive a free or at cost trash container. A re-inspection was completed 30 days following the initial community survey assessment.

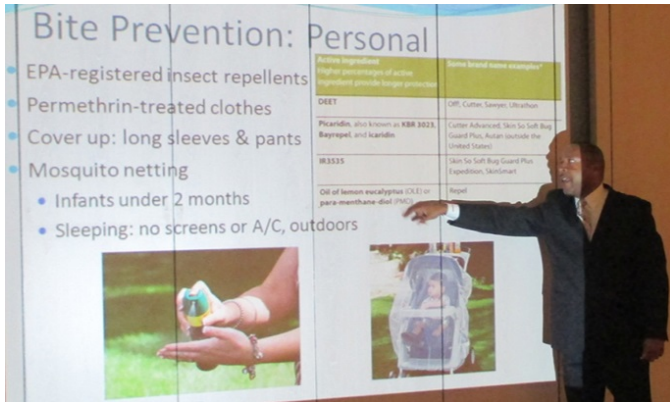


Notifications were posted in both English and Spanish (left) in advance of staff's assessment (right).

The program resulted in significant improvements in the community, including a 60 percent reduction in the evidence of rodents, a 60 percent reduction in refuse and trash, 100 percent reduction in vacant homes open to casual entry, and an 85 percent reduction in stagnant water.

The overall response from members of the Belle Grove Community has been very positive. Retired Army Veteran Edward Graves has lived in the Belle Grove Community for 15 years. He has been concerned about the neighborhood conditions and is very happy that the Anne Arundel County Department of Health is working to improve public health in his community. Mr. Graves stated, "I wish you would continue to do this. It is not as bad as it was. The work that you are doing... it helped a lot. Keep up the good work." CHIP staff will continue to educate and assist the Belle Grove Community property owners and tenants to achieve compliance on the housing and property maintenance conditions, which will improve the neighborhood for all.

Department Acts in Partnership to Control Mosquitoes, Prevent Disease



Zika Presentation by Deputy Health Officer Dr. David C. Rose

In the late fall of 2015, Brazil declared a public health emergency after observing an exponential increase in the number of babies born with microcephaly, a birth defect resulting in the underdevelopment of a child’s head circumference and often accompanied by varying degrees of brain damage. A few months earlier, the presence of the Zika virus, a mosquito-borne disease not previously seen in the Western Hemisphere, was confirmed in Brazil. Eventually, the association between Zika virus infection and the development of microcephaly was confirmed.

As awareness of the condition grew in the United States, there was a growing need for prevention messaging in the community. Maryland Governor Larry Hogan declared the week of April 24, 2016 as Zika Awareness Week. In observance, the Department of Health along with the Maryland Department of Agriculture (MDA) held a Zika awareness town hall meeting at Anne Arundel Community College. The meeting addressed specifics about the Zika virus disease, prevention of the disease and mosquito control. In addition, the Department distributed 850 Zika prevention kits, containing a full bottle of DEET insect repellent, mosquito larvicide dunks and educational materials, to local OB/GYN providers and to the Department’s Healthy Start, WIC and Dental Health programs.

As mosquito season arrived during the summer of 2016, the Department’s Bureaus of Environmental Health and Disease Prevention and Management spearheaded a mosquito control program in response to immediate concerns surrounding the Zika virus, as well as prevention for other ongoing arboviral threats, such as dengue fever, chikungunya and West Nile virus.

In coordination with the MDA, outreach teams comprised of Department and MDA staff went door to door in several county neighborhoods to provide education about mosquito-borne illnesses and to emphasize three key prevention messages: personal protection against mosquito bites, actions to take at home to prevent mosquito breeding and proper pesticide application. MDA also provided mosquito control truck-based spraying to decrease existing adult mosquito populations, as well as backyard spraying upon homeowner approval.

As of June 30, the Department’s education outreach included over 700 properties in Anne Arundel County. The official arboviral season ends the last day of October each year.

6. Strategic Priority: Organizational Issues

The Department recognizes the importance of building its organization capacity in order to meet health-related goals. The Department continues to work to improve efficiency and effectiveness of operations and supporting functions, including finance, human resources, technology, facilities and communications.

Goal 1: Improve staff morale.

- **Public Health Week, first department-wide book drive.** Team DOH, the Department's staff morale and activities group, launched its first department-wide service project, a book drive, during Public Health Week. Approximately 400 books were donated to Department of Health's WIC clinics. (Obj 1a)
- **Interactive and user friendly Team DOH webpage.** With support from the Public Information Office, Team DOH updated its webpage to make it more interactive and user friendly. The webpage included its first department-wide employee feedback survey where 200 employees shared their ideas about future events and programs they would like to see implemented. Positive feedback led to two internal ice cream social events held in Annapolis and Glen Burnie. These events were held in addition to the existing internal social events, such as the tailgate party and bowling. (Obj 1a)
- **Department and countywide awards.** Team DOH provided feedback to Department leadership in the selection of department and countywide awards. (Obj 1a)

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