

**Erie County, Pennsylvania**

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**ERIE COUNTY  
COMMUNITY HEALTH NEEDS  
ASSESSMENT**

**2012**

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DEPARTMENT OF HEALTH  
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UPMC Hamot



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# **Erie County Community Health Needs Assessment**

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## Table of Contents

Acknowledgements.....	3
Table of Contents.....	4
Executive Summary.....	10
Introduction .....	13
Methodology.....	14
Demographics .....	16
Introduction.....	16
Population Change .....	19
Age, Sex, and Population Projections.....	23
Race and Ethnicity .....	26
Housing and Household Characteristics.....	28
Occupations and Industries.....	30
Income .....	31
Poverty.....	32
Health Insurance Coverage and Selected Social Services .....	34
Education.....	35
Maternal, Infant, and Child Health .....	38
Introduction.....	38
Births to Teens.....	43
Low Birth Weight Infants.....	44
Prenatal Care .....	46
Marital Status of Mother .....	46
Cesarean Section Deliveries .....	47
Smoking During Pregnancy.....	47
Infant Mortality .....	48

---

Mortality, Cancer, and Injury .....	49
Introduction .....	49
Age-Adjusted Death Rates .....	52
Leading Causes of Death .....	54
Trends in Selected Leading Causes of Death .....	56
Cancer Mortality .....	58
Cancer Incidence .....	62
Injury Deaths.....	66
Childhood Injury Deaths .....	67
Injury Hospitalizations .....	68
Childhood Injury Hospitalizations.....	69
Infectious Diseases.....	72
AIDS and HIV .....	72
Campylobacteriosis.....	78
Chlamydia .....	78
Giardiasis .....	81
Gonorrhea.....	81
Haemophilus Influenza .....	84
Hepatitis A .....	84
Hepatitis B.....	84
Hepatitis C.....	85
Influenza .....	86
Listeriosis .....	88
Lyme Disease .....	88
Measles.....	89
Meningitis .....	89
Mumps.....	89
Pertussis (Whooping Cough) .....	90
Respiratory Syncytial Virus .....	90

---

---

Rubella (German Measles) .....	90
Salmonellosis .....	91
Syphilis .....	91
Syphilis, Congenital.....	92
Tuberculosis.....	92
Varicella zoster (Chickenpox) .....	93
West Nile Virus .....	93
<b>Chronic Diseases and Conditions.....</b>	<b>94</b>
Arthritis.....	94
Asthma.....	96
Cancer Prevalence .....	101
Cardiovascular Disease .....	104
Cholesterol Blood Level and Awareness .....	109
Chronic Obstructive Pulmonary Disease (COPD) .....	114
Diabetes.....	115
Hypertension .....	117
<b>Preventive Health Services .....</b>	<b>120</b>
Breast Cancer Screening.....	120
Cervical Cancer Screening .....	123
Colorectal Cancer Screening.....	125
Prostate Cancer Screening.....	129
Influenza Immunization.....	132
Pneumonia Immunization .....	136
Oral Health.....	138
<b>Health Risk Behaviors.....</b>	<b>141</b>
Alcohol Use .....	141
Youth Alcohol Use.....	148
Youth Drug Use.....	150

---

---

Nutrition .....	153
Food Deserts.....	158
Physical Activity .....	160
Seat Belt Use.....	162
Sleep .....	164
Tobacco.....	165
Youth Tobacco Use .....	173
Weight Control .....	175
Children and Youth BMI-for-Age .....	182
Mental and Behavioral Health .....	185
Depression .....	185
Youth Depression Symptoms .....	186
Anxiety Disorder .....	187
Attention Deficit Disorder/Hyperactivity (ADD/ADHD) .....	188
Financial Stress .....	188
Special Populations .....	190
Refugees and Immigrants.....	190
Homeless .....	191
Disabled .....	194
Health-Related Quality of Life.....	200
Fair or Poor Health .....	200
Poor Physical Health .....	202
Poor Mental Health .....	204
Activity Limits.....	206
Emotional Support.....	207
Life Satisfaction.....	208

---

Health Care Access.....	210
Health Insurance.....	210
Medicaid .....	212
Children’s Health Insurance Program (CHIP).....	212
Personal Health Care Provider .....	213
Routine Checkup.....	215
Lack of Care Due to Cost.....	216
Lack of Medication Due to Cost.....	218
Health Care Provider Location.....	220
Health Care Providers .....	221
Federally Designated Underserved Areas .....	221
Community Health Net (FQHC) .....	223
Rural Health Centers.....	224
Multi-Cultural Health Evaluation Delivery System (MHEDS) .....	225
Mental Health Services.....	225
Free Clinics.....	226
Medical Professionals.....	227
Hospital Utilization .....	228
Potentially Preventable Hospitalizations.....	229
Ambulatory Surgery Center Utilization .....	230
Pediatric Care.....	231
Home Health Agencies .....	232
Hospice .....	232
Nursing Home Utilization .....	232
Environmental Health .....	234
Food Safety .....	234
Water Supply .....	234
Water Pollution.....	234

---

---

Public Bathing .....	235
School Environment.....	235
Camps and Campgrounds.....	235
Vector Control .....	235
Beach Monitoring and Notification .....	236
Air Quality .....	237
Childhood Lead Poisoning .....	237
Quality of Life .....	238
Mobility.....	238
Public Safety .....	240
Leisure and Recreation .....	240
Social Engagement.....	245
Focus Groups.....	246
Introduction .....	246
Methodology .....	246
Locations and Invitees .....	247
Questions.....	247
Responses .....	248
Conclusions.....	252
Recommendations.....	253
Selected Healthy People 2010 and 2020 Goals .....	255
Peer County Comparison .....	257
Data Sources .....	267

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## Executive Summary

In 2010, with the Erie County Department of Health (ECDH) as lead agency, Corry Memorial Hospital, Millcreek Community Hospital, Saint Vincent Health System, UPMC Hamot, the Erie Community Foundation, Highmark Blue Cross Blue Shield, Community Health Net, and the Northwest Pennsylvania Area Health Education Center formed a collaboration and subsequent Steering Committee to complete a comprehensive Erie County Community Health Needs Assessment. The goals were to evaluate the health status of Erie County residents, identify health concerns within the community, and provide focus areas for future collaborative action among organizations within the community. The Mobilizing for Action through Planning and Partnerships (MAPP) framework was used to guide this activity. The ECDH epidemiology staff authored the Health Needs Assessment.

The Needs Assessment has fifteen sections containing both quantitative and qualitative data as well as a separate peer county section and Healthy People 2010 and 2020 indicators. Quantitative data was gathered from multiple sources including a 2011 Erie County Behavioral Risk Factor Surveillance System (BRFSS) Survey that was commissioned to update statistics on the health behaviors of Erie County adults. Health indicators are reported as individual data points, included in trend analyses, and compared to available state, national, Healthy People 2020, and peer county statistics. When possible, health indicators are also reported according to gender, race, ethnicity, age, education, and income. Qualitative data was compiled from seven focus groups conducted throughout Erie County in the spring and early summer of 2012. Using the same questions for each group, participant responses provided perceptual views from county residents about the health of their community.

Epidemiologists reviewed the data in the Assessment and identified over 150 indicators for consideration in the prioritization process. These indicators were organized in a prioritization matrix that included county, state, national, Healthy People 2020, and peer county statistics, identified the indicator as a targeted focus of other organizations, and associated the indicator with disparities. Trending changes were also noted. The leading health indicator issues are listed in Table 1.

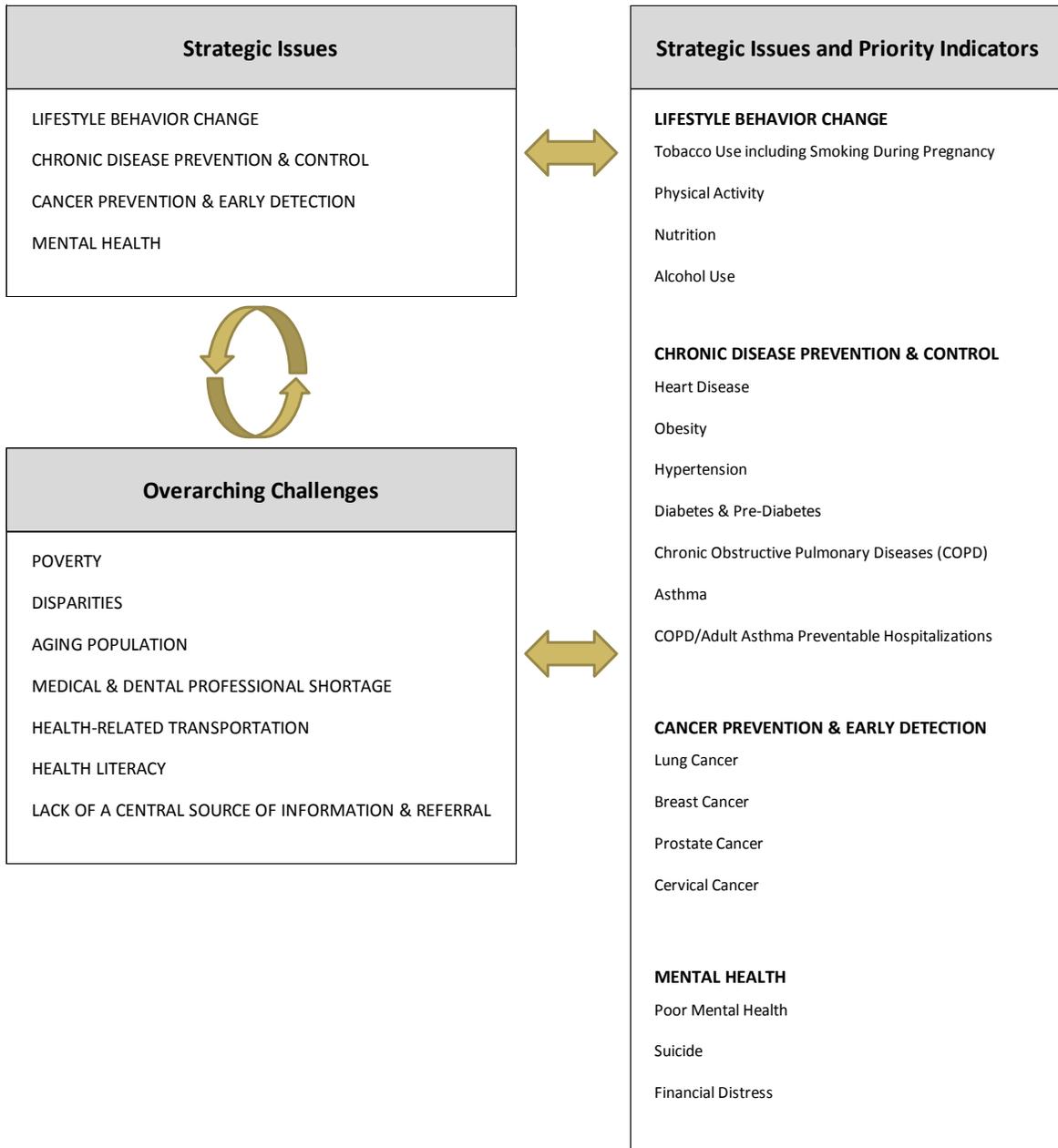
With the aid of a problem importance worksheet and the prioritization matrix, members of the Steering Committee then rated each indicator using a Likert scale of 1 to 10. Scores for each indicator were tallied and ranked. The results identified thirty-six indicators to be considered as priorities. A comprehensive community resource list for these indicators was then developed. Using this list, the Steering Committee identified final priority indicators, overarching challenges, and strategic health issues for Erie County (Table 2).

**Table 1. Prioritization Matrix Indicators**

Leading Health Indicator Issues from the Erie County Community Health Needs Assessment			
<b>Demographics</b>	<b>Mortality, Cancer, and Injury (continued)</b>	<b>Infectious Disease (continued)</b>	<b>Mental and Behavioral Health</b>
Aging population	Cancer incidence	Syphilis	Adult and youth depression
Income	All cancers	Tuberculosis	Anxiety disorder
Poverty	Lung cancer	Varicella zoster	Financial stress
Education	Colorectal cancer	West Nile virus	
Health insurance coverage	Female breast cancer		<b>Special Populations</b>
Unemployment	Prostate cancer	<b>Chronic Diseases and Conditions</b>	Refugees
	Injury deaths	Arthritis	Adult and youth homelessness
<b>Maternal, Infant, and Child Health</b>	All injuries	Asthma	Adult and youth disabilities
Birth and fertility rates	Childhood	Cancer prevalence	
Births to teens	Accidents	Cardiovascular disease	<b>Health-Related Quality of Life</b>
Low birth weight infants	Suicide	Heart disease	Fair or poor health
Prenatal care	Homicide	Heart attack	Poor physical and/or mental health
Single mothers	Poisoning	Stroke	Activity limits
Cesarean section deliveries	Motor vehicle accident	Cholesterol levels	Emotional support
Smoking during pregnancy	Unintentional falls	Chronic obstructive pulmonary disease	Life satisfaction
Infant mortality	Injury hospitalizations	Diabetes and pre-diabetes	
	All injuries	Hypertension	<b>Health Care Access</b>
<b>Mortality, Cancer, and Injury</b>	Childhood		Health insurance coverage
Death rates	Accidents	<b>Preventive Health Services</b>	Medicaid
Leading causes of death	Self-inflicted	Cancer screenings	Children's health insurance program
All causes	Assault	Female breast cancer	Personal health provider
Heart disease	Poisoning	Cervical cancer	Routine checkup
Cancer	Motor vehicle accident	Colorectal cancer	Lack of care and/or medication due to cost
Chronic lower respiratory disease	Unintentional falls	Prostate cancer	
Stroke		Immunizations	<b>Health Care Providers</b>
Accidents	<b>Infectious Disease</b>	Influenza	Federally designated underserved areas
Alzheimer's disease	AIDS and HIV	Pneumonia	Medical and dental professionals
Diabetes mellitus	Campylobacteriosis	Dental care	Potentially preventable hospitalizations
Nephritis	Chlamydia		Pediatric care
Influenza and pneumonia	Gonorrhea	<b>Health Risk Behaviors</b>	
Cancer mortality	Hepatitis A	Adult and youth alcohol use	<b>Focus Groups</b>
All cancers	Hepatitis B	Youth drug use	Health insurance coverage
Lung cancer	Hepatitis C	Nutrition	Economic hardship
Colorectal cancer	Lyme disease	Leisure physical activity	Lack of transportation
Female breast cancer	Meningococcal disease	Seat belt use	Dental care for low-income population
Pancreatic cancer	Pertussis	Adult and youth tobacco use	Literacy and health literacy
Prostate cancer	Salmonellosis	Adult and youth - overweight and obese	Lack of a central health source

Four strategic health issues were identified for Erie County. They are lifestyle behavior change, chronic disease prevention and control, cancer prevention and early detection, and mental health. Additionally, seven overarching challenges were targeted. These are issues that impact the health of Erie County residents and should be considered in any community-based health action plan. Finally, priority health indicators were listed for each strategic issue.

**Table 2. Erie County Strategic Issues, Overarching Challenges, and Priority Indicators**



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## Introduction

A community health needs assessment is a tool used to evaluate the health status of residents and identify areas of concern within the community. Data comes from multiple sources, including input from residents themselves. The long-range goal is to provide focus areas for collaborative action among community stakeholders and residents.

Mobilizing for Action through Planning and Partnerships (MAPP) was selected as a guide for this assessment. Based on a community driven strategy, the MAPP process provides a roadmap for both a Community Health Needs Assessment (CHNA) and a Community Health Improvement Plan (CHIP) and integrates activities between the two. As part of the CHNA, “Wellness in mind, body, and spirit” was chosen as the vision. Priorities and strategic issues identified through the CHNA process will be used in implementing the CHIP.

The objectives of the Erie County Community Health Needs Assessment are to: (1) provide a comprehensive overview of the health status of Erie County, (2) identify priority health needs within the county, (3) organize these priorities into strategic issues, and (4) share this information with the community at large, including stakeholders.

This report is divided into the following sections: (1) Demographics, (2) Maternal, Infant, and Child Health, (3) Mortality, Cancer, and Injury, (4) Infectious Diseases, (5) Chronic Diseases and Conditions, (6) Preventive Health Services, (7) Health Risk Behaviors, (8) Mental and Behavioral Health, (9) Special Populations, (10) Health-Related Quality of Life, (11) Health Care Access, (12) Health Care Providers, (13) Environmental Health, (14) Quality of Life, and (15) Focus Groups. Selected Healthy People 2010 and 2020 goals, a peer county comparison, and a list of data sources are also included as supplementary material.

Because this is a comprehensive needs assessment, both quantitative and qualitative data are included. Health indicators are reported as individual data points and are also included in trend analyses. Statistics for gender, race, ethnicity, age, education, and income are listed when available. Finally, indicators are compared to state, national, Healthy People, and peer county data. Priorities for Erie County were identified using a priority matrix, ranking system, and asset inventory. Final strategic issues and overarching challenges were then developed.

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## Methodology

In 2010, community partners met to discuss a comprehensive Erie County Community Health Needs Assessment. A Steering Committee was formed with representatives from the Erie County Department of Health (ECDH), Community Health Net (a Federally Qualified Health Center), the Erie Community Foundation, Highmark Blue Cross Blue Shield, the Northwest Pennsylvania Area Health Education Center, and the four Erie County nonprofit hospitals of Corry Memorial Hospital, Millcreek Community Hospital, Saint Vincent Health System, and UPMC Hamot. ECDH was identified as the lead agency. The Mobilizing for Action through Planning and Partnerships (MAPP) framework was used to complete the Needs Assessment.

Because behavioral risk factors are a key component of any comprehensive health needs assessment, a first step was agreement to conduct a 2011 Erie County Behavioral Risk Factor Surveillance System (BRFSS) Survey in order to update 2007 Erie County BRFSS data. Funding for the survey was provided by ECDH, a grant from the Erie Community Foundation, a grant from Highmark Blue Cross Blue Shield, and contributions from the four hospitals. An ECDH epidemiologist assumed responsibility and crafted the survey using questions from the national and state BRFSS surveys. Moore Research Services, Inc. conducted the telephone (landline and cell) survey and also analyzed and reported the data in collaboration with ECDH. The final report was delivered to Steering Committee members in February, 2012.

The ECDH epidemiology staff completed the Community Health Needs Assessment. Quantitative data sources included local health statistics calculated and reported by ECDH epidemiologists and available on the ECDH website, state health statistics and health care reports from the Pennsylvania Department of Health, national health statistics available on the Centers for Disease Control and Prevention (CDC) website, demographic data from the U.S. Census Bureau, hospital-related information from the Hospital and Healthsystem Association of Pennsylvania, and related data and information from various local, state, and national organizations. Notable data deficiencies include limited youth health indicators, comprehensive community mental health statistics, and adult drug abuse including prescription drugs. Westmoreland County, Pennsylvania, was selected as a peer county for comparative purposes. A complete list of data sources is provided at the end of the Needs Assessment document. With the exception of ECDH, sources are not responsible for any of the analyses, interpretations, or conclusions that appear in this Assessment.

Qualitative data was gathered via focus groups which were conducted to provide resident perceptions of health issues within the county. Groups were facilitated by the Northwest Pennsylvania Area Health Education Center. Five health-related questions, crafted by the Steering

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Committee, were used for all groups. They are: (1) Describe what you think is a healthy person, (2) Describe what you think is a healthy community, (3) What, if anything, prevents the residents of this community from attaining and maintaining the highest levels of health, (4) What, if anything, prevents this community from attaining and maintaining the highest levels of health, and (5) What are some of the things that could help this community attain the highest level of health? The group responses were analyzed to identify general indicators and themes.

Because Erie County consists of one large city (the City of Erie), one small city (the City of Corry), several large metropolitan suburbs, and many small rural communities, five community focus groups were held in various locations throughout the county. Overall, one large Erie County focus group was conducted. Four smaller community focus groups included the City of Erie, the City of Corry/Union City Borough/Union Township, North East Borough and Township, and Girard Township/Albion Borough. Invitations were sent to a diverse list of community organizations including nonprofit, religious, law enforcement, government, education, health care, social service, mental health, and advocate groups.

Besides the mix of urban, suburban, and rural populations, approximately seven percent of Erie County's population is African American. Additionally, Erie County currently settles the largest number of refugees of all counties in Pennsylvania. Two targeted focus groups were conducted to address the needs of these populations. The first was for refugee, migrant worker, and immigrant interpreters, and the second was for African American women.

In order to identify areas of need within Erie County, a prioritization matrix of health indicators was developed using information from the Health Needs Assessment. In addition to county, state, national, Healthy People 2020, and peer county statistics for the indicators, the matrix also included columns to identify the indicator as a CDC health status indicator, a Robert Wood Johnson Foundation health ranking indicator, an identified county focus group indicator, an indicator currently being addressed by other community organizations, and an indicator associated with disparities. Trending changes were also noted.

Based on the information in this matrix, the Steering Committee used a problem importance worksheet to rate each indicator using a Likert scale of 1 to 10 (with 10 being highest) as to the magnitude of the problem, the seriousness of the problem, its comparison to benchmarks, the feasibility of addressing the problem, and the availability of resources. Scores for each indicator were calculated and the indicators were then ranked according to the results. A preliminary grouping of indicators was developed by the Project Director. With the aid of a comprehensive community asset listing for these indicators, the Steering Committee met to discuss and decide strategic health issues, overarching challenges, and final priority indicators for Erie County.

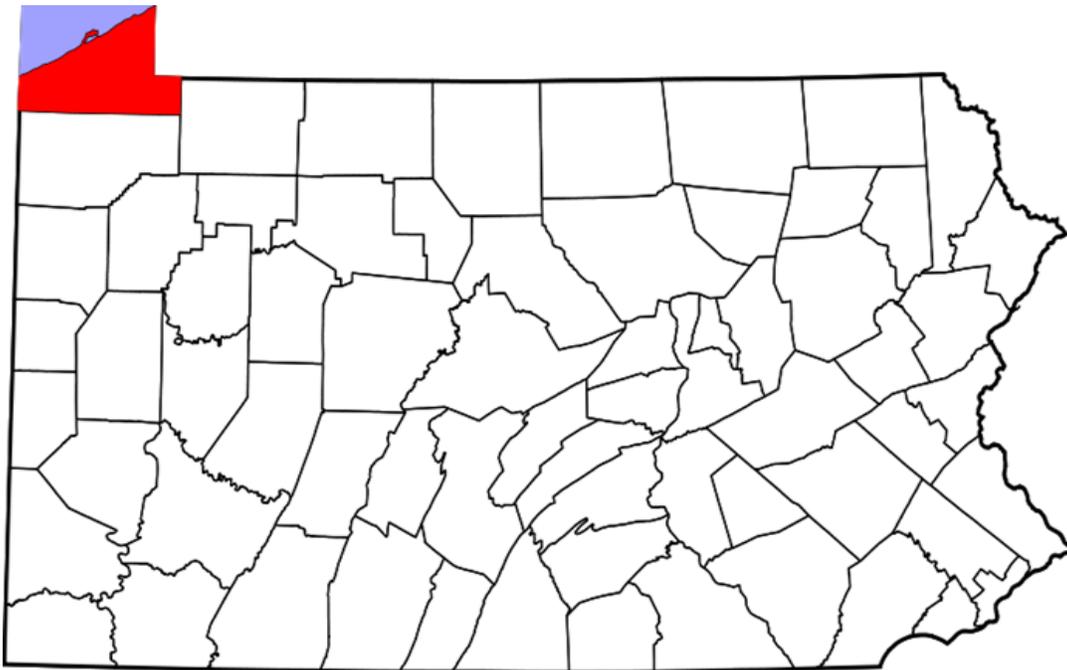
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## Demographics

### Introduction

Erie County is located in northwestern Pennsylvania on the south shore of Lake Erie (Figure 1). Established in 1800, it is the Commonwealth's lone link to the Great Lakes. Erie County is bordered on the north by Lake Erie and the province of Ontario, Canada, on the south by Crawford County, Pennsylvania, on the west by Ashtabula County, Ohio, and on the east by Chautauqua County, New York and Warren County, Pennsylvania. Erie is the largest of Pennsylvania's 67 counties, with a total area of 1,558 square miles. Overall, 802 square miles are land (1.8% of Pennsylvania's total land area), and 756 square miles are water (61.0% of Pennsylvania's total water area).

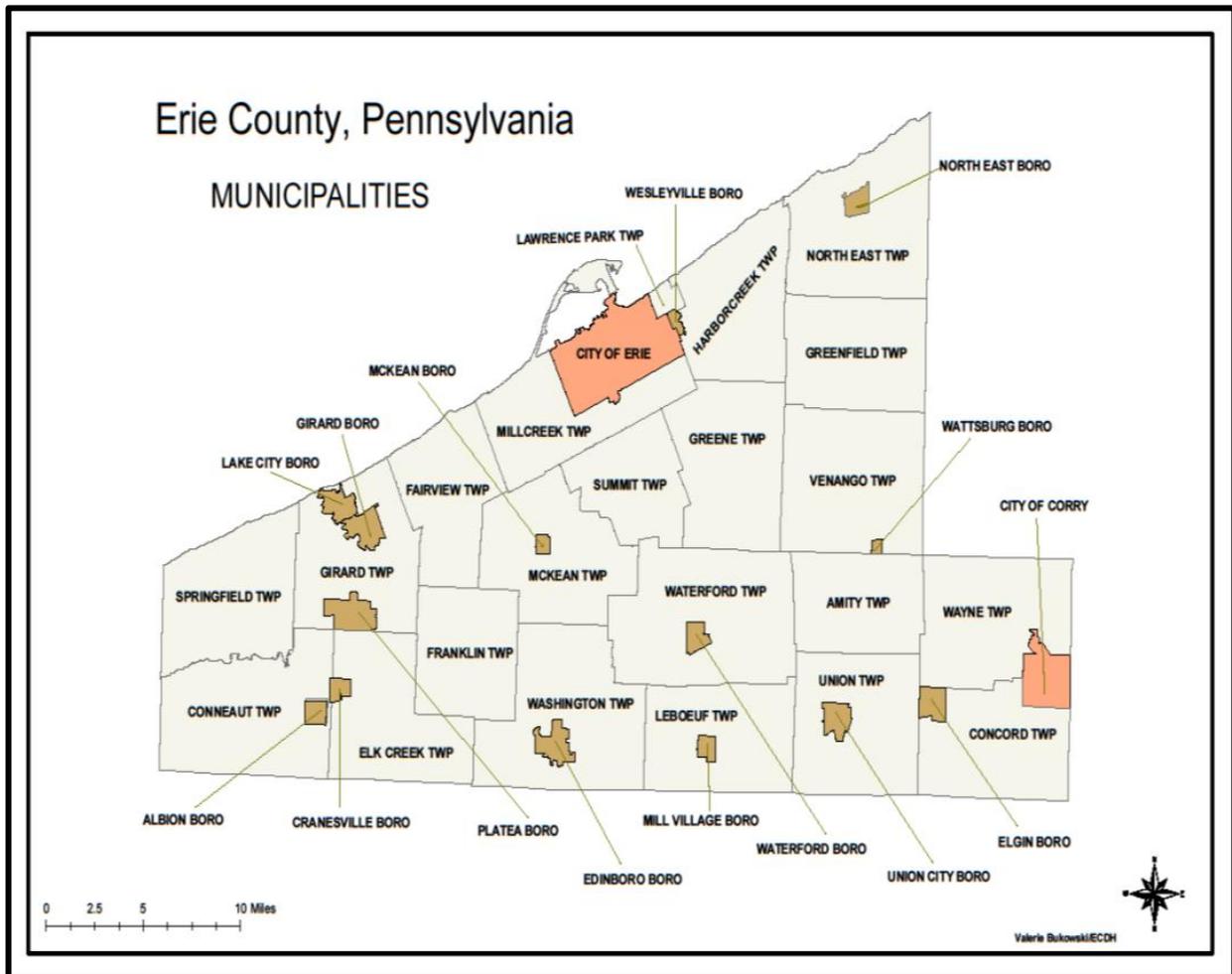
Figure 1. Erie County, Pennsylvania



Erie County's population totaled 280,566 residents in 2010. This amounted to 2.2% of Pennsylvania's population of 12,702,379 persons, and placed Erie as the 14th most populous county in the Commonwealth. The county population was 80.0% urban and 20.0% rural.

The 38 municipalities of Erie County are comprised of 2 cities, 22 townships, and 14 boroughs (Figure 2). The county seat is located in the City of Erie, which is currently the fourth most populous municipality in the state, behind Philadelphia, Pittsburgh, and Allentown.

Figure 2. The 38 Municipalities of Erie County



Erie County’s 38 municipalities vary greatly in total population, size (land area), and population density (Table 1). In 2010, municipality populations ranged from a low of 218 residents in Elgin Borough to a high of 101,786 residents in the City of Erie, land areas ranged from a low of 0.3 square miles in Wattsburg Borough to a high of 50.0 square miles in Waterford Township, and population densities ranged from a low of 43.3 persons per square mile in Wayne Township to a high of 6,303.8 persons per square mile in Wesleyville Borough. The overall population density of Erie County was 349.9 persons per square mile.

The ten largest county municipalities in 2010 were the City of Erie (101,786), Millcreek Township (53,515), Harborcreek Township (17,234), Fairview Township (10,102), the City of Corry (6,605), Summit Township (6,603), Edinboro Borough (6,438), North East Township (6,315), Girard Township (5,102), and Greene Township (4,706). Taken together, these municipalities accounted for more than three-quarters (77.8%) of the total county population.

Table 1. Population Density of Erie County Municipalities, 2010

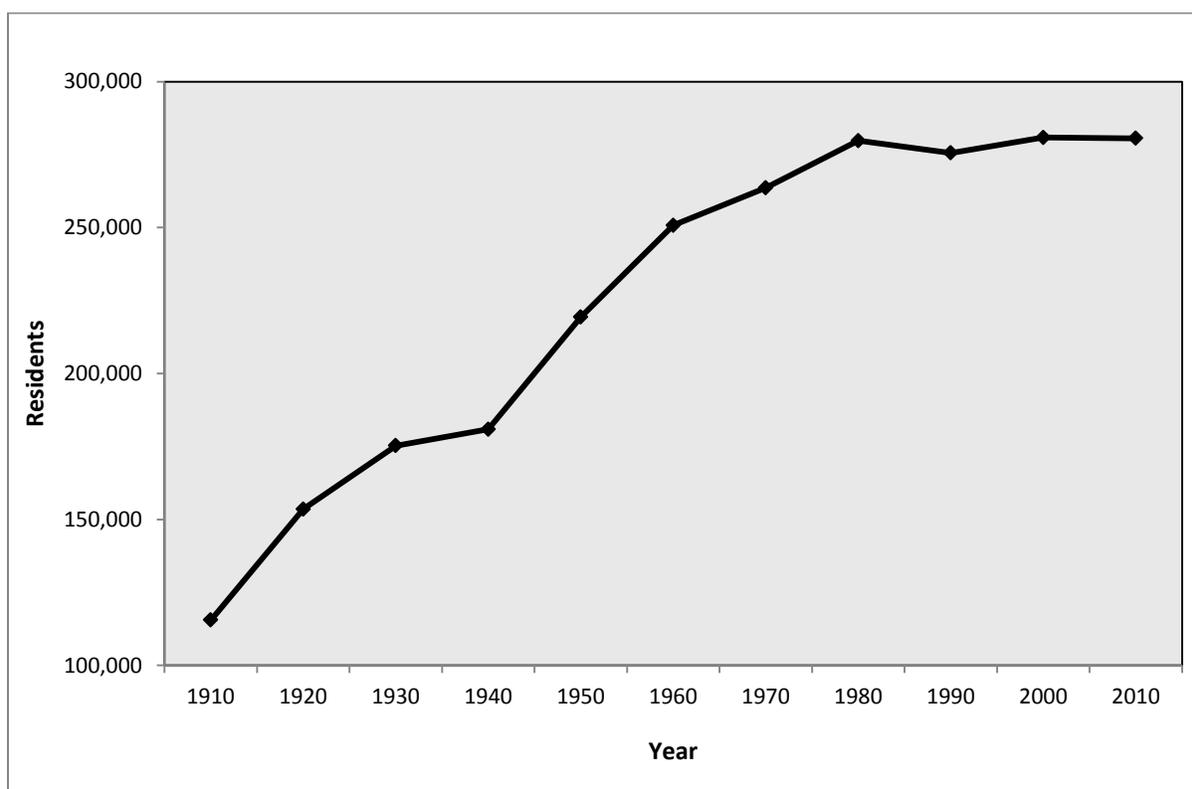
Erie County Municipalities, 2010			
<u>Municipality</u>	<u>Population</u>	<u>Land Area (Square Miles)</u>	<u>Persons per Square Mile</u>
Pennsylvania	12,702,379	44,816.60	283.4
Erie County	280,566	801.95	349.9
Albion Borough	1,516	1.06	1,430.2
Amity Township	1,073	28.27	38.0
Concord Township	1,344	33.02	40.7
Conneaut Township	4,290	43.31	99.1
City of Corry	6,605	6.10	1,082.8
Cranesville Borough	635	0.92	690.2
Edinboro Borough	6,438	2.32	2,775.0
Elgin Borough	218	1.56	139.7
Elk Creek Township	1,798	34.73	51.8
City of Erie	101,786	21.96	4,635.1
Fairview Township	10,102	29.16	346.4
Franklin Township	1,633	28.79	56.7
Girard Borough	3,104	2.35	1,320.9
Girard Township	5,102	31.77	160.6
Greene Township	4,706	37.53	125.4
Greenfield Township	1,933	33.82	57.2
Harborcreek Township	17,234	34.25	503.2
Lake City Borough	3,031	1.80	1,683.9
Lawrence Park Township	3,982	1.86	2,140.9
LeBoeuf Township	1,698	33.71	50.4
McKean Borough	388	0.58	669.0
McKean Township	4,409	36.61	120.4
Millcreek Township	53,515	29.48	1,815.3
Mill Village Borough	412	0.91	452.7
North East Borough	4,294	1.31	3,227.9
North East Township	6,315	42.36	149.1
Platea Borough	430	3.29	130.7
Springfield Township	3,425	37.69	90.9
Summit Township	6,603	23.88	276.5
Union Township	1,655	36.50	45.3
Union City Borough	3,320	1.87	1,775.4
Venango Township	2,297	43.58	52.7
Washington Township	4,432	45.19	98.1
Waterford Borough	1,517	1.22	1,243.4
Waterford Township	3,920	50.02	78.4
Wattsburg Borough	403	0.33	1,221.2
Wayne Township	1,659	38.29	43.3
Wesleyville Borough	3,341	0.53	6,303.8

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## Population Change

The population of Erie County grew by 142.9% over the last 100 years, from 115,517 residents in 1910 to 280,566 residents in 2010 (Figure 3). During the same period, Pennsylvania's population increased by 65.7%, from 7,665,111 people in 1910 to 12,702,379 people in 2010. Since 1980, Erie County's population has remained relatively level at approximately 280,000 residents.

Figure 3. Population of Erie County, 1910-2010



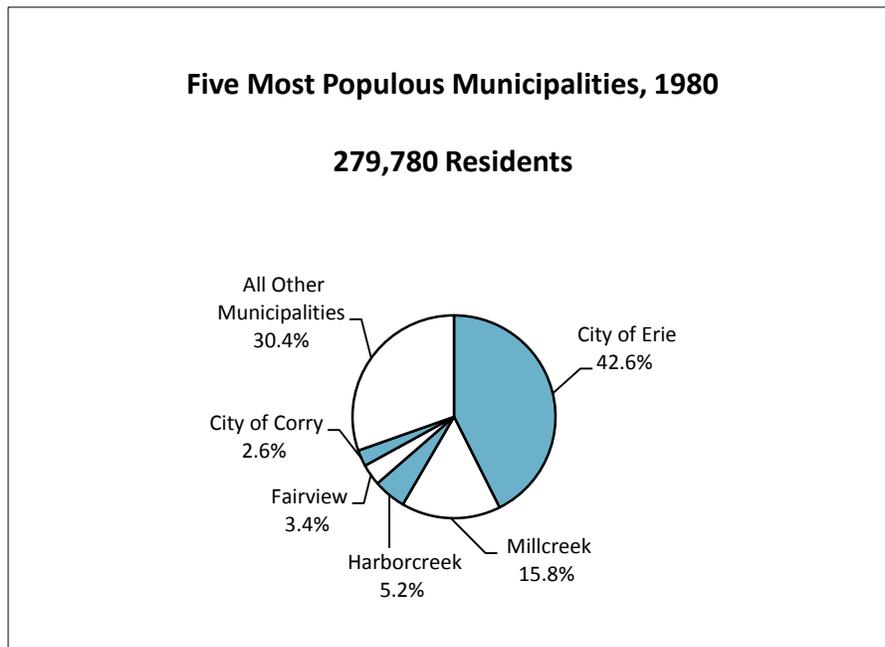
During the period 1980 to 2010, the population in the City of Erie dropped by a municipality-wide high of 17,337 persons (Table 2). This population decline of 14.6% was due in large part to out-migration to nearby municipalities. In contrast to the City of Erie, Millcreek Township experienced the largest municipality population gain, increasing by 9,212 persons (+20.8%). Other municipalities that experienced large population increases from 1980 to 2010 were Conneaut Township (2,397 persons, +126.7%), Fairview Township (2,584 persons, +34.3%), Harborcreek Township (2,590 persons, +17.7%), Summit Township (1,222 persons, +22.7%), and Waterford Township (1,046 persons, +36.4%). Notable population losses occurred in the City of Corry (544 persons, -7.6%), Greene Township (532 persons, -10.2%), Lawrence Park Township (602 persons, -13.1%), and Wesleyville Borough (657 persons, -16.4%).

**Table 2. Population of Erie County Municipalities, 1980 & 2010**

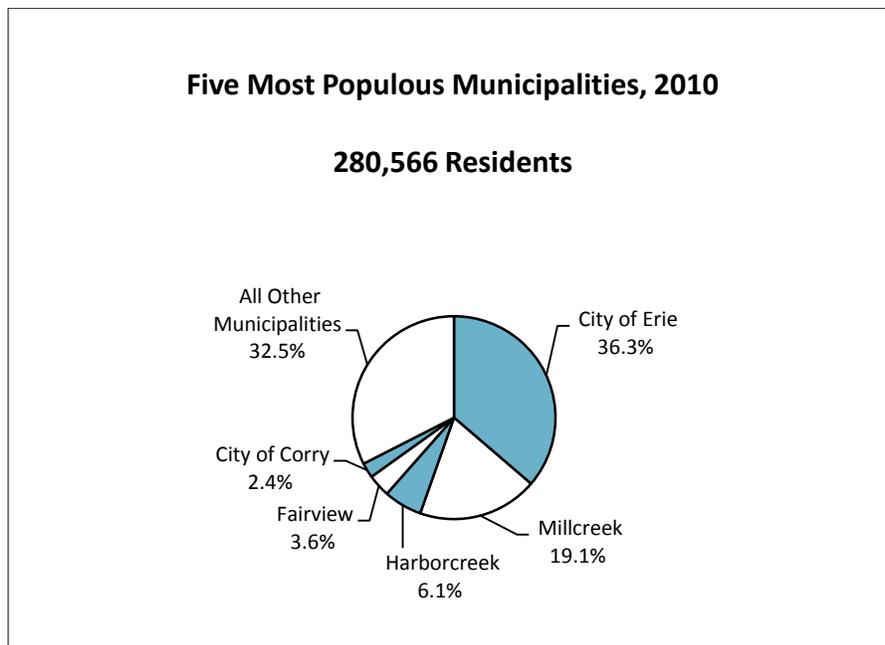
Erie County Municipalities, 1980 & 2010				
<u>Municipality</u>	<u>1980 Population</u>	<u>2010 Population</u>	<u>Numeric Change</u>	<u>Percent Change</u>
Pennsylvania	11,863,895	12,702,379	838,484	7.1
Erie County	279,780	280,566	786	0.3
Albion Borough	1,818	1,516	-302	-16.6
Amity Township	1,098	1,073	-25	-2.3
Concord Township	1,434	1,344	-90	-6.3
Conneaut Township	1,893	4,290	2,397	126.7
City of Corry	7,149	6,605	-544	-7.6
Cranesville Borough	703	635	-68	-9.7
Edinboro Borough	6,324	6,438	114	1.8
Elgin Borough	235	218	-17	-7.2
Elk Creek Township	1,775	1,798	23	1.3
City of Erie	119,123	101,786	-17,337	-14.6
Fairview Borough	1,855	Fairview Borough consolidated with Fairview Township in 1998		
Fairview Township	7,518	10,102	2,584	34.3
Franklin Township	1,301	1,633	332	25.5
Girard Borough	2,615	3,104	489	18.7
Girard Township	4,306	5,102	796	18.5
Greene Township	5,238	4,706	-532	-10.2
Greenfield Township	1,677	1,933	256	15.3
Harborcreek Township	14,644	17,234	2,590	17.7
Lake City Borough	2,384	3,031	647	27.1
Lawrence Park Township	4,584	3,982	-602	-13.1
LeBoeuf Township	1,500	1,698	198	13.2
McKean Borough	465	388	-77	-16.6
McKean Township	4,047	4,409	362	8.9
Millcreek Township	44,303	53,515	9,212	20.8
Mill Village Borough	427	412	-15	-3.5
North East Borough	4,568	4,294	-274	-6.0
North East Township	5,750	6,315	565	9.8
Platea Borough	492	430	-62	-12.6
Springfield Township	3,395	3,425	30	0.9
Summit Township	5,381	6,603	1,222	22.7
Union Township	1,779	1,655	-124	-7.0
Union City Borough	3,623	3,320	-303	-8.4
Venango Township	2,089	2,297	208	10.0
Washington Township	3,567	4,432	865	24.2
Waterford Borough	1,568	1,517	-51	-3.3
Waterford Township	2,874	3,920	1,046	36.4
Wattsburg Borough	513	403	-110	-21.4
Wayne Township	1,767	1,659	-108	-6.1
Wesleyville Borough	3,998	3,341	-657	-16.4

A comparison of Erie County’s five most populous municipalities in 1980 and 2010 is shown in Figures 4 and 5 (see Table 2 for actual population counts). Please note that for 1980, Fairview refers to the combined populations of Fairview Borough and Fairview Township. In 1998, Fairview Borough consolidated with Fairview Township.

**Figure 4. The Five Most Populous Municipalities in Erie County, 1980**



**Figure 5. The Five Most Populous Municipalities in Erie County, 2010**

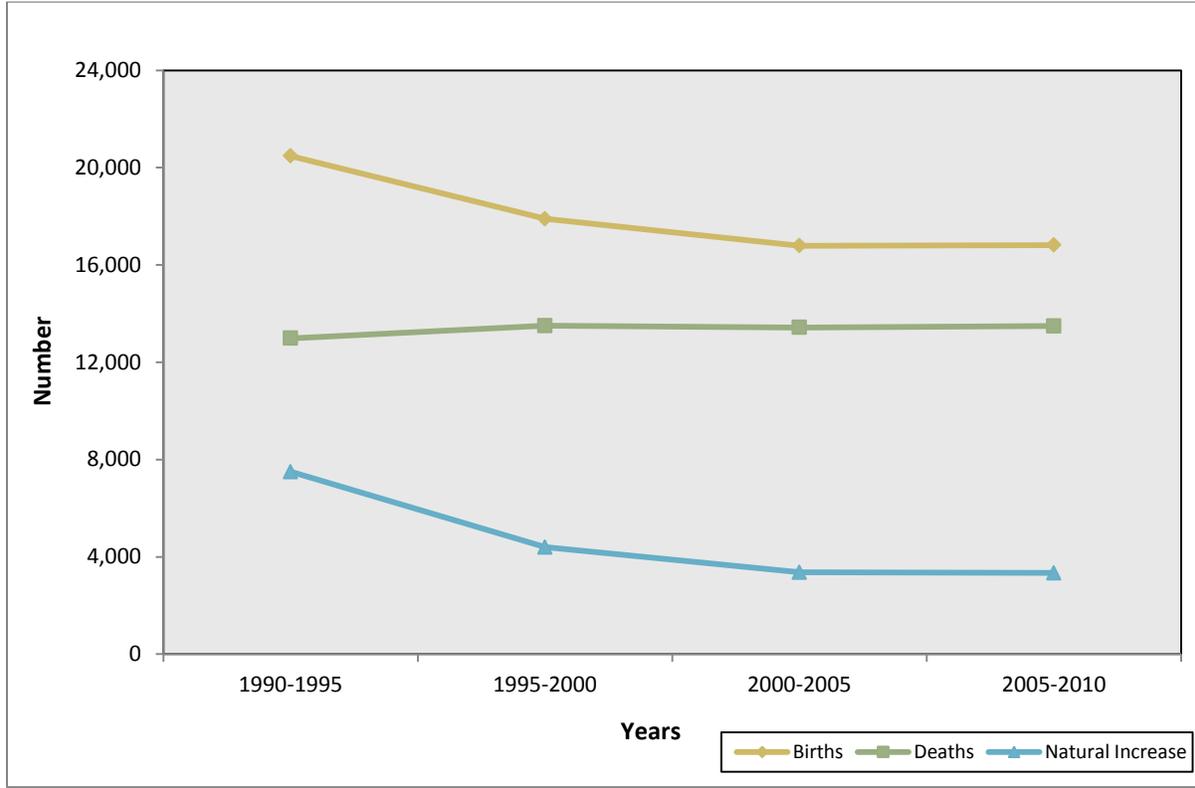


There were 71,984 live births and 53,397 deaths in Erie County from 1990 to 2010, resulting in a natural increase (births - deaths) of 18,587 residents (Table 3, Figure 6). Since the actual county-wide population increase during this period was only 4,944 residents, this means that Erie County experienced a net out-migration of 13,593 residents during the last two decades.

**Table 3. Resident Births, Deaths, and Net Migration, 1990-2010**

Erie County, 1990-2010					
<u>Year(s)</u>	<u>Population</u>	<u>Births</u>	<u>Deaths</u>	<u>Natural Increase (Births - Deaths)</u>	<u>Net Migration</u>
1990	275,572	4,211	2,602	1,609	762
1991	277,943	4,138	2,538	1,600	72
1992	279,615	4,091	2,543	1,548	-1,394
1993	279,769	4,111	2,645	1,466	-914
1994	280,321	3,929	2,658	1,271	-1,132
1995	280,460				
1990-1995	Gain of 4,888	20,480	12,986	7,494	-2,606
1995	280,460	3,676	2,688	988	-878
1996	280,570	3,674	2,667	1,007	-2,176
1997	279,401	3,484	2,680	804	-3,804
1998	276,401	3,541	2,699	842	-250
1999	276,993	3,519	2,767	752	3,098
2000	280,843				
1995-2000	Gain of 383	17,894	13,501	4,393	-4,010
2000	280,843	3,471	2,718	753	-1,960
2001	279,636	3,369	2,653	716	18
2002	280,370	3,372	2,722	650	-1,054
2003	279,966	3,299	2,659	640	1,749
2004	282,355	3,280	2,674	606	-2,515
2005	280,446				
2000-2005	Loss of 397	16,791	13,426	3,365	-3,762
2005	280,446	3,223	2,793	430	-1,065
2006	279,811	3,441	2,604	837	-1,556
2007	279,092	3,529	2,643	886	-803
2008	279,175	3,394	2,786	608	508
2009	280,291	3,232	2,658	574	-299
2010	280,566				
2005-2010	Gain of 120	16,819	13,484	3,335	-3,215
1990-2000	Gain of 5,271	38,374	26,487	11,887	-6,616
2000-2010	Loss of 277	33,610	26,910	6,700	-6,977
1990-2010	Gain of 4,994	71,984	53,397	18,587	-13,593

Figure 6. Erie County Resident Births, Deaths, and Natural Increase (Births-Deaths), 1990-2010



### Age, Sex, and Population Projections

Of the 280,566 people residing in Erie County in 2010, 142,609 (50.8%) were female and 137,957 (49.2%) were male (Table 4). With respect to age, 63,808 (22.7%) were under 18 years, 99,271 (35.4%) were ages 18 to 44 years, 76,663 (27.3%) were ages 45 to 64 years, and 40,824 (14.6%) were 65 years and older (Figure 7).

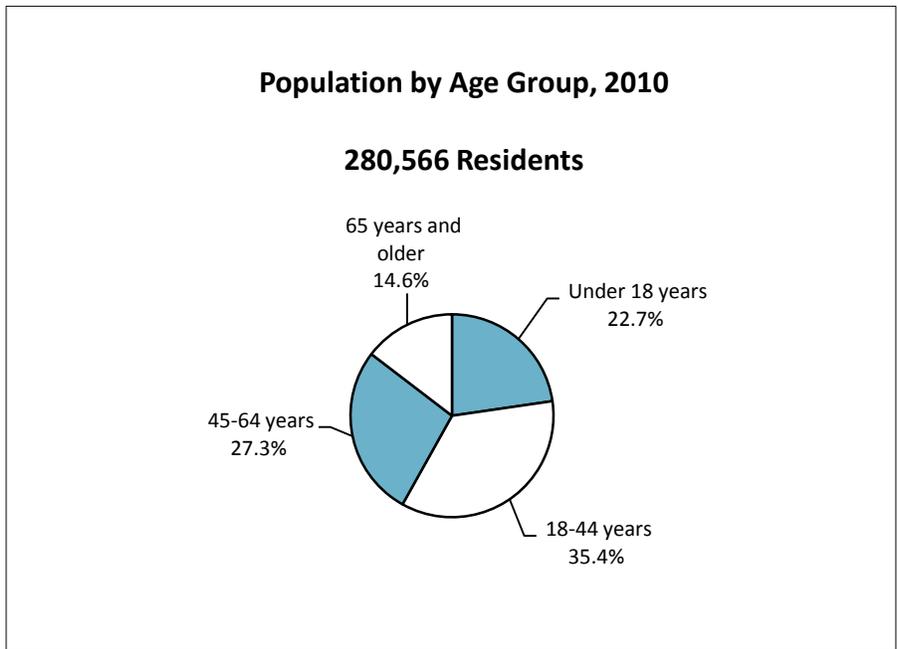
The 2010 age and sex distribution percentages for Erie County and Pennsylvania were very similar. However, Pennsylvania had a slightly older population distribution, with higher median ages observed for males, females, and both sexes combined.

The population of Erie County is aging. The median age in Erie County increased to a new high of 38.6 years in 2010, up from 36.2 years in 2000, and 32.9 years in 1990. The aging of the baby boom generation (people born between 1946 and 1964) into older age groups, declining birth rates, and improved mortality are some of the key contributors to the observed increase in median age.

**Table 4. Population by Age and Sex, 2010**

Erie County and Pennsylvania, 2010						
Age Group	Erie County	Erie County Males	Erie County Females	PA	PA Males	PA Females
All Ages	280,566 (100.0%)	137,957 (100.0%)	142,609 (100.0%)	12,702,379 (100.0%)	6,190,363 (100.0%)	6,512,016 (100.0%)
< 18	63,808 (22.7%)	32,927 (23.9%)	30,881 (21.7%)	(22.0%)	(23.1%)	(20.9%)
18 - 44	99,271 (35.4%)	49,851 (36.1%)	49,420 (34.7%)	(34.5%)	(35.5%)	(33.7%)
45 - 64	76,663 (27.3%)	38,032 (27.6%)	38,631 (27.1%)	(28.0%)	(28.2%)	(27.9%)
65 and older	40,824 (14.6%)	17,147 (12.4%)	23,677 (16.6%)	(15.4%)	(13.3%)	(17.5%)
< 1	3,157 (1.1%)	1,639 (1.2%)	1,518 (1.1%)	(1.1%)	(1.2%)	(1.1%)
1 - 14	48,679 (17.4%)	25,095 (18.2%)	23,584 (16.5%)	(16.8%)	(17.6%)	(16.0%)
15 - 24	44,654 (15.9%)	22,469 (16.3%)	22,185 (15.6%)	(14.0%)	(14.6%)	(13.4%)
25 - 44	66,589 (23.7%)	33,575 (24.3%)	33,014 (23.2%)	(24.6%)	(25.2%)	(24.1%)
45 - 64	76,663 (27.3%)	38,032 (27.6%)	38,631 (27.1%)	(28.0%)	(28.2%)	(27.9%)
65 - 74	20,427 (7.3%)	9,483 (6.9%)	10,994 (7.7%)	(7.7%)	(7.3%)	(8.2%)
75 and older	20,397 (7.3%)	7,664 (5.6%)	12,733 (8.9%)	(7.7%)	(6.0%)	(9.4%)
Median age	38.6	37.1	39.9	40.1	38.7	41.5

**Figure 7. Erie County Population by Age, 2010**



In 2008, the Pennsylvania State Data Center published detailed population projections up to the year 2030 for the Commonwealth and its 67 counties. Respective projections were completed using Census 2000 population figures as the baseline in cohort-component demographic projection models that accounted for the various components of population change (trends in births, deaths, and net migration).

For the purposes of this assessment, population comparisons were made between the 2020 and 2030 population projections provided by the Pennsylvania State Data Center and the actual Census 2010 populations for Erie County (Table 5). It should be noted that the Erie County total, sex, and age group populations from the Census 2010 were very similar to the 2010 Erie County projections completed by the Data Center.

During the period 2010 to 2030, the population of Erie County is expected to drop by 4.6%, or 13,028 persons (from 280,566 to 267,538 residents). Overall, the male and female populations are projected to decline by 7.1% (9,848 residents) and 2.2% (3,180 residents), respectively. The three age group population categories of under 20 years, 20-44 years, and 45-64 years are projected to decline by 11.8% (8,737 residents), 5.4% (4,772 residents), and 21.9% (16,782 residents), respectively. However, the 65 years and older population is projected to increase by 42.3% (17,263 residents). By 2030, seniors will account for 1 out of every 5 county residents.

**Table 5. Population Projections, 2010 to 2030**

Erie County, 2010 to 2030			
Subject	Actual	Projected	
	<u>2010 Erie County Population</u>	<u>2020 Erie County Population</u>	<u>2030 Erie County Population</u>
Total	280,566 (100.0%)	275,355 (100.0%)	267,538 (100.0%)
Male	137,957 (49.2%)	133,056 (48.3%)	128,109 (47.9%)
Female	142,609 (50.8%)	142,299 (51.7%)	139,429 (52.1%)
Under 20 years	74,141 (26.4%)	67,021 (24.3%)	65,404 (24.4%)
20 - 44 years	88,938 (31.7%)	90,561 (32.9%)	84,166 (31.5%)
45 - 64 years	76,663 (27.3%)	68,403 (24.8%)	59,881 (22.4%)
65 years and older	40,824 (14.6%)	49,370 (17.9%)	58,087 (21.7%)

## Race and Ethnicity

In 2010, 247,569 (88.2%) of Erie County residents were White, 20,155 (7.2%) were Black, 3,077 (1.1%) were Asian, 3,887 (1.4%) were classified as Other Race, and 5,878 (2.1%) were categorized as Two or More Races (Table 6, Figure 8). A total of 9,518 (3.4%) residents were Hispanic or Latino, of any race (Table 6, Figure 9).

From 2000 to 2010, the number of Whites in Erie County decreased by 3.0% (from 255,282 to 247,569), the Black population increased by 17.2% (from 17,202 to 20,155), the number of Asians increased by 59.5% (from 1,929 to 3,077), and the Hispanic population rose by 55.4% (from 6,126 to 9,518). The 2010 racial and ethnic distribution percentages for Erie County and Pennsylvania were largely comparable. However, Pennsylvania was more diverse, with higher percentages of Blacks, Asians, Other Races, Two or More Races, and Hispanics.

**Table 6. Population by Race and Ethnicity, 2000 & 2010**

Erie County and Pennsylvania, 2000 & 2010				
<u>Race or Ethnicity</u>	<u>2000 Erie County Population</u>	<u>2010 Erie County Population</u>	<u>2000 PA Population</u>	<u>2010 PA Population</u>
All Races	280,843 (100.0%)	280,566 (100.0%)	12,281,054 (100.0%)	12,702,379 (100.0%)
White	255,282 (90.9%)	247,569 (88.2%)	(85.4%)	(81.9%)
Black or African American	17,202 (6.1%)	20,155 (7.2%)	(10.0%)	(10.8%)
Asian	1,929 (0.7%)	3,077 (1.1%)	(1.8%)	(2.7%)
American Indian and Alaska Native	464 (0.2%)	566 (0.2%)	(0.2%)	(0.2%)
Native Hawaiian and Other Pacific Islander	61 (0.02%)	90 (0.03%)	(0.02%)	(0.03%)
Some Other Race	2,406 (0.9%)	3,231 (1.2%)	(1.5%)	(2.4%)
Two or More Races	3,499 (1.2%)	5,878 (2.1%)	(1.2%)	(2.9%)
Hispanic or Latino (of any race)	6,126 (2.2%)	9,518 (3.4%)	(3.2%)	(5.7%)
Mexican	1,211 (0.4%)	2,032 (0.7%)	(0.4%)	(1.0%)
Puerto Rican	3,538 (1.3%)	5,725 (2.0%)	(1.9%)	(2.9%)
Cuban	85 (0.03%)	168 (0.1%)	(0.1%)	(0.1%)
Other	1,292 (1.5%)	1,593 (0.6%)	(0.8%)	(1.6%)

Figure 8. Erie County Population by Race, 2010

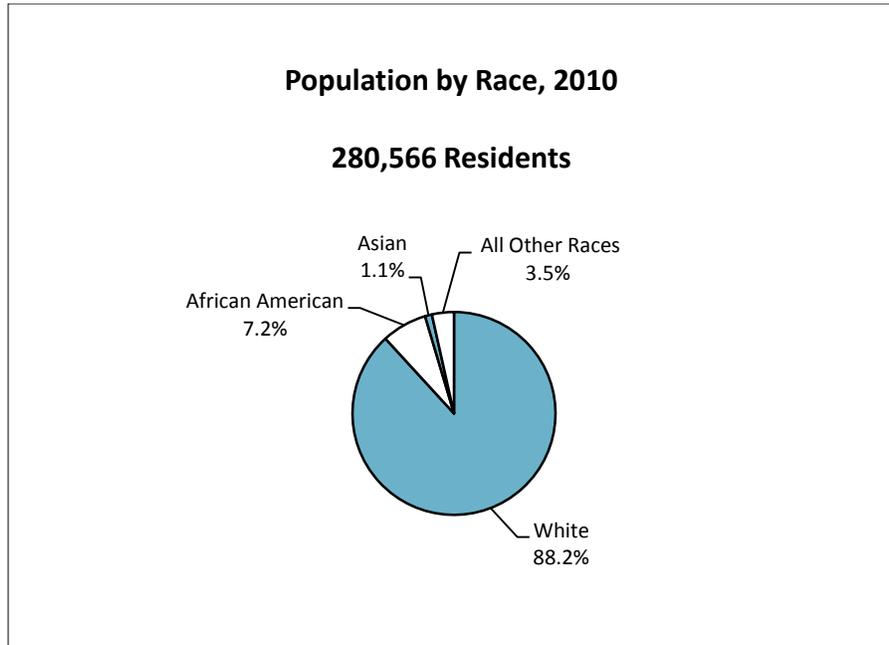
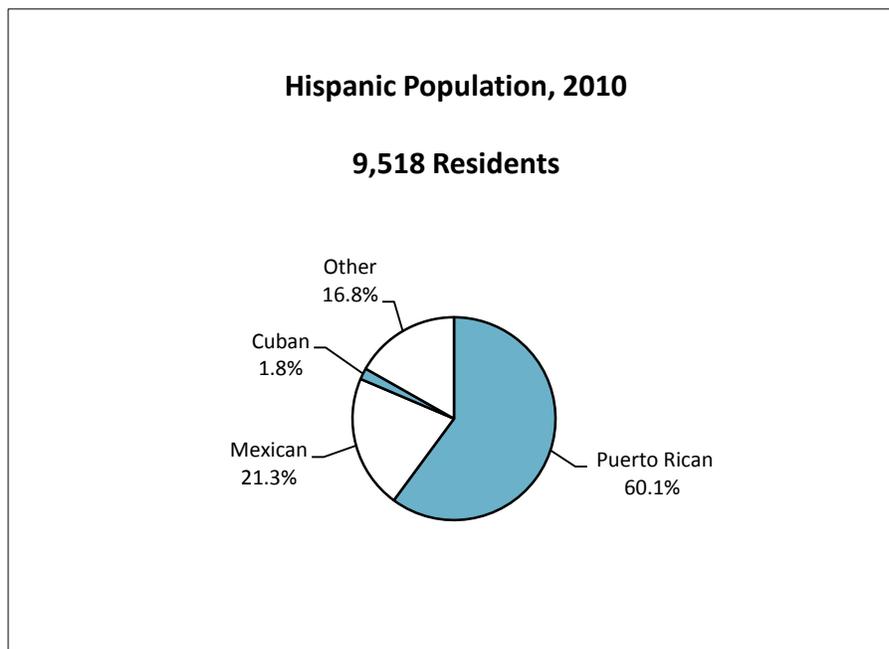


Figure 9. Erie County Hispanic Population, 2010



## Housing and Household Characteristics

In 2010, there were 110,413 households in Erie County, with an average household size of 2.4 persons. Overall, there were 70,196 (63.6%) family households, with an average size of 3.0 persons, and 40,217 (36.4%) nonfamily households, with an average size of 1.3 persons. Pertinent Erie County housing characteristics are presented in Table 7 and Figures 10 and 11.

Table 7. Housing Characteristics, 2010

Erie County, 2010		
<u>Subject</u>	<u>Number</u>	<u>Percent</u>
Households and Group Quarters		
Total population	280,566	100.0
In households	267,691	95.4
In family households	217,100	77.4
In nonfamily households	50,591	18.0
In group quarters	12,875	4.6
Institutionalized population	5,208	1.9
Correctional facilities for adults	2,948	1.1
Juvenile facilities	222	0.1
Nursing and skilled nursing facilities	1,962	0.7
Other	76	0.0
Noninstitutionalized population	7,667	2.7
College and university student housing	6,435	2.3
Military quarters	11	0.003
Other	1,221	0.4
Household Types		
Total households	110,413	100.0
Family households	70,196	63.6
With related children under 18 years	32,762	29.7
Husband-wife family	50,093	45.4
With related children under 18 years	19,717	17.9
Female householder, no husband present	14,584	13.2
With related children under 18 years	9,760	8.8
Male householder, no wife present	5,519	5.0
With related children under 18 years	3,285	3.0
Nonfamily households	40,217	36.4
Householder living alone	32,373	29.3
Householder 65 years and over	12,482	11.3
Housing Occupancy		
Total housing units	119,138	100.0
Occupied housing units	110,413	92.7
Vacant housing units	8,725	7.3
Housing Tenure		
Occupied housing units	110,413	100.0
Owner-occupied	73,847	66.9
Renter-occupied	36,566	33.1

Figure 10. Erie County Households and Group Quarters, 2010

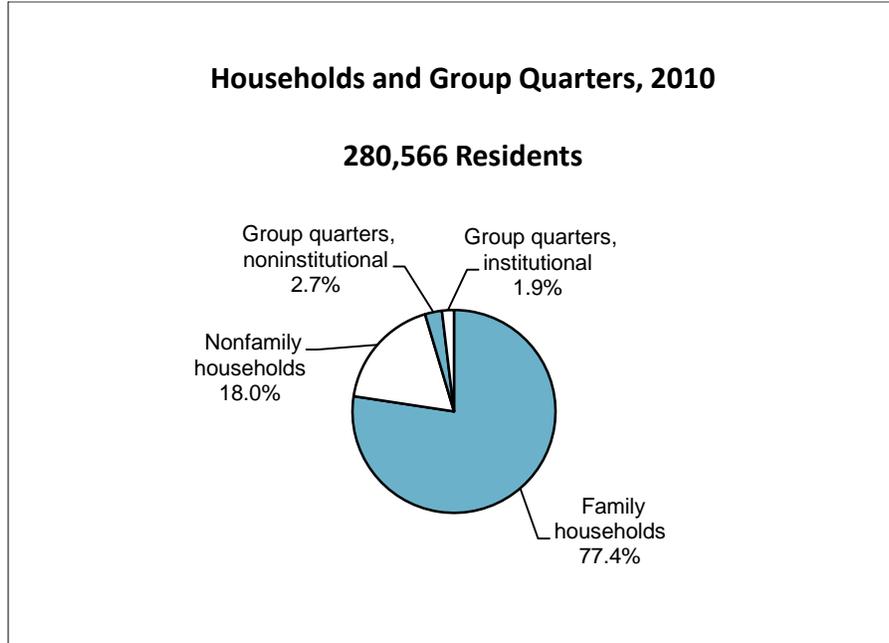
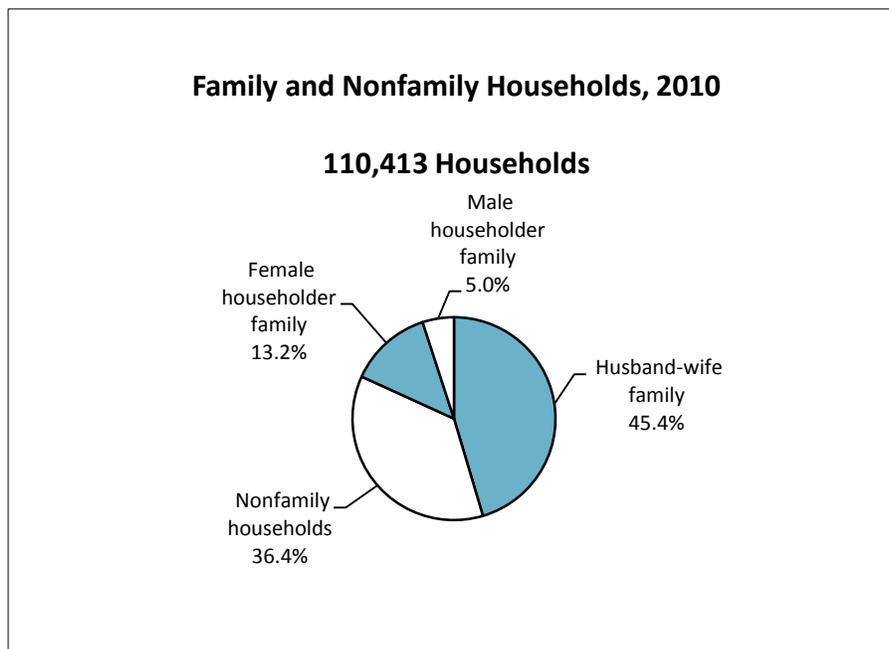


Figure 11. Erie County Family and Nonfamily Households, 2010



## Occupations and Industries

In 2010, the Erie County civilian labor force ages 16 years and over was estimated to be 138,007 persons, of which 125,071 (90.6%) were employed and 12,936 (9.4%) were unemployed. In Pennsylvania, the corresponding unemployment rate was 9.6%. Of the 125,071 people employed in 2010, 38,711 (31.0%) were in management, business, science, and arts occupations, 29,697 (23.7%) were in sales and office occupations, 24,613 (19.7%) were in service occupations, 22,641 (18.1%) were in production, transportation, and material moving occupations, and 9,409 (7.5%) were in natural resources, construction, and maintenance occupations. The leading industries for each of the occupational categories are presented in Table 8.

**Table 8. Industry by Occupation for the Civilian Employed Population, 2010**

Erie County, 2010		
<u>Occupations and Leading Industries</u>	<u>Number</u>	<u>Percent</u>
Management, business, science, and arts occupations	38,711	100.0
Educational services, health care, and social assistance	20,175	52.1
Manufacturing	4,723	12.2
Professional, scientific, management, administrative, and waste management services	3,397	8.8
Sales and office occupations	29,697	100.0
Retail trade	9,582	32.3
Educational services, health care, and social assistance	5,282	17.8
Manufacturing	2,948	9.9
Service occupations	24,613	100.0
Arts, entertainment, recreation, accomodation, and food services	8,908	36.2
Educational services, health care, and social assistance	8,794	35.7
Other services, except public administration	1,717	7.0
Production, transportation, and material moving occupations	22,641	100.0
Manufacturing	14,125	62.4
Transportation, warehousing, and utilities	1,988	8.8
Retail trade	1,666	7.4
Natural resources, construction, and maintenance occupations	9,409	100.0
Construction	4,009	42.6
Manufacturing	1,500	15.9
Other services, except public administration	873	9.3

## Income

In 2010, Erie County household income distribution levels differed substantially based on household type (Table 9). Overall, 31.6% of households had income below \$25,000 and 13.6% had income above \$100,000.

Regardless of household type, Erie County's median incomes were lower than those reported for Pennsylvania. The median household income was \$42,519 (for Pennsylvania, \$49,288), the median family household income was \$56,663 (for Pennsylvania, \$61,890), the median married-couple family household income was \$67,916 (for Pennsylvania, \$73,226), and the median nonfamily household income was \$23,986 (for Pennsylvania, \$27,316). Additionally, the Erie County per capita income was \$22,192 in 2010 (for Pennsylvania, \$26,374).

**Table 9. Income Levels in the Past 12 Months (in 2010 Inflation-Adjusted Dollars)**

Erie County, 2010				
Subject	Households	Families	Married-Couple Families	Nonfamily Households
Total number with income	109,388 (100.0%)	67,345 (100.0%)	48,169 (100.0%)	42,043 (100.0%)
Less than \$25,000	31.6%	20.3%	8.9%	51.9%
\$25,000 to \$49,999	24.5%	22.5%	20.8%	27.7%
\$50,000 to \$74,999	19.3%	23.2%	26.9%	12.4%
\$75,000 to \$99,999	11.0%	14.6%	17.8%	4.7%
\$100,000 to \$149,999	9.8%	13.4%	17.5%	3.0%
\$150,000 or more	3.8%	5.9%	8.1%	0.3%
Median income	\$42,519	\$56,663	\$67,916	\$23,986
Mean income	\$54,905	\$68,300	\$81,783	\$31,507

## Poverty

In 2010, 17.4% of Erie County residents lived below the poverty level (Table 10). With the exception of seniors and Hispanics, Erie County had higher poverty rates than Pennsylvania for all of the listed categories in Table 10.

Overall, poverty rates varied greatly among Erie County's 38 municipalities during the period 2006-2010 (Table 11). The five highest poverty rates were observed in Edinboro Borough (28.6%), the City of Corry (26.9%), the City of Erie (25.0%), North East Borough (22.1%), and Springfield Township (19.1%), while the five lowest rates were observed in Elk Creek Township (4.1%), McKean Township (4.2%), Fairview Township (4.8%), McKean Borough (5.2%), and Franklin Township (5.4%).

**Table 10. Poverty Status in the Past 12 Months, 2010**

Erie County and Pennsylvania, 2010		
<u>Subject</u>	Erie County	Pennsylvania
	<u>Percent Below Poverty Level</u>	<u>Percent Below Poverty Level</u>
Total population	17.4	13.4
Male	15.9	12.1
Female	18.8	14.6
Under 18 years	24.7	19.1
18 - 64 years	16.9	12.7
65 years and older	7.9	7.9
White	14.4	10.6
Black or African American	44.7	28.4
Hispanic or Latino (of any race)	31.6	33.5
All families	12.9	9.3
With related children under 18 years	22.9	15.9
Married-couple families	4.3	3.8
With related children under 18 years	7.1	5.7
Female householder, no husband present	34.6	29.1
With related children under 18 years	43.4	31.4
Male householder, no wife present	34.6	15.0
With related children under 18 years	48.1	21.3
White householder families	10.0	7.0
Black householder families	52.5	25.1
Hispanic householder families	40.5	31.3

Table 11. Poverty Status of Erie County Municipalities, 2006-2010

Erie County Municipalities, 2006-2010			
<u>Municipality</u>	<u>Percent of People Below Poverty Level</u>	<u>Percent of Families Below Poverty Level</u>	<u>Percent of Families With Related Children &lt; 18 Below Poverty Level</u>
Pennsylvania	12.4	8.5	14.2
Erie County	15.6	10.5	18.2
Albion Borough	13.4	10.0	19.0
Amity Township	11.5	7.6	16.8
Concord Township	7.8	7.4	11.1
Conneaut Township	18.1	12.0	21.5
City of Corry	26.9	21.7	43.8
Cranesville Borough	9.7	6.3	10.4
Edinboro Borough	28.6	4.2	0.0
Elgin Borough	6.3	0.0	0.0
Elk Creek Township	4.1	2.9	5.6
City of Erie	25.0	18.8	29.3
Fairview Township	4.8	2.9	6.5
Franklin Township	5.4	4.3	9.6
Girard Borough	16.0	10.9	23.3
Girard Township	6.1	4.6	7.5
Greene Township	8.1	6.0	8.2
Greenfield Township	7.2	6.3	2.0
Harborcreek Township	8.7	3.6	6.0
Lake City Borough	11.2	6.5	10.6
Lawrence Park Township	7.4	4.0	8.4
LeBoeuf Township	11.4	8.5	13.8
McKean Borough	5.2	0.0	0.0
McKean Township	4.2	3.2	6.4
Millcreek Township	7.2	3.9	6.8
Mill Village Borough	8.7	3.7	8.0
North East Borough	22.1	22.9	32.0
North East Township	6.1	4.1	6.7
Platea Borough	10.2	5.0	9.3
Springfield Township	19.0	14.8	26.1
Summit Township	6.1	4.2	9.4
Union Township	7.4	3.3	7.2
Union City Borough	12.3	6.8	13.1
Venango Township	11.4	8.3	9.6
Washington Township	11.4	9.4	18.5
Waterford Borough	9.7	8.6	18.7
Waterford Township	15.1	13.3	28.8
Wattsburg Borough	8.6	5.5	10.0
Wayne Township	12.1	11.2	12.4
Wesleyville Borough	16.5	10.9	20.4

## Health Insurance Coverage and Selected Social Services

Among the civilian noninstitutionalized population in Erie County in 2010, 90.4% had health insurance coverage (Table 12). For those 18 to 64 years of age, 13.7% were uninsured. Overall, insurance coverage rates were very similar for Erie County and Pennsylvania. Relevant summary statistics for several social service programs are also included in Table 12.

**Table 12. Health Insurance and Social Services Statistics, 2010**

Erie County and Pennsylvania, 2010		
<u>Subject</u>	<u>Erie County</u>	<u>Pennsylvania</u>
Health insurance coverage for the civilian noninstitutionalized population, 2010	90.4%	89.8%
With private health insurance only	54.9%	58.6%
With public coverage only	20.9%	17.0%
With both private and public coverage	14.6%	14.3%
No health insurance coverage	9.6%	10.2%
Uninsured, under 18 years	4.2%	5.2%
Uninsured, 18 - 64 years	13.7%	14.3%
Uninsured, 65 years and older	0.5%	0.4%
Population receiving Cash Assistance, December 2010	3.2%	2.3%
Population eligible for Medical Assistance, December 2010	23.7%	17.9%
Population participating in the Supplemental Nutrition Assistance Program (SNAP), December 2010	19.5%	13.5%
Population participating in the Women, Infants and Children (WIC) Nutrition Program, June 2010	2.6%	2.0%
Estimated number of clients per 1,000 residents participating in the Homeless Assistance Program (HAP), 2010	6.7	7.2
Children enrolled in the Children's Health Insurance Program (CHIP), December 2010	5.9%	6.1%
Population receiving federally administered Supplemental Security Income (SSI) payments, December 2010	3.8%	2.8%

## Education

The total estimated school enrollment for the Erie County population 3 years and over was 75,565 students in 2010. Overall, 8.5% of students were in nursery school, preschool, or kindergarten, 38.1% were in elementary school grades 1 to 8, 21.1% were in high school grades 9 to 12, 26.9% were in college, and 5.4% were in graduate or professional school (Table 13).

Compared to Pennsylvania in 2010, Erie County had a lower percentage of students in nursery school, preschool, or kindergarten (8.5% versus 10.9%), identical percentages of students in grades 1 to 8 (38.1%) and high school (21.1%), and a higher percentage of students in college and graduate or professional school (32.3% versus 29.8%).

Of the 75,565 total enrolled students in Erie County in 2010, 74.3% were enrolled in public school and 25.7% were enrolled in private school. Public school enrollments were 68.8% for nursery school, preschool, or kindergarten, 87.9% for elementary school, 84.2% for high school, 56.8% for college, and 35.9% for graduate or professional school.

**Table 13. Enrollment by Level of School, 2000 & 2010**

Erie County, 2000 & 2010				
<u>Subject</u>	<u>2000</u>	<u>2010</u>	<u>Numeric Change</u>	<u>Percent Change</u>
Total estimated enrollment for population 3 years and over	77,763 (100.0%)	75,565 (100.0%)	-2,198	-2.8
Nursery school, preschool, or kindergarten	8,915 (11.5%)	6,436 (8.5%)	-2,479	-27.8
Elementary school grades 1 to 4	16,967 (21.8%)	13,842 (18.3%)	-3,125	-18.4
Elementary school grades 5 to 8	16,112 (20.7%)	14,937 (19.8%)	-1,175	-7.3
High school grades 9 to 12	16,937 (21.8%)	15,952 (21.1%)	-985	-5.8
College	16,319 (21.0%)	20,333 (26.9%)	4,014	24.6
Graduate or professional school	2,513 (3.2%)	4,065 (5.4%)	1,552	61.8

In the past decade, an interesting age-related shift has occurred in the overall composition of the school enrollment population in Erie County. From 2000 to 2010, the total enrollment has declined from 77,763 to 75,565 students, a drop of only 2.8% (2,198 students). However, the nursery school, preschool, kindergarten, elementary school, and high school combined enrollment has decreased by 13.2% (7,764 students). In contrast, the college and graduate or professional school enrollments have increased by 24.6% (4,014 students) and 61.8% (1,552 students), respectively (Table 13).

In 2010, 90.2% of Erie County residents 25 years and over had at least graduated from high school, 23.4% had a bachelor’s degree or higher, and 9.3% had earned a graduate or professional degree. The accompanying percentages for Pennsylvania were 88.4%, 27.1%, and 10.4%, respectively. It should be noted that striking racial and ethnic differences in educational attainment were observed in Erie County in 2010 (Table 14).

**Table 14. Educational Attainment by Race and Ethnicity, 2010**

Erie County, 2010			
<u>Subject</u>	<u>Both Sexes</u>	<u>Males</u>	<u>Females</u>
Less than high school diploma (population 25 years and over)			
All races	9.8%	11.4%	8.4%
White	9.0%	10.3%	7.7%
Black or African American	18.3%	21.2%	16.0%
Hispanic or Latino (of any race)	30.6%	32.3%	28.9%
Bachelor's degree or higher (population 25 years and over)			
All races	23.4%	23.9%	23.0%
White	23.9%	24.6%	23.2%
Black or African American	13.7%	9.1%	17.4%
Hispanic or Latino (of any race)	14.1%	13.8%	14.6%

The percentage of Erie County residents 25 years and over who were high school graduates or higher increased from 77.5% in 1990 to 84.6% in 2000 to 90.2% in 2010, for an overall improvement of 16.4%. Similarly, the percentage of Erie County residents who had earned a bachelor’s degree or higher increased from 16.2% in 1990 to 20.8% in 2000 to 23.4% in 2010, for an overall improvement of 44.4%.

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For Erie County residents 25 years and over, the 2010 median earnings were \$17,950 for those who had not graduated from high school, \$25,122 for high school graduates, \$41,762 for those with a bachelor's degree, and \$57,804 for those with a graduate or professional degree. These earnings were collectively lower than the corresponding earnings for Pennsylvania, which were \$19,537, \$26,785, \$46,904, and \$63,065, respectively.

## Maternal, Infant, and Child Health

### Introduction

There were 9,891 resident live births reported in Erie County during the period 2008 to 2010, for a corresponding crude birth rate of 11.8 births per 1,000 population (Table 1). A total of 9,544 (96.5%) of these births were single births, 318 (3.2%) were twin births, and 29 (0.3%) were grouped as triplets or more births. With respect to gender, males accounted for a slight majority (51.2%) of babies.

Overall, 7,896 (79.8%) of the 9,891 resident births were to White women, 1,261 (12.8%) births were to Black women, 651 (6.6%) births were to women classified as Other Race, and 83 (0.8%) births were to women categorized as Unknown Race. A total of 508 (5.1%) births were to women of Hispanic origin (of any race).

The crude birth rates for the White, Black, and Hispanic populations were 10.6, 20.9, and 17.8 births per 1,000, respectively. The accompanying rates for Pennsylvania were 9.9, 16.2, and 21.2 births per 1,000, respectively.

**Table 1. Resident Live Births and Crude Birth Rates by Race and Hispanic Origin of Mother, 2008-2010**

Erie County and Pennsylvania, 2008-2010				
Race or Hispanic Origin	Erie County Births	Rate	Pennsylvania Births	Rate
All Races	9,891 (100.0%)	11.8	436,776 (100.0%)	11.6
White	7,896 (79.8%)	10.6	313,935 (71.9%)	9.9
Black or African American	1,261 (12.7%)	20.9	66,060 (15.1%)	16.2
Other Race	651 (6.6%)	NA	46,016 (10.5%)	NA
Unknown Race	83 (0.8%)	NA	10,765 (2.5%)	NA
Hispanic (of any race)	508 (5.1%)	17.8	41,527 (9.5%)	21.2

Notes: Rates are per 1,000 population for each specified group, 2008-2010; NA = Not available

Erie County and Pennsylvania resident live births and age-specific birth rates for the period 2008-2010 are presented in Table 2. In both Erie County and Pennsylvania, the highest birth rate was observed for women in the 25-29 years age group (113.8 and 111.3 births per 1,000 females aged 25-29 years, respectively).

In Erie County, just over three-quarters (77.3%) of all resident births during 2008-2010 occurred to women aged 20-34 years. Births to teenage mothers (under the age of 20) accounted for 11.3% of all births, compared to 12.6% of births in 1998-2000, and 14.3% of births in 1990-1992.

**Table 2. Resident Live Births by Age of Mother, 2008-2010**

Erie County and Pennsylvania, 2008-2010				
<u>Age Group</u>	<u>Erie County</u>	<u>Rate</u>	<u>Pennsylvania</u>	<u>PA Rate</u>
All Ages	9,891 (100.0%)	58.0	436,776 (100.0%)	59.0
Under 15	7 (0.1%)	0.3	447 (0.1%)	0.4
15 - 19	1,114 (11.3%)	32.9	38,468 (8.8%)	28.1
15 - 17	347 (3.5%)	18.9	11,693 (2.7%)	15.0
18 - 19	767 (7.8%)	49.5	26,775 (6.1%)	45.6
20 - 24	2,677 (27.1%)	80.3	98,637 (22.6%)	75.1
25 - 29	2,892 (29.2%)	113.8	124,550 (28.5%)	111.3
30 - 34	2,078 (21.0%)	84.2	109,628 (25.1%)	99.2
35 - 39	918 (9.3%)	35.7	52,732 (12.1%)	44.5
40 - 44	187 (1.9%)	6.8	11,290 (2.6%)	8.6
45 and older	15 (0.2%)	0.5	776 (0.2%)	0.5
Unknown age	3 (0.03%)	NA	248 (0.06%)	NA

Notes: Rates are per 1,000 female population for each specified group, 2008-2010; NA = Not available;  
The rate for the all ages category is per 1,000 females aged 15-44 years

The total number of live births and crude birth rates for Erie County's 38 municipalities during 2008-2010 are shown in Table 3. The number of births ranged from a low of 3 babies in Elgin Borough to a high of 4,940 babies in the City of Erie. Erie County's three most populous municipalities - the City of Erie, Millcreek Township, and Harborcreek Township - accounted for over two-thirds (68.1%) of all resident live births. Crude birth rates ranged from a low of 4.5 births per 1,000 population in both Edinboro Borough and Elgin Borough, to a high of 17.6 births per 1,000 in Union City Borough.

**Table 3. Erie County Municipality Live Births and Crude Birth Rates, 2008-2010**

Erie County Municipalities, 2008-2010		
<u>Municipality</u>	<u>Births</u>	<u>Rate</u>
Erie County	9,891 (100.0%)	11.8
Albion Borough	45 (0.5%)	9.9
Amity Township	28 (0.3%)	8.4
Concord Township	48 (0.5%)	11.9
Conneaut Township	70 (0.7%)	5.6
City of Corry	307 (3.1%)	15.9
Cranesville Borough	16 (0.2%)	8.9
Edinboro Borough	88 (0.9%)	4.5
Elgin Borough	3 (0.03%)	4.5
Elk Creek Township	47 (0.5%)	8.8
City of Erie	4,940 (49.9%)	16.0
Fairview Township	226 (2.3%)	7.3
Franklin Township	44 (0.4%)	8.8
Girard Borough	103 (1.0%)	11.5
Girard Township	121 (1.2%)	7.8
Greene Township	110 (1.1%)	7.8
Greenfield Township	58 (0.6%)	9.9
Harborcreek Township	360 (3.6%)	7.1
Lake City Borough	121 (1.2%)	13.7
Lawrence Park Township	144 (1.5%)	12.6
LeBoeuf Township	59 (0.6%)	11.8
McKean Borough	19 (0.2%)	16.8
McKean Township	115 (1.2%)	5.4
Millcreek Township	1,435 (14.5%)	9.1
Mill Village Borough	12 (0.1%)	10.1
North East Borough	168 (1.7%)	13.2
North East Township	195 (2.0%)	10.0
Platea Borough	12 (0.1%)	9.1
Springfield Township	82 (0.8%)	8.3
Summit Township	174 (1.8%)	9.1
Union Township	44 (0.4%)	9.0
Union City Borough	174 (1.8%)	17.6
Venango Township	55 (0.6%)	8.0
Washington Township	104 (1.1%)	7.7
Waterford Borough	69 (0.7%)	15.8
Waterford Township	131 (1.3%)	11.1
Wattsburg Borough	18 (0.2%)	16.4
Wayne Township	43 (0.4%)	8.3
Wesleyville Borough	103 (1.0%)	10.3

Note: Rates are per 1,000 population for each municipality, 2008-2010

The Erie County crude birth rate dropped from 14.9 births per 1,000 population in 1990-1992 to 11.8 births per 1,000 in 2008-2010, a decline of 20.8% (Table 4, Figure 1). For the White and Black populations, the birth rates decreased by 25.9% and 29.6%, respectively. For Pennsylvania, the crude birth rates declined by 17.1% for the total population, 24.6% for Whites, and 29.3% for Blacks from 1990-1992 to 2008-2010.

**Table 4. Crude Birth and Fertility Rates by Race, 1990-1992 to 2008-2010**

Erie County and Pennsylvania, 1990-1992, 2000-2002, & 2008-2010									
Race	1990-1992			2000-2002			2008-2010		
	Births	Birth Rate	Fertility Rate	Births	Birth Rate	Fertility Rate	Births	Birth Rate	Fertility Rate
Erie County									
All Races	12,440 (100.0%)	14.9	64.6	10,212 (100.0%)	12.2	57.3	9,891 (100.0%)	11.8	58.0
White	11,077 (89.0%)	14.3	61.8	8,923 (87.4%)	11.7	54.8	7,896 (79.8%)	10.6	54.8
Black or African American	1,274 (10.2%)	29.7	116.4	1,090 (10.7%)	21.1	96.6	1,261 (12.7%)	20.9	97.9
Pennsylvania									
All Races	502,781 (100.0%)	14.0	62.5	431,658 (100.0%)	11.7	56.6	436,776 (100.0%)	11.6	59.0
White	416,080 (82.8%)	13.0	58.9	352,471 (81.7%)	11.1	55.3	313,935 (71.9%)	9.9	52.1
Black or African American	76,565 (15.2%)	22.9	92.9	59,699 (13.8%)	16.0	69.3	66,060 (15.1%)	16.2	70.6

Notes: Birth rates are per 1,000 population for each specified group; Fertility rates are per 1,000 females aged 15-44 years for each specified group

The Erie County general fertility rate dropped from 64.6 births per 1,000 females aged 15-44 years in 1990-1992 to 58.0 births per 1,000 in 2008-2010, a decline of 10.2% (Table 4, Figure 2). For White and Black females, the fertility rates decreased by 11.3% and 15.9%, respectively. For Pennsylvania, the fertility rates declined by 5.6% overall, 11.5% for Whites, and 24.0% for Blacks from 1990-1992 to 2008-2010.

Figure 1. Erie County Crude Birth Rates by Race, 1990-1992 to 2008-2010

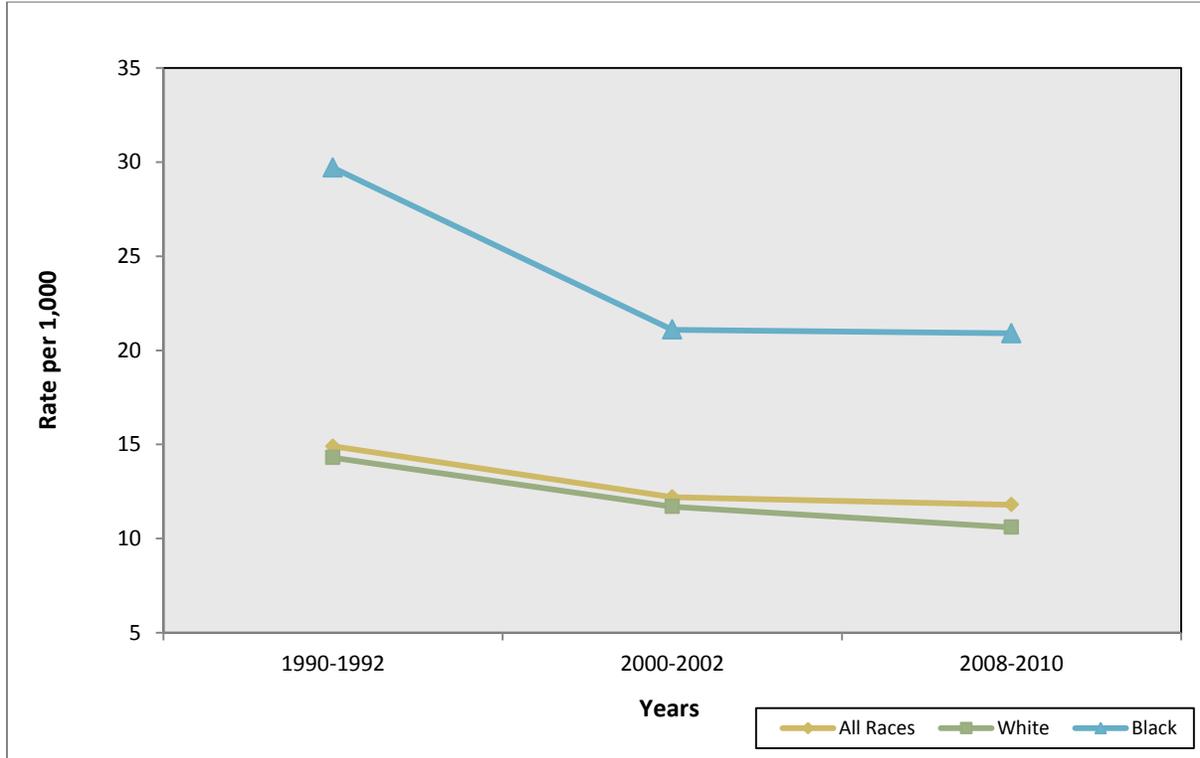
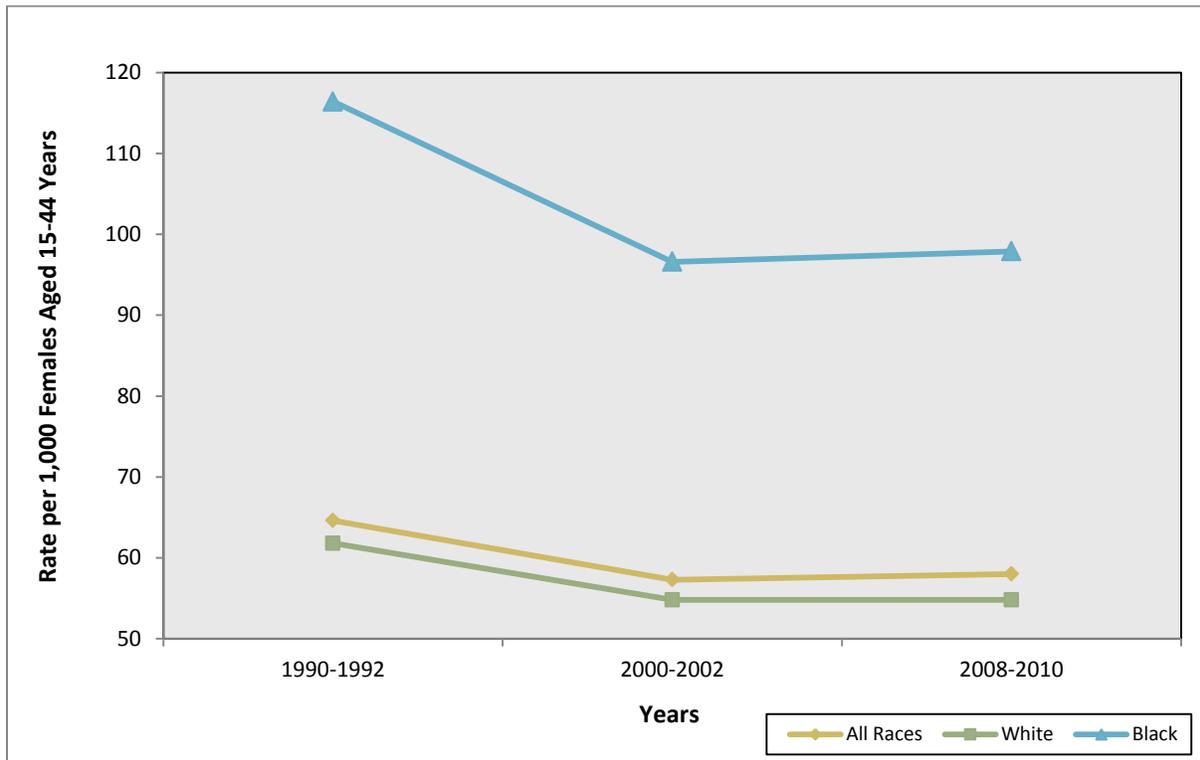


Figure 2. Erie County General Fertility Rates by Race, 1990-1992 to 2008-2010



## Births to Teens

From 1990 to 2010, the Erie County birth rate for female residents 15 to 19 years of age fell by one-third (33.3%), from 49.6 to 33.1 births per 1,000 females aged 15-19 years (Table 5, Figure 3). Overall, the birth rates for females 15-17 and 18-19 years dropped by 41.0% and 24.5%, respectively.

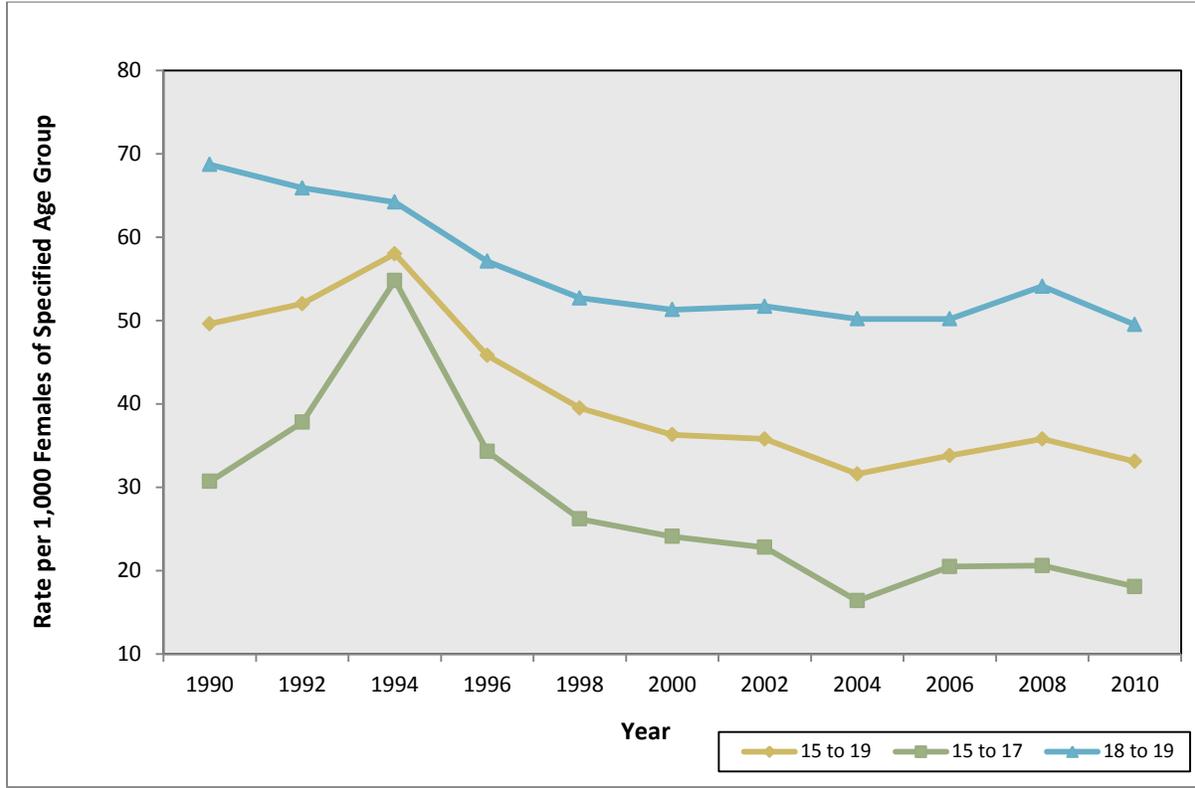
Historically, the fewest three-year total number of births to Erie County female residents 15-19, 15-17, and 18-19 years of age were recorded during the most recent period of 2008-2010. These totals were 1,114, 347, and 767 births, respectively.

**Table 5. Teen Live Birth Rates, 1990-2010**

Erie County and Pennsylvania, 1990-2010									
Year	Ages 15 to 19			Ages 15 to 17			Ages 18 to 19		
	Number	Birth Rate	PA Rate	Number	Birth Rate	PA Rate	Number	Birth Rate	PA Rate
1990	558	49.6	45.2	173	30.7	28.5	385	68.7	65.6
1992	589	52.0	41.5	213	37.8	27.4	376	65.9	60.0
1994	602	52.4	39.6	231	40.5	26.7	371	64.2	57.2
1996	527	45.8	37.4	196	34.3	24.6	331	57.1	54.8
1998	476	39.5	35.6	157	26.2	22.6	319	52.7	52.2
2000	400	36.3	33.9	146	24.1	19.5	254	51.3	54.0
2002	402	35.8	29.4	141	22.8	16.4	261	51.7	48.1
2004	364	31.6	28.2	104	16.4	15.7	260	50.2	46.1
2006	390	33.8	29.5	130	20.5	16.0	260	50.2	48.7
2008	407	35.8	29.9	129	20.6	16.3	278	54.1	48.1
2010	365	33.1	27.0	105	18.1	14.2	260	49.5	43.7

Note: Rates are per 1,000 females for each specified group

Figure 3. Erie County Teen Live Birth Rates, 1990-2010



Selected summary statistics for Erie County and Pennsylvania resident live births for the period 2008-2010 are included in Table 6. What follows are brief summaries for some of the major topics.

### Low Birth Weight Infants

Overall, 8.9% of Erie County live births were classified as low birth weight (less than 2,500 grams or 5 pounds and 9 ounces). The percentage of low birth weight babies born to Black mothers (16.2%) was considerably higher than the percentages for White (7.6%) and Hispanic (9.8%) mothers. The percentage of low birth weight babies in Erie County gradually increased from 7.3% in 1998-2000 to 8.9% in 2008-2010. For Pennsylvania, the percentage rose from 7.8% in 1998-2000 to 8.3% in 2008-2010.

During 2008-2010, 1.8% of Erie County live births were classified as very low birth weight (less than 1,500 grams or 3 pounds and 5 ounces) and 6.8% were classified as high birth weight (greater than 4,000 grams or 8 pounds and 13 ounces). For Pennsylvania, the corresponding percentages were 1.6% and 8.6%, respectively.

**Table 6. Selected Summary Statistics for Resident Live Births by Race and Hispanic Origin of Mother, 2008-2010**

Erie County and Pennsylvania, 2008-2010												
Subject	All Races			White			Black			Hispanic (Of Any Race)		
	Count	Erie County	PA	Count	Erie County	PA	Count	Erie County	PA	Count	Erie County	PA
Percent Low Birth Weight ( <u>&lt; 2,500 grams or 5 lbs. 9 ozs.</u> )	880	8.9%	8.3%	599	7.6%	7.1%	204	16.2%	13.5%	50	9.8%	8.8%
Percent No Prenatal Care	98	1.0%	1.6%	47	0.6%	0.9%	44	3.5%	4.7%	5	NA	1.9%
Percent Prenatal Care in 1st Trimester	7,325	74.8%	70.9%	6,155	78.1%	76.2%	747	60.1%	54.6%	331	66.3%	55.6%
Percent < 18 Births	354	3.6%	2.8%	181	2.3%	1.6%	128	10.2%	6.7%	44	8.7%	6.5%
Percent Unmarried	4,867	49.5%	41.0%	3,446	43.9%	31.4%	1,032	82.6%	79.2%	355	70.2%	66.6%
Percent Cesarean Section	3,721	37.6%	31.3%	2,975	37.7%	31.6%	460	36.5%	30.8%	205	40.4%	29.8%
Percent Non-Smoking Mother	7,162	72.7%	83.5%	5,700	72.4%	81.6%	885	70.7%	85.6%	385	76.1%	89.9%
During Pregnancy												
Percent Breastfeeding	6,290	63.7%	68.5%	5,283	67.1%	70.1%	530	42.1%	57.2%	293	57.8%	68.6%
Percent Medicaid as Source of Payment	3,607	36.6%	32.3%	2,621	33.3%	25.3%	635	50.5%	56.9%	257	50.7%	53.3%
Percent Receiving WIC Food	4,808	49.2%	39.7%	3,450	44.1%	30.6%	881	70.9%	66.5%	365	72.7%	72.3%
During Pregnancy												
Infant (< 1 year of age) Mortality Rate (deaths per 1,000 live births)	91	9.2	7.3	56	7.1	6.4	32	25.4	15.1	2	NA	7.3
Neonatal (< 28 days old) Mortality Rate (deaths per 1,000 live births)	65	6.6	5.1	39	4.9	4.5	23	18.2	10.3	2	NA	5.2
Note: Unknowns excluded from calculations; NA = Not available												

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## Prenatal Care

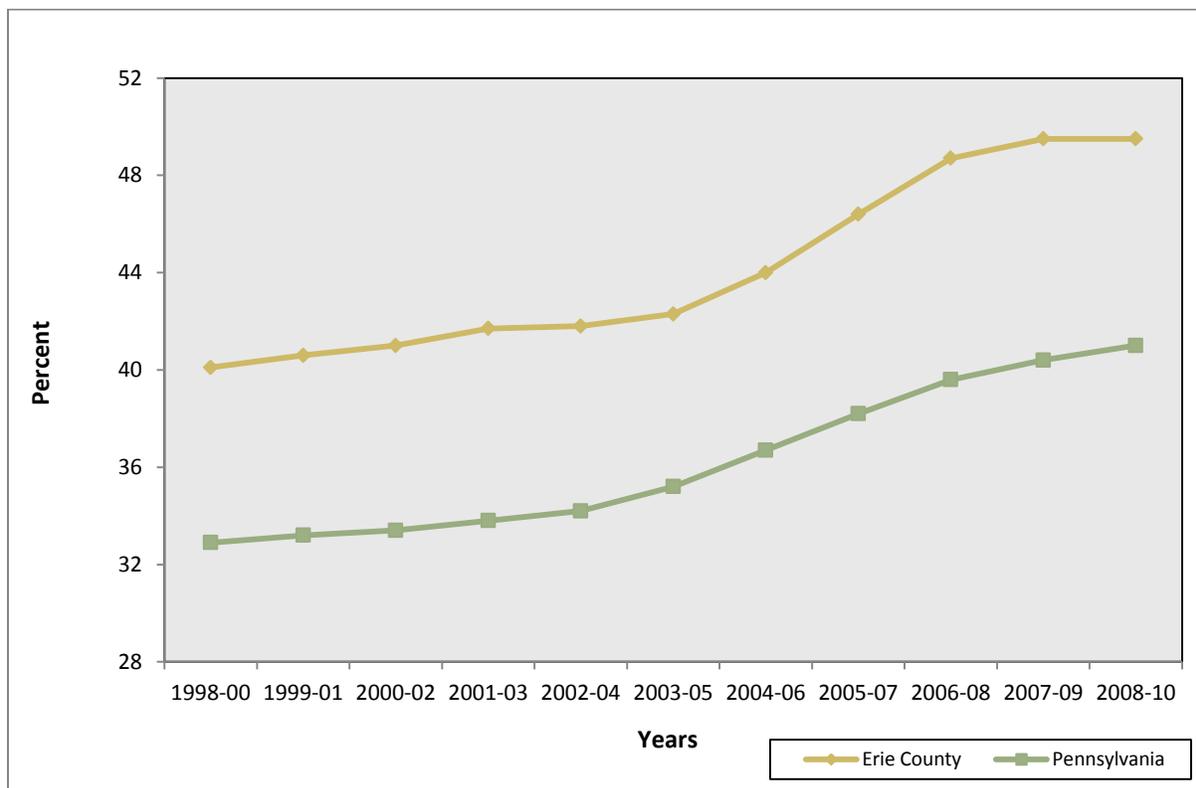
From 2008-2010, 74.8% of Erie County live births were to mothers who had received prenatal care during the first trimester of pregnancy and 1.0% were to mothers who had no prenatal care at all during their pregnancy.

The percentages of Erie County births to White, Black, and Hispanic mothers who had received prenatal care in the first trimester were 78.1%, 60.1%, and 66.3%, respectively. Although the percentage of births to White mothers who had no prenatal care was only 0.6%, the percentage among Black mothers was 3.5%.

## Marital Status of Mother

From 2008-2010, nearly half (49.5%) of Erie County live births were to unmarried mothers. The percentages among White, Black, and Hispanic mothers were 43.9%, 82.6%, and 70.2%, respectively. The percentage of unmarried mothers in Erie County rose from 40.1% in 1998-2000 to 49.5% in 2008-2010 (Figure 4). For Pennsylvania, the percentage rose from 32.9% in 1998-2000 to 41.0% in 2008-2010.

Figure 4. Percent of Live Births to Unmarried Mothers, 1998-2000 to 2008-2010



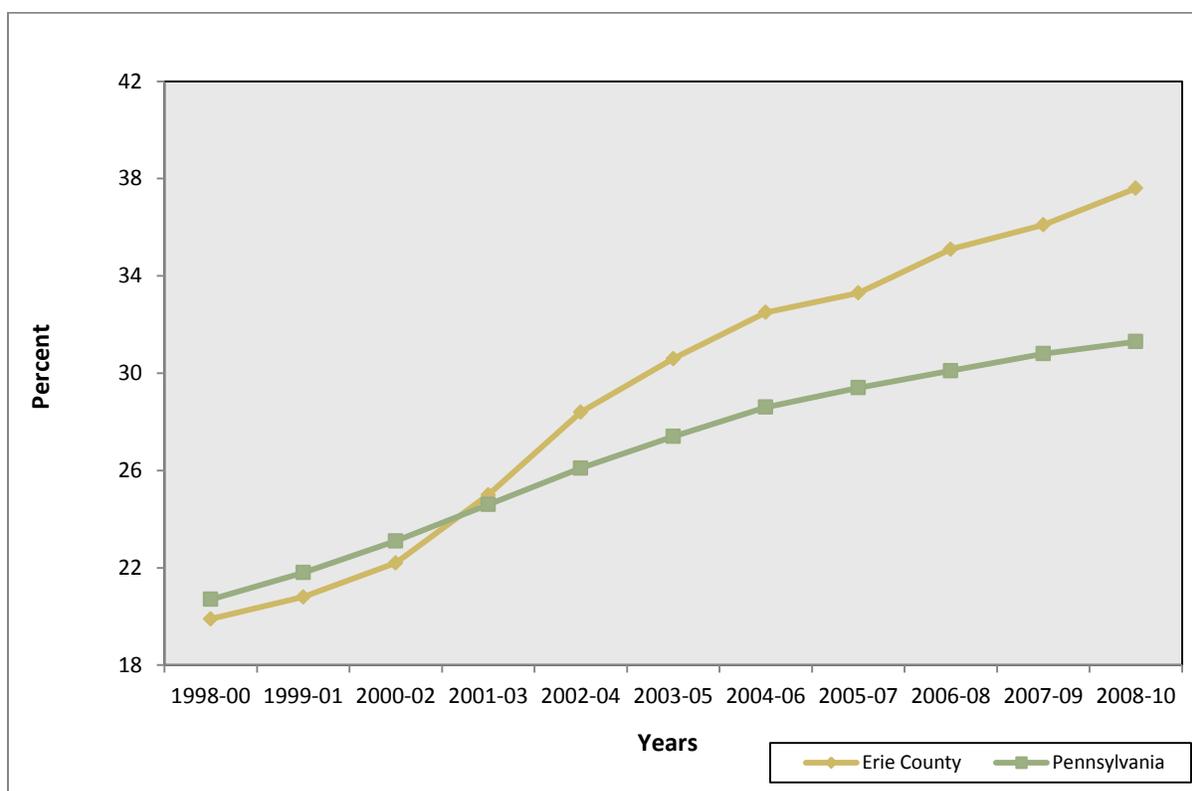
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## Cesarean Section Deliveries

From 2008-2010, over one-third (37.6%) of Erie County live births were cesarean section deliveries. The percentages of these deliveries among White, Black, and Hispanic mothers were 37.7%, 36.5%, and 40.4%, respectively.

The percentage of cesarean section deliveries in Erie County has nearly doubled from 19.9% in 1998-2000 to 37.6% in 2008-2010 (Figure 5). For Pennsylvania, the percentage rose from 20.7% in 1998-2000 to 31.3% in 2008-2010.

Figure 5. Percent of Live Births Delivered by Cesarean Section, 1998-2000 to 2008-2010



## Smoking During Pregnancy

From 2008-2010, 72.7% of Erie County live births were to mothers who did not smoke during pregnancy. The percentages among White, Black, and Hispanic mothers were 72.4%, 70.7%, and 76.1%, respectively. The percentage of non-smoking mothers in Erie County has remained essentially unchanged since 1998-2000, when the percentage equaled 73.0%. For comparison, the percentage of non-smoking mothers in Pennsylvania was 82.8% in 1998-2000 and 83.5% in 2008-2010.

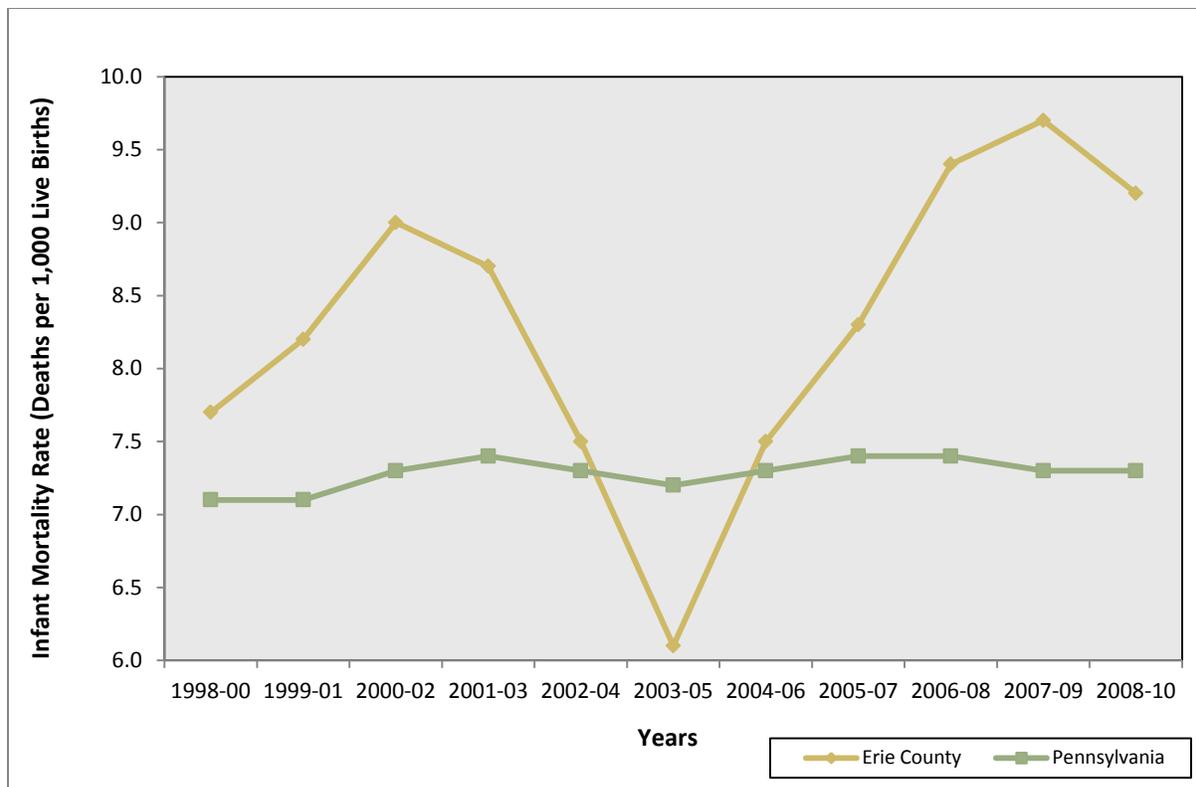
## Infant Mortality

Infant mortality is defined as the death of an infant less than one year of age. From 2008-2010, there were a total of 91 resident infant deaths in Erie County, with a corresponding infant mortality rate of 9.2 deaths per 1,000 live births. Although Whites accounted for the majority (61.5%) of infant deaths, the mortality rate among Blacks (25.4 deaths per 1,000 live births) was over three times higher than the rate for Whites (7.1 deaths per 1,000 live births).

Overall, the infant mortality rate in Erie County increased from 7.7 deaths per 1,000 live births in 1998-2000 to 9.2 deaths per 1,000 live births in 2008-2010 (Figure 6). During the same period, the mortality rate in Pennsylvania increased slightly from 7.1 to 7.3 deaths per 1,000 live births.

A total of 65 (71.4%) of the 91 Erie County resident infant deaths during 2008-2010 occurred during the neonatal period (the first 27 days of life), with a corresponding neonatal mortality rate of 6.6 deaths per 1,000 live births. The mortality rates among Whites and Blacks were 4.9 and 18.2 deaths per 1,000 live births, respectively.

Figure 6. Infant Mortality Rates, 1998-2000 to 2008-2010



## Mortality, Cancer, and Injury

### Introduction

A total of 8,062 Erie County residents died during the period 2008 to 2010, for a corresponding crude death rate of 9.6 deaths per 1,000 population (Table 1). Overall, 3,786 (47.0%) deaths were to males and 4,276 (53.0%) deaths were to females. The crude death rates for males and females were 9.2 and 10.0 deaths per 1,000, respectively. With respect to race and ethnicity, 7,648 (94.9%) deaths were to Whites, 386 (4.8%) deaths were to Blacks, and 28 (0.3%) deaths were to persons classified as Other or Unknown Race. A total of 52 (0.6%) deaths were to Hispanics or Latinos (of any race).

The 2008-2010 resident death percentages and crude death rates for Erie County and Pennsylvania were largely comparable. However, Pennsylvania experienced a larger proportion of deaths and higher crude death rates among Blacks and Hispanics.

**Table 1. Deaths and Crude Death Rates by Race and Sex, 2008-2010**

Erie County and Pennsylvania, 2008-2010				
Race or Ethnicity	Erie County Deaths	Rate	Pennsylvania Deaths	Rate
All Races	8,062 (100.0%)	9.6	373,729 (100.0%)	9.9
Male	3,786 (47.0%)	9.2	180,309 (48.2%)	9.8
Female	4,276 (53.0%)	10.0	193,411 (51.8%)	10.0
Unknown	0		9	
White	7,648 (94.9%)	10.3	335,996 (89.9%)	10.6
Male	3,564 (44.2%)	9.8	161,312 (43.2%)	10.4
Female	4,084 (50.7%)	10.8	174,680 (46.7%)	10.7
Unknown	0		4	
Black or African American	386 (4.8%)	6.4	34,785 (9.3%)	8.5
Male	206 (2.6%)	6.5	17,391 (4.7%)	9.0
Female	180 (2.2%)	6.3	17,389 (4.7%)	8.1
Unknown	0		5	
Hispanic or Latino (of any race)	52 (0.6%)	1.8	4,656 (1.2%)	2.4
Male	31 (0.4%)	2.1	2,782 (0.7%)	2.8
Female	21 (0.3%)	1.5	1,874 (0.5%)	1.9
Unknown	0		0	

Note: Rates are per 1,000 population for each specified group, 2008-2010

Erie County resident deaths and age-specific death rates for the period 2008-2010 are presented in Table 2. Overall, males had higher age-specific death rates than females for all nine age group categories. The lowest age-specific rates were observed in the 10-19 years age group (0.3 deaths per 1,000 for males and 0.2 deaths per 1,000 for females), and the highest rates were seen in the 80 years and older age group (119.1 deaths per 1,000 for males and 102.5 deaths per 1,000 for females).

Although over half (51.0%) of all county deaths occurred in residents 80 years and older, females had nearly 1,000 more deaths than males in this age group category. Interestingly, only 8.2% of all deaths occurred in persons under the age of 50 years.

**Table 2. Deaths and Age-Specific Death Rates by Age and Sex, 2008-2010**

Erie County, 2008-2010						
<u>Age Group</u>	<u>Erie County</u>	<u>Rate</u>	<u>Erie County Males</u>	<u>Rate</u>	<u>Erie County Females</u>	<u>Rate</u>
All Ages	8,062 (100.0%)	9.6	3,786 (100.0%)	9.2	4,276 (100.0%)	10.0
0 - 9	116 (1.4%)	1.1	63 (1.7%)	1.2	53 (1.2%)	1.1
10 - 19	28 (0.3%)	0.2	18 (0.5%)	0.3	10 (0.2%)	0.2
20 - 29	103 (1.3%)	0.9	78 (2.1%)	1.3	25 (0.6%)	0.4
30 - 39	128 (1.6%)	1.3	78 (2.1%)	1.5	50 (1.2%)	1.0
40 - 49	285 (3.5%)	2.5	156 (4.1%)	2.7	129 (3.0%)	2.3
50 - 59	699 (8.7%)	6.1	422 (11.1%)	7.5	277 (6.5%)	4.7
60 - 69	1,021 (12.7%)	13.0	580 (15.3%)	15.5	441 (10.3%)	10.7
70 - 79	1,570 (19.5%)	31.3	828 (21.9%)	38.3	742 (17.4%)	26.0
80 and older	4,112 (51.0%)	108.3	1,563 (41.3%)	119.1	2,549 (59.6%)	102.5
Infant deaths	91 (1.1%)					
< 28 days	65 (0.8%)					
28 - 364 days	26 (0.3%)					

Note: Rates are per 1,000 population for each specified group, 2008-2010

The total number of deaths and crude death rates for Erie County's 38 municipalities during 2008-2010 are presented in Table 3. The number of deaths ranged from a low of 5 residents in Elgin Borough to a high of 3,286 residents in the City of Erie. Erie County's three most populous municipalities - the City of Erie, Millcreek Township, and Harborcreek Township - accounted for nearly two-thirds (65.4%) of all resident deaths. Crude death rates ranged from a low of 3.5 deaths per 1,000 in Venango Township to a high of 21.9 deaths per 1,000 in Wattsburg Borough.

**Table 3. Erie County Municipality Deaths and Crude Death Rates, 2008-2010**

Erie County Municipalities, 2008-2010		
<u>Municipality</u>	<u>Deaths</u>	<u>Rate</u>
Erie County	8,062 (100.0%)	9.6
Albion Borough	40 (0.5%)	8.8
Amity Township	17 (0.2%)	5.1
Concord Township	22 (0.3%)	5.5
Conneaut Township	54 (0.7%)	4.3
City of Corry	239 (3.0%)	12.4
Cranesville Borough	21 (0.3%)	11.7
Edinboro Borough	137 (1.7%)	7.0
Elgin Borough	5 (0.1%)	7.5
Elk Creek Township	42 (0.5%)	7.8
City of Erie	3,286 (40.8%)	10.6
Fairview Township	505 (6.3%)	16.3
Franklin Township	27 (0.3%)	5.4
Girard Borough	94 (1.2%)	10.5
Girard Township	124 (1.5%)	8.0
Greene Township	96 (1.2%)	6.8
Greenfield Township	21 (0.3%)	3.6
Harborcreek Township	450 (5.6%)	8.8
Lake City Borough	57 (0.7%)	6.5
Lawrence Park Township	134 (1.7%)	11.8
LeBoeuf Township	26 (0.3%)	5.2
McKean Borough	10 (0.1%)	8.8
McKean Township	72 (0.9%)	5.4
Millcreek Township	1,535 (19.0%)	9.7
Mill Village Borough	7 (0.1%)	5.9
North East Borough	125 (1.6%)	9.9
North East Township	176 (2.2%)	9.0
Platea Borough	8 (0.1%)	6.1
Springfield Township	78 (1.0%)	7.9
Summit Township	149 (1.8%)	7.8
Union Township	38 (0.5%)	7.8
Union City Borough	89 (1.1%)	9.0
Venango Township	24 (0.3%)	3.5
Washington Township	82 (1.0%)	6.1
Waterford Borough	51 (0.6%)	11.7
Waterford Township	75 (0.9%)	6.3
Wattsburg Borough	24 (0.3%)	21.9
Wayne Township	51 (0.6%)	9.9
Wesleyville Borough	71 (0.9%)	7.1

Note: Rates are per 1,000 population for each municipality, 2008-2010

## Age-Adjusted Death Rates

Age-adjusted death rates are constructs that are used to make comparisons of relative mortality risks across groups and over time. Age-adjusted death rates are better indicators than crude (unadjusted) death rates when comparing different groups or over time because they remove the potential bias that can occur when the populations being compared have different age distributions. For this report, age-adjusted rates were computed by the direct method by applying age-specific death rates to the year 2000 U.S. standard million population age distribution. All reported age-adjusted rates are per 100,000 U.S. standard population.

In the period 2008-2010, Erie County's age-adjusted death rate for all causes of death was 791.6 deaths per 100,000 population (Table 4). The age-adjusted rates for males and females were 930.3 and 687.3 deaths per 100,000, respectively. With respect to race and ethnicity, the highest rates were observed in Black males and females. Overall, the age-adjusted death rates for Erie County and Pennsylvania were similar.

**Table 4. Age-Adjusted Death Rates by Race and Sex, 2008-2010**

Erie County and Pennsylvania, 2008-2010				
<u>Race or Ethnicity</u>	<u>Erie County Deaths</u>	<u>Rate</u>	<u>Pennsylvania Deaths</u>	<u>Rate</u>
All Races	8,062 (100.0%)	791.6	373,729 (100.0%)	779.6
Male	3,786 (47.0%)	930.3	180,309 (48.2%)	940.1
Female	4,276 (53.0%)	687.3	193,411 (51.8%)	656.0
Unknown	0		9	
White	7,648 (94.9%)	770.2	335,996 (89.9%)	768.9
Male	3,564 (44.2%)	897.8	161,312 (43.2%)	927.0
Female	4,084 (50.7%)	673.2	174,680 (46.7%)	646.9
Unknown	0		4	
Black or African American	386 (4.8%)	1,042.1	34,785 (9.3%)	994.5
Male	206 (2.6%)	1,104.0	17,391 (4.7%)	1,234.3
Female	180 (2.2%)	950.0	17,389 (4.7%)	822.1
Unknown	0		5	
Hispanic or Latino (of any race)	52 (0.6%)	477.5	4,656 (1.2%)	471.4
Male	31 (0.4%)	611.9	2,782 (0.7%)	587.2
Female	21 (0.3%)	324.2	1,874 (0.5%)	370.2
Unknown	0		0	

Note: Age-adjusted rates are per 100,000 population for each specified group, 2008-2010

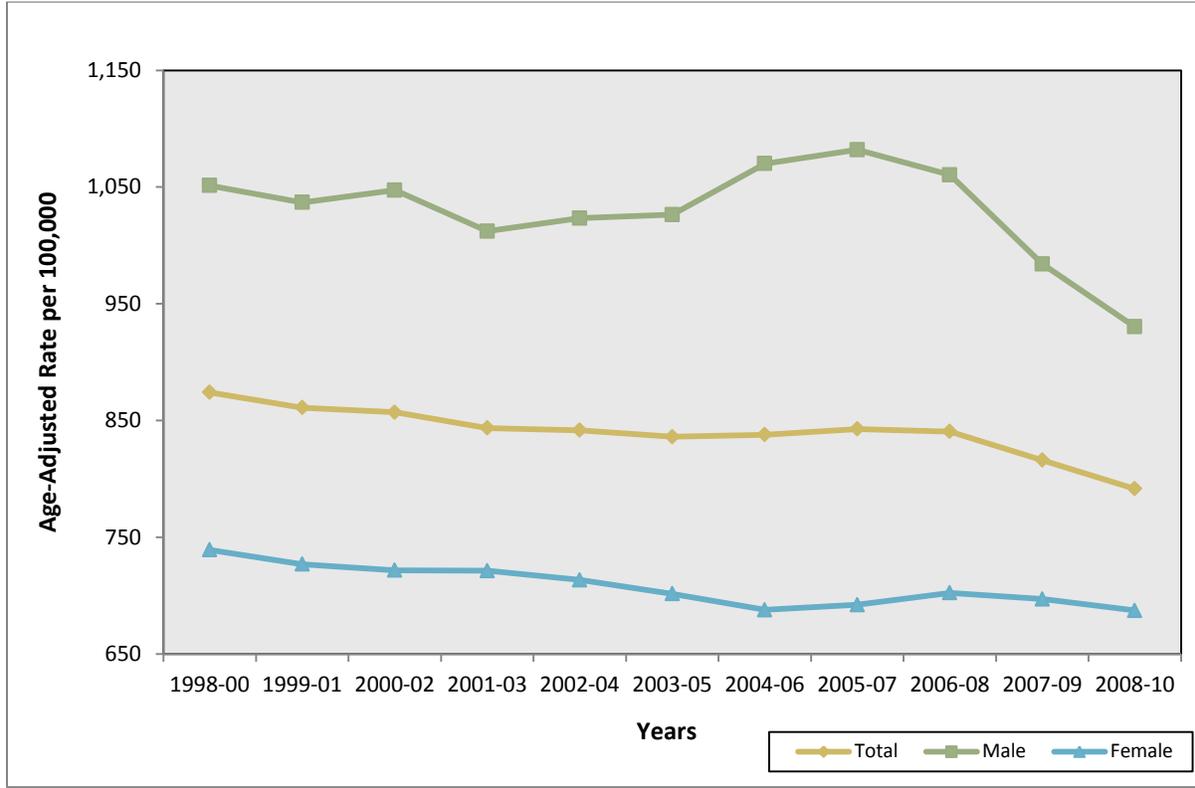
In Erie County, the age-adjusted death rate for all causes of death dropped from 874.2 deaths per 100,000 population in 1998-2000 to 791.6 deaths per 100,000 in 2008-2010, a decline of 9.4% (Table 5, Figure 1). For Erie County males and females, the death rates decreased by 11.5% and 7.0%, respectively. For Pennsylvania, the death rates declined by 10.2% for the total population, 10.8% for males, and 8.6% for females from 1998-2000 to 2008-2010.

**Table 5. Age-Adjusted Death Rates, 1998-2000 to 2008-2010**

Erie County and Pennsylvania, 1998-2000 to 2008-2010						
<u>Years</u>	<u>Erie County</u>	<u>Erie County Males</u>	<u>Erie County Females</u>	<u>PA</u>	<u>PA Males</u>	<u>PA Females</u>
1998-2000	874.2	1,051.3	739.2	868.5	1,054.4	728.5
1999-2001	861.1	1,036.9	727.0	870.8	1,055.9	732.9
2000-2002	857.1	1,047.3	721.8	877.6	1,073.5	737.5
2001-2003	843.6	1,012.2	721.4	872.0	1,067.3	732.4
2002-2004	841.7	1,023.4	713.5	865.4	1,057.5	727.6
2003-2005	836.1	1,026.4	701.7	851.6	1,039.3	715.3
2004-2006	837.9	1,070.1	687.9	845.3	1,034.4	709.1
2005-2007	842.8	1,082.0	692.2	842.9	1,037.8	704.7
2006-2008	840.7	1,060.4	702.5	832.9	1,021.8	697.1
2007-2009	816.1	984.1	697.2	803.0	975.3	674.0
2008-2010	791.6	930.3	687.3	779.6	940.1	656.0

Note: Age-adjusted rates are per 100,000 population for the specified years

Figure 1. Erie County Age-Adjusted Death Rates for All Causes of Death, 1998-2000 to 2008-2010



### Leading Causes of Death

The 15 leading causes of death for Erie County residents in 2008-2010 are shown in Table 6. Although these causes collectively accounted for 6,526 (80.9%) of the 8,062 county deaths, heart disease and cancer (malignant neoplasms) accounted for nearly half (49.2%) of all resident deaths. The age-adjusted death rates for heart disease and cancer were 199.6 and 189.1 deaths per 100,000, respectively. It should be noted that the death rates for these two causes were considerably higher in males than in females.

Overall, the age-adjusted death rates for males were higher than the rates for females for 12 of the 15 leading causes. The three causes of death in which females had higher rates were stroke (cerebrovascular diseases), Alzheimer’s disease, and septicemia. Interestingly, 91 of the 110 (82.7%) suicide deaths occurred in males.

Due to low counts, age-adjusted death rates for Blacks were calculated for only four of the leading causes of death - heart disease, cancer, stroke, and diabetes mellitus. Blacks experienced substantially higher death rates than Whites for each of these four causes.

**Table 6. Erie County Leading Causes of Death, 2008-2010**

Erie County and Pennsylvania, 2008-2010											
Cause of Death	Total		Male		Female		White		Black		PA
	Deaths	Rate	Rate								
All Causes of Death	8,062	791.6	3,786	930.3	4,276	687.3	7,648	770.2	386	1,042.1	779.6
Heart Disease	2,107	199.9	1,014	250.4	1,093	163.7	2,005	192.4	93	271.9	195.3
Cancer (Malignant Neoplasms)	1,861	189.1	940	226.2	921	164.2	1,769	185.4	88	240.0	183.8
Chronic Lower Respiratory Diseases	455	44.4	215	54.1	240	38.8	447	44.5	8	NA	39.9
Stroke (Cerebrovascular Diseases)	429	40.4	155	39.0	274	40.9	400	37.8	28	92.1	40.1
Accidents (Unintentional Injuries)	317	35.0	199	48.8	118	23.4	310	37.7	7	NA	40.4
Alzheimer's Disease	261	23.1	67	17.4	194	26.0	256	22.7	4	NA	20.6
Diabetes Mellitus	240	24.3	125	30.7	115	19.0	219	22.6	20	56.7	20.4
Nephritis, Nephrotic Syndrome, & Nephrosis	227	21.5	95	23.9	132	20.4	213	20.6	14	NA	18.6
Influenza & Pneumonia	160	17.5	81	20.1	113	15.6	187	17.0	7	NA	14.6
Suicide (Intentional Self-Harm)	110	12.7	91	21.7	19	NA	104	13.2	5	NA	11.9
Septicemia	107	10.6	41	9.8	66	11.2	101	10.3	5	NA	13.9
Chronic Liver Disease & Cirrhosis	79	8.1	45	9.9	34	6.6	77	8.1	2	NA	7.7
Essential Hypertension & Hypertensive Renal Disease	63	6.1	25	5.9	38	5.7	57	5.7	6	NA	6.1
Parkinson's Disease	58	5.5	31	8.0	27	3.9	58	5.6	0	NA	7.1
In situ, Benign, & Uncertain Neoplasms	52	5.3	33	8.2	19	NA	50	5.2	2	NA	5.1

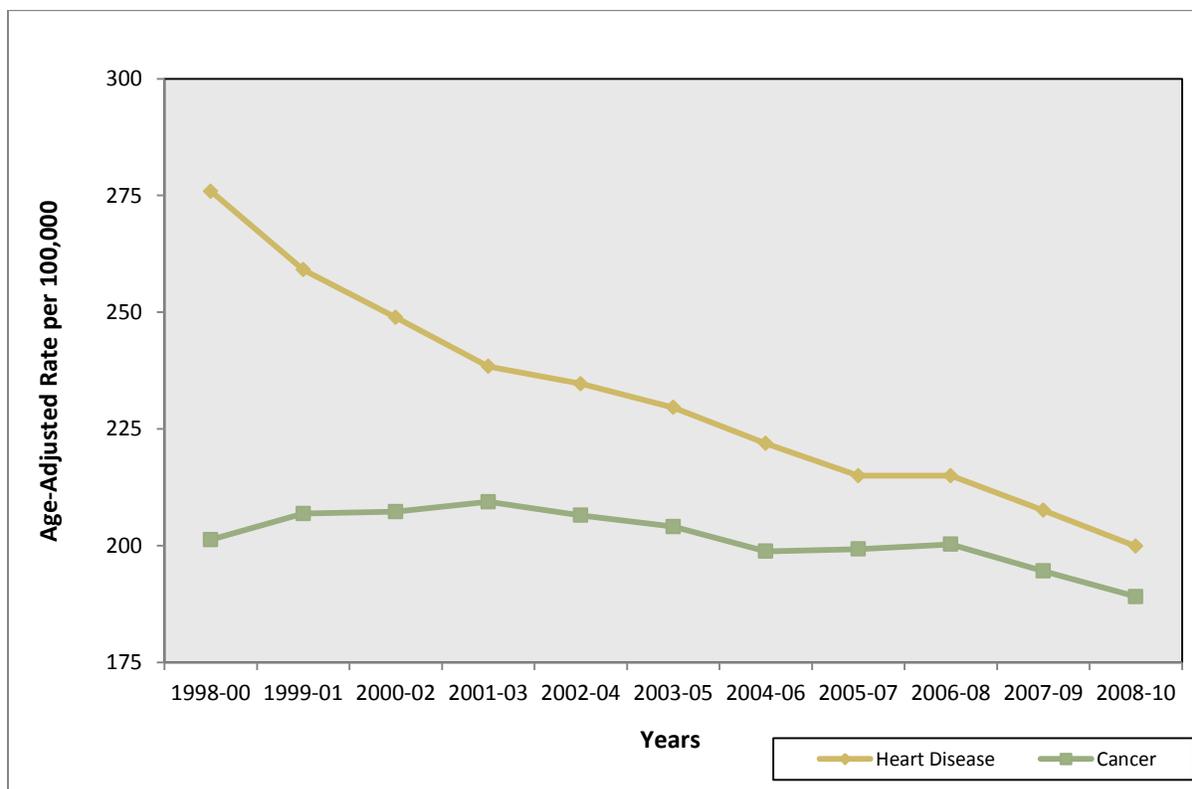
Notes: Age-adjusted rates are per 100,000 population, 2008-2010; NA = Not available

## Trends in Selected Leading Causes of Death

In Erie County, the age-adjusted death rate for heart disease dropped from 275.9 deaths per 100,000 population in 1998-2000 to 199.9 deaths per 100,000 in 2008-2010, a decline of 27.5% (Figure 2). For Erie County males and females, the death rates decreased by 27.0% and 27.5%, respectively. For Pennsylvania, the death rates declined by 28.0% for the total population, 26.2% for males, and 29.7% for females from 1998-2000 to 2008-2010.

In Erie County, the age-adjusted death rate for cancer (primary malignant neoplasms) dropped slightly from 201.3 deaths per 100,000 population in 1998-2000 to 189.1 deaths per 100,000 in 2008-2010, a decline of 6.1% (Figure 2). For Erie County males and females, the death rates decreased by 6.8% and 4.8%, respectively. For Pennsylvania, the death rates declined by 11.1% for the total population, 12.4% for males, and 10.5% for females from 1998-2000 to 2008-2010.

Figure 2. Erie County Age-Adjusted Death Rates for Heart Disease and Cancer, 1998-2000 to 2008-2010



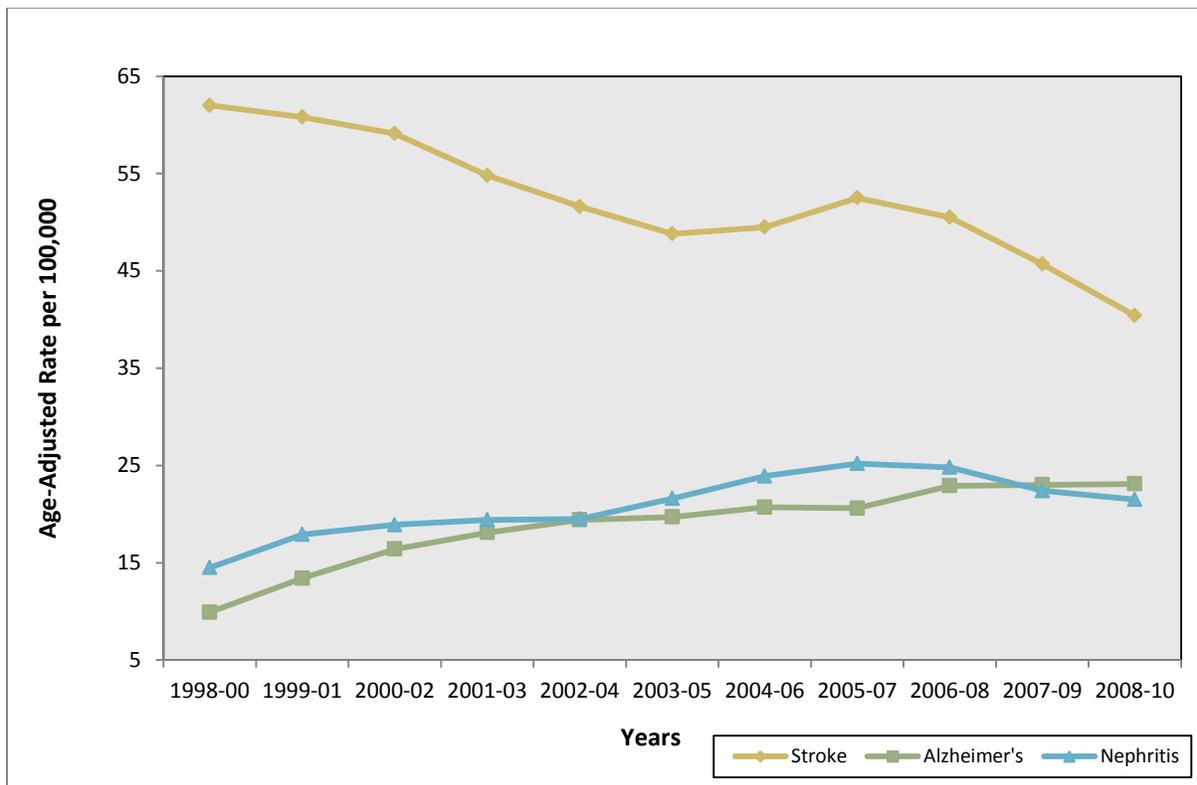
In Erie County, the age-adjusted death rate for stroke (cerebrovascular diseases) dropped from 62.0 deaths per 100,000 population in 1998-2000 to 40.4 deaths per 100,000 in 2008-2010, a decline of 34.8% (Figure 3). For Erie County males and females, the death rates decreased by 37.4% and 33.1%, respectively. For Pennsylvania, the death rates declined by 27.4% for the

total population, 26.9% for males, and 27.3% for females from 1998-2000 to 2008-2010.

In Erie County, the age-adjusted death rate for Alzheimer's disease rose from 9.9 deaths per 100,000 population in 1998-2000 to 23.1 deaths per 100,000 in 2008-2010, an upsurge of 133.3% (Figure 3). For Erie County males and females, the death rates increased by 74.0% and 173.7%, respectively. For Pennsylvania, the death rates rose by 76.1% for the total population, 76.0% for males, and 76.4% for females from 1998-2000 to 2008-2010.

In Erie County, the age-adjusted death rate for nephritis, nephrotic syndrome, and nephrosis rose from 14.5 deaths per 100,000 population in 1998-2000 to 21.5 deaths per 100,000 in 2008-2010, an increase of 48.3% (Figure 3). For Erie County males and females, the death rates increased by 20.1% and 82.1%, respectively. For Pennsylvania, the death rates rose by 17.0% for the total population, 18.3% for males, and 15.0% for females from 1998-2000 to 2008-2010.

**Figure 3. Erie County Age-Adjusted Death Rates for Stroke, Alzheimer's Disease, and Nephritis, 1998-2000 to 2008-2010**



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## Cancer Mortality

A total of 1,861 Erie County residents died from cancers (primary malignant neoplasms) during the period 2008 to 2010, for a corresponding age-adjusted death rate of 189.1 deaths per 100,000 population (Table 7). Overall, 940 (50.5%) deaths were to males and 921 (49.5%) deaths were to females. The age-adjusted death rates for males and females were 226.2 and 164.2 deaths per 100,000, respectively. For Pennsylvania, the death rates were 183.8 for the total population, 225.1 for males, and 155.8 for females.

With respect to race and ethnicity in Erie County, 1,769 (95.1%) cancer deaths were to Whites, 88 (4.7%) deaths were to Blacks, 4 (0.5%) deaths were to persons classified as Other Race, and 18 (2.1%) deaths were to Hispanics or Latinos (of any race).

During 2008-2010, Erie County's five leading cancer mortality sites were: (1) bronchus and lung (27.4% of all deaths), (2) colon and rectum (8.5%), (3) female breast (7.7%), (4) pancreas (6.0%), and (5) prostate (5.7%) (Table 7, Figure 4). These sites accounted for over half (55.4%) of all cancer deaths. As the leading cause of cancer death, lung cancer killed nearly as many people as colorectal, breast, pancreatic, and prostate cancers combined (510 versus 521 deaths). The age-adjusted death rate for lung cancer dropped from 58.1 deaths per 100,000 population in 1998-2000 to 51.8 deaths per 100,000 in 2008-2010, a decline of 10.8% (Figure 5). For Erie County males and females, the rates decreased by 23.2% and increased by 8.0%, respectively.

Among Erie County males, the five leading cancer mortality sites during 2008-2010 were: (1) bronchus and lung (28.3% of all deaths), (2) prostate (11.3%), (3) colon and rectum (8.1%), (4) pancreas (6.0%), and (5) esophagus (5.1%) (Table 7, Figure 6). These sites accounted for 58.7% of all male cancer deaths.

Among Erie County females, the five leading cancer mortality sites during 2008-2010 were: (1) bronchus and lung (26.5% of all deaths), (2) breast (15.6%), (3) colon and rectum (9.0%), (4) pancreas (6.1%), and (5) ovary (5.0%) (Table 7, Figure 7). These sites accounted for 62.2% of all female cancer deaths.

Overall, the Erie County and Pennsylvania age-adjusted death rates were similar across all cancer sites/types for the total population, males, and females. Due to low counts, possible age-adjusted cancer death rate comparisons for Erie County males and females were limited to a total of six cancer sites/types - bronchus and lung, colon and rectum, pancreas, leukemia, non-Hodgkin lymphoma, and brain. Males had higher death rates than females for each of these sites/types.

**Table 7. Erie County Cancer Mortality by Site/Type, 2008-2010**

Erie County and Pennsylvania, 2008-2010													
Cancer Site/Type	Total Population					Cancer Site/Type	Male			Cancer Site/Type	Female		
	All Deaths	White	Black	Rate	PA Rate		Deaths	Rate	PA Rate		Deaths	Rate	PA Rate
All Cancer Sites	1,861	1,769	88	189.1	183.8	All Cancer Sites	940	226.2	225.1	All Cancer Sites	921	164.2	155.8
Bronchus & Lung	510	487	22	51.8	50.0	Bronchus & Lung	266	63.6	65.1	Bronchus & Lung	244	43.3	39.3
Colon & Rectum	159	154	5	16.5	17.5	Prostate	106	26.9	22.0	Breast	144	26.3	23.8
Breast (Female)	144	136	8	26.3	23.8	Colon & Rectum	76	18.7	21.2	Colon & Rectum	83	14.4	14.6
Pancreas	112	104	7	11.4	11.5	Pancreas	56	13.4	13.3	Pancreas	56	9.8	10.4
Prostate	106	103	3	26.9	22.0	Esophagus	48	11.3	8.9	Ovary	46	8.2	8.6
Leukemia	76	72	4	7.8	7.5	Leukemia	38	9.0	10.2	Leukemia	38	6.6	5.6
Esophagus	62	59	3	6.4	4.9	Urinary Bladder	37	9.0	8.7	Corpus & Uterus, NOS	23	4.4	4.9
Non-Hodgkin Lymphoma	62	62	0	6.1	6.9	Liver	32	7.1	8.4	Non-Hodgkin Lymphoma	31	4.7	5.5
Urinary Bladder	48	45	3	4.6	4.8	Non-Hodgkin Lymphoma	31	7.4	8.9	Kidney & Renal Pelvis	25	4.4	2.6
Brain	46	44	1	4.8	4.2	Stomach	26	6.0	4.7	Brain	22	4.2	3.5
Ovary	46	45	1	8.2	8.6	Brain	24	5.7	4.9	Multiple Myeloma	16	NA	2.7
Liver	45	38	7	4.6	5.4	Oral Cavity & Pharynx	21	4.9	3.6	Esophagus	14	NA	1.7
Kidney & Renal Pelvis	42	41	1	4.3	4.0	Melanoma	18	NA	4.5	Urinary Bladder	11	NA	2.3
Stomach	42	39	3	4.1	3.3	Kidney & Renal Pelvis	17	NA	5.8	Liver	13	NA	2.4
Melanoma	31	31	0	3.2	3.0	Multiple Myeloma	15	NA	4.2	Stomach	16	NA	2.2
Multiple Myeloma	31	30	0	3.2	3.3	Larynx	9	NA	2.2	Melanoma	13	NA	1.9
Oral Cavity & Pharynx	25	23	2	2.5	2.3	Hodgkin Lymphoma	4	NA	0.4	Cervix Uteri	11	NA	2.2
Corpus & Uterus, NOS	23	23	0	4.4	4.9	Thyroid	3	NA	0.5	Larynx	3	NA	0.4
Larynx	12	12	0	NA	1.2	Testis	0	NA	0.3	Oral Cavity & Pharynx	4	NA	1.3
Cervix Uteri	11	10	1	NA	2.2	All Other Sites	113	NA	NA	Hodgkin Lymphoma	2	NA	0.3
Hodgkin Lymphoma	6	5	1	NA	0.4					Thyroid	3	NA	0.6
Thyroid	6	4	2	NA	0.5					All Other Sites	103	NA	NA
Testis	0	0	0	NA	0.3								
All Other Sites	216	202	8	NA	NA								

Notes: Age-adjusted rates are per 100,000 population, 2008-2010; NA = Not available

Figure 4. Erie County Cancer Deaths, 2008-2010

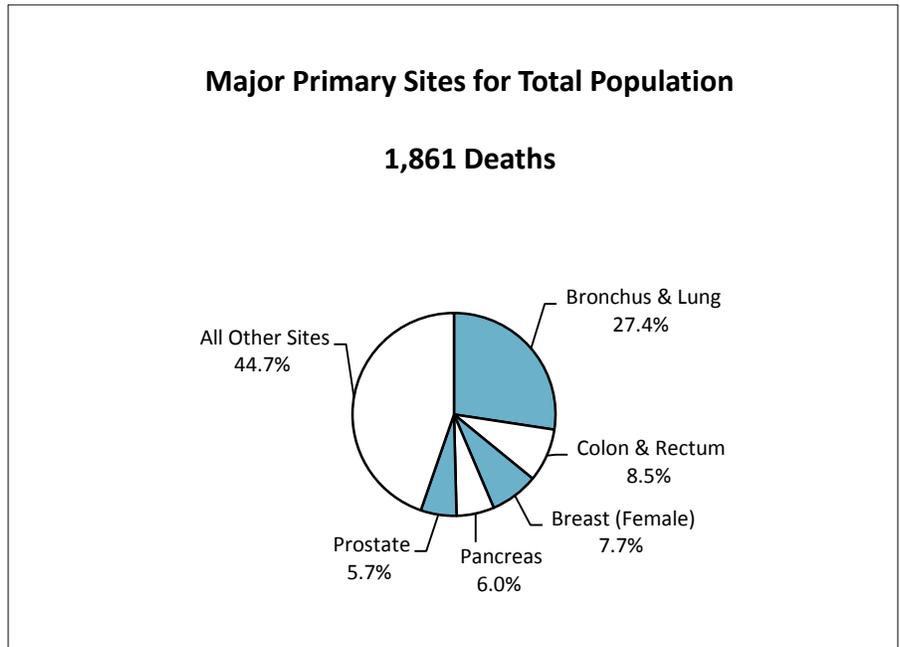


Figure 5. Erie County Age-Adjusted Death Rates for Lung Cancer, 1998-2000 to 2008-2010

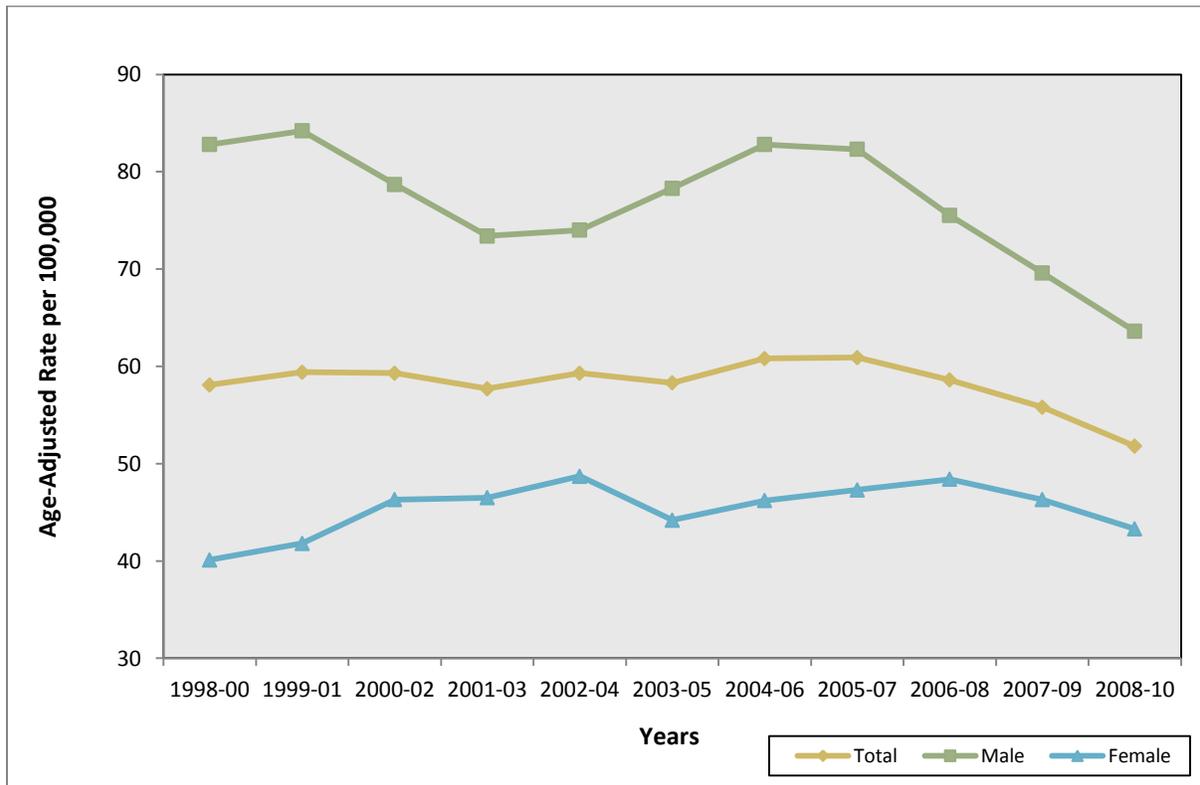


Figure 6. Erie County Male Cancer Deaths, 2008-2010

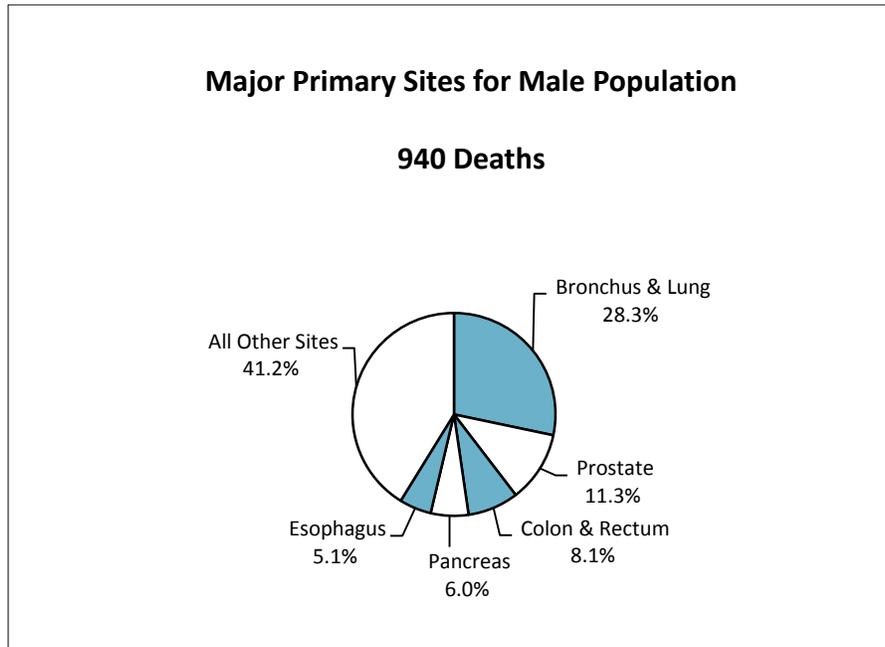
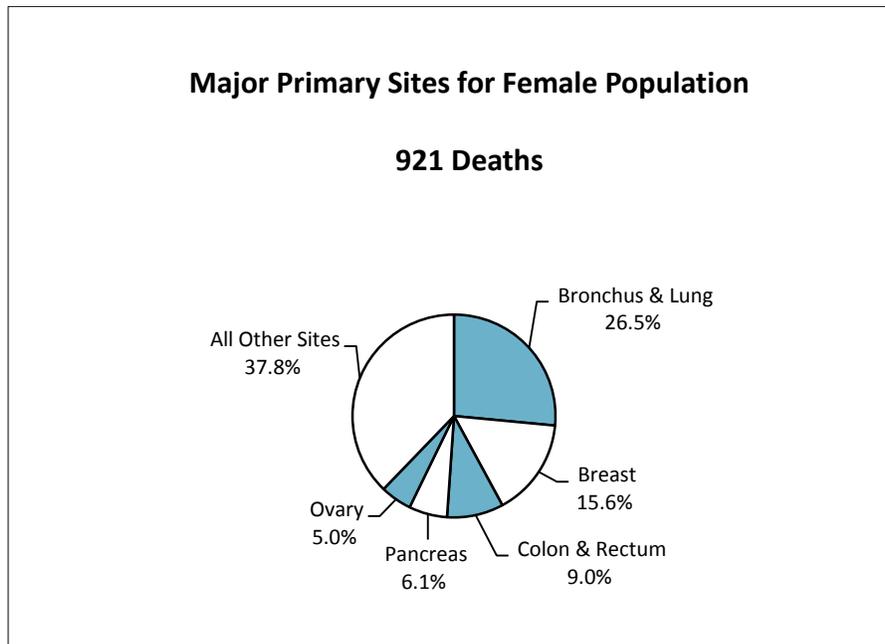


Figure 7. Erie County Female Cancer Deaths, 2008-2010



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## Cancer Incidence

There were a total of 4,602 new cancer cases (primary invasive cancers and in situ urinary bladder cancers) diagnosed among Erie County residents during 2007-2009, for a corresponding age-adjusted cancer incidence rate of 483.9 cases per 100,000 population (Table 8). Overall, cancers were diagnosed in 2,274 (49.4%) males and 2,328 (50.6%) females. The age-adjusted incidence rates for males and females were 543.2 and 449.8 cases per 100,000, respectively. For Pennsylvania, the incidence rates were 507.7 for the total population, 584.2 for males, and 458.0 for females.

With respect to race and ethnicity in Erie County, cancers were diagnosed in 4,343 (94.4%) Whites, 217 (4.7%) Blacks, 42 (0.9%) persons of Other/Unknown Race, and 38 (0.8%) Hispanics or Latinos (of any race).

During 2007-2009, Erie County's five leading cancer incidence sites were: (1) female breast (14.5% of all diagnoses), (2) bronchus and lung (14.2%), (3) prostate (13.7%), (4) colon and rectum (9.4%), and (5) urinary bladder (4.5%) (Table 8, Figure 8). The age-adjusted incidence rate for breast cancer dropped slightly from 136.1 cases per 100,000 population in 1997-1999 to 130.6 cases per 100,000 in 2007-2009, a decline of 4.0% (Figure 9).

Among Erie County males, the five leading cancer incidence sites/types during 2007-2009 were: (1) prostate (27.8% of all diagnoses), (2) bronchus and lung (14.6%), (3) colon and rectum (9.8%), (4) urinary bladder (7.1%), and (5) non-Hodgkin lymphoma (4.9%) (Table 8, Figure 10). These sites/types accounted for 64.2% of all male diagnoses.

Among Erie County females, the five leading cancer incidence sites during 2007-2009 were: (1) breast (28.7% of all diagnoses), (2) bronchus and lung (13.8%), (3) colon and rectum (9.0%), (4) uterus (6.8%), and (5) thyroid (6.0%) (Table 8, Figure 11). These sites accounted for 64.2% of all female diagnoses.

Overall, the Erie County and Pennsylvania age-adjusted incidence rates were similar across all cancer sites/types for the total population, males, and females.

Valid age-adjusted cancer incidence rate comparisons for Erie County males and females were possible for a total of 13 cancer sites/types. Males had higher age-adjusted incidence rates than females for each of these sites/types with the exception of the thyroid, where the rate for females was approximately three times higher than the rate for males (27.9 versus 9.2 cases per 100,000).

**Table 8. Erie County Cancer Incidence by Site/Type, 2007-2009**

Erie County and Pennsylvania, 2007-2009													
Cancer Site/Type	Total Population					Male			Female				
	All Cases	White	Black	Rate	PA Rate	Cancer Site/Type	Cases	Rate	PA Rate	Cancer Site/Type	Cases	Rate	PA Rate
All Cancer Sites	4,602	4,343	217	483.9	507.7	All Cancer Sites	2,274	543.2	584.2	All Cancer Sites	2,328	449.8	458.0
Breast (Female)	667	626	33	130.6	128.1	Prostate	632	147.4	151.7	Breast	667	130.6	128.1
Bronchus & Lung	653	622	28	67.6	69.9	Bronchus & Lung	332	80.2	86.8	Bronchus & Lung	321	59.5	58.3
Prostate	632	575	49	147.4	151.7	Colon & Rectum	223	54.6	58.1	Colon & Rectum	209	37.4	43.2
Colon & Rectum	432	410	20	45.0	49.6	Urinary Bladder	161	40.2	45.4	Corpus & Uterus, NOS	158	30.3	31.4
Urinary Bladder	208	202	4	21.0	25.2	Non-Hodgkin Lymphoma	111	26.2	25.6	Thyroid	140	32.2	27.9
Non-Hodgkin Lymphoma	204	196	7	21.3	21.2	Kidney & Renal Pelvis	84	19.6	23.3	Non-Hodgkin Lymphoma	93	17.1	17.9
Thyroid	178	170	5	20.9	18.7	Oral Cavity & Pharynx	83	19.3	16.7	Melanoma	71	14.7	15.8
Corpus & Uterus, NOS	158	152	3	30.3	31.4	Melanoma	80	19.1	23.0	Kidney & Renal Pelvis	69	13.7	12.0
Kidney & Renal Pelvis	153	144	9	16.4	17.0	Leukemia	61	14.8	16.6	Ovary	63	12.5	13.5
Melanoma	151	148	0	16.3	18.6	Pancreas	59	14.3	14.5	Pancreas	58	10.2	11.2
Oral Cavity & Pharynx	117	111	5	12.2	11.2	Stomach	46	11.1	10.4	Leukemia	53	10.2	9.8
Pancreas	117	111	5	12.0	12.7	Esophagus	43	10.2	10.0	Urinary Bladder	47	8.4	11.0
Leukemia	114	104	7	12.0	12.7	Multiple Myeloma	39	9.2	7.4	Cervix Uteri	34	7.8	8.2
Stomach	68	61	7	7.0	7.0	Thyroid	38	9.1	9.2	Oral Cavity & Pharynx	34	6.5	6.5
Brain	64	63	1	7.2	7.2	Brain	33	8.2	8.3	Brain	31	6.4	6.3
Multiple Myeloma	64	59	4	6.7	5.9	Liver	25	5.6	11.0	Multiple Myeloma	25	4.7	4.8
Ovary	63	62	1	12.5	13.5	Testis	23	5.7	6.3	Stomach	22	4.0	4.3
Esophagus	60	58	2	6.1	5.5	Larynx	21	4.6	7.2	Esophagus	17	NA	2.1
Liver	38	34	3	3.9	6.8	Hodgkin Lymphoma	17	NA	3.7	Hodgkin Lymphoma	15	NA	3.0
Cervix Uteri	34	29	4	7.8	8.2	All Other Sites	163	NA	NA	Liver	13	NA	3.4
Hodgkin Lymphoma	32	31	1	3.6	3.3					Larynx	3	NA	1.5
Larynx	24	21	2	2.5	4.0					All Other Sites	185	NA	NA
Testis	23	23	0	5.7	6.3								
All Other Sites	348	331	17	NA	NA								

Notes: Age-adjusted rates are per 100,000 population, 2007-2009; NA = Not available

Figure 8. Erie County New Cancer Cases, 2007-2009

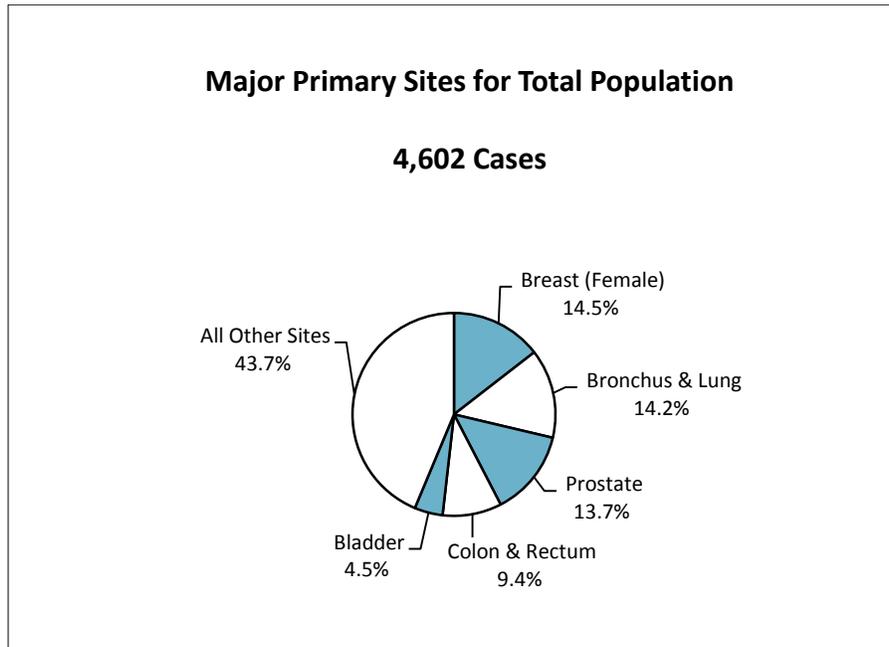


Figure 9. Erie County Age-Adjusted Incidence Rates for Female Breast Cancer, 1997-1999 to 2007-2009

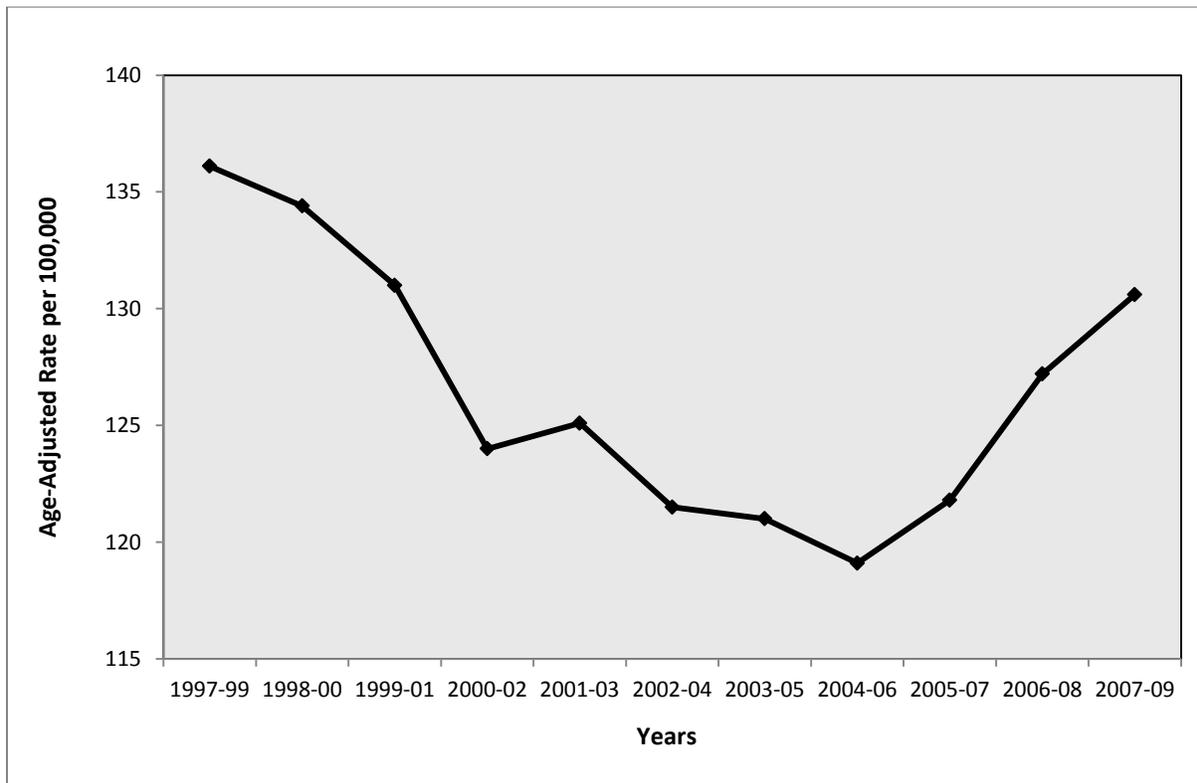


Figure 10. Erie County Male New Cancer Cases, 2007-2009

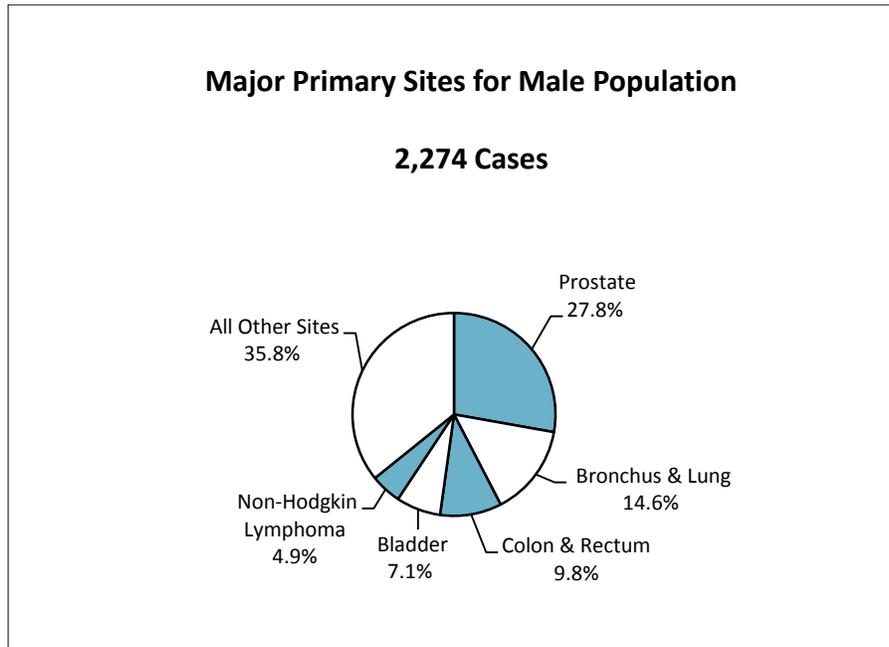
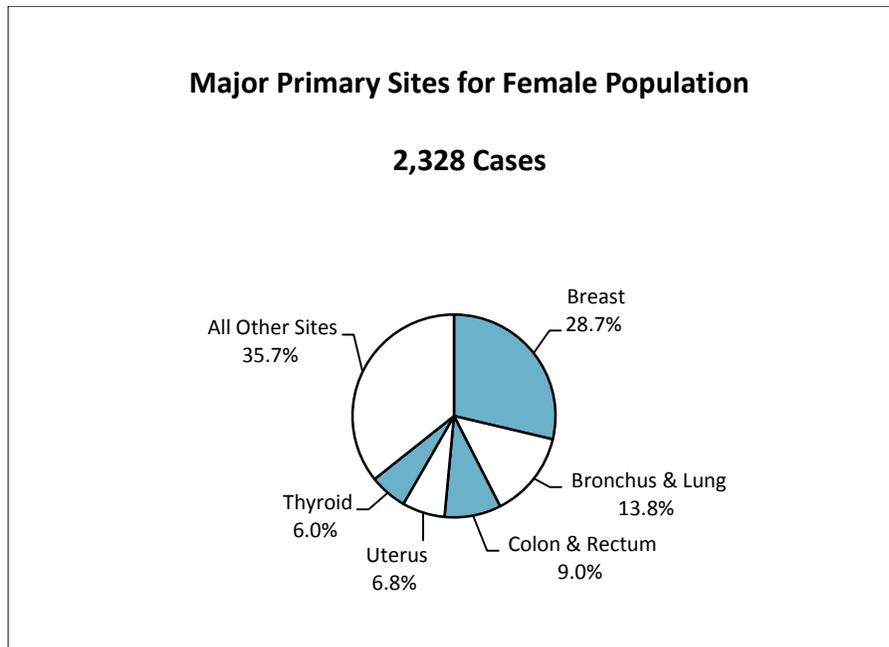


Figure 11. Erie County Female New Cancer Cases, 2007-2009



## Injury Deaths

Injury includes both unintentional injuries (accidents) and self-inflicted or assault injuries (violence). From 2005 to 2009, there were a total of 745 deaths due to injury among Erie County residents (Table 9). Most of these deaths were accidents. Overall, 533 (71.5%) deaths were unintentional, 168 (22.6%) were suicides, 30 (4.0%) were homicides, and 14 (1.9%) were undetermined. Males accounted for over two-thirds (68.2%) of all injury deaths, while seniors had both the highest number of deaths (230) and highest death rate (114.3 deaths per 100,000 population) among the five age group categories.

From 2005 to 2009, the leading causes of injury death among Erie County residents were poisonings, motor vehicle traffic accidents, unintentional falls, and firearm-related events. These four causes accounted for 536 (71.9%) of the 745 total injury deaths. Overall, 121 (68.0%) of the 178 poisoning deaths were accidental drug poisonings, and 80 (85.1%) of the 94 firearm-related events were suicides.

**Table 9. Erie County Injury Deaths and Death Rates, 2005-2009**

Erie County and Pennsylvania, 2005-2009															
Subject	Number	Rate	PA Rate	Male	Female	Age 0-19	Rate	Age 20-34	Rate	Age 35-49	Rate	Age 50-64	Rate	Age ≥65	Rate
All Injuries	745	50.9	58.8	508	237	54	14.3	142	49.8	177	62.1	142	56.6	230	114.3
Unintentional Injuries	533	35.8	40.2	337	196	37	9.8	88	30.9	116	40.7	90	35.9	202	100.4
Suicides	168	11.9	11.4	147	21	10	NA	36	12.6	51	17.9	47	18.7	24	11.9
Homicides	30	2.2	5.9	17	13	6	NA	11	NA	5	NA	5	NA	3	NA
Undetermined	14	NA	NA	7	7	1	NA	7	NA	5	NA	0	NA	1	NA
Leading Causes															
Poisonings	178	12.9	15.3	109	69	1	NA	38	13.3	80	28.1	46	18.3	13	NA
Motor Vehicle Traffic Accidents	137	9.5	11.5	96	41	13	NA	47	16.5	34	11.9	18	NA	25	12.4
Unintentional Falls	129	7.7	7.2	70	59	0	NA	2	NA	4	NA	14	NA	109	54.2
Firearm-Related Events	94	6.5	10.6	88	6	4	NA	25	8.8	21	7.4	26	10.4	18	NA

Notes: Erie County and PA age-adjusted rates are per 100,000 population, 2005-2009; All other rates are per 100,000 for each specified group, 2005-2009; NA = Not available

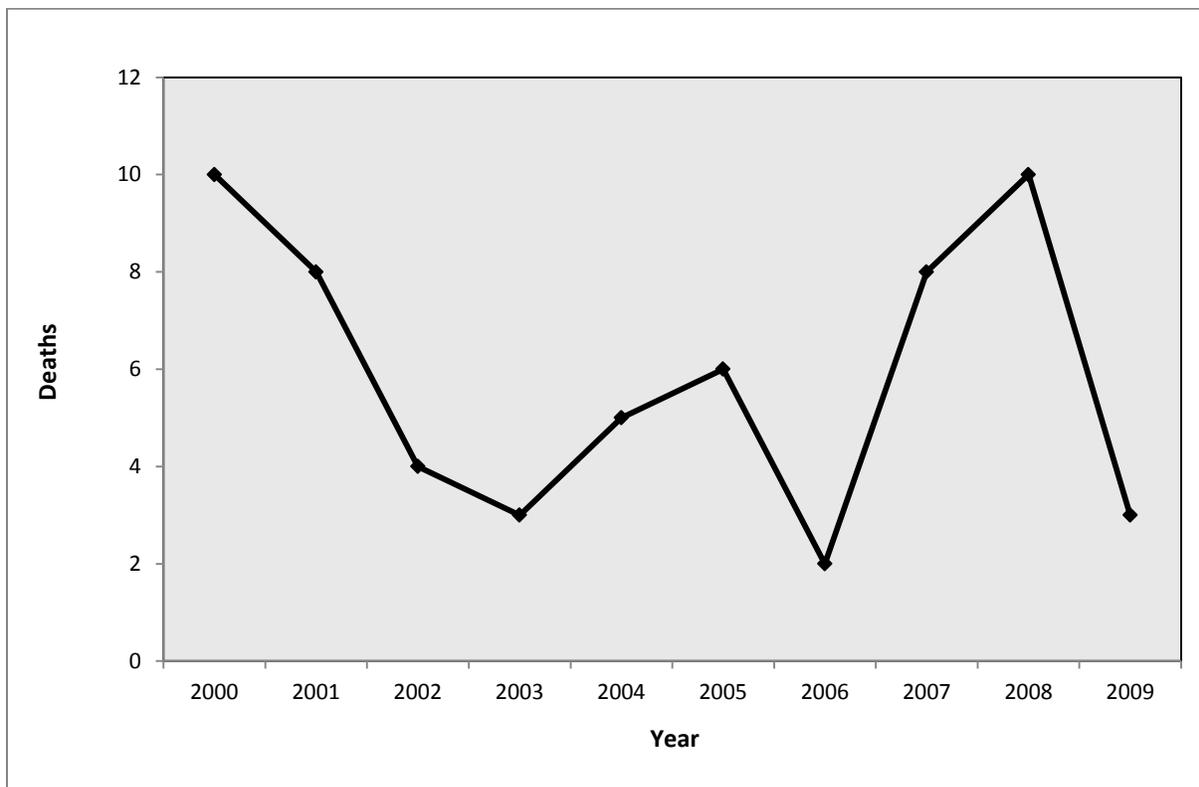
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## Childhood Injury Deaths

From 2000 to 2009, there were a total of 59 deaths due to injury among Erie County residents 14 years of age and younger. Injury deaths ranged from a low of 2 in 2006 to a high of 10 in both 2000 and 2008 (Figure 12).

The average number of childhood injury deaths for the 10 year period was 5.9 per year. Overall, the Erie County age-specific death rate was 10.9 deaths per 100,000 persons aged 0 to 14 years. For Pennsylvania, the corresponding rate was 8.9.

Figure 12. Erie County Childhood Injury Deaths, 2000-2009



Of the 59 total injury deaths, 48 (81.4%) were unintentional (accidents), 6 (10.2%) were homicides, 4 (6.8%) were suicides, and 1 (1.7%) death was undetermined (Table 10). Males accounted for a slight majority (59.3%) of deaths, and over half (50.8%) of all deaths occurred in children under the age of five.

Motor vehicle traffic accidents, drownings, and suffocations were the three leading causes of childhood injury deaths, accounting for 55.9% of all injury deaths and 68.8% of all unintentional deaths.

Table 10. Erie County Childhood Injury Deaths and Death Rates, 2000-2009

Erie County and Pennsylvania, 2000-2009				
<u>Subject</u>	<u>Number</u>	<u>Percent</u>	<u>Rate</u>	<u>PA Rate</u>
All Injuries (ages 0 - 14 years)	59	100.0	10.9	8.9
Male	35	59.3	12.6	NA
Female	24	40.7	9.1	NA
0 - 4 years	30	50.8	NA	NA
5 - 9 years	10	16.9	NA	NA
10 - 14 years	19	32.2	NA	NA
Unintentional Injuries	48	81.4	8.9	6.5
Motor Vehicle Traffic Accidents	15	25.4	NA	2.1
Drownings	10	16.9	NA	0.8
Fires/Flames	5	8.5	NA	1.1
Suffocations (ages < 1)	4	6.8	NA	11.2
Suffocations (ages 1 - 14)	4	6.8	NA	0.4
All Other Accidents	10	16.9	NA	NA
Suicides	4	6.8	NA	1.5
Homicides	6	10.2	NA	1.5
Undetermined	1	1.7	NA	NA

Notes: Rates are per 100,000 population, 2000-2009; NA = Not available

## Injury Hospitalizations

In 2009, there were a total of 2,630 hospitalizations due to injury in Erie County (Table 11). Most of these hospitalizations were the result of unintentional injuries (accidents). Overall, 2,150 (81.7%) hospitalizations were due to accidents, 291 (11.1%) were due to self-inflicted injuries, 90 (3.4%) were due to assault injuries, and 99 (3.8%) were undetermined. Females accounted for a slight majority (54.1%) of hospitalizations, while seniors had both the highest number of hospitalizations (1,195) and highest hospitalization rate (2,919 hospitalizations per 100,000 population) among the five age group categories.

In 2009, the leading causes of injury hospitalization in Erie County were unintentional falls, poisonings, and motor vehicle traffic accidents. These three causes accounted for nearly two-thirds (64.4%) of all hospitalizations. The leading cause, unintentional falls, accounted for

almost half (45.1%) of all hospitalizations. Most (71.9%) unintentional fall hospitalizations occurred in seniors. Overall, 61.7% of poisoning hospitalizations were due to self-inflicted poisonings.

**Table 11. Erie County Injury Hospitalizations and Hospitalization Rates, 2009**

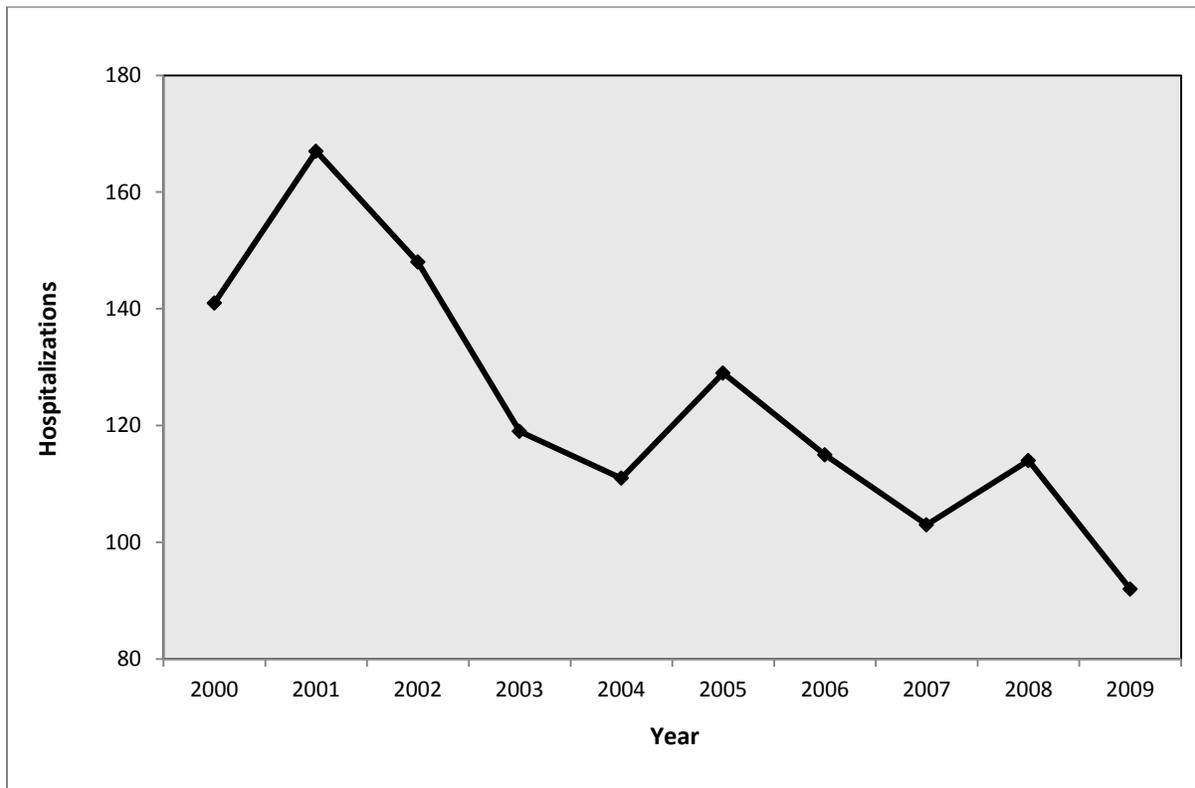
Erie County and Pennsylvania, 2009															
Subject	Number	Rate	PA Rate	Male	Female	Age 0-19	Rate	Age 20-34	Rate	Age 35-49	Rate	Age 50-64	Rate	Age ≥65	Rate
All Injuries	2,630	849.3	1020.4	1,207	1,423	198	266.5	344	595.3	433	778.6	460	890.3	1,195	2,919.1
Unintentional Injuries	2,150	677.3	856.6	966	1,184	141	189.8	187	323.6	282	507.1	394	762.5	1,146	2,799.4
Self-Inflicted Injuries	291	106.4	79.1	129	162	34	45.8	103	178.3	107	192.4	40	77.4	7	NA
Assaults	90	33.0	44.0	70	20	15	NA	37	64.0	26	46.8	10	NA	2	NA
Undetermined	99	NA	NA	42	57	8	NA	17	NA	18	NA	16	NA	40	NA
Leading Causes															
Unintentional Falls	1,185	352.1	436.7	406	779	24	32.3	35	60.6	87	156.4	187	361.9	852	2,081.2
Poisonings	379	135.7	133.4	162	317	34	45.8	113	195.6	123	221.2	67	129.7	42	102.6
Self-Inflicted Poisonings	234	86.6	63.9	95	139	22	29.6	81	140.2	95	170.8	31	60.0	5	NA
Motor Vehicle Traffic Accidents	129	68.8	94.2	119	82	22	29.6	52	90.0	51	91.7	38	73.5	38	92.8
Notes: Erie County and PA age-adjusted rates are per 100,000 population, 2009; All other rates are per 100,000 for each specified group, 2009; NA = Not available															

### Childhood Injury Hospitalizations

From 2000 to 2009, there were a total of 1,239 hospitalizations due to injury in Erie County for persons 14 years of age and younger. Injury hospitalizations ranged from a low of 92 in 2009 to a high of 167 in 2001 (Figure 13).

The average number of childhood injury hospitalizations for the 10 year period was 123.9 per year. Overall, the Erie County age-specific injury hospitalization rate was 228.6 hospitalizations per 100,000 persons aged 0 to 14 years. For Pennsylvania, the corresponding rate was 292.6.

Figure 13. Erie County Childhood Injury Hospitalizations, 2000-2009



The vast majority of the 1,239 childhood injury hospitalizations were the result of unintentional injuries (accidents) (Table 12). Overall, 1,073 (86.6%) hospitalizations were due to accidents, 81 (6.5%) were due to self-inflicted injuries, 50 (4.0%) were due to assault injuries, and 35 (2.8%) were undetermined. Interestingly, 79 of the 81 self-inflicted injuries occurred in children aged 10 to 14 years. A total of 42 (53.2%) of these 79 injuries were self-inflicted poisonings.

With regard to gender, males accounted for 60.0% of hospitalizations. While children aged 10 to 14 years had the highest number of hospitalizations (499), children under the age of five had the highest hospitalization rate (284.1 hospitalizations per 100,000 population) among the three age group categories.

From 2000 to 2009, the leading causes of childhood injury hospitalization in Erie County were falls, motor vehicle traffic accidents, and poisonings. These three causes accounted for 45.2% of all hospitalizations. The leading cause, falls, accounted for over one-fifth (22.4%) of hospitalizations. Of the 134 poisonings, 86 (64.2%) were unintentional and 43 (32.1%) were self-inflicted. A total of 66 (76.7%) of the 86 unintentional poisonings occurred in children under the age of five, and 42 (97.8%) of the 43 self-inflicted poisonings occurred in children aged 10 to 14 years.

Table 12. Erie County Childhood Injury Hospitalizations, 2000-2009

Erie County and Pennsylvania, 2000-2009				
<u>Subject</u>	<u>Number</u>	<u>Percent</u>	<u>Rate</u>	<u>PA Rate</u>
All Injuries (ages 0 - 14 years)	1,239	100.0	228.6	292.6
Male	744	60.0	267.0	359.0
Female	495	40.0	188.0	222.7
0 - 4 years	480	38.7	284.1	NA
5 - 9 years	260	21.0	143.6	NA
10 - 14 years	499	40.3	260.1	NA
Unintentional Injuries	1,073	86.6	198.0	264.7
Self-Inflicted Injuries	81	6.5	14.9	NA
Assaults	50	4.0	9.2	12.0
Undetermined	35	2.8	NA	NA
Leading Causes				
Falls	277	22.4	51.1	81.8
Motor Vehicle Traffic Accidents	149	12.0	27.5	39.7
Poisonings	134	10.8	24.7	25.0

Notes: Rates are per 100,000 population, 2000-2009; NA = Not available

# Infectious Diseases

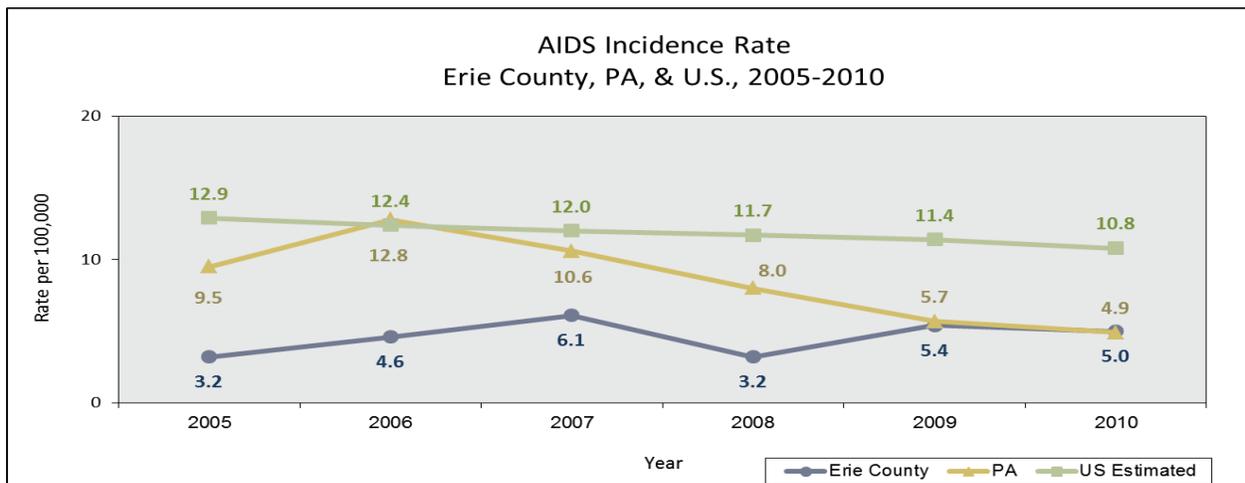
## AIDS and HIV

AIDS, or acquired immunodeficiency syndrome, is caused by HIV, the human immunodeficiency virus. HIV attacks and weakens the immune system. Individuals infected with HIV may not develop AIDS for many years. AIDS is the final stage of HIV infection. In published reports, the Centers for Disease Control and Prevention (CDC) includes both reported and estimated cases for AIDS and HIV (non-AIDS). The estimation method uses a mathematical model that accounts for reporting delays.

**AIDS** From January 1, 1983 to December 31, 2010, a total of 349 AIDS cases have been reported in Erie County with 186 currently living. In 2010, 14 (15 in 2009) newly diagnosed AIDS cases were reported for a crude incidence rate of 5.0 cases per 100,000 compared to 4.9 for PA, 8.3 for U.S. reported cases, and 10.8 for U.S. estimated cases (Figure 1). The average annual crude incidence rate for AIDS in Erie County was 4.3 in 2008-2010 (6.0 for PA; 11.3 for U.S. estimated cases). The Healthy People 2020 Goal is 13.0 cases per 100,000 aged 13 and above.

Differences in AIDS prevalence occur within demographic groups (Table 1). Of all reported AIDS cases in Erie County, 82.8% were male, 40.3% were aged 30-39, 27.6% were aged 40-49, 58.6% were non-Hispanic White, 29.9% were non-Hispanic Black, 43.5% were among men who have sex with men, 25.1% were among injecting drug users, and 15.3% were among those practicing high risk heterosexual contact.

Figure 1. AIDS Incidence, 2005-2010



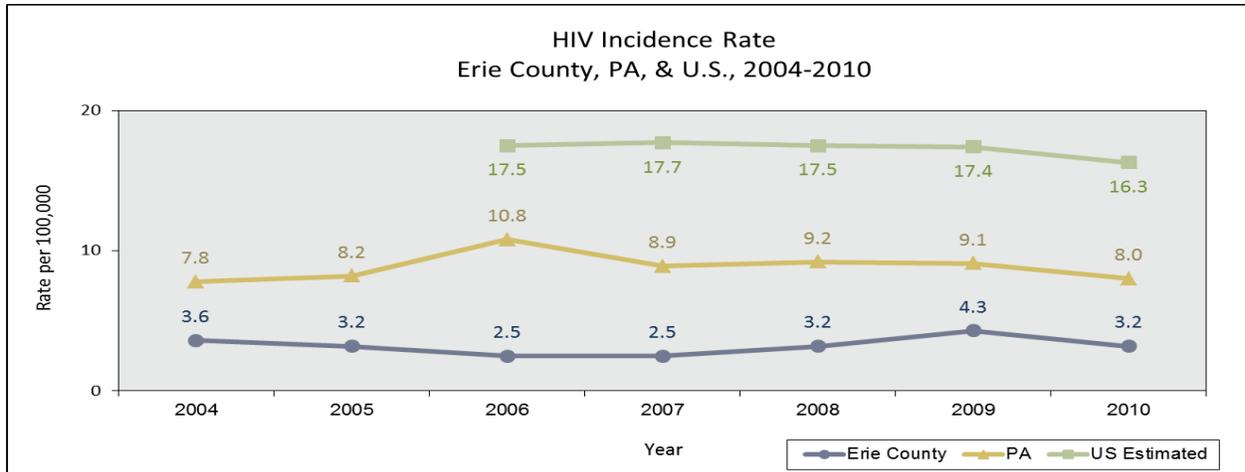
**Table 1. Demographic Prevalence of AIDS, 2010**

Demographics of Diagnosed AIDS Cases, 2010 Cumulative^ Percent of Reported AIDS Cases Erie County, PA, and U.S.				
	ERIE COUNTY	PA	U.S.	U.S.
	<i>% of Total Reported</i>	<i>% of Total Reported</i>	<i>% of Total Reported</i>	<i>% of Total Estimated**</i>
	<u>As of 12/31/2010</u>	<u>As of 12/31/2010</u>	<u>As of 12/31/2009</u>	<u>As of 12/31/2009</u>
<u>Gender</u>				
Male*	82.8	77.5	79.9	79.8
Female*	17.2	22.5	20.1	20.2
<u>Age at Diagnosis</u>				
13-19	0.8	0.9	0.8	0.8
20-29	19.2	15.1	15.6	15.6
30-39	40.3	38.6	40.7	40.5
40-49	27.6	29.9	28.7	28.8
≥50	11.3	14.6	13.4	13.5
<u>Race/Ethnicity</u>				
White, non-Hispanic	58.6	35.5	37.6	37.3
Black, non-Hispanic	29.9	49.6	40.7	40.9
Hispanic	11.3	12.4	19.5	19.6
Other	0.3	2.5	2.2	2.2
Unknown	0.0	0.0	0.0	0.0
<u>Mode of Transmission</u>				
Men who have sex with men (MSM)	43.5	37.6	44.9	47.6
Injecting drug use (IDU)	25.1	30.5	23.2	25.7
MSM & IDU	6.9	5.1	6.8	7.1
High risk heterosexual contact	15.3	20.5	15.1	18.5
Hemophilia/Coagulation disorder	0.9	0.7	NA	NA
Transfusion/Receipt of blood components or tissue	1.2	0.6	NA	NA
Other/Risk not reported***	6.1	1.1	9.1	1.1
All Pediatric****	0.0	0.0	0.8	0.8
<p>Note: ^From beginning of epidemic; *For PA, gender is reported for all age groups; For U.S., only gender for adults and adolescents is reported;  **Estimating cases accounts for reporting delays; ***For U.S., includes hemophilia, blood transfusion, and any other risk factor not reported or not identified; ****Includes adult cases which are assigned pediatric modes of transmission since infection is believed to have occurred before age 13;  Data may be incomplete due to a reporting lag; Number of cases listed in this report may vary from previous reports due to the interstate deduplication process; NA indicates not available</p>				

**HIV** HIV surveillance reporting in PA and the U.S. has become more reliable over the past several years producing more accurate statistics for HIV infected individuals whose disease has not yet progressed to AIDS.

As of December 31, 2010, a total of 146 HIV (non-AIDS) cases had been reported in Erie County with 141 currently living. In 2010, 9 (12 in 2009) newly diagnosed HIV (non-AIDS) cases were reported for a crude incidence rate of 3.2 cases per 100,000 compared to 8.0 for PA, and 16.3 for U.S. estimated cases (Figure 2). The average annual crude incidence rate for HIV (non-AIDS) in Erie County was 3.6 in 2008-2010 (8.8 for PA; 17.2 for U.S. estimated cases).

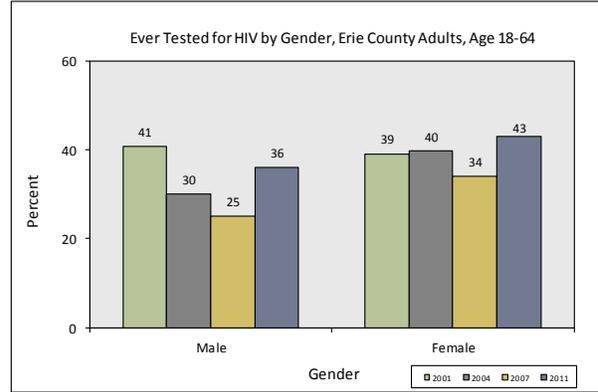
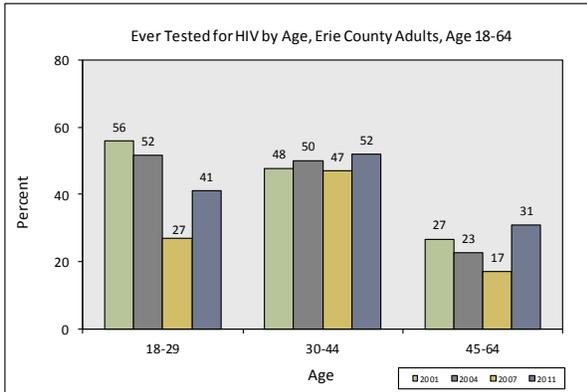
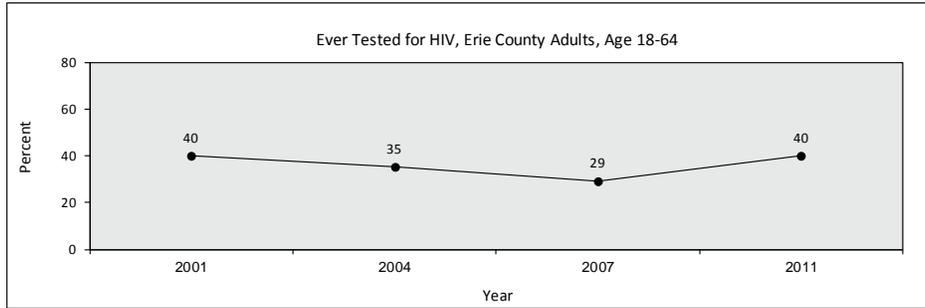
Figure 2. HIV (non-AIDS) Incidence, 2004-2010



**HIV Testing** Based on the Behavioral Risk Factor Surveillance Survey (BRFSS), the self-reported percentage of Erie County adults aged 18-64 who were ever tested for HIV (excluding blood donations) significantly increased to 40% in 2011 compared to 29% in 2007 (Figure 3). This was higher than PA at 35% (2010). Values for the U.S. were not available.

From 2007 to 2011, the percentage of those who were ever tested for HIV (excluding blood donations) increased for all demographic groups (Table 2). Significant increases were seen for males (25% to 36%, respectively), females (34% to 43%, respectively), age 45-64 (17% to 31%, respectively), high school graduates (25% to 40%, respectively), and non-Hispanic White adults (29% to 37%, respectively). High percentage point increases were seen for those with household income below \$25,000 (34% to 49%, respectively), and age 18-29 (27% to 41%, respectively).

Figure 3. Lifetime HIV Testing, 2001-2011



In 2011, differences in prevalence occurred within demographic groups. Prevalence was significantly lower for non-Hispanic White adults (37%) compared to non-Hispanic Black (69%) and Hispanic (61%) adults (Table 2). A higher percentage was seen for females (43%) compared to males (36%), age 30-44 (52%) compared to other age groups, those with less than a high school education (61%) compared to other education groups, and those with household income below \$25,000 (49%) compared to other income groups.

HIV testing decreased with increasing education and increasing income. The highest prevalence of HIV testing was seen for non-Hispanic Black adults (69%) followed by those with less than a high school education (61%) and Hispanic adults (61%). The lowest prevalence of HIV testing was 31% for age 45-64.

**Table 2. Lifetime HIV Testing, 2007 & 2011**

Ever Tested for HIV (Excluding Blood Donations), Age 18-64 Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	29%	26% – 33%	40%	36% – 43%	11%	***	35%
<u>Gender</u>							
Male	25%	20% – 31%	36%	32% – 40%	11%	***	32%
Female	34%	29% – 39%	43%	39% – 48%	9%	***	37%
<u>Age</u>							
18-29	27%	19% – 37%	41%	35% – 47%	14%		37%
30-44	47%	40% – 54%	52%	46% – 58%	5%		44%
45-64	17%	14% – 21%	31%	26% – 35%	14%	***	26%
<u>Education</u>							
<High School	NSR		61%	48% – 74%			37%
High School	25%	20% – 32%	40%	34% – 45%	15%	***	29%
Some College	35%	27% – 43%	42%	36% – 47%	7%		38%
College Graduate	28%	22% – 35%	37%	31% – 42%	9%		37%
<u>Income</u>							
<\$25,000	34%	26% – 44%	49%	43% – 56%	15%		NA
\$25,000-\$49,999	30%	23% – 37%	39%	33% – 45%	9%		34%
\$50,000+	28%	22% – 34%	37%	32% – 43%	9%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	29%	25% – 33%	37%	34% – 40%	8%	***	29%
Black, non-Hispanic	NA		69%	56% – 82%			71%
Hispanic	NA		61%	43% – 79%			55%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**HIV Situation Applies** For the BRFSS, behaviors considered high risk for HIV infection (an HIV situation) are defined as having used intravenous drugs in the past year, having been treated for a sexually transmitted or venereal disease in the past year, having given or received money or drugs in exchange for sex in the past year, or having anal sex without a condom in the past year.

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who practiced risky behavior within the past year that could result in HIV infection was 2% in 2011 compared to 2% for PA (2010) (Table 3). U.S. values were not available.

In 2011, prevalence in Erie County was similar for most demographic groups. The highest prevalence was seen for age 30-44 (4%) followed by high school graduates (3%). The lowest prevalence of self-reported high risk behavior was 0% for both those with less than a high school education and Hispanic adults followed by age 65 and above (1%) and those with household income of \$25,000-\$49,999 (1%)

**Table 3. HIV Situation Applies, 2011**

Practiced Risky Behavior Within the Past Year that Could Result in HIV Infection Erie County Adult BRFSS, 2011					
	2007		2011	PA 2010	
		<u>CI</u>			
			<u>CI</u>		
All Adults	NA		2%	1% - 3%	2%
<u>Gender</u>					
Male	NA		2%	1% - 3%	2%
Female	NA		2%	1% - 3%	3%
<u>Age</u>					
18-29	NA		2%	0% - 3%	5%
30-44	NA		4%	2% - 7%	3%
45-64	NA		2%	0% - 3%	1%
65+	NA		1%	0% - 1%	NA
<u>Education</u>					
<High School	NA		0%	NCI	4%
High School	NA		3%	1% - 4%	2%
Some College	NA		2%	0% - 3%	3%
College Graduate	NA		2%	1% - 4%	2%
<u>Income</u>					
<\$25,000	NA		2%	1% - 4%	NA
\$25,000-\$49,999	NA		1%	0% - 2%	3%
\$50,000+	NA		2%	1% - 4%	NA
<u>Race/Ethnicity</u>					
White, non-Hispanic	NA		2%	1% - 3%	2%
Black, non-Hispanic	NA		2%	0% - 6%	5%
Hispanic	NA		0%	NCI	3%
<small>Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available</small>					

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## Campylobacteriosis

Campylobacteriosis is an infectious disease caused by *Campylobacter* bacteria. Most people who become ill with campylobacteriosis get diarrhea, cramping, abdominal pain, and fever. The diarrhea may be bloody. Some infected persons do not have any symptoms. Transmission occurs through ingestion of organisms present in contaminated food and water, undercooked meat, and raw milk or through contact with infected pets and farm animals.

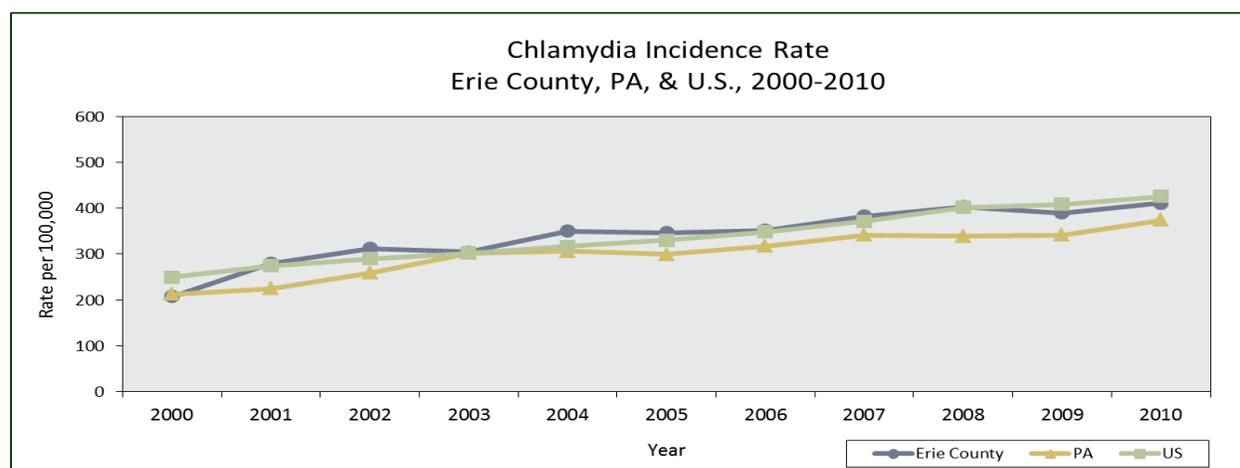
In 2010, there were 25 reported cases in Erie County with a crude incidence rate of 8.9 cases per 100,000 (13.8 for PA) compared to 28 cases in 2009 with a rate of 10.0. From 2008-2010, there were 86 reported cases in Erie County with an average annual crude incidence rate of 10.3 (13.1 for PA) compared to 86 cases from 2007-2009 with a rate of 10.3.

## Chlamydia

Chlamydia is a common sexually transmitted infection (STI) caused by the bacterium, *Chlamydia trachomatis*. It is one of the most frequently reported infectious diseases in the U.S. Left untreated, a chlamydial infection can damage a woman's reproductive organs and cause infertility. For many individuals infected with *Chlamydia*, symptoms are mild or absent. A majority of infections are not diagnosed. Less than 50% of sexually active young women are screened annually.

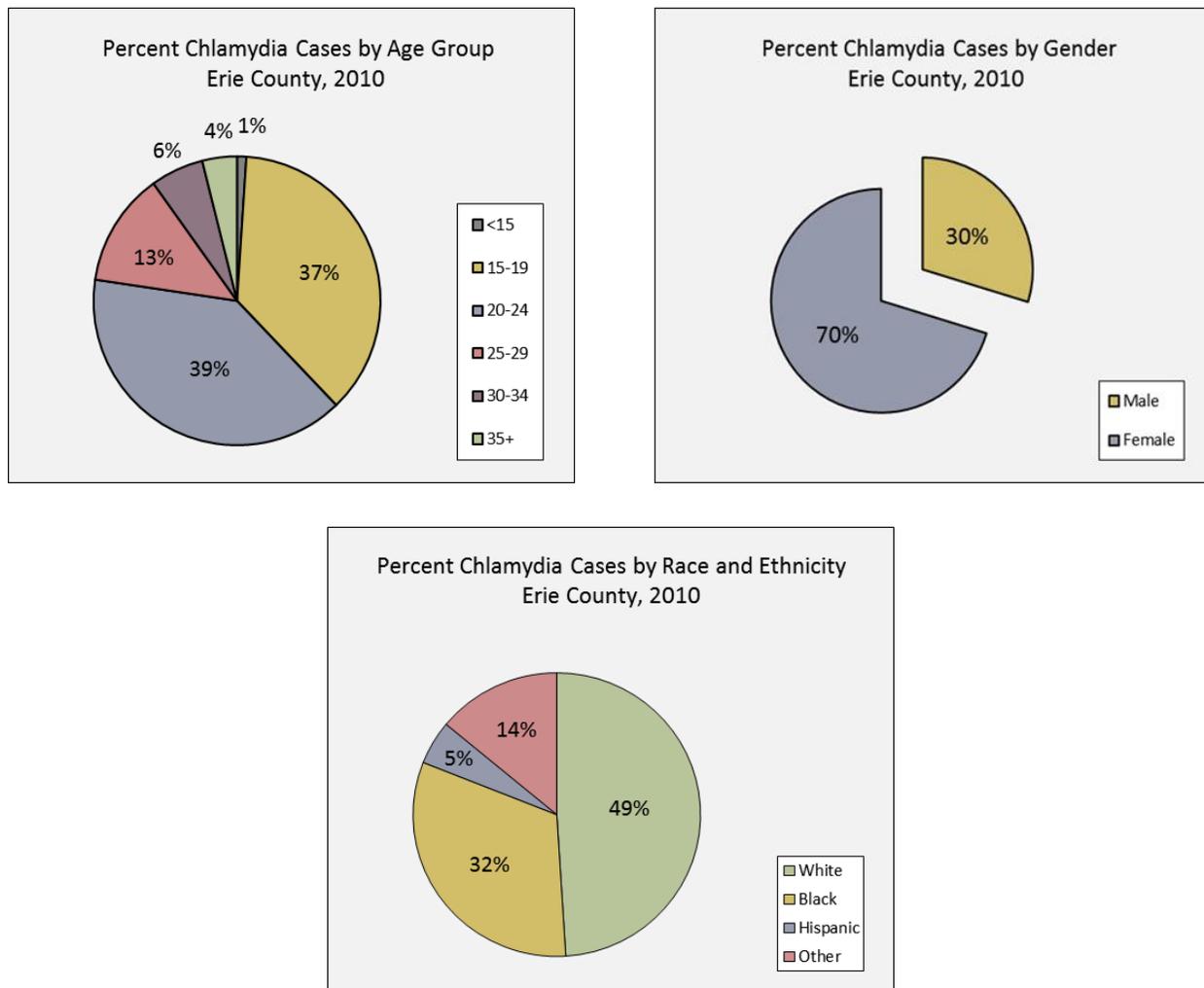
The number of reported cases and rate of chlamydia in Erie County has been increasing since 2000. In 2010, 1,152 cases were reported (1,089 for 2009) (Figure 4).

Figure 4. Chlamydia Incidence, 2000-2010



Of all chlamydia cases reported in 2010, 70% were female, 49% were White compared to 32% for Black and 5% for Hispanic, 39% were age 20-24, and 37% were age 15-19 (Figure 5, Table 4).

Figure 5. Chlamydia Demographics, 2010



The annual crude incidence rate of chlamydia in Erie County increased from 389.4 per 100,000 in 2009 to 411.0 in 2010 (373.9 for PA; 426.0 for U.S.) (Figure 4, Table 4). Rate increases were seen for all demographic groups with the exception of those under age 15, Blacks, and age 25-29. From 2009 to 2010, chlamydia incidence rates significantly increased for Whites (192.5 to 222.0, respectively) and for age 20-24 (1,986.5 to 2,291.0, respectively). The largest percent rate increase was seen for age 30-34 (23.2%) followed by age 20-24 (15.3%) and Whites (15.3%). The largest percent rate decrease was seen for those under age 15 (32.8%).

**Table 4. Chlamydia Incidence, 2009-2010**

Chlamydia Case Count, Percent of Total, and Incidence Rate Erie County, PA, & U.S., 2009 & 2010							
	2009		2010		2009	2010	% Rate Change
	# Cases	% of Total	# Cases	% of Total	Rate	Rate	
<u>Erie County</u>							
Total	1,089		1,152		389.4	411.0	5.5
Male	340	31.2	342	29.7	247.7	248.4	0.3
Female	749	68.8	810	70.3	526.0	568.0	8.0
White	490	45.0	566	49.1	192.5	<b>222.0</b>	15.3
Black	375	34.4	364	31.6	2,017.2	1,952.4	-3.2
Hispanic	50	4.6	56	4.9	608.6	650.2	6.8
<15 years *	18	1.7	12	1.0	34.8	23.4	-32.8
15-19 years	426	39.1	424	36.8	1,941.5	1,944.0	0.1
20-24 years	390	35.8	455	39.5	1,986.5	<b>2,291.0</b>	15.3
25-29 years	160	14.7	147	12.8	813.1	773.9	-4.8
30-34 years	52	4.8	69	6.0	323.7	399.0	23.2
35+ years	42	3.9	45	3.9	27.9	29.8	6.9
<u>Pennsylvania</u>							
Total	43,068		47,518		341.7	373.9	9.4
<u>United States</u>							
Total	1,244,180		1,307,893		409.2	426.0	4.1
<small>Note: Red indicates significant difference from previous year; *Numbers less than 20 provide statistically unreliable rates;            Crude rate equals number of cases per 100,000 population; 95% Confidence Interval used;            For percent of total for age groups, the denominator is the total number of cases for a reported age; Before 2003 some reported cases did not include age;            Total includes unknown gender, race, and age; Hispanic origin can be of any race; There may be multiple diseases in one person; Some individuals may become infected more than once;            U.S Census Bureau, Intercensal Population Estimates used for Erie County and PA; U.S. Census Bureau, Vintage Postcensal Series Population Estimates used for U.S.;            U.S Census Bureau, Census 2010 Population used for PA 2010 rate; Previous year population used for Erie County calculations; Current year population used for PA calculations;            Current year population used for U.S. calculations from 2000-2005; Previous year population used for U.S. calculations from 2006 to present</small>							

The average annual crude incidence rate of chlamydia in Erie County increased from 392.1 cases per 100,000 in 2007-2009 to 401.3 in 2008-2010 (351.7 for PA; 412.0 for U.S.). For 2008-2010, the respective chlamydia incidence rates were 200.9 for Whites, 2,062.2 for Blacks, 681.9 for Hispanics, 243.9 for males, 553.2 for females, 36.1 for age under 15, 1,862.2 for age 15-19, 2,113.5 for age 20-24, 830.3 for age 25-29, 384.1 for age 30-34, and 29.7 for age 35 and above.

## Giardiasis

Giardiasis is a diarrheal disease caused by *Giardia lamblia*, a microscopic parasite. Once a person or animal has been infected with *Giardia*, the parasite lives in the intestine and is passed through the stool. It can survive outside the body and in many environments (food, soil, water, contaminated surfaces) for months.

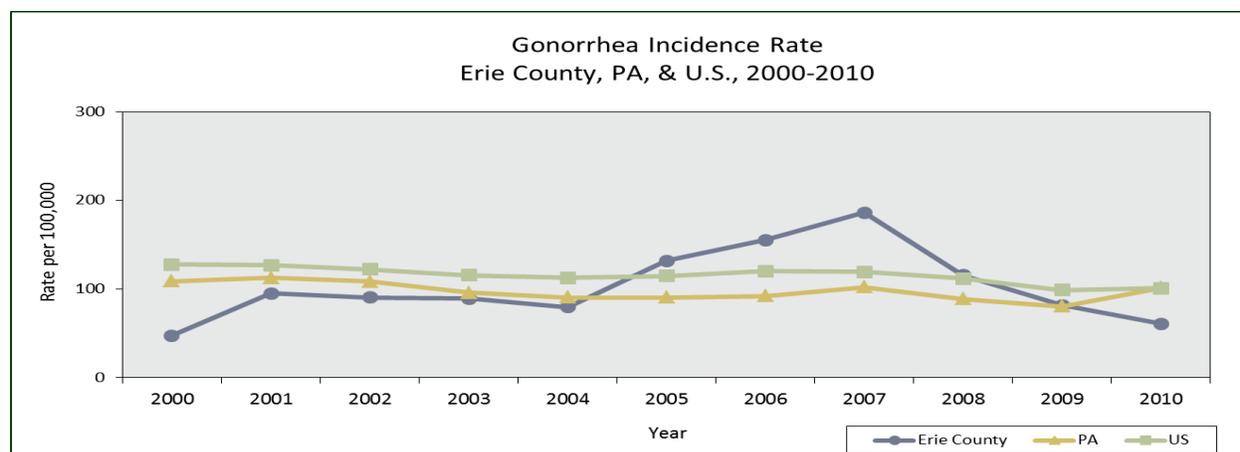
In 2010, there were 20 reported cases in Erie County with a crude incidence rate of 7.1 cases per 100,000 (6.2 for PA; 6.5 for U.S.) compared to 41 cases in 2009 with a rate of 14.7. From 2008-2010, there were 119 reported cases in Erie County with an average annual crude incidence rate of 14.2 (6.6 for PA; 6.3 for U.S.) compared to 154 cases from 2007-2009 with a rate of 18.4 (6.6 for PA; 6.4 for U.S.)

## Gonorrhea

Gonorrhea is a common STI caused by the bacteria *Neisseria gonorrhoeae*. This bacterium can grow and multiply easily in the reproductive tract as well as the mouth, throat, eyes, and anus. Untreated, gonorrhea can cause serious and permanent health problems in both women and men. It is a common cause of pelvic inflammatory disease (PID) in women and may lead to infertility in men.

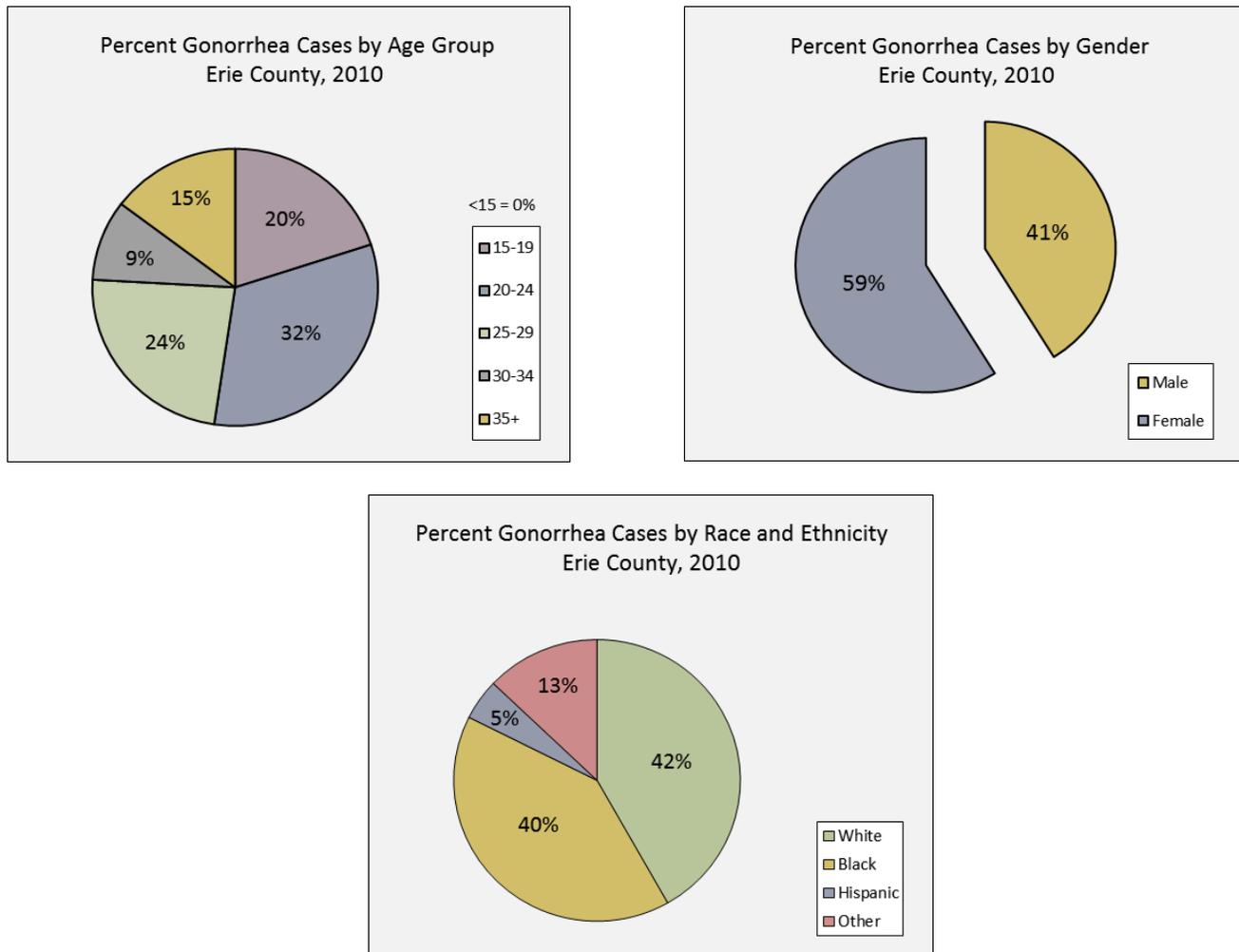
The number of reported cases and rate of gonorrhea in Erie County has been decreasing since 2007. In 2010, 170 cases were reported (229 for 2009) (Figure 6). The number of reported cases in Erie County increased from a low of 133 in 2000 to a high of 521 in 2007 and then decreased to 170 cases in 2010 as the result of an aggressive public health campaign.

Figure 6. Gonorrhea Incidence, 2000-2010



Of all gonorrhea cases reported in 2010, 59% were female, 42% were White compared to 40% for Black and 5% for Hispanic, 32% were age 20-24, 24% were age 25-29, and 20% were age 15-19 (Figure 7, Table 5).

Figure 7. Gonorrhea Demographics, 2010



The annual crude incidence rate of gonorrhea in Erie County significantly decreased from 81.9 per 100,000 in 2009 to 60.7 in 2010 (101.4 for PA; 100.8 for U.S.) (Figure 6, Table 5). The Healthy People 2020 Goal is 257.0 cases per 100,000 females aged 15-44 and 198.0 cases per 100,000 males aged 15-44. From 2009 to 2010, gonorrhea incidence rates significantly decreased for females (99.7 to 70.1, respectively), for Blacks (656.3 to 370.1, respectively), ages 15-19 (337.3 to 155.9, respectively), and ages 20-24 (397.3 to 276.9, respectively). From 2009 to 2010, the rate significantly increased for ages 25-29 (127.0 to 210.6, respectively). The

largest percent rate decrease was seen for those under age 15 (100.0%) followed by age 15-19 (53.8%) and Blacks (43.6%). The largest percent rate increase was seen for those aged 25-29 (65.8%).

Table 5. Gonorrhea Incidence, 2009 & 2010

Gonorrhea Case Count, Percent of Total, and Incidence Rate Erie County, PA, & U.S., 2009 & 2010							
	2009		2010		2009	2010	% Rate Change
	# Cases	% of Total	# Cases	% of Total	Rate	Rate	
<u>Erie County</u>							
Total	229		170		81.9	60.7	-25.9
Male	87	38.0	70	41.2	63.4	50.8	-19.8
Female	142	62.0	100	58.8	99.7	70.1	-29.7
White	70	30.6	71	41.8	27.5	27.9	1.3
Black	122	53.3	69	40.6	656.3	370.1	-43.6
Hispanic	12	5.2	8	4.7	146.1	92.9	-36.4
<15 years *	3	1.3	0	0.0	5.8	0.0	-100.0
15-19 years	74	32.3	34	20.0	337.3	155.9	-53.8
20-24 years	78	34.1	55	32.4	397.3	276.9	-30.3
25-29 years	25	10.9	40	23.5	127.0	210.6	65.8
30-34 years	24	10.5	16	9.4	149.4	92.5	-38.1
35+ years	25	10.9	25	14.7	16.6	16.6	-0.2
<u>Pennsylvania</u>							
Total	10,138		12,883		80.4	101.4	26.0
<u>United States</u>							
Total	301,174		309,341		99.1	100.8	1.7

Note: Red indicates significant difference from previous year; \*Numbers less than 20 provide statistically unreliable rates;  
Crude rate equals number of cases per 100,000 population; 95% Confidence Interval used;  
For percent of total for age groups, the denominator is the total number of cases for a reported age; Before 2003 some reported cases did not include age;  
Total includes unknown gender, race, and age; Hispanic origin can be of any race; There may be multiple diseases in one person; Some individuals may become infected more than once;  
U.S. Census Bureau, Intercensal Population Estimates used for Erie County and PA; U.S. Census Bureau, Vintage Postcensal Series Population Estimates used for U.S.;  
U.S. Census Bureau, Census 2010 Population used for PA 2010 rate; Previous year population used for Erie County calculations; Current year population used for PA calculations;  
Current year population used for U.S. calculations from 2000-2005; Previous year population used for U.S. calculations from 2006 to present;

The average annual crude incidence rate of gonorrhea in Erie County decreased from 128.0 cases per 100,000 in 2007-2009 to 86.1 in 2008-2010 (90.3 for PA; 103.8 for U.S.). For 2008-2010, the respective gonorrhea incidence rates were 30.9 for Whites, 657.0 for Blacks, 143.1 for

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Hispanics, 66.3 for males, 105.2 for females, 5.8 for age under 15, 296.9 for age 15-19, 377.5 for age 20-24, 245.9 for age 25-29, 134.9 for age 30-34, and 18.1 for age 35 and above.

## **Haemophilus Influenza**

Haemophilus influenzae invasive disease is caused by the bacteria *Haemophilus influenzae*. Transmission is by direct contact or by droplets during coughing and sneezing. There are six serotypes (a-f) as well as nontypeable forms. *H. influenzae* type B (Hib), the most virulent strain, generally affects children up to 5 years of age and can result in death. Hib cases significantly dropped after the introduction of the Hib vaccine. At least half of all invasive *H. influenzae* infections are now attributed to the nontypeable strains which affect all age groups.

In 2010, there were 5 reported cases of *H. influenzae* in Erie County with a crude incidence rate of 1.8 cases per 100,000 compared to 11 cases in 2009 with a rate of 3.9. From 2008-2010, there were 22 reported cases with an average annual incidence rate of 2.6 (1.7 for PA; 1.0 for U.S.) compared to 22 cases from 2007-2009 with a rate of 2.6.

## **Hepatitis A**

Hepatitis A is an acute, vaccine-preventable liver disease caused by the hepatitis A virus (HAV). HAV infection is transmitted by the fecal-oral route via person-to-person contact or consumption of contaminated food or water. HAV infection does not result in chronic infection or chronic liver disease

In 2010, there were 2 reported case of hepatitis A in Erie County with a crude incidence rate of 0.7 cases per 100,000 (0.4 for PA; 0.5 for U.S.) compared to 3 reported cases in 2009 with a rate of 1.1. From 2008-2010, there were 5 reported cases with an average annual incidence rate of 0.6 (0.5 for PA; 0.7 for U.S.) compared to 7 cases from 2007-2009 with a rate of 0.8. The Healthy People 2020 Goal is 0.3 cases per 100,000 population.

## **Hepatitis B**

Hepatitis B is a vaccine-preventable liver disease caused by hepatitis B virus (HBV). HBV infection can lead to chronic or lifelong infection, cirrhosis, liver cancer, liver failure, and death. Transmission occurs through contact with the blood or other body fluids of infected individuals.

**Acute Hepatitis B** In 2010, there were 2 reported cases of acute hepatitis B in Erie County with a crude incidence rate of 0.7 cases per 100,000 (0.6 for PA; 1.1 for U.S.) and 4 reported cases in 2009 with a rate of 1.4. From 2008-2010, there were 12 reported cases of acute hepatitis B in

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Erie County with an average annual incidence rate of 1.4 (0.9 for PA; 1.2 for U.S.) compared to 12 cases from 2007-2009 with a rate of 1.4. The Healthy People 2020 Goal is 1.9 cases per 100,000 population aged 19 and above.

**Chronic Hepatitis B** In 2010, there were 15 reported cases of chronic hepatitis B in Erie County with a crude incidence rate of 5.4 cases per 100,000 (11.6 for PA) compared to 9 cases in 2009 with a rate of 3.2. From 2008-2010, there were 35 reported cases of chronic hepatitis B in Erie County with an average annual incidence rate of 4.2 (13.6 for PA) compared to 32 cases from 2007-2009 with a rate of 3.8.

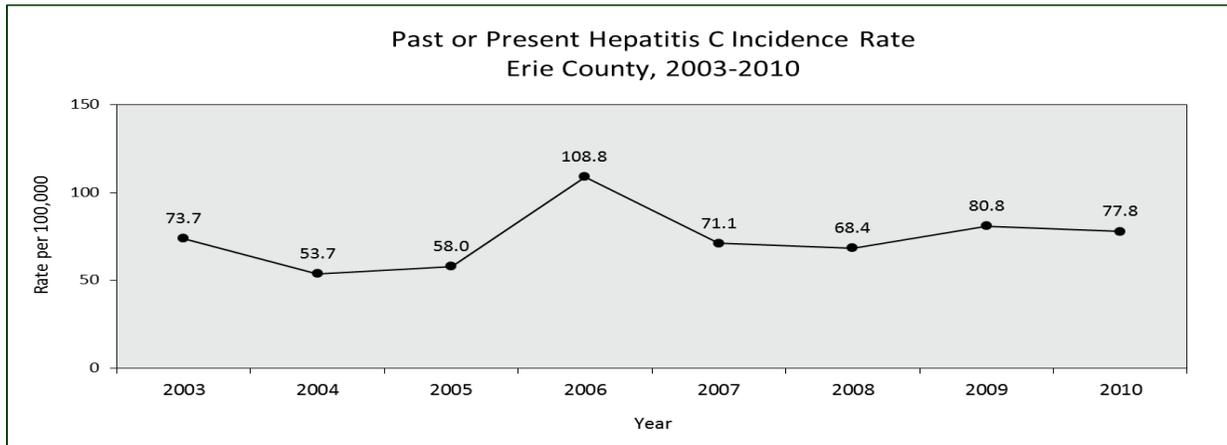
## **Hepatitis C**

Hepatitis C is a liver disease caused by the hepatitis C virus (HCV). Most individuals with HCV infection develop a chronic infection that is asymptomatic. These individuals do not know they are infected until chronic liver disease develops decades later. HCV infection can lead to cirrhosis, liver failure, liver cancer, and death. HCV is spread by contact with the blood of an infected person.

**Acute Hepatitis C** In 2010, there were 7 reported cases of acute hepatitis C in Erie County with a crude incidence rate of 2.5 cases per 100,000 (0.2 for PA; 0.3 for U.S.) compared to 8 cases in 2009 with a rate of 2.9. From 2008-2010, there were 16 reported cases of acute hepatitis C in Erie County with an average annual incidence rate of 1.9 (0.2 for PA; 0.3 for U.S.) compared to 9 cases from 2007-2009 with a rate of 1.1. The Healthy People 2020 Goal is 0.2 new cases per 100,000 population.

**Past or Present Hepatitis C** In 2010, there were 218 reported cases of past or present hepatitis C in Erie County with a crude incidence rate of 77.8 cases per 100,000 (73.5 for PA) compared to 226 cases in 2009 with a rate of 80.8. From 2008-2010, there were 635 reported cases of past or present hepatitis C in Erie County with an average annual incidence rate of 75.6 (80.3 for PA) compared to 616 cases from 2007-2009 with a rate of 73.5. From 2005 to 2006, the incidence rate for past or present hepatitis C increased by 88%, but then dropped to stable levels (Figure 8).

Figure 8. Past or Present Hepatitis C Incidence, 2003-2010



## Influenza

Influenza (also known as the flu) is a vaccine-preventable respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. The virus is usually spread from person to person during coughing and sneezing.

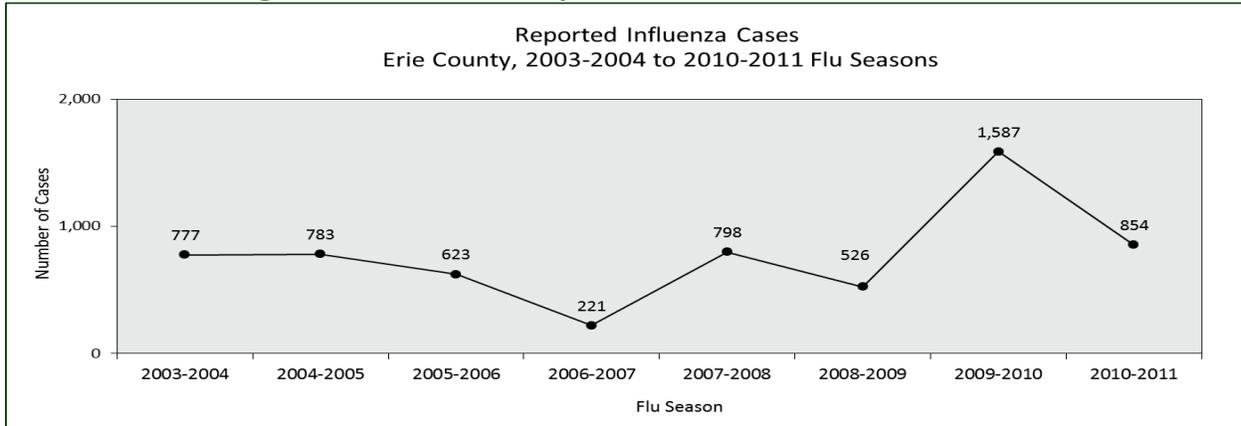
To standardize disease case counting, the CDC assigns a number to every week (Sunday through Saturday) in the calendar year. Annual flu counts are those cases reported from CDC Week 1 to CDC Week 52. But the flu season officially begins with CDC Week 40 of one year and ends with CDC Week 39 of the following year. Case counts for the flu season correspond to the cases reported during these weeks. A typical influenza season in Erie County begins in November (CDC Week 46), peaks from January through March (CDC Weeks 1-13), and ends in May (CDC Week 20) with few cases reported after this.

For the 2010-2011 Erie County flu season, a total of 854 cases were reported (659 seasonal Type A, 175 Type B, and 20 Type A H1N1 [pandemic H1N1]) (Figure 9). Among age groups, 7.7% of all cases were under 2 years old, 31.0% were aged 2 to 17, 11.6% were aged 18 to 25, 24.4% were aged 26 to 49, 10.9% were aged 50-64, and 14.2% were aged 65 and above.

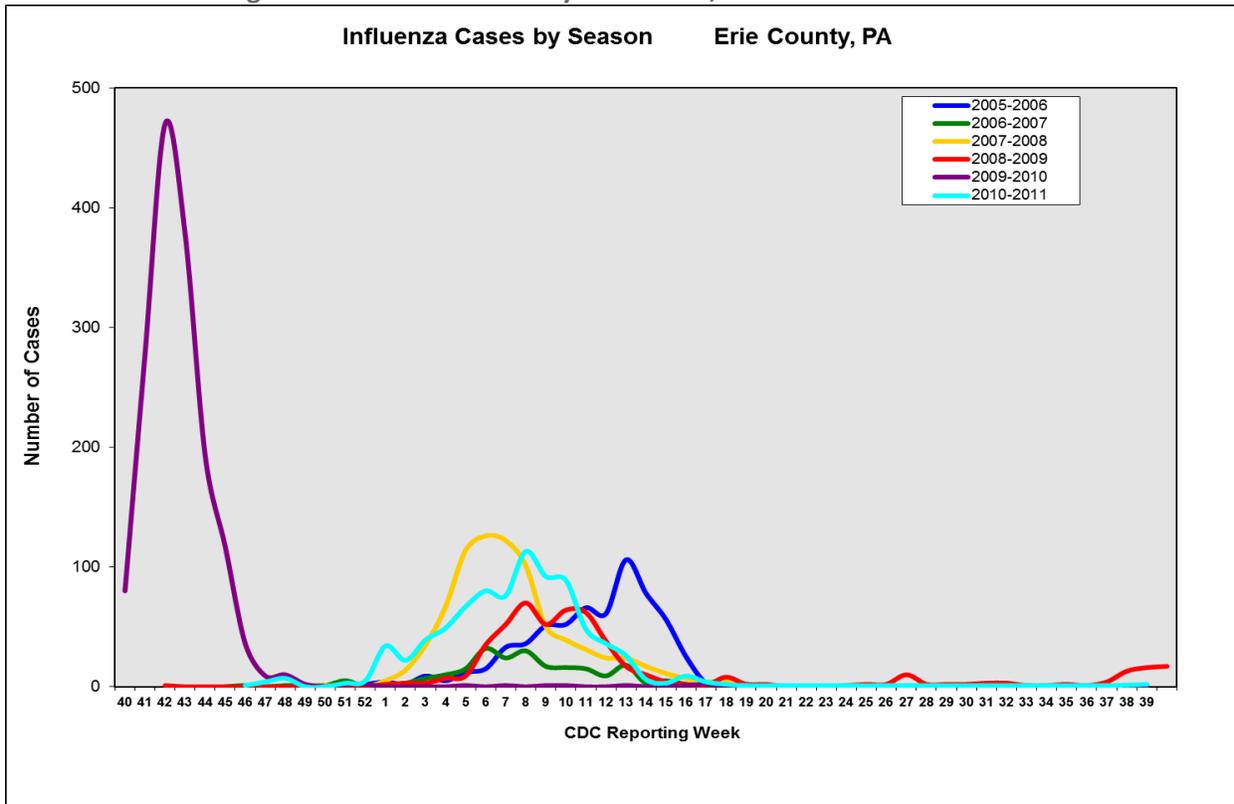
For the 2009-2010 flu season, a total of 1,587 cases were reported (116 Type A H1N1, 1,469 presumed Type A H1N1, 2 seasonal Type A, and 0 Type B). Among age groups, 5.4% of all cases were less than 2 years old, 66.9% were aged 2 to 17, 8.9% were aged 18 to 25, 12.2% were aged 26 to 49, 4.7% were aged 50-64, and 1.0% were aged 65 and above. From CDC Weeks 40 to 1 (10/4/09-1/2/10), 1,577 flu cases were reported (110 Type A H1N1 and 1,467 presumed Type A H1N1). From CDC Weeks 5 to 39 (1/31/10-10/2/10), 10 flu cases were reported (6 Type A H1N1, 2 presumed Type A H1N1, and 2 seasonal Type A).

The H1N1 pandemic began in June 2009 with the first confirmed case of Type A H1N1, peaked in October 2009, and subsided by December 2009 with sporadic reporting continuing through April 2010 (Figure 10). The pandemic spanned two flu seasons with 142 reported cases of confirmed Type A H1N1 and 1,525 reported cases of presumed Type A H1N1.

**Figure 9. Influenza Cases by Flu Season, 2003-2004 to 2010-2011**



**Figure 10. Influenza Cases by Flu Season, 2005-2006 to 2010-2011**



Annual influenza case counts were 30 for 2010 compared to 2,102 for 2009, 799 for 2008, and 215 for 2007.

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## Listeriosis

Listeriosis is caused by the bacteria *Listeria monocytogenes*. Transmission occurs through ingestion of organisms in contaminated food. Symptoms include fever, muscle aches, and sometimes gastrointestinal problems. Pregnant women, newborns, adults with weak immune systems, and older individuals are at increased risk for serious illness. Infection during pregnancy can result in miscarriage, stillbirth, prematurity, or infection of the newborn even when the mother has mild symptoms.

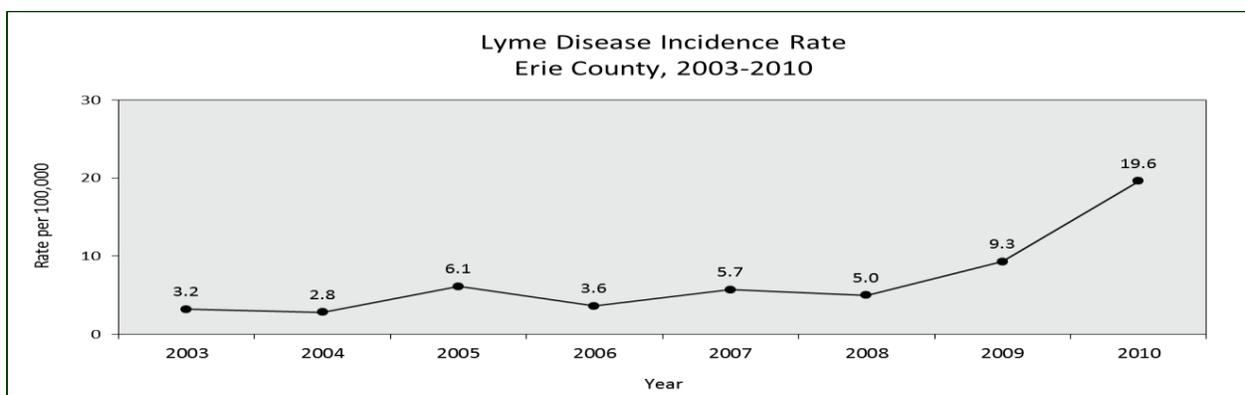
In 2010, there were no cases of listeriosis reported in Erie County. Crude incidence rates were 0.4 per 100,000 for PA and 0.3 for the U.S. in 2010. In 2009, there were 2 reported cases in Erie County for a rate of 0.7.

## Lyme Disease

Lyme disease is caused by the bacterium *Borrelia burgdorferi*. It is transmitted to humans by the bite of infected blacklegged ticks. Typical symptoms include fever, headache, fatigue, and a characteristic skin rash. If left untreated, infection can spread to joints, the heart, and the nervous system.

In 2010, there were 55 cases of Lyme disease reported in Erie County for a crude incidence rate of 19.6 cases per 100,000 (30.0 for PA; 9.8 for U.S.) compared to 26 cases in 2009 with a rate of 9.3. From 2008-2010, there were 95 reported cases of Lyme disease with an incidence rate of 11.3 (35.8 for PA; 11.3 for U.S.) compared to 56 cases from 2007-2009 with a rate of 6.7. Since 2008, Lyme disease rates have increased for Erie County (Figure 11).

Figure 11. Lyme Disease Incidence, 2003-2010



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## Measles

Measles is a vaccine-preventable disease spread through coughing or sneezing and is characterized by rash, high fever, coughing, and runny nose. Complications can occur.

There were no reported cases of measles in Erie County in 2010. The last reported case occurred in 1991.

## Meningitis

Meningitis is an infection of the fluid of a person's spinal cord and the fluid that surrounds the brain.

**Viral or Aseptic Meningitis** is a clinically diagnosed meningitis that has no laboratory confirmation of bacterial or fungal infection. Viral meningitis is usually less severe than bacterial meningitis and normally doesn't require specific treatment.

In 2010, there were 6 reported cases of aseptic meningitis in Erie County with a crude incidence rate of 2.1 cases per 100,000 (3.9 for PA) compared to 26 cases in 2009 with a rate of 9.3. From 2008-2010, there were 42 reported cases of aseptic meningitis with an incidence rate of 5.0 (3.6 for PA) compared to 53 cases from 2007-2009 with a rate of 6.3.

**Meningococcal Disease** is a vaccine-preventable type of meningitis caused by the bacteria *Neisseria meningitidis*. It is one of the major types of bacterial meningitis. Bacterial meningitis can be quite severe and may result in brain damage, hearing loss, or learning disability.

In 2010, there were no reported cases of meningococcal disease in Erie County compared to a crude incidence rate per 100,000 of 0.2 for PA and 0.3 for the U.S. In 2009, 2 cases were reported in Erie County for a rate of 0.7. From 2008-2010, there were 5 reported cases of meningococcal disease with an incidence rate of 0.6 (0.3 for PA; 0.3 for U.S.) compared to 7 cases from 2007-2009 with a rate of 0.8. The Healthy People 2020 Goal is 0.3 case per 100,000 population.

## Mumps

Mumps is a vaccine-preventable disease caused by the mumps virus. Symptoms include fever, headache, muscle aches, tiredness, loss of appetite, and swelling of salivary glands.

From 2003 to 2010, only one case of mumps occurred in Erie County. It was reported in 2006.

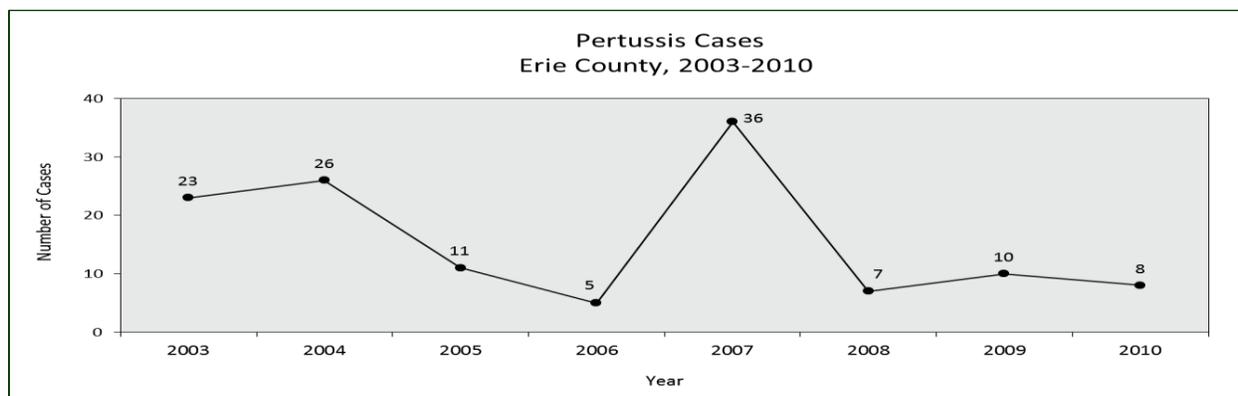
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## Pertussis (Whooping Cough)

Pertussis, a vaccine-preventable respiratory disease caused by the bacteria *Bordetella pertussis*, is found mainly in children. Symptoms include spasms of severe coughing, whooping, and posttussive vomiting and may last many weeks.

In 2010, there were 8 cases of pertussis reported in Erie County for a crude incidence rate of 2.9 cases per 100,000 (7.8 for PA; 9.1 for U.S.) compared to 10 cases in 2009 with a rate of 3.6 (Figure 12). From 2008-2010, there were 25 reported cases of pertussis with an incidence rate of 3.0 (5.5 for PA; 6.3 for U.S.) compared to 53 cases from 2007-2009 with a rate of 6.3.

Figure 12. Pertussis Cases, 2003-2010



## Respiratory Syncytial Virus

*Respiratory syncytial virus* (RSV) is the most common cause of bronchiolitis and pneumonia in children under 1 year of age in the United States. Most children are infected with the virus by their second birthday but only a small percentage experience severe disease.

In 2010, there were 188 reported cases of RSV in Erie County compared to 194 cases in 2009. Of the 188 cases, 123 (65%) were in infants less than one year of age and 41 (22%) were in children 1 year of age. From 2008-2010, there were 613 reported cases of RSV for an average of 204 cases per year compared to 567 cases from 2007-2009 for an average of 189 cases per year.

## Rubella (German Measles)

Rubella is a vaccine-preventable viral disease that causes fever and rash. Rubella can cause birth defects in pregnant women who become infected. There were no reported cases of rubella in Erie County from 2003 to 2010.

## Salmonellosis

Salmonellosis is an infection caused by *Salmonella* bacteria. Symptoms are diarrhea, fever, and abdominal pain. Most infected persons recover without treatment but in some persons the diarrhea may be severe enough to require hospitalization. Salmonella is passed via the fecal-oral route from the feces of animals or humans to other animals or humans.

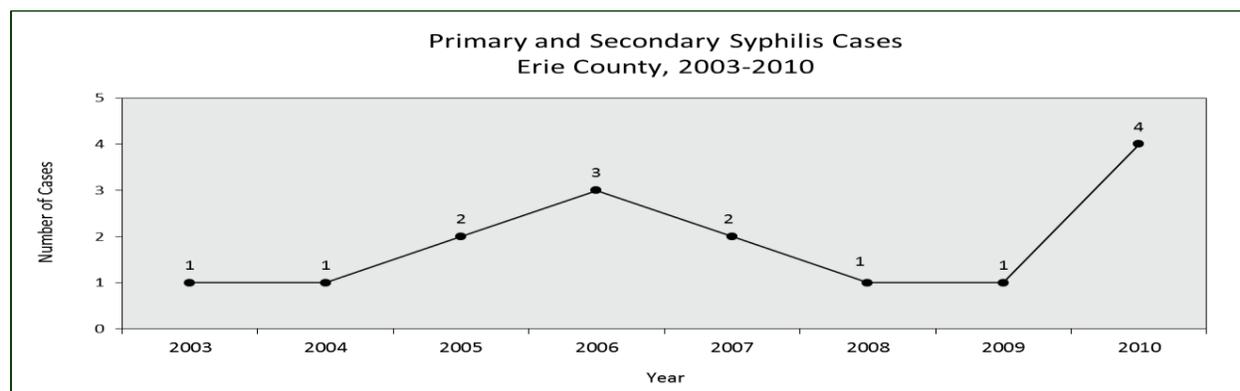
In 2010, there were 84 cases of salmonellosis reported in Erie County for a crude incidence rate of 30.0 cases per 100,000 (15.1 for PA; 17.9 for U.S.) compared to 35 cases in 2009 with a rate of 12.5. From 2008-2010, there were 154 reported cases of salmonellosis with an incidence rate of 18.3 (14.4 for PA; 16.8 for U.S.) compared to 99 cases from 2007-2009 for a rate of 11.8.

## Syphilis

Syphilis is a sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum*. Syphilis is passed from person to person through direct contact with a syphilis sore. Sores occur on the external genitals, vagina, anus, or in the rectum but also can occur on the lips and in the mouth. Even without treatment, these symptoms eventually disappear but the infection remains in the body. This is called latent syphilis and can last for years.

**Primary and Secondary Syphilis** In 2010, there were 4 cases of primary and secondary syphilis reported in Erie County for a crude incidence rate of 1.4 (2.9 for PA; 4.5 for U.S.) compared to 1 case in 2009 with a rate of 0.4 (Figure 13). From 2008-2010, 6 cases were reported for an average annual crude incidence rate of 0.7 cases per 100,000 (2.6 for PA; 4.5 for U.S.). From 2007-2009, there were 4 cases of primary and secondary syphilis for a crude incidence rate of 0.5. The Healthy People 2020 Goals are 1.4 cases per 100,000 females and 6.8 cases per 100,000 males.

Figure 13. Primary and Secondary Syphilis Cases, 2003-2010



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**Early Latent Syphilis** In 2010, 2 cases of early latent syphilis were reported in Erie County for a crude incidence rate of 0.7 (2.8 for PA; 4.4 for U.S.). No cases were reported in 2009. From 2008-2010, 2 cases were reported for an average annual crude incidence rate of 0.2 cases per 100,000 (2.7 for PA). From 2007-2009, there were 5 cases of early latent syphilis for a crude incidence rate of 0.6.

**Late and Late Latent Syphilis** In 2010, 1 case of late and late latent syphilis was reported in Erie County for a crude incidence rate of 0.4 cases per 100,000 (2.1 for PA) compared to 4 cases reported in 2009 with a rate of 1.4. From 2008-2010, 6 cases were reported for an average annual crude incidence rate of 0.7 (2.2 for PA; 5.9 for U.S.). From 2007-2009, there were 5 cases of late and late latent syphilis for a crude incidence rate of 0.6.

### **Syphilis, Congenital**

Congenital syphilis occurs when a pregnant woman who has syphilis passes the disease to her baby in utero.

There was 1 reported case of congenital syphilis in Erie County in 2010 for a crude incidence rate of 0.4 per 100,000 (0.0 for PA; 0.1 for U.S.). No cases were reported in 2009. The last reported case occurred in 1998. The Healthy People 2020 Goal is 9.1 per 100,000 live births.

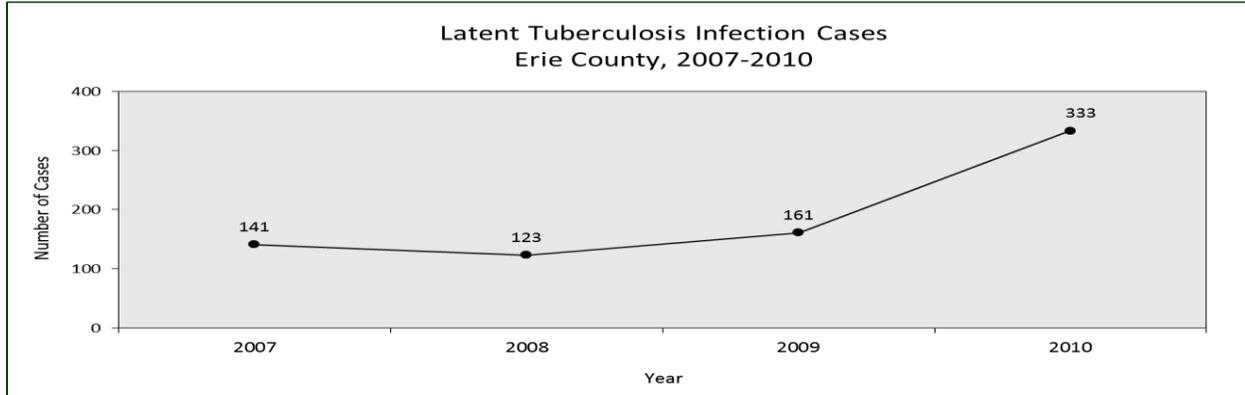
### **Tuberculosis**

Tuberculosis (TB) is a mycobacterial disease that is spread from person to person through the air. TB usually affects the lungs and can result in death if not treated.

**Active Tuberculosis** In 2010, there were 5 cases of tuberculosis disease reported in Erie County for a crude incidence rate of 1.8 cases per 100,000 (1.9 for PA; 3.7 for U.S.) compared to 4 cases in 2009 with a rate of 1.4. From 2008-2010, there were 13 reported cases of tuberculosis with an average annual incidence rate of 1.5 (2.3 for PA; 3.9 for U.S.) compared to 14 cases from 2007-2009 with a rate of 1.7. The Healthy People 2020 Goal is 1.0 new case per 100,000 population.

**Latent Tuberculosis Infection (LTBI)** In 2010, there were 333 cases of LTBI reported in Erie County compared to 161 cases in 2009, 123 in 2008, and 141 in 2007 (Figure 14).

Figure 14. Latent Tuberculosis Infection Cases, 2007-2010



### Varicella zoster (Chickenpox)

Chickenpox is a vaccine-preventable disease caused by infection with the *Varicella zoster* virus. Symptoms include fever and an itchy skin rash of blister-like lesions.

In 2010, there were 16 cases of chickenpox reported in Erie County for a crude incidence rate of 5.7 cases per 100,000 (9.1 for PA; 5.1 for U.S.) compared to 38 cases in 2009 with a rate of 13.6. From 2008-2010, there were 132 reported cases of chickenpox with an annual average incidence rate of 15.7 (13.6 for PA; 21.8 for U.S.) compared to 284 cases from 2007-2009 for a rate of 33.9.

### West Nile Virus

West Nile virus is transmitted to humans by mosquitoes. Most infected individuals have no symptoms, about 20% develop mild symptoms (West Nile fever), and less than 1% develop a neurological infection (West Nile encephalitis).

No cases of West Nile illness were reported for Erie County in 2010. There was one reported case of West Nile fever in 2004 and one reported case of West Nile encephalitis in 2003.

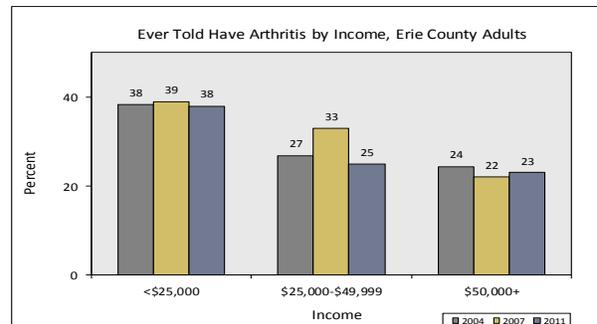
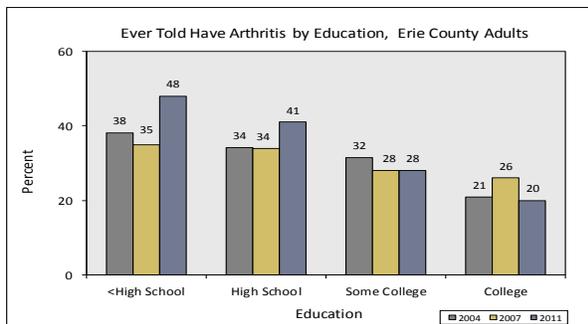
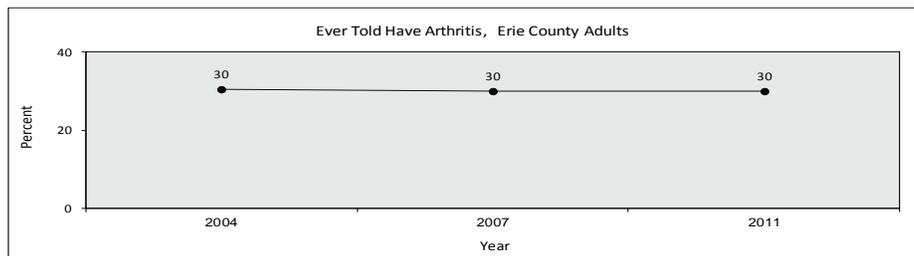
# Chronic Diseases and Conditions

## Arthritis

Arthritis is one of the most common health conditions among adults and a primary cause of disability. The Centers for Disease Control and Prevention (CDC) estimates that over 50 million American adults have self-reported doctor-diagnosed arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia and expect this number to rise to 67 million by the year 2030.

**Arthritis Diagnosis** Based on the Behavioral Risk Factor Surveillance Survey (BRFSS), the self-reported percentage of Erie County adults aged 18 and above who have ever been diagnosed with arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia remained constant at 30% in 2011 compared to 2007 and 2004 (Figure 1). This was lower than PA at 31% (2009) but higher than the U.S. at 26% (2009).

Figure 1. Lifetime Arthritis Prevalence, 2004-2011



Despite this lack of reported change for all adults, higher decreases in lifetime arthritis prevalence from 2007 to 2011 occurred among those with household income of \$25,000-\$49,999 (-8%), college graduates (-6%), and age 65 and above (-5%) (Table 1).

Higher percentage point increases were seen for those with less than a high school education (+13%) and high school graduates (+7%).

In 2011, differences in prevalence were seen among demographic groups. Significantly higher percentages were seen for both those with less than a high school education (48%) and high school graduates (41%) compared with other education groups, for those with household income below \$25,000 (38%) compared with other income groups, and for females (35%) compared with males. In 2011, 31% of non-Hispanic White, 20% of non-Hispanic Black, and 17% of Hispanic adults reported ever being diagnosed with arthritis. Lifetime arthritis prevalence increased with increasing age and decreased with increasing income. The highest prevalence of lifetime arthritis was seen for age 65 and above (61%) followed by those with less than a high school education (48%), high school graduates (41%), and age 45-64 (41%).

**Table 1. Lifetime Arthritis Prevalence, 2007 & 2011**

Ever Told Have Arthritis, Rheumatoid Arthritis, Gout, Lupus, or Fibromyalgia Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	PA 2009
		CI		CI		
All Adults	30%	28% – 34%	30%	28% – 33%	0%	31%
<u>Gender</u>						
Male	26%	22% – 30%	25%	22% – 29%	-1%	27%
Female	35%	31% – 39%	35%	31% – 39%	0%	35%
<u>Age</u>						
18-29	5%	2% – 12%	4%	2% – 6%	-1%	8%
30-44	15%	10% – 20%	15%	11% – 19%	0%	18%
45-64	37%	32% – 42%	41%	37% – 46%	4%	39%
65+	66%	59% – 71%	61%	54% – 67%	-5%	57%
<u>Education</u>						
<High School	35%	23% – 48%	48%	37% – 59%	13%	42%
High School	34%	30% – 39%	41%	36% – 46%	7%	37%
Some College	28%	22% – 34%	28%	24% – 33%	0%	28%
College Graduate	26%	21% – 31%	20%	16% – 24%	-6%	24%
<u>Income</u>						
<\$25,000	39%	33% – 46%	38%	32% – 43%	-1%	NA
\$25,000-\$49,999	33%	28% – 39%	25%	20% – 30%	-8%	33%
\$50,000+	22%	18% – 26%	23%	19% – 27%	1%	NA
<u>Race/Ethnicity</u>						
White, non-Hispanic	31%	28% – 34%	31%	28% – 34%	0%	33%
Black, non-Hispanic	NA		20%	9% – 32%		27%
Hispanic	NA		17%	3% – 30%		26%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Arthritis Limitations** In 2011, 43% (42% in 2004) of Erie County adults diagnosed with arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia reported being limited in any of their usual activities because of arthritis or joint symptoms. This was higher than PA at 42% (2009), the U.S. at 42% (2007-2009), and the Healthy People 2020 goal of 35.5%.

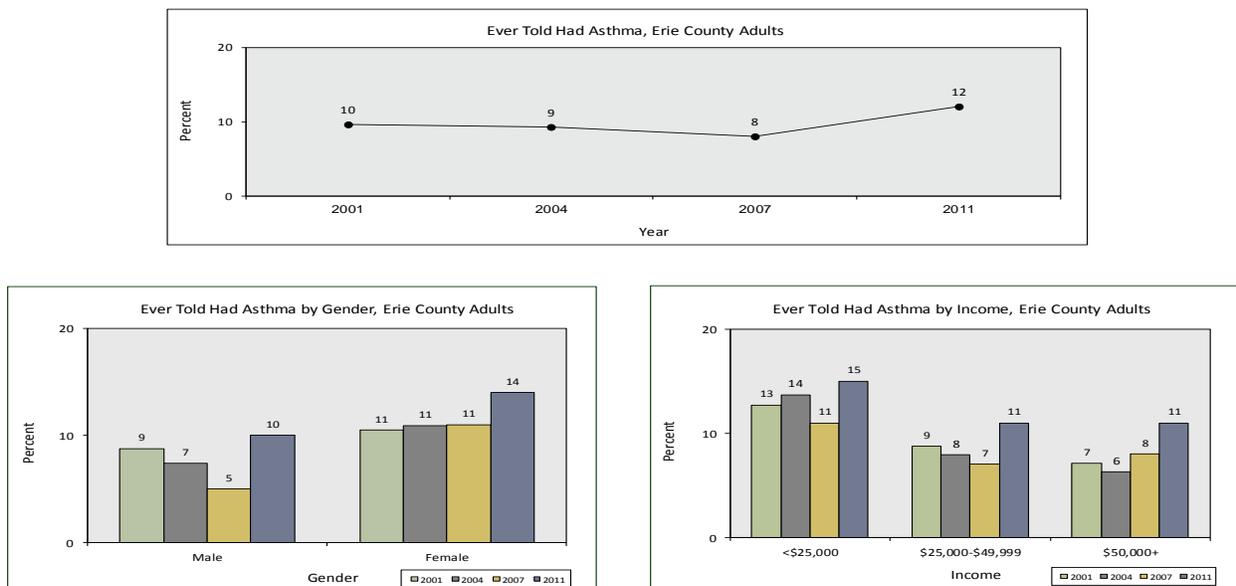
**Children and Youth** During the 2008-2009 school year, 0.23% (0.16% for PA) of Erie County students (grades K-12) had a medical diagnosis of arthritis or rheumatic disease compared to 0.15% in 2007-2008 (1.05% for PA), and 0.17% in 2006-2007 (0.17% for PA).

## Asthma

According to the CDC, the prevalence of asthma has reached a national high. Similar trends are seen among adults in Pennsylvania and Erie County. Identified risk factors are young age (0-17 years), female sex, multiple-race, Puerto Rican ethnicity, and family income below the poverty level.

**Lifetime Prevalence** Based on the BRFSS, the self-reported asthma lifetime prevalence (ever diagnosed with asthma) for Erie County adults aged 18 and above increased significantly to 12% in 2011 compared to 8% in 2007 (Figure 2). This was lower than PA at 14% (2010) and the U.S. at 14% (2010).

Figure 2. Lifetime Asthma Prevalence, 2001-2011



From 2007 to 2011, an increase in asthma diagnosis occurred for all demographic groups. A significant increase was seen among high school graduates (6% to 13%, respectively) and non-

Hispanic Whites (8% to 12%, respectively) (Table 2). Higher percentage point increases were seen for those with less than a high school education (+8%) and ages 18-29 (+6%) and 30-44 (+6%).

In 2011, differences in prevalence were seen within education groups, income groups, and gender. A lower percentage was seen for age 65 and above (8%) compared with other age groups while higher percentages were seen for less than a high school education (19%), household income below \$25,000 (15%), and females (14%). The highest lifetime asthma prevalence was seen for Hispanic adults (24%) while 6% of non-Hispanic Black adults reported ever being diagnosed with asthma. The prevalence of lifetime asthma decreased with increasing age, increasing education, and increasing income.

**Table 2. Lifetime Asthma Prevalence, 2007 & 2011**

Ever Told Had Asthma Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	8%	7% - 10%	12%	10% - 14%	4%	***	14%
<u>Gender</u>							
Male	5%	3% - 8%	10%	7% - 12%	5%		12%
Female	11%	9% - 14%	14%	12% - 17%	3%		16%
<u>Age</u>							
18-29	11%	6% - 20%	17%	13% - 22%	6%		20%
30-44	8%	5% - 11%	14%	10% - 18%	6%		13%
45-64	9%	7% - 12%	10%	7% - 13%	1%		14%
65+	6%	3% - 11%	8%	5% - 12%	2%		10%
<u>Education</u>							
<High School	11%	5% - 23%	19%	10% - 27%	8%		20%
High School	6%	4% - 10%	13%	10% - 16%	7%	***	12%
Some College	11%	8% - 17%	13%	9% - 16%	2%		15%
College Graduate	8%	5% - 12%	10%	7% - 13%	2%		13%
<u>Income</u>							
<\$25,000	11%	7% - 17%	15%	11% - 19%	4%		NA
\$25,000-\$49,999	7%	4% - 10%	11%	7% - 14%	4%		15%
\$50,000+	8%	5% - 11%	11%	8% - 14%	3%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	8%	6% - 10%	12%	10% - 14%	4%	***	12%
Black, non-Hispanic	NA		6%	0% - 13%			15%
Hispanic	NA		24%	9% - 40%			18%

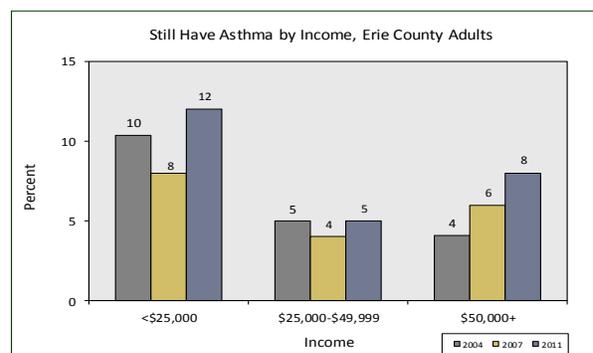
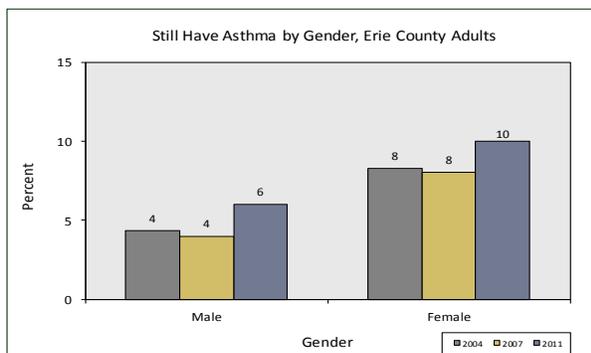
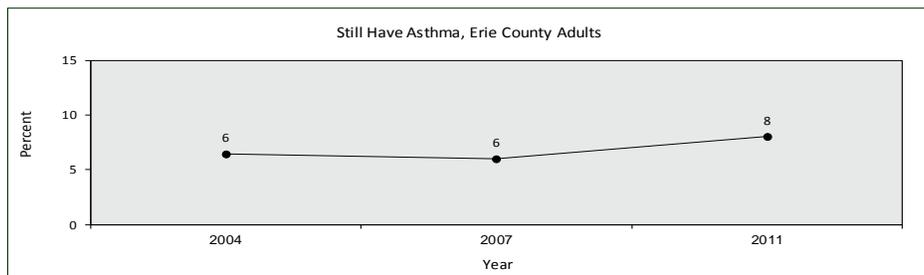
Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Current Asthma Prevalence** Based on the BRFSS, the current asthma prevalence (still have asthma) among Erie County adults aged 18 and above increased to 8% in 2011 compared to 6% in 2007 and 6% in 2004 (Figure 3). This was lower than PA at 10% (2010) and the U.S. at 9% (2010).

From 2007 to 2011, higher percentage point increases were seen for age 30-44 (+4%), high school graduates (+4%), and those with household income below \$25,000 (+4%).

In 2011, differences in prevalence were seen within education groups, income groups, and gender (Table 3). Comparatively higher percentages were seen for those with less than a high school education (12%), those with household income below \$25,000 (12%), females (10%), age 18-29 (10%), and age 30-44. In 2011, 8% of non-Hispanic White, 6% of non-Hispanic Black, and 18% of Hispanic adults had asthma. In 2011, the highest current asthma prevalence was seen for Hispanic adults (18%). Asthma prevalence decreased with increasing age, increasing education, and increased income.

**Figure 3. Current Asthma Prevalence, 2004-2011**



**Table 3. Current Asthma Prevalence, 2007 & 2011**

Still Have Asthma Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	6%	5% - 8%	8%	6% - 9%	2%		10%
<u>Gender</u>							
Male	4%	2% - 7%	6%	4% - 8%	2%		8%
Female	8%	6% - 11%	10%	7% - 12%	2%		12%
<u>Age</u>							
18-29	7%	3% - 16%	10%	7% - 14%	3%		13%
30-44	6%	3% - 9%	10%	6% - 13%	4%		9%
45-64	6%	4% - 9%	7%	4% - 9%	1%		11%
65+	5%	2% - 10%	5%	2% - 7%	-1%		8%
<u>Education</u>							
<High School	11%	5% - 23%	12%	5% - 19%	1%		15%
High School	5%	3% - 8%	9%	7% - 12%	4%		10%
Some College	8%	5% - 12%	7%	4% - 10%	-1%		11%
College Graduate	5%	3% - 8%	7%	4% - 9%	2%		9%
<u>Income</u>							
<\$25,000	8%	5% - 14%	12%	8% - 15%	4%		NA
\$25,000-\$49,999	4%	3% - 7%	5%	3% - 8%	1%		9%
\$50,000+	6%	4% - 9%	8%	5% - 11%	2%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	5%	4% - 7%	8%	6% - 9%	3%		9%
Black, non-Hispanic	NA		6%	0% - 13%			12%
Hispanic	NA		18%	4% - 32%			11%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

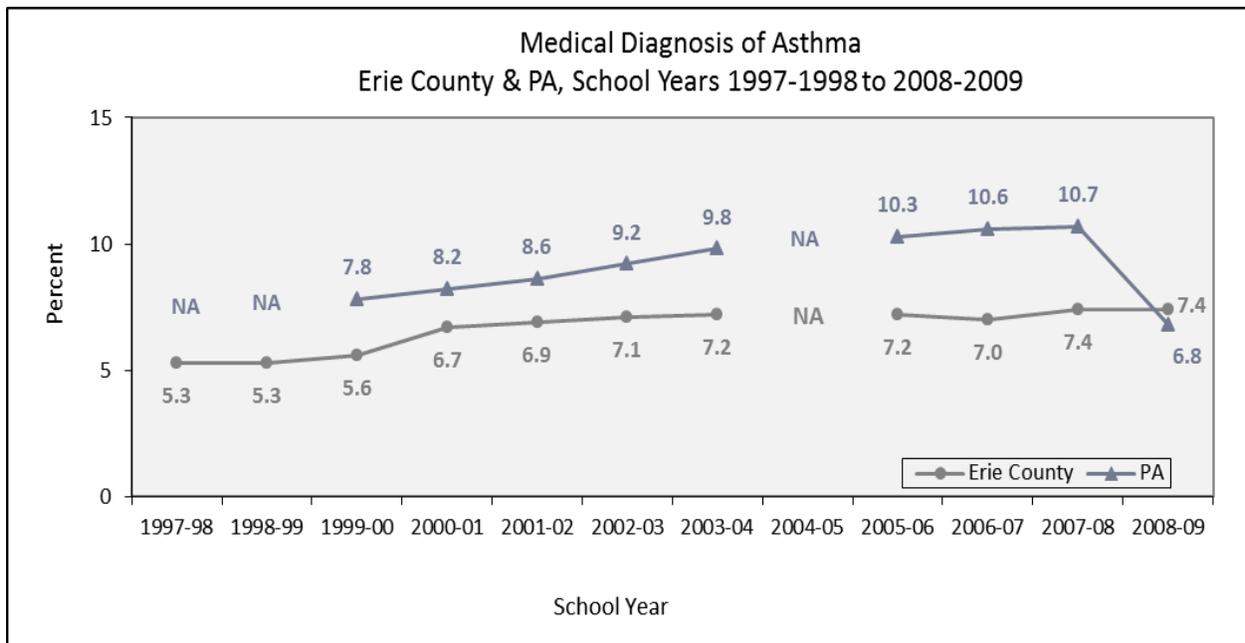
**Children and Youth** As part of the adult BRFSS, two asthma questions focus on children in the household. In 2011, the lifetime asthma prevalence for Erie County children under age 18 remained at 9% when compared to 2004 and 2001. This was lower than 14% for PA (2010) and 13% for the U.S. (2010). In 2011, the percentage of households with children under age 18 who were ever diagnosed with asthma remained stable at 15% (17% in 2007; 15% in 2004 and 2001).

In 2011, the current asthma prevalence for Erie County children under age 18 remained at 7% when compared to 2004 and 2001. This was lower than 10% for PA (2010) and 8% for the U.S.

(2010). The percentage of households with children under age 18 who currently have asthma remained relatively stable at 12% (13% in 2007; 11% in 2004 and 2001).

During the 1999-2000 school year, current asthma prevalence reported for Erie County students (grades K-12) was 5.6% (7.8% for PA) (Figure 4, Table 4). This increased to 7.1% during the 2002-2003 school year and has remained stable since then.

Figure 4. Student Asthma Prevalence, School Years 1997-1998 to 2008-2009



Limited data is available for individual school districts within Erie County. For the 2006-2007 school year, GECAC Community Charter School and Perseus House Charter School of Excellence reported the highest percentage of students with a medical diagnosis of asthma at 15.2% and 14.4%, respectively, followed by the Fairview School District at 10.6% (Table 4). During this same time, Wattsburg Area School District, Northwestern School District, and Corry Area School District reported the lowest percentage of students with a medical diagnosis of asthma at 3.0%, 3.4%, and 3.7%, respectively.

**Table 4. Childhood Asthma Prevalence by School District, School Years 1997-1998 to 2008-2009**

Students* with Medical Diagnosis of Asthma, Grades K-12 Erie County & PA, School Years 1997-1998 to 2008-2009												
	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
	%	%	%	%	%	%	%	%	%	%	%	%
<b>Schools and School Districts</b>												
Corry Area School District	4.3	3.5	4.0	4.1	3.9	4.8	6.6	NA	5.5	3.7	NA	NA
Erie City School District	6.3	6.3	6.6	8.1	7.4	8.3	8.4	NA	7.9	8.6	NA	NA
Fairview School District	6.4	6.2	6.3	6.0	6.2	5.8	5.8	NA	8.1	10.6	NA	NA
Fort Leboeuf School District	5.8	5.6	5.9	5.5	7.9	7.0	7.3	NA	8.2	7.3	NA	NA
General McLane School District	5.7	5.0	7.2	19.0	18.3	18.0	11.4	NA	6.4	6.3	NA	NA
Girard School District	4.8	4.7	5.3	3.7	6.7	6.0	4.9	NA	7.1	6.8	NA	NA
Harbor Creek School District	3.7	4.1	3.8	4.3	4.9	6.6	9.1	NA	4.6	7.3	NA	NA
Iroquois School District	5.3	5.8	5.7	5.8	6.3	6.0	5.9	NA	6.2	6.0	NA	NA
Millcreek Township School District	4.7	4.5	4.4	5.0	5.2	4.7	5.7	NA	7.1	6.2	NA	NA
North East School District	4.4	5.4	4.6	4.6	4.3	4.2	3.3	NA	5.4	6.1	NA	NA
Northwestern School District	3.6	4.5	4.6	5.2	5.7	5.4	6.2	NA	7.1	3.4	NA	NA
Union City Area School District	4.5	5.1	5.6	4.9	6.8	7.3	7.7	NA	6.3	6.1	NA	NA
Wattsburg Area School District	5.0	5.2	4.7	5.2	5.3	6.3	6.4	NA	5.8	3.0	NA	NA
GECAC Community Charter School			11.4	9.1	8.5	12.6	10.3	NA	11.0	15.2	NA	NA
NWPA Collegiate Academy Charter School							8.3	NA	NA	NA	NA	NA
PA Global Academy Charter School							5.0	NA	NA	NA	NA	NA
Perseus House Charter School of Excellence							10.5	NA	14.1	14.4	NA	NA
Montessori Regional Charter School								NA	5.1	5.0	NA	NA
Erie County Total	5.3	5.3	5.6	6.7	6.9	7.1	7.2	NA	7.2	7.0	7.4	7.4
PA	NA	NA	7.8	8.2	8.6	9.2	9.8	NA	10.3	10.6	10.7	6.8

Note: \*Students with asthma in public and private/non-public schools combined, served by school districts, charter schools, and comprehensive vocational-technical schools; The count of students with this chronic condition is taken between March 15 and March 30; NA indicates that data is not available

## Cancer Prevalence

Earlier in this document (pp. 62-65), cancer incidence for Erie County was reported. This statistic provides a snapshot of annual cancer diagnoses within Erie County, but does not provide information about cancer survivors. Advances in early detection and treatment have increased the survival rate for individuals diagnosed with cancer. According to the American Cancer Society and the National Cancer Institute, the five-year survival rate for all cancers diagnosed between 2001 and 2007 was 67% and the number of survivors is expected to increase from the current estimate of 13.7 million to 18 million in 2022.

**Cancer Survivors** Based on the BRFSS, the self-reported complete (lifetime) prevalence of Erie County adults aged 18 and above who were ever told they had cancer was 12% in 2011 (Table 5). This was higher than 10% for PA (2009). U.S. values were not available. In 2011, a significant difference was seen between males (8%) and females (15%) as well as between ages 45-64 (14%) and 65 and above (32%). Overall, the percentage of individuals who reported a lifetime

cancer diagnosis increased with age, decreased with increasing education, and decreased with increasing income. In 2011, 12% of non-Hispanic White, 6% of non-Hispanic Black, and 3% of Hispanic adults were ever told they had cancer.

Table 5. Cancer Prevalence, 2007 & 2011

Ever Told Had Cancer Erie County Adult BRFSS, 2011					
	2007		2011	PA 2009	
		<u>CI</u>			
All Adults	NA		12%	10% - 13%	10%
<u>Gender</u>					
Male	NA		8%	6% - 10%	8%
Female	NA		15%	12% - 18%	12%
<u>Age</u>					
18-29	NA		2%	0% - 3%	1%
30-44	NA		2%	0% - 4%	3%
45-64	NA		14%	10% - 17%	10%
65+	NA		32%	25% - 38%	27%
<u>Education</u>					
<High School	NA		18%	10% - 26%	12%
High School	NA		14%	11% - 18%	11%
Some College	NA		10%	7% - 13%	8%
College Graduate	NA		9%	6% - 12%	10%
<u>Income</u>					
<\$25,000	NA		13%	9% - 17%	NA
\$25,000-\$49,999	NA		11%	8% - 15%	10%
\$50,000+	NA		11%	8% - 14%	NA
<u>Race/Ethnicity</u>					
White, non-Hispanic	NA		12%	10% - 14%	11%
Black, non-Hispanic	NA		6%	0% - 13%	4%
Hispanic	NA		3%	0% - 10%	5%

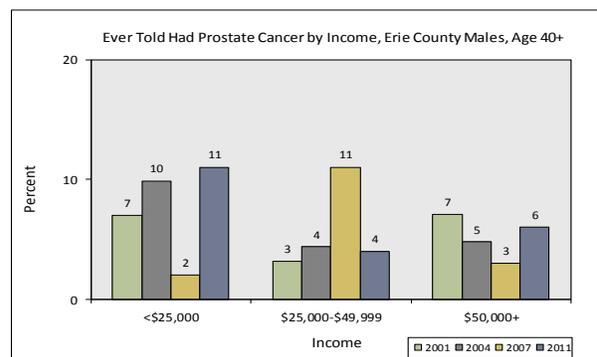
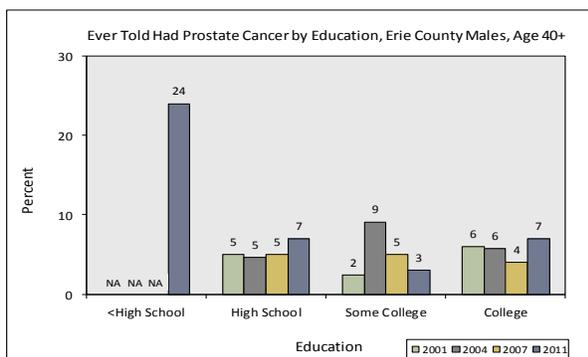
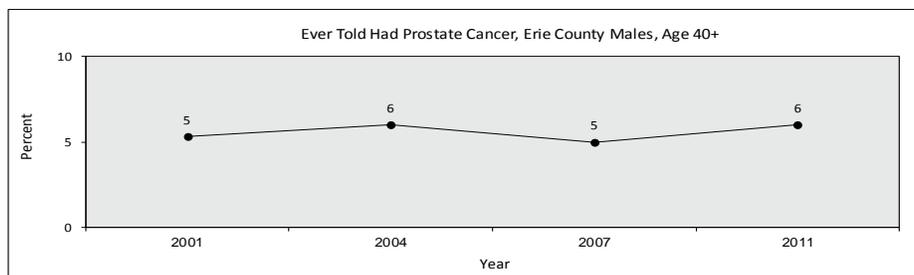
Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available

**Skin Cancer** Based on the BRFSS, the self-reported lifetime prevalence of Erie County adults aged 18 and above who were ever told they had skin cancer (melanoma, basal cell carcinoma, or squamous cell carcinoma) was 5% in 2011. Percentages were similar for most subgroups (3%-5%), but were higher for ages 45-64 (7%) and 65 and above (12%) and for those with less than a high school education (12%). Within race, 5% of non-Hispanic White and 2% of non-Hispanic Black adults reported ever being diagnosed with skin cancer. For Hispanic adults the percentage was 3%.

**Prostate Cancer** Based on the BRFSS, the self-reported lifetime prevalence of Erie County males age 40 and above who were ever told they had prostate cancer increased to 6% in 2011 compared to 5% in 2007 (Figure 5). In 2010, Pennsylvania reported prostate cancer diagnosis for men age 50+ at 7%. According to the National Cancer Institute, the five-year survival rate for all stages of prostate cancer diagnosed between 2001 and 2007 was nearly 100%.

In 2011, differences in prevalence were seen within age groups, income groups, and education groups. Overall, the percentage of individuals who reported a lifetime prostate cancer diagnosis increased with age. Comparatively higher percentages were seen for those with less than a high school education (24%) and those with household income below \$25,000 (11%). In 2011, 6% of non-Hispanic White adult males age 40 and above reported ever being told they had prostate cancer. Values were not available for non-Hispanic Black and Hispanic adult males.

Figure 5. Prostate Cancer Prevalence, 2001-2011



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## Cardiovascular Disease

According to the CDC, cardiovascular disease has an overall annual cost of \$444 billion and causes one in three deaths each year. In Erie County, diseases of the heart, including heart attack and chronic heart disease, was the leading cause of death for years 2008-2010 while cerebrovascular disease (stroke) was fourth. Inactivity, obesity, high blood pressure, cigarette smoking, high cholesterol, and diabetes are risk factors associated with heart attack, heart disease, and stroke.

**Heart Attack** Based on the BRFSS, the self-reported prevalence of Erie County adults aged 35 and above who were ever told they had a heart attack (myocardial infarction) increased to 6% in 2011 compared with 5% in 2007 and 5% in 2004 (Figure 6). This mirrored PA at 6% (2010), but was higher than the U.S. at 4% (2010).

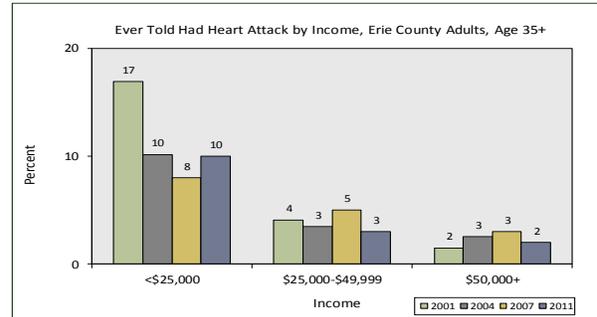
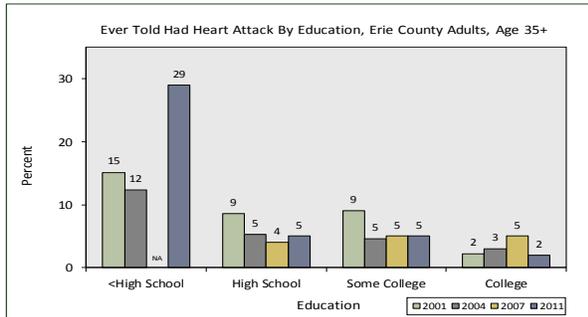
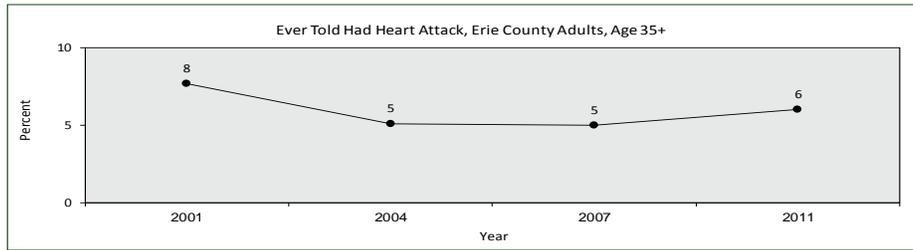
From 2007 to 2011, the highest percentage point decrease was seen in college graduates (-3%), while the highest percentage point increases were seen for age 35-44 (+2%) and those with household income below \$25,000 (+2%).

In 2011, differences in prevalence were seen within education groups, income groups, gender, and age groups (Table 6). Significantly higher percentages were seen for those with less than a high school education (29%) compared to other education groups, those with household income below \$25,000 (10%) compared to other income groups, and for age 65 and above (10%) compared with ages 35-44 and 45-54. A higher percentage was also seen for males (7%) compared with females.

In 2011, 5% of non-Hispanic White adults and <1% of non-Hispanic Black adults reported ever being told they had a heart attack. Values for Hispanic adults were not reported.

Heart attack prevalence increased with increasing age and decreased with increasing education and increasing income. The highest prevalence of heart attack was seen for those with less than a high school education followed by age 65 and above and those with household income below \$25,000.

**Figure 6. Heart Attack Prevalence, 2001-2011**



**Table 6. Heart Attack Prevalence, 2007 & 2011**

Ever Told Had a Heart Attack, Age 35+ Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	PA 2010
		CI		CI		
All Adults	5%	4% - 7%	6%	4% - 7%	1%	6%
<b>Gender</b>						
Male	6%	4% - 9%	7%	5% - 10%	1%	7%
Female	4%	3% - 6%	4%	2% - 6%	0%	4%
<b>Age</b>						
35-44	0%	0% - 2%	2%	0% - 4%	2%	1%
45-54	2%	1% - 5%	2%	0% - 5%	0%	3%
55-64	8%	1% - 7%	6%	3% - 9%	-2%	6%
65+	12%	8% - 17%	10%	6% - 13%	-2%	14%
<b>Education</b>						
<High School	NSR		29%	16% - 41%		10%
High School	4%	3% - 7%	5%	3% - 8%	1%	8%
Some College	5%	2% - 9%	5%	2% - 8%	0%	5%
College Graduate	5%	3% - 8%	2%	0% - 4%	-3%	3%
<b>Income</b>						
<\$25,000	8%	5% - 13%	10%	6% - 15%	2%	NA
\$25,000-\$49,999	5%	3% - 8%	3%	0% - 5%	-2%	6%
\$50,000+	3%	2% - 5%	2%	0% - 3%	-1%	NA
<b>Race/Ethnicity</b>						
White, non-Hispanic	5%	4% - 7%	5%	4% - 7%	0%	6%
Black, non-Hispanic	NA		0%	NCI		4%
Hispanic	NA		NSR			5%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Heart Disease** Based on the BRFSS, the prevalence of Erie County adults aged 35 and above who were ever told they had heart disease (including angina and coronary heart disease) decreased to 7% in 2011 compared with 8% in 2007 (Figure 7). This was higher than PA at 6% (2010) and the U.S. at 4% (2010).

From 2007 to 2011, heart disease prevalence decreased significantly among those with household income of \$25,000-\$49,999 (Table 7). A 7% percentage point decrease was seen for age 65 and above.

In 2011, differences in prevalence were seen within education groups, income groups, age groups, and gender. Comparatively higher percentages were seen for those with less than a high school education (19%), age 65 and above (12%), and males (10%). A comparatively lower percentage was seen for those with household income of \$25,000-\$49,999.

In 2011, 7% of non-Hispanic White and 4% of non-Hispanic Black adults reported ever being diagnosed with heart disease. Values for Hispanic adults were not reported. Heart disease increased with increasing age. The highest prevalence of heart disease was seen for those with less than a high school education followed by age 65 and above.

**Figure 7. Heart Disease Prevalence, 2004-2011**

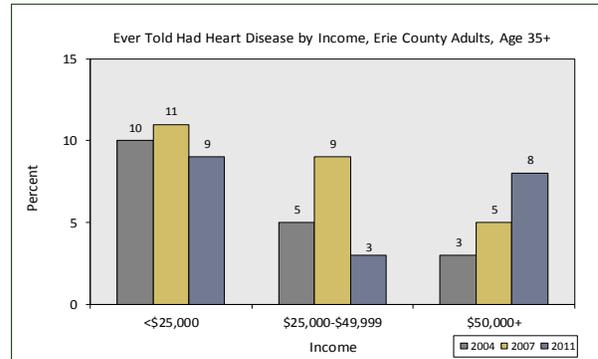
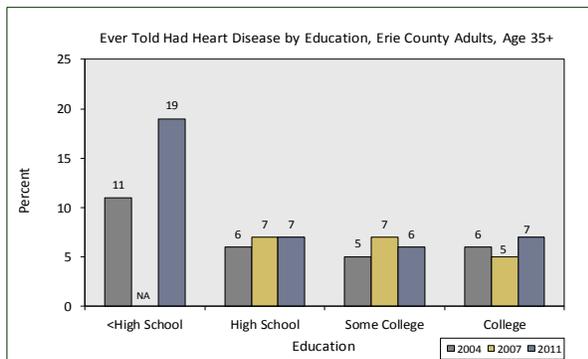
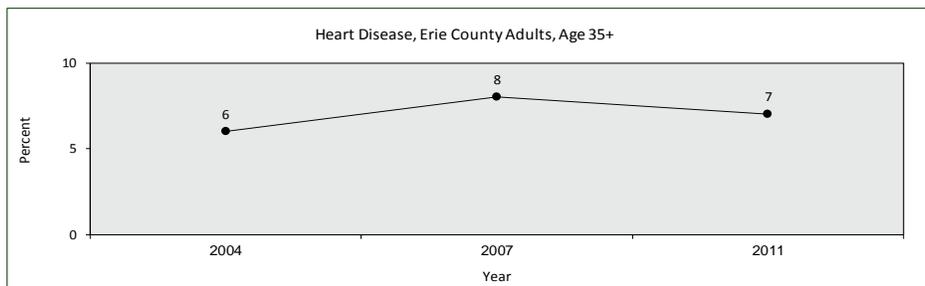


Table 7. Heart Disease Prevalence, 2007 & 2011

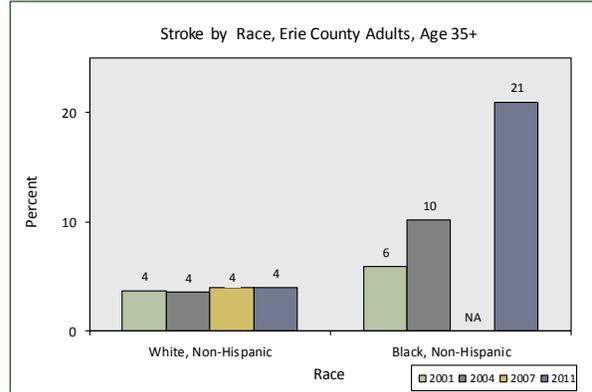
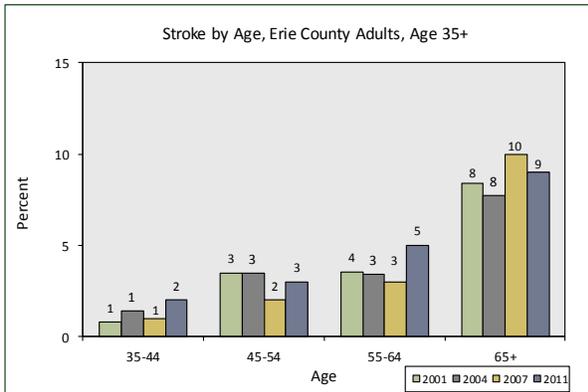
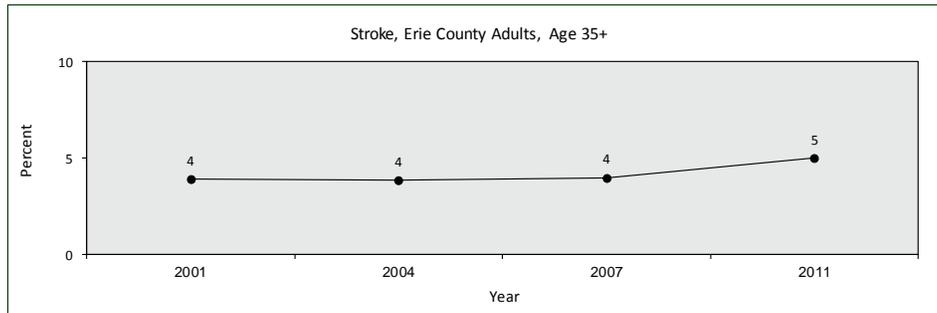
Ever Told Had Heart Disease, Age 35+ Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	8%	6% - 10%	7%	5% - 9%	-1%		6%
<u>Gender</u>							
Male	9%	6% - 12%	10%	7% - 13%	1%		7%
Female	7%	5% - 10%	5%	3% - 7%	-2%		4%
<u>Age</u>							
35-44	0%	0% - 3%	2%	0% - 4%	2%		0%
45-54	2%	1% - 5%	3%	0% - 6%	1%		2%
55-64	11%	7% - 17%	9%	5% - 12%	-3%		6%
65+	18%	13% - 24%	12%	7% - 16%	-7%		15%
<u>Education</u>							
<High School	NSR		19%	8% - 30%			10%
High School	7%	5% - 10%	7%	4% - 10%	0%		7%
Some College	7%	4% - 11%	6%	3% - 9%	-1%		6%
College Graduate	5%	3% - 9%	7%	4% - 11%	2%		4%
<u>Income</u>							
<\$25,000	11%	7% - 16%	9%	5% - 13%	-2%		NA
\$25,000-\$49,999	9%	6% - 13%	3%	1% - 6%	-6%	***	7%
\$50,000+	5%	3% - 8%	8%	5% - 11%	3%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	8%	6% - 10%	7%	5% - 9%	-1%		6%
Black, non-Hispanic	NA		4%	0% - 11%			5%
Hispanic	NA		NSR				5%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Stroke** Based on the BRFSS, the prevalence of Erie County adults aged 35 and above who were ever told they had a stroke increased to 5% in 2011 compared with 4% in 2007 and 4% in 2004 (Figure 8). This was higher than PA at 4% (2010) and the U.S. at 3% (2010).

From 2007 to 2011, the highest percentage point increase (+3%) was seen for those with some college education followed by age 55-64 and males (Table 8).

Figure 8. Stroke Prevalence, 2001-2011



In 2011, differences in prevalence were seen within education groups, income groups, age groups, and race. A significantly higher percentage was seen for those with less than a high school education (20%) compared to high school and college graduates. Higher percentages were also seen for those with household income below \$25,000 (7%) compared with other income groups and age 65 and above (9%) compared with other age groups.

In 2011, 4% of non-Hispanic White and 21% of non-Hispanic Black adults were ever told they had a stroke. Values for Hispanic adults were not reported. Stroke prevalence increased with increasing age and decreased with increasing education and increasing income. The highest prevalence of stroke was seen for non-Hispanic Black adults followed by those with less than a high school education.

**Table 8. Stroke Prevalence, 2007 & 2011**

Ever Told Had a Stroke, Age 35+ Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	PA 2010
		CI		CI		
All Adults	4%	3% - 6%	5%	4% - 7%	1%	4%
<u>Gender</u>						
Male	3%	2% - 6%	5%	3% - 7%	2%	4%
Female	5%	3% - 7%	6%	3% - 8%	1%	4%
<u>Age</u>						
35-44	1%	0% - 2%	2%	0% - 5%	1%	1%
45-54	2%	1% - 5%	3%	0% - 5%	1%	3%
55-64	3%	1% - 7%	5%	2% - 8%	2%	3%
65+	10%	6% - 15%	9%	5% - 13%	-1%	9%
<u>Education</u>						
<High School	NSR		20%	9% - 31%		8%
High School	5%	3% - 7%	6%	3% - 8%	1%	6%
Some College	3%	1% - 6%	6%	3% - 9%	3%	4%
College Graduate	2%	1% - 4%	2%	0% - 3%	-1%	2%
<u>Income</u>						
<\$25,000	8%	5% - 13%	7%	3% - 10%	-1%	NA
\$25,000-\$49,999	6%	4% - 10%	5%	2% - 8%	-1%	5%
\$50,000+	NA		1%	0% - 3%		NA
<u>Race/Ethnicity</u>						
White, non-Hispanic	4%	3% - 6%	4%	3% - 6%	0%	4%
Black, non-Hispanic	NA		21%	6% - 37%		7%
Hispanic	NA		NSR			5%

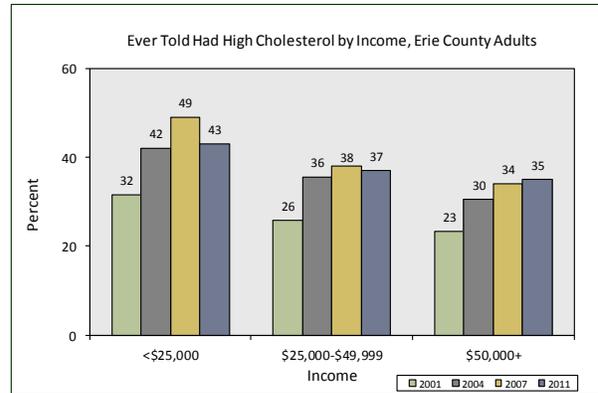
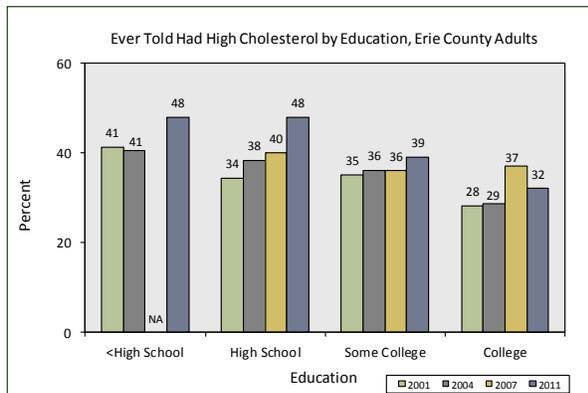
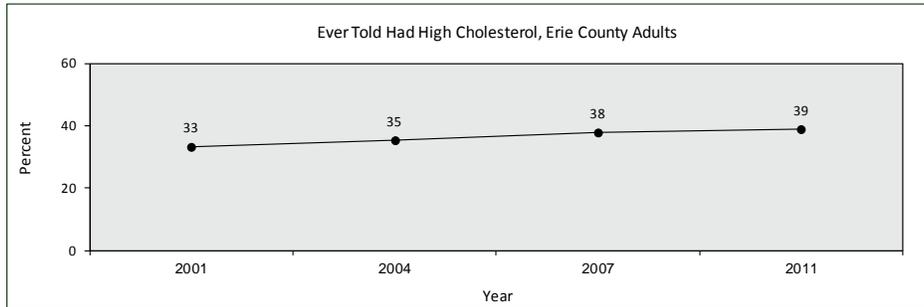
Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

## Cholesterol Blood Level and Awareness

High cholesterol is a major risk factor for coronary heart disease and heart attack. Current guidelines recommend that adults be screened for blood cholesterol levels and, if needed, to follow appropriate treatment plans and lifestyle changes to control these levels. From 2000 to 2010, the CDC reported a 27% decrease in the number of adults with high blood cholesterol.

**High Cholesterol** Based on the BRFSS, the self-reported prevalence of Erie County adults aged 18 and above who were ever told they had high blood cholesterol increased to 39% in 2011 compared with 38% in 2007 and 35% in 2004 (Figure 9). This mirrored PA at 39% (2009), but was higher than the U.S. at 37% (2010). The Healthy People 2020 Goal for high cholesterol diagnosis is 13.5% for adults aged 20 and above.

**Figure 9. Elevated Blood Cholesterol Prevalence, 2001-2011**



From 2007 to 2011, an increase in prevalence was seen for high school graduates (40% to 48%, respectively) and age 30-44 (20% to 25%, respectively). Decreases in prevalence were seen for age 65 and above (58% to 51%, respectively), those with household income below \$25,000 (49% to 43%, respectively), and college graduates (37% to 32%, respectively).

In 2011, differences in prevalence were seen within education groups, income groups, and age groups (Table 9). A significantly higher percentage was seen for ages 45-64 and 65 and above compared to ages 18-29 and 30-44. Higher percentages were seen for those with less than a high school education (48%), high school graduates (48%), and those with household income below \$25,000 (43%). In 2011, 39% of non-Hispanic White and 33% of non-Hispanic Black adults reported ever being told they had high blood cholesterol. Values for Hispanic adults were not reported.

The prevalence of high cholesterol increased with increasing age and decreased with increasing income. The highest percentage of high blood cholesterol diagnosis was seen for both those with less than a high school education and high school graduates followed by age 45-64 and those with household income below \$25,000.

**Table 9. Elevated Blood Cholesterol Prevalence, 2007 & 2011**

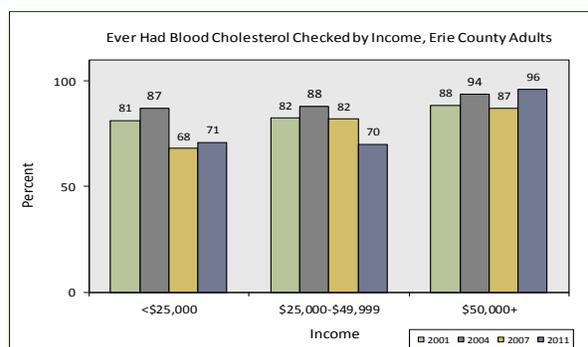
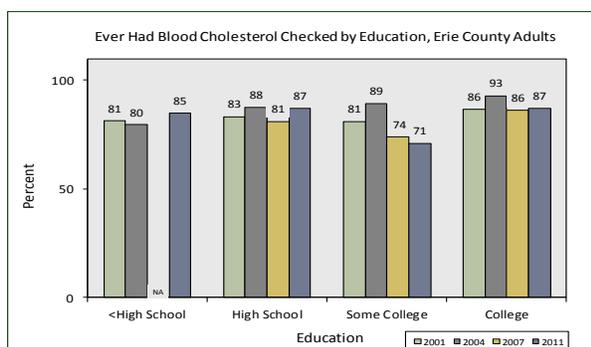
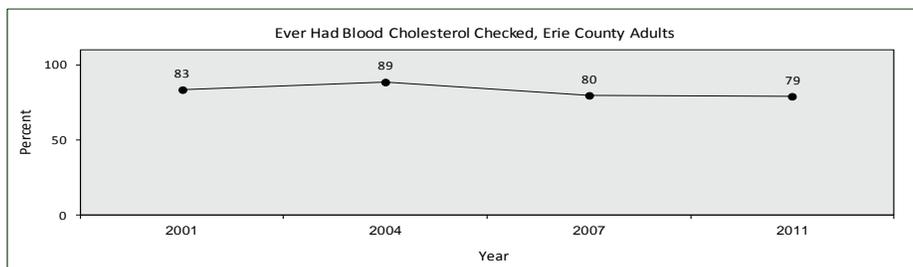
Ever Told Had High Blood Cholesterol Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	PA 2009
		CI		CI		
All Adults	38%	35% – 42%	39%	36% – 42%	1%	39%
<u>Gender</u>						
Male	39%	34% – 45%	41%	36% – 45%	2%	40%
Female	38%	33% – 42%	38%	33% – 42%	0%	38%
<u>Age</u>						
18-29	NA		15%	8% – 22%		14%
30-44	20%	15% – 26%	25%	19% – 31%	5%	27%
45-64	45%	40% – 50%	46%	41% – 51%	1%	44%
65+	58%	51% – 64%	51%	44% – 58%	-7%	55%
<u>Education</u>						
<High School	NSR		48%	35% – 62%		48%
High School	40%	35% – 46%	48%	42% – 53%	8%	45%
Some College	36%	30% – 44%	39%	33% – 45%	3%	36%
College Graduate	37%	31% – 44%	32%	27% – 38%	-5%	33%
<u>Income</u>						
<\$25,000	49%	42% – 57%	43%	36% – 49%	-6%	NA
\$25,000-\$49,999	38%	32% – 44%	37%	30% – 43%	-1%	44%
\$50,000+	34%	28% – 39%	35%	30% – 40%	1%	NA
<u>Race/Ethnicity</u>						
White, non-Hispanic	38%	35% – 42%	39%	36% – 43%	1%	40%
Black, non-Hispanic	NA		33%	18% – 49%		33%
Hispanic	NA		NSR			31%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Cholesterol Check** Based on the BRFSS, the prevalence of Erie County adults aged 18 and above who ever had their blood cholesterol checked decreased to 79% in 2011 compared with 80% in 2007 and 89% in 2004 (Figure 10). This was lower than PA at 82% (2009) and the U.S. at 81% (2009).

From 2007 to 2011, the prevalence of those who ever had their blood cholesterol checked decreased significantly for those with household income of \$25,000-\$49,999 (82% to 70%, respectively) and increased significantly for those with household income of \$50,000 and above (87% to 96%, respectively). Those with household income below \$25,000 saw an increase in this percentage (68% to 71%, respectively).

Figure 10. Blood Cholesterol Screening, 2001-2011



In 2011, differences in prevalence were seen within education groups and age groups. Significantly higher percentages were seen for ages 45-64 (95%) and 65 and above (96%) compared with other age groups and for those with household income of \$50,000 and above compared with other income groups. With the exception of age group 18-29 (42%), the lowest percentage for ever having blood cholesterol checked was seen for Hispanic adults (52%). In 2011, 80% of males, 79% of females, 80% of non-Hispanic White, and 75% of non-Hispanic Black adults reported ever having their blood cholesterol checked.

**Cholesterol Checked in Past Five Years** Based on the BRFSS, the prevalence of Erie County adults aged 18 and above who had their blood cholesterol checked in the past five years was 76% in 2011 compared with 76% in 2007 and 85% in 2004. This was lower than PA at 79% (2009), the U.S. at 77% (2010), and the Healthy People 2020 goal of 82.1%.

From 2007 to 2011, the prevalence of those who had their blood cholesterol checked in the past five years decreased significantly for those with household income of \$25,000-\$49,999 (79% to

66%, respectively) and increased significantly for those with household income of \$50,000 and above (81% to 91%, respectively) (Table 10). Those with household income below \$25,000 saw an increase in this percentage (63% to 68% in 2011, respectively).

In 2011, differences in prevalence were seen within education groups and age groups. Significantly lower percentages were seen for those with some college (67%) compared with all other education groups and lower for ages 18-29 (38%) and 30-44 (70%) compared with ages 45-64 and 65 and above. A significantly higher percentage was seen for those with household income of \$50,000 and above (91%) compared with other income groups. With the exception of age group 18-29 (38%), the lowest percentage for having blood cholesterol checked in the past five years was seen for Hispanic adults (52%). In 2011, 75% of males, 76% of females, 76% of non-Hispanic White adults, and 73% of non-Hispanic Black adults reported ever having their blood cholesterol checked in the past five years.

**Table 10. Five Year Blood Cholesterol Screening, 2007 & 2011**

Had Blood Cholesterol Checked In the Past 5 Years Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2009
		CI		CI			
All Adults	76%	72% – 79%	76%	73% – 78%	-1%		79%
<u>Gender</u>							
Male	72%	66% – 77%	75%	71% – 79%	3%		78%
Female	80%	75% – 83%	76%	72% – 79%	-4%		80%
<u>Age</u>							
18-29	36%	26% – 47%	38%	32% – 44%	2%		45%
30-44	72%	65% – 77%	70%	64% – 76%	-2%		75%
45-64	90%	87% – 93%	91%	88% – 94%	1%		90%
65+	94%	90% – 97%	96%	93% – 98%	2%		96%
<u>Education</u>							
<High School	NSR		82%	73% – 91%			74%
High School	78%	72% – 83%	83%	79% – 87%	5%		78%
Some College	71%	62% – 79%	67%	62% – 72%	-4%		77%
College Graduate	78%	72% – 83%	82%	77% – 86%	4%		81%
<u>Income</u>							
<\$25,000	63%	55% – 71%	68%	63% – 73%	5%		NA
\$25,000-\$49,999	79%	72% – 85%	66%	61% – 72%	-13%	***	79%
\$50,000+	81%	76% – 86%	91%	88% – 94%	10%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	77%	73% – 80%	76%	74% – 79%	-1%		80%
Black, non-Hispanic	NA		73%	60% – 85%			75%
Hispanic	NA		52%	33% – 71%			76%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

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## **Chronic Obstructive Pulmonary Disease (COPD)**

COPD is a term used to identify a group of lung diseases including emphysema and chronic bronchitis. Smoking is the primary risk factor for COPD. Asthma, occupational exposure to dust and chemicals, other air pollutants in the home and workplace, genetic factors, and recurrent respiratory infections are also linked to this disease.

Based on the BRFSS, the self-reported prevalence of Erie County adults aged 18 and above who were ever told they had COPD, emphysema, or chronic bronchitis was 7% in 2011. This was higher than the U.S. at 5% (2007-2009).

The percentage of diagnosed COPD was 7% for both males and females. Differences in prevalence were seen within age groups, education groups, and income groups. Overall, COPD prevalence increased with age: 18-29 (4%), 30-44 (2%), 45-64 (8%), and 65 and above (15%); decreased with increasing education: less than high school (17%), high school graduates (13%), some college (5%), and college graduates (2%); and decreased with increasing income: below \$25,000 (13%), \$25,000-\$49,999 (4%), and \$50,000 and above (5%). In 2011, 7% of non-Hispanic White, 2% of non-Hispanic Black, and 21% of Hispanic adults were ever told they had COPD, emphysema, or chronic bronchitis. Of all demographic groups, Hispanic adults had the highest percentage of diagnosed COPD at 21%.

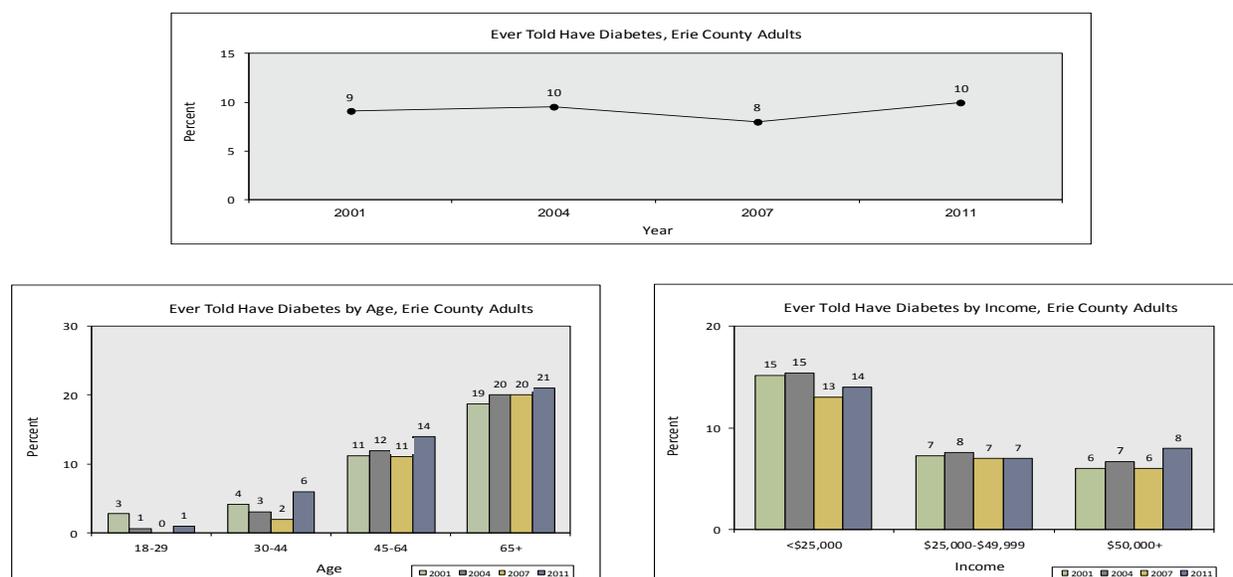
In Erie County, chronic lower respiratory disease was the third leading cause of death for years 2008-2010.

## Diabetes

Diabetes is the leading cause of kidney failure, lower limb amputations, and blindness and a major cause of heart disease and stroke. Approximately 90 to 95 percent of diagnosed diabetes cases are type 2. Although type 2 diabetes is primarily associated with age, risk factors also include overweight, inactivity, hypertension, familial history, high risk racial groups including African American, Hispanic or Latino ethnicity, a woman who had gestational diabetes during pregnancy, and a woman who had a baby weighing nine or more pounds at birth. In Erie County, diabetes was the seventh leading cause of death for years 2008-2010.

**Diabetes Diagnosis** Based on the BRFSS, the self-reported prevalence of Erie County adults aged 18 and above who were ever told they had diabetes increased to 10% in 2011 compared with 8% in 2007 (Figure 11). This mirrored PA at 10% (2010), but was higher than the U.S. at 9% (2010).

Figure 11. Diabetes Prevalence, 2001-2011



From 2007 to 2011, the percentage of those diagnosed with diabetes either increased or remained the same for all subgroups except those with less than a high school education (Table 11). This group experienced a 7% decrease (19% to 12%, respectively).

In 2011, differences in prevalence were seen within income groups and age groups. A significantly higher percentage was seen for ages 45-64 (14%) and 65 and above (21%) compared with other age groups. A comparatively higher percentage was seen for those with household income below \$25,000 (14%). In 2011, 10% of male, 10% of female, 10% of non-

Hispanic White, 8% of non-Hispanic Black, and 7% of Hispanic adults reported ever being told they had diabetes.

The highest prevalence of diabetes was seen for age 65 and above (21%).

**Table 11. Diabetes Prevalence, 2007 & 2011**

Ever Told Had Diabetes Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	PA 2010
		CI		CI		
All Adults	8%	7% – 10%	10%	8% – 12%	2%	10%
<u>Gender</u>						
Male	8%	6% – 11%	10%	8% – 13%	2%	11%
Female	9%	7% – 11%	10%	8% – 12%	1%	9%
<u>Age</u>						
18-29	0%	NCI – NCI	1%	0% – 2%	1%	2%
30-44	2%	1% – 4%	6%	3% – 8%	4%	4%
45-64	11%	8% – 14%	14%	10% – 17%	3%	12%
65+	20%	15% – 26%	21%	15% – 26%	1%	22%
<u>Education</u>						
<High School	19%	11% – 32%	12%	5% – 19%	-7%	17%
High School	9%	7% – 12%	14%	10% – 17%	5%	13%
Some College	7%	4% – 11%	10%	7% – 14%	3%	10%
College Graduate	6%	4% – 9%	7%	4% – 9%	1%	7%
<u>Income</u>						
<\$25,000	13%	9% – 17%	14%	10% – 18%	1%	NA
\$25,000-\$49,999	7%	4% – 10%	7%	4% – 10%	0%	12%
\$50,000+	6%	4% – 8%	8%	5% – 11%	2%	NA
<u>Race/Ethnicity</u>						
White, non-Hispanic	8%	6% – 10%	10%	9% – 12%	2%	13%
Black, non-Hispanic	NA		8%	1% – 16%		16%
Hispanic	NA		7%	0% – 16%		9%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Pre-Diabetes** Pre-diabetes is diagnosed as a higher than normal blood sugar level. Individuals with this condition have a greater risk of developing type 2 diabetes. In 2011, 6% of Erie County adults aged 18 and above had ever been told they had pre-diabetes.

Differences in prevalence were seen within age groups and gender. Comparatively higher percentages were seen for males (8%) and ages 45-64 (9%) and 65 and above (11%). In 2011, 5% of female, 7% of non-Hispanic White, 2% of non-Hispanic Black and 11% of Hispanic adults

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reported ever being told they had pre-diabetes. The highest prevalence of pre-diabetes (11%) was seen for age group 65 and above and for Hispanic adults.

**Children and Youth** Results from the SEARCH for Diabetes in Youth long term study indicate a 23% increase in type 1 diabetes and a 21% increase in type 2 diabetes among American youth under the age of twenty from 2001 to 2009. The overall crude prevalence of diabetes for this age group was 0.18% in 2001 while the annual incidence rate of diabetes mellitus (type 1 and type 2 combined) was 0.02% in 2003.

During the 2008-2009 school year, 0.32% (0.30% for PA) of Erie County students (grades K-12) had a medical diagnosis of type 1 diabetes. This prevalence remained relatively constant since 2005-2006. During the 2008-2009 school year, 0.09% (0.07% for PA) of Erie County students (grades K-12) had a medical diagnosis of type 2 diabetes compared with 0.07% in 2007-2008 (0.06% for PA), 0.03% in 2006-2007 (0.06% for PA), and 0.05% in 2005-2006 (0.05% for PA).

## **Hypertension**

Hypertension (high blood pressure) is associated with heart disease, stroke, and kidney failure. The CDC estimates that only 46% of adults age 18 and above with hypertension have their condition under control. This percentage drops even lower for those who don't have a regular source of medical care, who don't visit a health professional regularly, or who don't have health insurance.

**Hypertension Diagnosis** Based on the BRFSS, the self-reported prevalence of Erie County adults aged 18 and above who were ever told they had high blood pressure increased to 31% in 2011 compared with 28% in 2007 (Figure 12). This mirrored PA at 31% (2009), but was higher than the U.S. at 29% (2009) and the Healthy People 2020 goal of 26.9%. From 2007 to 2011, the percentage of those who were ever told they had high blood pressure increased significantly among males (28% to 36%, respectively), age 45-64 (30% to 40%, respectively), and those with household income of \$50,000 and above (21% to 29%, respectively) (Table 12).

In 2011, differences in prevalence were seen within gender, age groups, education groups, and income groups. Significantly higher percentages were seen for males (36%) compared with females, and for ages 45-64 (40%) and 65 and above (55%) compared with younger age groups. Comparatively higher percentages were seen for those with less than a high school education (41%), high school graduates (37%), and those with household income below \$25,000 (39%). In 2011, 27% of female, 31% of non-Hispanic White, 39% of non-Hispanic Black, and 24% of Hispanic adults reported ever being told they had high blood pressure.

Figure 12. Hypertension Prevalence, Erie County, 2001-2011

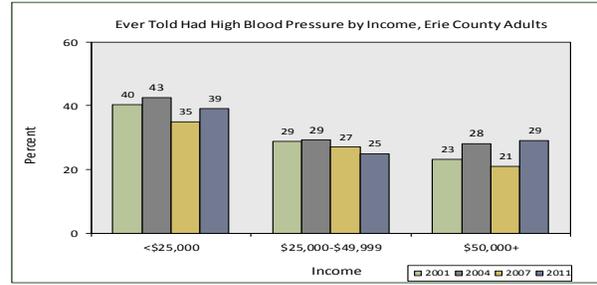
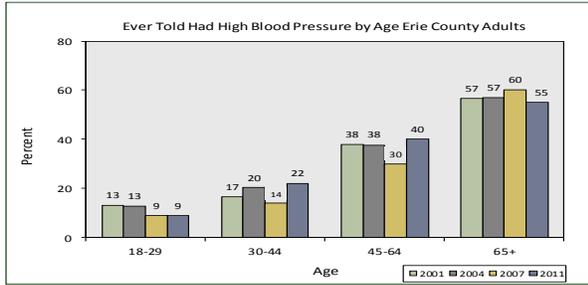
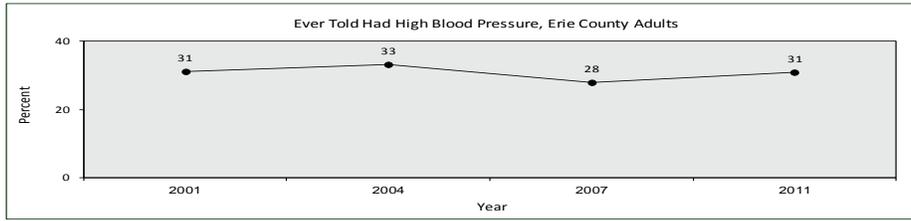


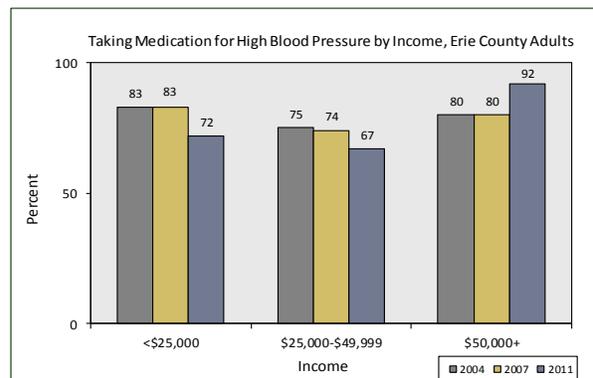
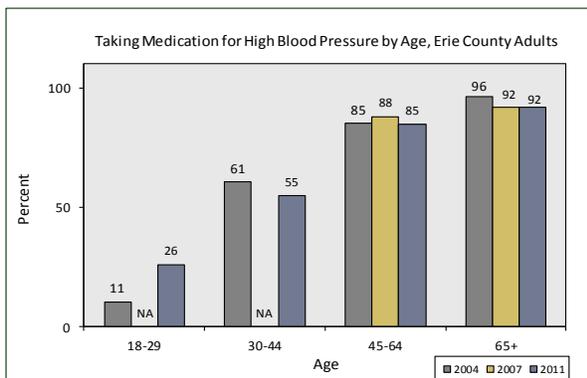
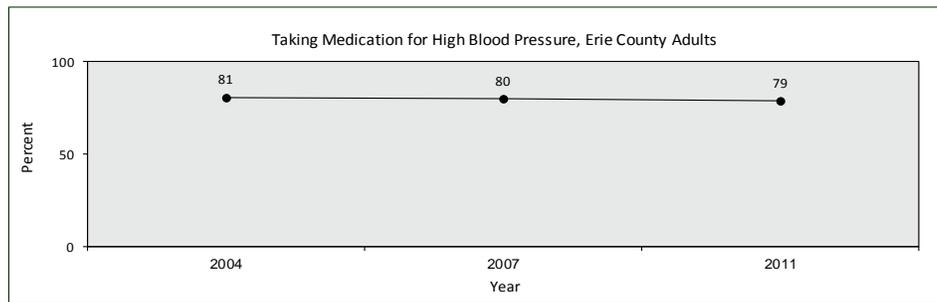
Table 12. Hypertension Prevalence, 2007 & 2011

Ever Told Have High Blood Pressure Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2009
		CI		CI			
All Adults	28%	25% – 30%	31%	29% – 34%	3%		31%
<u>Gender</u>							
Male	28%	23% – 32%	36%	32% – 40%	8%	***	32%
Female	27%	24% – 31%	27%	24% – 31%	0%		31%
<u>Age</u>							
18-29	9%	4% – 17%	9%	5% – 12%	0%		10%
30-44	14%	10% – 20%	22%	17% – 27%	8%		19%
45-64	30%	26% – 35%	40%	35% – 44%	10%	***	36%
65+	60%	53% – 66%	55%	49% – 62%	-5%		59%
<u>Education</u>							
<High School	38%	26% – 52%	41%	30% – 52%	3%		42%
High School	32%	27% – 37%	37%	32% – 42%	5%		37%
Some College	21%	16% – 27%	29%	25% – 34%	8%		30%
College Graduate	24%	19% – 29%	28%	23% – 33%	4%		24%
<u>Income</u>							
<\$25,000	35%	29% – 41%	39%	33% – 44%	4%		NA
\$25,000-\$49,999	27%	22% – 33%	25%	20% – 30%	-2%		34%
\$50,000+	21%	17% – 25%	29%	25% – 34%	8%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	28%	25% – 31%	31%	29% – 34%	3%		32%
Black, non-Hispanic	NA		39%	25% – 52%			38%
Hispanic	NA		24%	9% – 40%			19%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Medication Use** Based on the BRFSS, the prevalence of Erie County adults aged 18 and above who currently take medication for their high blood pressure decreased to 79% in 2011 compared with 80% in 2007 and 81% in 2004 (Figure 13). This was lower than PA at 80% (2009). Current U.S. values were not available.

**Figure 13. Hypertension Medication Use Prevalence, 2004-2011**



From 2007 to 2011, medication use decreased for those with household incomes below \$25,000 (83% to 72%, respectively) and \$25,000-\$49,999 (74% to 67%, respectively), but increased for those with household income of \$50,000 and above (80% to 92%, respectively).

In 2011, differences in prevalence were seen among demographic groups. Significantly higher percentages were seen for ages 45-64 (85%) and 65 and above (92%) compared with other age groups. Despite an overall low prevalence, use of hypertension medication for age group 18-29 increased from 11% in 2004 to 26% in 2011. Comparatively higher percentages were seen for age 65 and above (92%), those with household income of \$50,000 and above (92%), and high school graduates (90%). Comparatively lower percentages were seen for ages 18-29 (26%) and 30-44 (55%), non-Hispanic Black adults (63%), and those with household income of \$25,000-\$49,999 (67%). Among non-Hispanic White adults, 80% of those diagnosed with hypertension take medication to control it. Values for Hispanic adults were not reported.

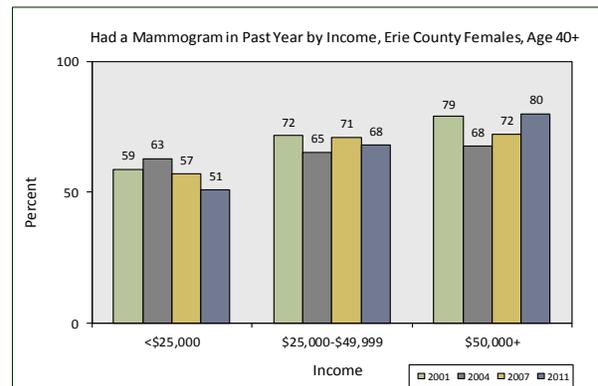
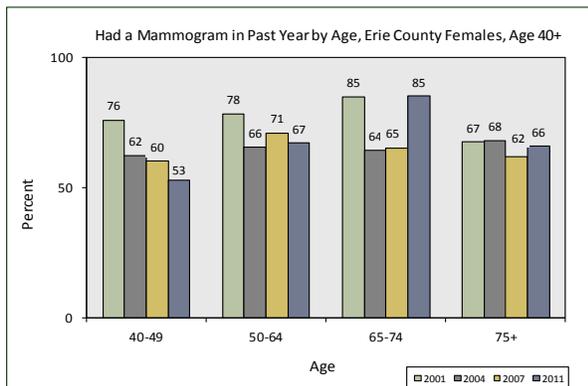
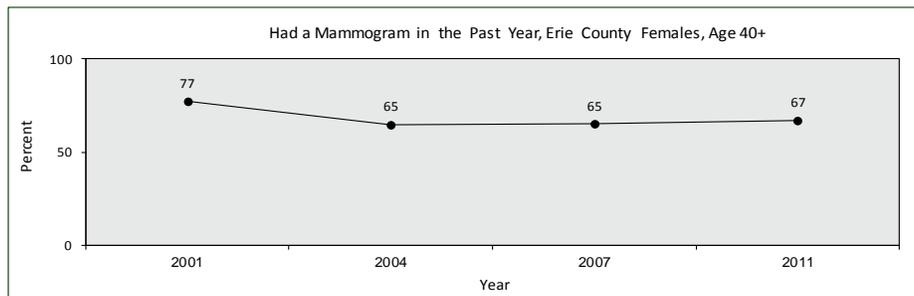
## Preventive Health Services

### Breast Cancer Screening

Breast cancer is the most frequently diagnosed cancer in women (excluding skin cancer) and is the second leading cause of cancer death in females. The five year survival rate for women whose cancer was detected early (still localized) is 99%. This rate drops to 84% once breast cancer reaches a regional stage (spread to nearby lymph nodes) and 23% if it is diagnosed at a distant stage (spread to distant lymph nodes or organs). Mammography is considered the most effective screening tool for early stage breast cancer. It detects 80%-90% of these cases.

**Mammogram** Based on the Behavioral Risk Factor Surveillance Survey (BRFSS), the self-reported percentage of Erie County females aged 40 and above who had a mammogram in the past year increased to 67% in 2011 compared with 65% in 2007 (Figure 1). This was higher than PA at 58% (2010).

Figure 1. Annual Mammogram Prevalence, 2001-2011



From 2007 to 2011, a significant increase in annual mammogram screening was seen among women aged 65-74. Increases occurred for women age 75 and above, women with a high school or college education, women with household income of \$50,000 and above, and non-

Hispanic White women aged 40 and above (Table 1). Decreases occurred for women ages 40-49 and 50-64, women with some college education, and women with household incomes below \$25,000 and \$25,000-\$49,999. The highest percentage of annual mammogram screening was 94% for women with less than a high school education followed by age 65-74 (85%) and women with household income of \$50,000 and above (80%). The lowest percentage was 51% for women with household income below \$25,000 followed by age 40-49 (53%).

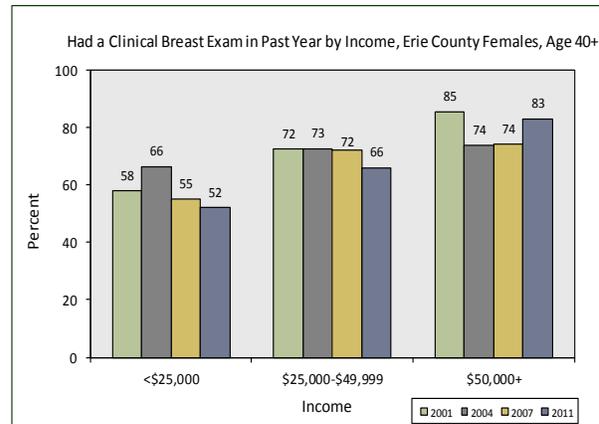
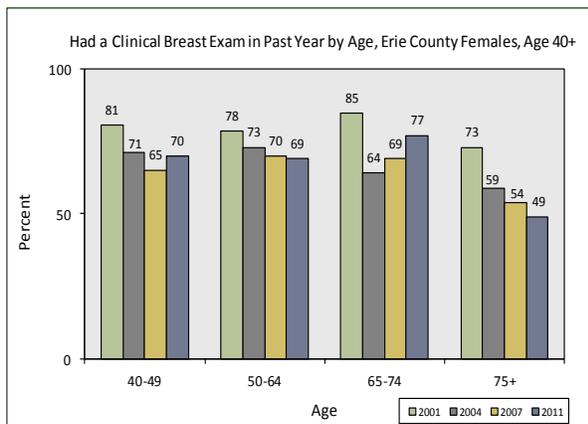
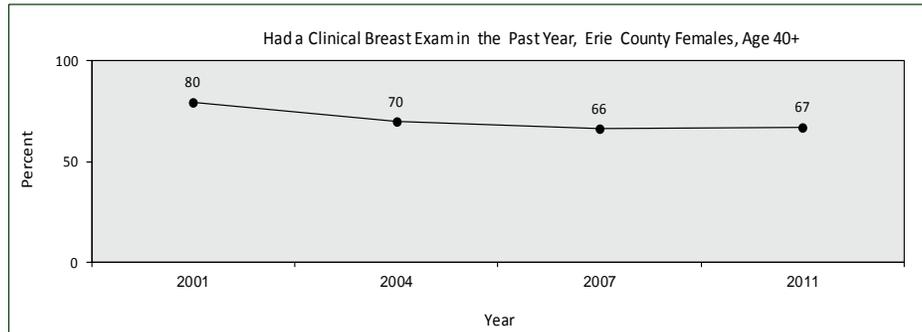
From 2001 to 2011, women aged 40-49 experienced a steady decline in annual mammogram screening (76% to 53%, respectively). In 2011, 67% of non-Hispanic White females aged 40 and above had an annual mammogram. Values were not reported for non-Hispanic Black and Hispanic females.

**Table 1. Annual Mammogram Prevalence, 2007 & 2011**

Had a Mammogram in the Past Year, Females, Age 40+ Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
Adult Females, Age 40+	65%	61% - 70%	67%	62% - 72%	2%		58%
<u>Age</u>							
40-49	60%	51% - 69%	53%	41% - 64%	-7%		52%
50-64	71%	64% - 77%	67%	60% - 74%	-4%		62%
65-74	65%	51% - 77%	85%	77% - 94%	20%	***	68%
75+	62%	51% - 72%	66%	54% - 78%	4%		54%
<u>Education</u>							
<High School	NSR		94%	86% - 100%			52%
High School	66%	60% - 72%	72%	65% - 79%	6%		57%
Some College	65%	55% - 74%	59%	50% - 69%	-6%		57%
College Graduate	71%	62% - 79%	72%	63% - 81%	1%		63%
<u>Income</u>							
<\$25,000	57%	48% - 66%	51%	42% - 61%	-6%		NA
\$25,000 to \$49,999	71%	62% - 78%	68%	58% - 78%	-3%		60%
\$50,000+	72%	64% - 79%	80%	73% - 87%	8%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	65%	60% - 70%	67%	62% - 72%	2%		59%
Black, non-Hispanic	NA		NSR				58%
Hispanic	NA		NSR				NSR
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change</small>							

**Clinical Breast Exam** Based on BRFSS reports, the self-reported annual clinical breast exam prevalence for Erie County females aged 40 and above increased to 67% in 2011 compared with 66% in 2007 (Figure 2). This was higher than PA at 62% (2010).

**Figure 2. Annual Clinical Breast Examination Prevalence, 2001-2011**



From 2007 to 2011, increases in annual clinical breast exams were seen among women age 40-49 and 65-74, women with a high school or college education, and women with household income of \$50,000 and above (Table 2). Decreases occurred for women ages 50-64 and 75 and above, women with some college education, and women with household incomes below \$25,000 and \$25,000-\$49,999.

From 2001 to 2011, several demographic groups experienced a decline in annual clinical breast exams: age 50-64 (78% to 69%, respectively), household income below \$25,000 (58% to 52%, respectively), household income of \$25,000-\$49,999 (72% to 66%, respectively), and some college education (81% to 61%, respectively).

In 2011, 67% of non-Hispanic White females aged 40 and above had a clinical breast exam in the past year. Values were not reported for non-Hispanic Black and Hispanic females. The

highest prevalence of annual clinical breast exam was 84% for women with less than a high school education followed by household income of \$50,000 and above (83%). The lowest prevalence was 49% for age 75 and above followed by household income below \$25,000 (52%).

**Table 2. Annual Clinical Breast Exam Prevalence, 2007 & 2011**

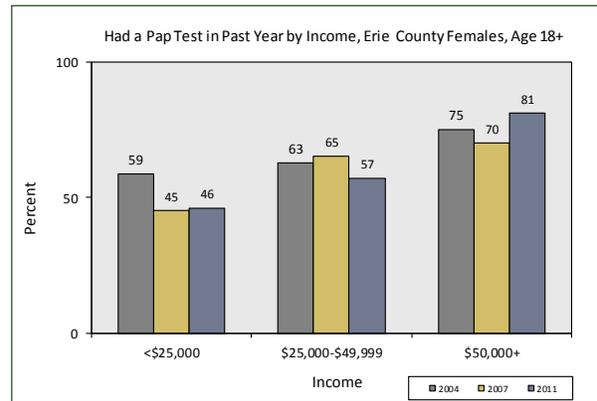
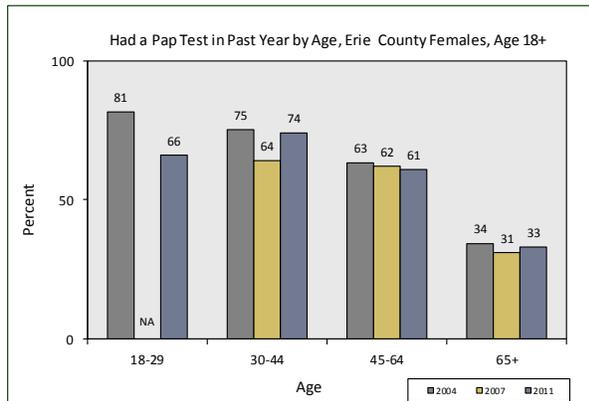
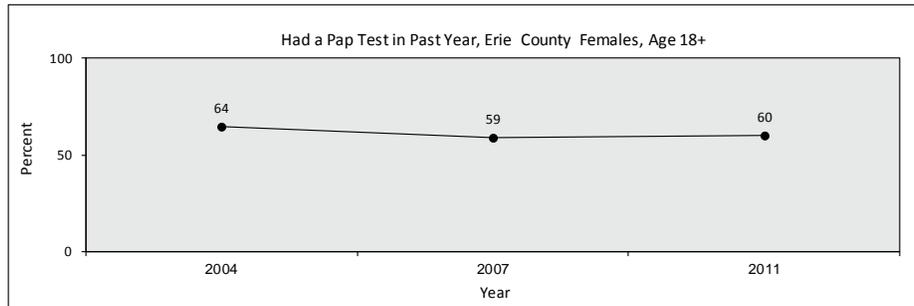
Had A Clinical Breast Exam in the Past Year, Females, Age 40+ Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
Adult Females, Age 40+	66%	61% - 70%	67%	63% - 72%	1%		62%
<u>Age</u>							
40-49	65%	56% - 73%	70%	59% - 80%	5%		67%
50-64	70%	63% - 76%	69%	62% - 76%	-1%		65%
65-74	69%	55% - 80%	77%	67% - 87%	8%		64%
75+	54%	43% - 65%	49%	36% - 62%	-5%		47%
<u>Education</u>							
<High School	NSR		84%	71% - 100%			52%
High School	66%	59% - 72%	72%	65% - 79%	6%		58%
Some College	68%	58% - 76%	61%	51% - 71%	-7%		62%
College Graduate	71%	62% - 79%	73%	64% - 82%	2%		71%
<u>Income</u>							
<\$25,000	55%	46% - 64%	52%	43% - 62%	-3%		NA
\$25,000 to \$49,999	72%	64% - 79%	66%	56% - 77%	-6%		60%
\$50,000+	74%	66% - 81%	83%	76% - 90%	9%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	66%	61% - 70%	67%	62% - 72%	1%		62%
Black, non-Hispanic	NA		NSR				66%
Hispanic	NA		NSR				NSR
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change</small>							

## Cervical Cancer Screening

The incidence of invasive cervical cancer has decreased over the past several decades due to early cancer screening methods. The most common of these is the Pap test which can detect both precancerous and early stage cancer cells.

Based on BRFSS reports, the self-reported annual Pap test prevalence for Erie County females aged 18 and above increased to 60% in 2011 compared with 59% in 2007 (Figure 3). Values were not available for PA or the U.S.

**Figure 3. Annual Pap Test Prevalence, 2004-2011**



From 2007 to 2011, a significant increase in annual Pap testing was seen among women with household income of \$50,000 and above (70% to 81%, respectively) (Table 3). Increases greater than 1 percentage point were seen among women aged 30-44 (64% to 74%, respectively), women with a high school or college education, and women aged 65 and above. Decreases greater than 1 percentage point occurred for women with some college education and women with household incomes of \$25,000-\$49,999.

Based on available data, several population groups experienced a steady decline in annual Pap testing from 2004 to 2011: age 18-29 (81% to 66%, respectively), household income below \$25,000 (59% to 46%, respectively), and some college education (66% to 57%, respectively).

In 2011, 58% of non-Hispanic White and 93% of non-Hispanic Black females aged 18 and above had a Pap test in the past year. Values were not reported for Hispanic females. Annual screening was significantly higher for college graduates compared with other education groups

and significantly higher for household income of \$50,000 and above compared with other income groups. The highest percentage for an annual Pap test was 93% for non-Hispanic Black females age 18 and above. The lowest percentage was 33% for age 65 and above followed by household income below \$25,000 (46%) and less than a high school education (47%).

**Table 3. Annual Pap Test Prevalence, 2007 & 2011**

Had a Pap Test in the Past Year, Females Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA
		CI		CI			
Adult Females	59%	54% - 63%	60%	56% - 64%	1%		NA
<u>Gender</u>							
Male	NA		NA				NA
Female	59%	54% - 63%	60%	56% - 64%	1%		NA
<u>Age</u>							
18-29	NSR		66%	58% - 74%			NA
30-44	64%	55% - 72%	74%	67% - 81%	10%		NA
45-64	62%	56% - 68%	61%	55% - 68%	-1%		NA
65+	31%	24% - 39%	33%	24% - 41%	2%		NA
<u>Education</u>							
<High School	NSR		47%	32% - 62%			NA
High School	54%	48% - 61%	58%	51% - 64%	4%		NA
Some College	60%	51% - 68%	57%	50% - 64%	-3%		NA
College Graduate	69%	61% - 76%	75%	69% - 82%	6%		NA
<u>Income</u>							
<\$25,000	45%	36% - 54%	46%	38% - 53%	1%		NA
\$25,000-\$49,999	65%	57% - 71%	57%	49% - 65%	-8%		NA
\$50,000+	70%	62% - 76%	81%	76% - 87%	11%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	59%	54% - 63%	58%	54% - 62%	-1%		NA
Black, non-Hispanic	NA		93%	83% - 100%			NA
Hispanic	NA		NSR				NA

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

## Colorectal Cancer Screening

Colorectal cancer is a commonly diagnosed cancer among all adults. It is preventable by removal of premalignant polyps and is curable when diagnosed early. Fecal occult blood testing (FOBT), sigmoidoscopy, and colonoscopy are the most commonly used screening methods.

**Sigmoidoscopy and Colonoscopy** Based on the BRFSS, the self-reported prevalence of adults aged 50 and above who had a sigmoidoscopy or colonoscopy (proctoscopy) within the past five years increased significantly to 62% in 2011 compared with 53% in 2007 (Figure 4). This represents a greater than 100% increase from 2001 to 2011.

From 2007 to 2011, significant increases were also seen for age 50-64 (49% to 60%, respectively), those with a high school education (49% to 67%, respectively), those with household incomes of \$50,000 and above (56% to 74%, respectively), and non-Hispanic Whites (53% to 62%, respectively) (Table 4).

Even though percentage increases were seen within all subgroups, differences in prevalence exist within income groups. In 2011, the prevalence for those with income of \$50,000 and above (74%) was significantly higher compared with other income groups.

The highest percentage of sigmoidoscopy or colonoscopy screening was 74% for household income of \$50,000 and above. The lowest percentage was 51% for household income below \$25,000. Values were not reported for non-Hispanic Black and Hispanic adults.

**Figure 4. Sigmoidoscopy or Colonoscopy Prevalence, 2001-2011**

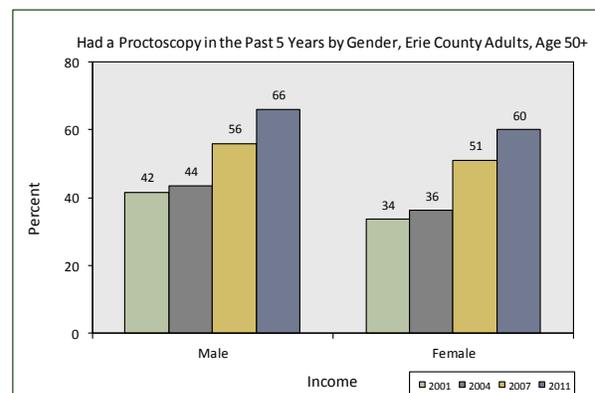
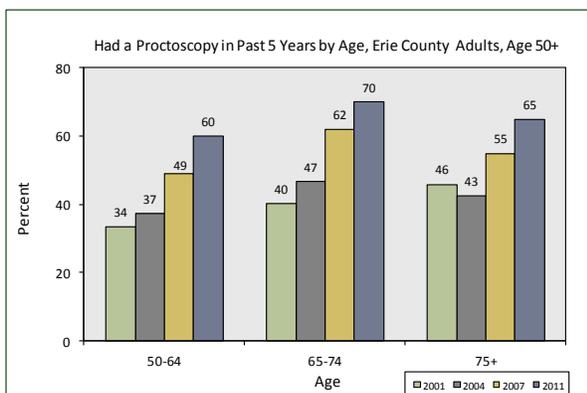
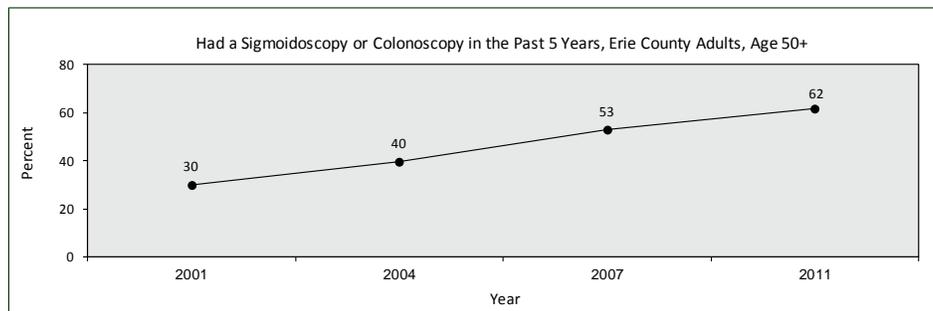


Table 4. Sigmoidoscopy or Colonoscopy Prevalence, 2007 & 2011

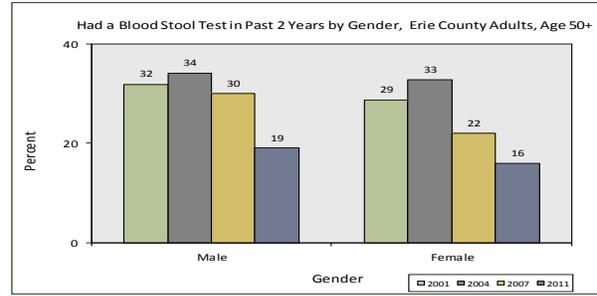
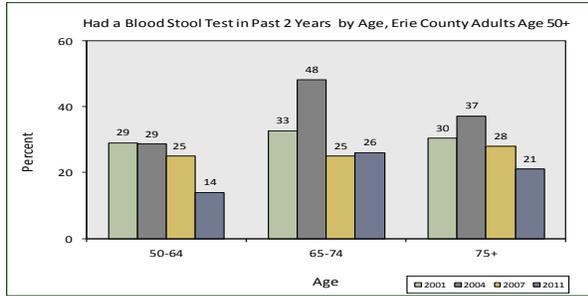
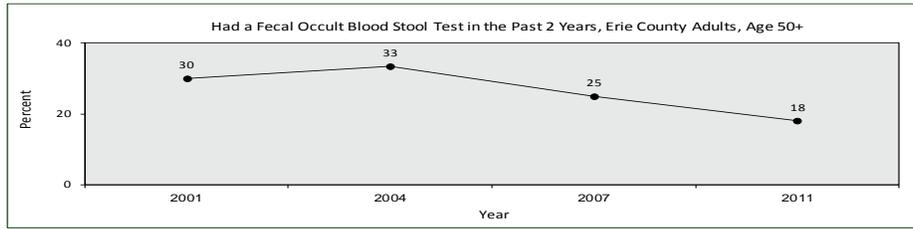
Had a Sigmoidoscopy or Colonoscopy in the Past Five Years, Age 50+ Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA
		CI		CI			
All Adults Age 50+	53%	49% – 58%	62%	58% – 66%	9%	***	NA
<u>Gender</u>							
Male	56%	49% – 63%	66%	60% – 71%	10%		NA
Female	51%	45% – 56%	60%	54% – 65%	9%		NA
<u>Age</u>							
50-64	49%	44% – 55%	60%	55% – 65%	11%	***	NA
65-74	62%	52% – 71%	70%	62% – 78%	8%		NA
75+	55%	45% – 63%	65%	55% – 74%	10%		NA
<u>Education</u>							
<High School	NSR		67%	53% – 82%			NA
High School	49%	43% – 55%	67%	61% – 73%	18%	***	NA
Some College	53%	43% – 62%	57%	49% – 65%	4%		NA
College Graduate	65%	57% – 72%	69%	61% – 76%	4%		NA
<u>Income</u>							
<\$25,000	48%	40% – 57%	51%	43% – 59%	3%		NA
\$25,000-\$49,999	54%	46% – 61%	56%	48% – 65%	2%		NA
\$50,000+	56%	49% – 64%	74%	68% – 81%	18%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	53%	49% – 58%	62%	58% – 66%	9%	***	NA
Black, non-Hispanic	NA		NSR				NA
Hispanic	NA		NSR				NA

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Fecal Occult Blood Test (FOBT)** Based on the BRFSS, the self-reported prevalence of adults aged 50 and above who had a blood stool test within the past two years decreased significantly to 18% in 2011 compared with 25% in 2007 (Figure 5). This represents a 40% decrease from 2001 to 2011. The Erie County prevalence of 18% is higher than the U.S. at 17% (2010). Values were not available for PA.

From 2007 to 2011, significant decreases were also seen for males (30% to 19%, respectively), age 50-64 (25% to 14%, respectively), those with household income of \$25,000-\$49,999 (31% to 16%, respectively), and non-Hispanic Whites (24% to 18%, respectively) (Table 5). Percentage point decreases were seen within all subgroups from 2007 to 2011 except for a 1 percentage point increase for age 65-74. Values were not reported for non-Hispanic Black and Hispanic adults. The highest prevalence of FOBT was 35% for less than a high school education. The lowest prevalence was 14% for age 50-64.

**Figure 5. Blood Stool Test Prevalence, 2001-2011**



**Table 5. Blood Stool Test Prevalence, 2007 & 2011**

Had a Fecal Occult Blood Stool Test in the Past Two Years, Age 50+ Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA
	25%	CI 22% – 29%	18%	CI 15% – 21%			
All Adults Age 50+	25%	22% – 29%	18%	15% – 21%	-7%	***	NA
<u>Gender</u>							
Male	30%	24% – 36%	19%	15% – 24%	-11%	***	NA
Female	22%	18% – 27%	16%	12% – 20%	-6%		NA
<u>Age</u>							
50-64	25%	20% – 30%	14%	10% – 18%	-11%	***	NA
65-74	25%	17% – 34%	26%	18% – 33%	1%		NA
75+	28%	20% – 37%	21%	12% – 29%	-7%		NA
<u>Education</u>							
<High School	NSR		35%	20% – 50%			NA
High School	25%	20% – 32%	17%	13% – 22%	-8%		NA
Some College	23%	16% – 32%	15%	9% – 20%	-8%		NA
College Graduate	28%	22% – 36%	20%	13% – 26%	-8%		NA
<u>Income</u>							
<\$25,000	26%	19% – 35%	19%	12% – 25%	-7%		NA
\$25,000-\$49,999	31%	24% – 38%	16%	10% – 22%	-15%	***	NA
\$50,000+	24%	18% – 31%	21%	15% – 27%	-3%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	24%	21% – 28%	18%	14% – 21%	-7%	***	NA
Black, non-Hispanic	NA		NSR				NA
Hispanic	NA		NSR				NA

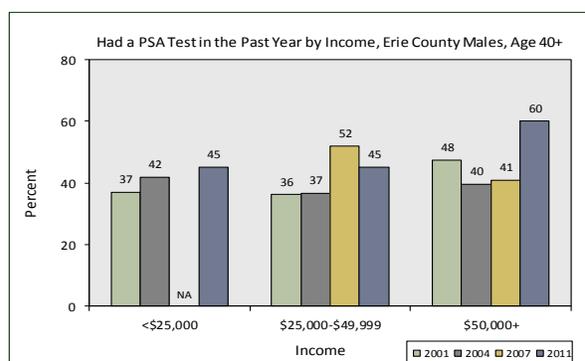
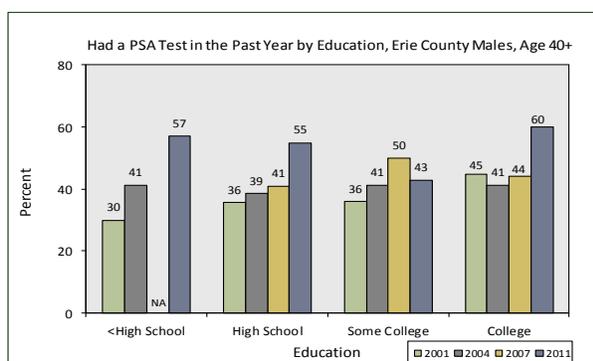
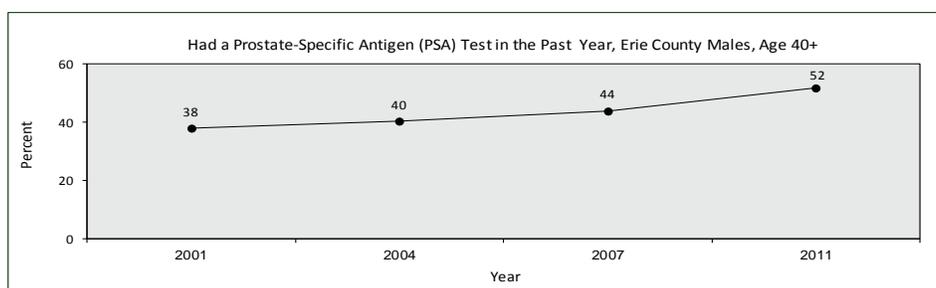
Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

## Prostate Cancer Screening

Prostate cancer is the most frequently diagnosed cancer in men (excluding skin cancer) and is the second leading cause of cancer death in males. National incidence rates are significantly higher in African-American men than in Whites. The five year survival rate for men whose cancer was detected early (while it was still localized) or at the regional stage (spread to nearby lymph nodes) is 100%. Current methods of screening are the prostate-specific antigen (PSA) blood test and the digital rectal exam.

**PSA Blood Test** Based on the BRFSS, the self-reported prevalence of males aged 40 and above who had a PSA blood test within the past year increased to 52% in 2011 compared with 44% in 2007 (Figure 6). This represents a 37% increase from 2001 to 2011. PA reported that 56% (2010) of men age 50 and above had a PSA test in the past year.

Figure 6. PSA Blood Test Prevalence, 2001-2011



From 2007 to 2011, a significant increase was seen for males aged 40 and above whose household income was \$50,000 and above (41% to 60%, respectively) (Table 6). Percentage increases were seen for males aged 40-49 (16% to 17%, respectively) and 65 and above (64% to 67%, respectively), males with a high school education (41% to 55%, respectively), males with a college education (44% to 60%, respectively), and non-Hispanic White males (44% to 51%, respectively).

Based on available data, steady increases in PSA testing were seen from 2001 to 2011 for males with less than a high school education (30% to 57%, respectively) and males with a high school education (36% to 55%, respectively).

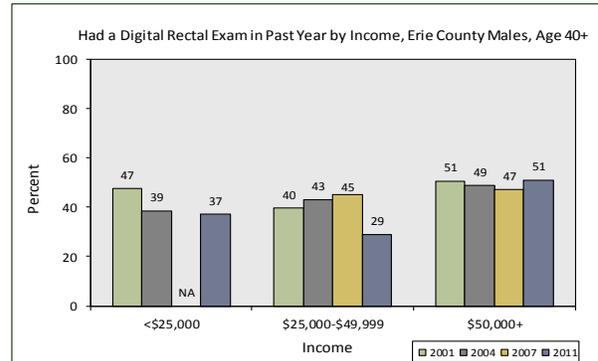
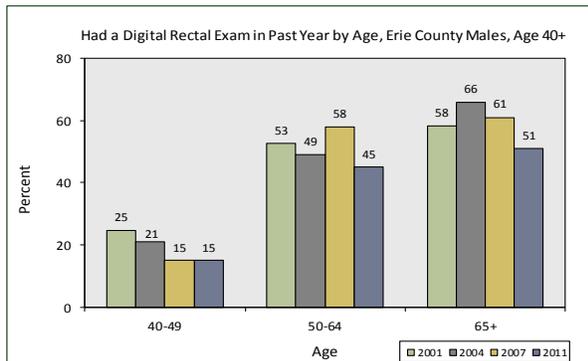
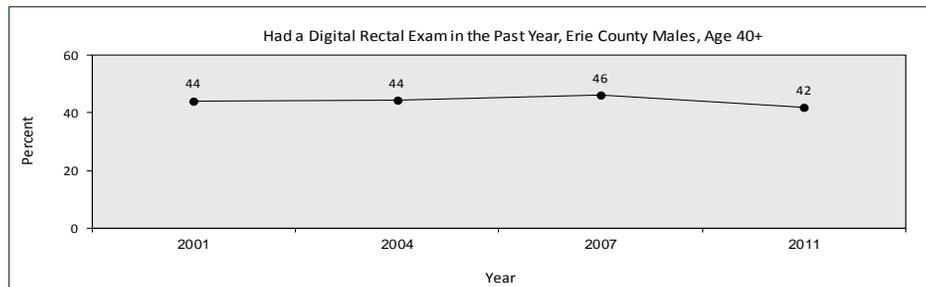
From 2007 to 2011, decreases in annual PSA testing were seen for males with some college education (50% to 43%, respectively) and males with household income of \$25,000 to \$49,999 (52% to 45%, respectively). Values were not reported for non-Hispanic Black and Hispanic adults. The highest percentage of annual PSA screening was 67% for age 65 and above. The lowest percentage was 17% for age 40-49.

**Table 6. PSA Blood Test Prevalence, 2007 & 2011**

Had a Prostate-Specific Antigen Test in the Past Year, Males, Age 40+ Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010 Age 50+
		CI		CI			
All Males, Age 40+	44%	38% – 50%	52%	46% – 57%	8%		56%
<u>Age</u>							
40-49	16%	8% – 28%	17%	8% – 26%	1%		NA
50-64	51%	42% – 60%	51%	44% – 59%	0%		49%
65+	64%	53% – 74%	67%	58% – 77%	3%		NA
<u>Education</u>							
<High School	NSR		57%	33% – 80%			40%
High School	41%	32% – 51%	55%	46% – 64%	14%		56%
Some College	50%	37% – 63%	43%	33% – 54%	-7%		54%
College Graduate	44%	34% – 54%	60%	51% – 70%	16%		59%
<u>Income</u>							
<\$25,000	NSR		45%	33% – 57%			NA
\$25,000-\$49,999	52%	42% – 63%	45%	34% – 56%	-7%		55%
\$50,000+	41%	33% – 51%	60%	51% – 69%	19%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	44%	38% – 50%	51%	46% – 57%	7%		57%
Black, non-Hispanic	NA		NSR				51%
Hispanic	NA		NSR				NSR
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change</small>							

**Digital Rectal Exam** Based on the BRFSS, the self-reported prevalence of males aged 40 and above who had a digital rectal exam within the past year decreased to 42% in 2011 compared with 46% in 2007 (Figure 7). PA reports that 47% of men age 50 and above had an annual digital rectal exam (2010).

**Figure 7. Digital Rectal Exam Prevalence, 2001-2011**



From 2007 to 2011, decreases were seen for males ages 50-64 (58% to 45%, respectively) and 65 and above (61% to 51%, respectively), males with some college education (51% to 38%, respectively), and males whose household income was \$25,000-\$49,999 (45% to 29%, respectively) (Table 7).

Increases in annual digital rectal exams were seen for college graduates, males with household income of \$50,000 and above, and non-Hispanic White males. From 2001 to 2011, steady decreases in digital rectal exams were seen for males aged 40-49 (25% to 15%, respectively) and males with household income below \$25,000 (47% to 37%, respectively). Values were not reported for non-Hispanic Black and Hispanic adults.

The highest percentage of annual digital rectal exams was 51% for both age 65 and above and household income of \$50,000 and above followed by college graduates (50%). The lowest percentage was 15% for age 40-49.

Table 7. Digital Rectal Exam Prevalence, 2007 & 2011

Had a Digital Rectal Exam in the Past Year, Males, Age 40+ Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010 Age 50+
		CI		CI			
All Males, Age 40+	46%	40% - 52%	42%	37% - 47%	-4%		47%
<u>Age</u>							
40-49	15%	9% - 26%	15%	6% - 23%	0%		NA
50-64	58%	49% - 66%	45%	37% - 52%	-13%		54%
65+	61%	50% - 71%	51%	41% - 61%	-10%		NA
<u>Education</u>							
<High School	NSR		23%	2% - 43%			39%
High School	44%	34% - 53%	44%	35% - 53%	0%		46%
Some College	51%	38% - 64%	38%	28% - 48%	-13%		44%
College Graduate	46%	36% - 56%	50%	40% - 60%	4%		51%
<u>Income</u>							
<\$25,000	NSR		37%	25% - 48%			NA
\$25,000-\$49,999	45%	35% - 56%	29%	19% - 39%	-16%		43%
\$50,000+	47%	38% - 56%	51%	42% - 60%	4%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	46%	40% - 52%	43%	32% - 53%	3%		48%
Black, non-Hispanic	NA		NSR				45%
Hispanic	NA		NSR				NSR
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change</small>							

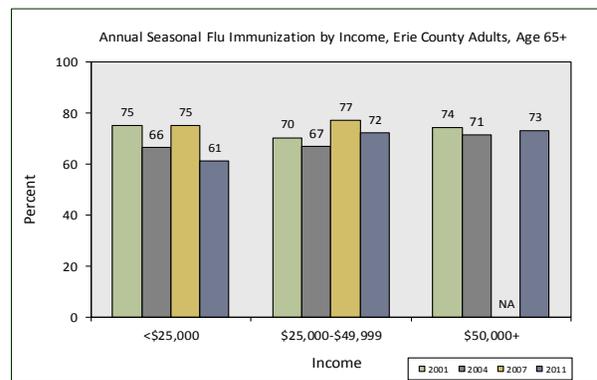
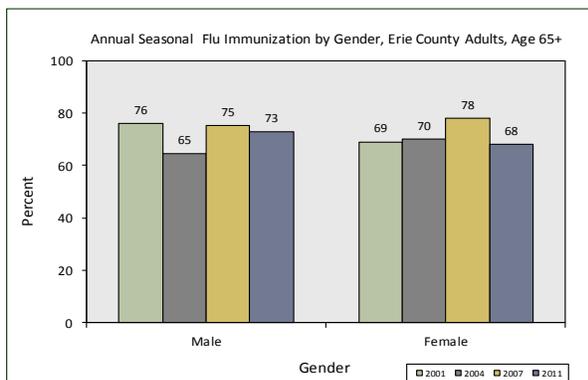
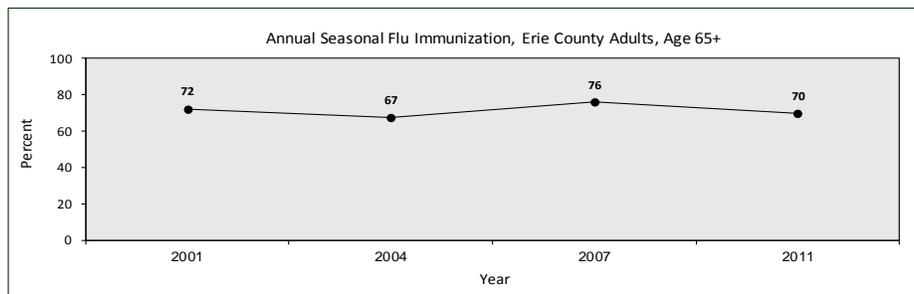
## Influenza Immunization

Influenza is a contagious respiratory illness caused by influenza viruses. It causes mild to severe illness, and at times can lead to death. Children under the age of five, especially children younger than two years of age, adults age 65 and above, persons living in facilities such as nursing homes, pregnant women, and people with health conditions such as asthma, diabetes, or heart disease are at greater risk for serious complications from the flu and are advised to get annual flu vaccinations. Flu vaccinations are also recommended for people who live with or care for these high risk individuals. Complications of flu can include bacterial pneumonia, ear infections, sinus infections, dehydration, and worsening of chronic medical conditions, such as

congestive heart failure, asthma, or diabetes. Influenza and pneumonia was the ninth leading cause of death in Erie County in 2008-2010.

**Age 65+** Based on the BRFSS, the self-reported percentage of Erie County adults aged 65 and above who had a flu shot within the past year dropped to 70% in 2011 compared with 76% in 2007 (Figure 8). This was higher than the U.S. at 67% (2010), but lower than the Healthy People 2020 Goal of 90%. Values for PA were not available. Note that this statistic has been combined in the 2011 BRFSS. Before 2011, separate questions were asked for the flu shot and the nasal spray vaccine. In the 2011 survey, one question included both the flu shot and the nasal spray vaccine. Before 2011, approximately 1% of those surveyed reported nasal spray vaccine.

**Figure 8. Seasonal Flu Immunization Prevalence, Age 65+, 2001-2011**



From 2007 to 2011, the highest percentage point decreases were 14% for those with household income less than \$25,000 and 11% for females (Table 8). The only percentage point increase was 6% for college graduates.

In 2011, differences in prevalence were seen within gender, education groups, and income groups. Comparatively lower percentages were seen for those with some college education (57%), those with household income below \$25,000 (61%), and females (68%). Comparatively higher percentages were seen for college graduates (82%) and high school graduates (80%). In

2011, 70% of non-Hispanic White adults age 65 and above reported receiving a flu shot or nasal flu vaccine in the past year. Values were not reported for non-Hispanic Black and Hispanic adults. The highest percentage of seasonal flu immunizations among ages 65 and above was 80% for high school graduates. The lowest percentage was 57% for some college.

**Table 8. Seasonal Flu Immunization Prevalence, Age 65+, 2007 & 2011**

Had a Seasonal Flu Shot or Nasal Flu Vaccine in the Past Year, Age 65+*							
Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA
		CI		CI			
Adults Age 65+	76%	70% – 82%	70%	64% – 76%	-6%		NA
<u>Gender</u>							
Male	75%	64% – 83%	73%	64% – 82%	-2%		NA
Female	78%	69% – 84%	68%	59% – 76%	-11%		NA
<u>Education</u>							
<High School	NSR		70%	52% – 88%			NA
High School	80%	72% – 87%	80%	72% – 88%	0%		NA
Some College	NSR		57%	43% – 70%			NA
College Graduate	76%	64% – 85%	82%	70% – 94%	6%		NA
<u>Income</u>							
<\$25,000	75%	64% – 84%	61%	50% – 72%	-14%		NA
\$25,000-\$49,999	77%	66% – 85%	72%	59% – 84%	-5%		NA
\$50,000+	NSR		73%	58% – 88%			NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	77%	71% – 82%	70%	64% – 76%	-7%		NA
Black, non-Hispanic	NA		NSR				NA
Hispanic	NA		NSR				NA

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change; \*Before 2011, there were two separate questions for flu shot and nasal spray vaccine but they were combined into one question in 2011

**Age 50+** Based on the BRFSS, the self-reported percentage of Erie County adults aged 50 and above who had a flu shot within the past year increased to 60% in 2011 compared with 58% in 2007 (Table 9). This was higher than PA at 56% (2010). The U.S. value was not available. Note that this statistic has been combined in the 2011 BRFSS. Before 2011, separate questions were asked for the flu shot and the nasal spray vaccine. In the 2011 survey, one question included

both the flu shot and the nasal spray vaccine. Before 2011, approximately 1% of those surveyed reported nasal spray vaccine.

**Table 9. Seasonal Flu Immunization Prevalence, Age 50+, 2007 & 2011**

Had a Seasonal Flu Shot or Nasal Flu Vaccine in the Past Year, Age 50+*						
Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	Sig
		CI		CI		
Adults Age 50+	58%	54% – 63%	60%	55% – 64%	2%	56%
<u>Gender</u>						
Male	55%	48% – 61%	60%	55% – 66%	5%	54%
Female	62%	56% – 67%	59%	53% – 64%	-3%	58%
<u>Age</u>						
50-64	44%	39% – 50%	53%	48% – 58%	9%	NA
65+	76%	70% – 82%	70%	64% – 76%	-6%	NA
<u>Education</u>						
<High School	NSR		60%	45% – 75%		56%
High School	61%	55% – 67%	66%	60% – 72%	5%	54%
Some College	58%	49% – 67%	54%	46% – 62%	-4%	55%
College Graduate	55%	47% – 63%	63%	55% – 71%	8%	60%
<u>Income</u>						
<\$25,000	64%	56% – 72%	49%	41% – 57%	-15%	NA
\$25,000-\$49,999	58%	51% – 66%	62%	53% – 70%	4%	55%
\$50,000+	54%	46% – 61%	62%	55% – 70%	8%	NA
<u>Race/Ethnicity</u>						
White, non-Hispanic	59%	54% – 63%	60%	56% – 64%	1%	57%
Black, non-Hispanic	NA		NSR			49%
Hispanic	NA		NSR			67%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change; \*Before 2011, there were two separate questions for flu shot and nasal spray vaccine but they were combined into one question in 2011

From 2007 to 2011, the highest percentage point decrease was 15% for those with household income below \$25,000. The highest percentage point increases were 9% for age 50-64, 8% for college graduates, and 8% for those with income of \$50,000 and above.

In 2011, differences in prevalence were seen within age groups, education groups, and income groups. Comparatively lower percentages were seen for age 50-64 (53%), those with some college education (54%), and those with household income below \$25,000 (49%).

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Comparatively higher percentages were seen for age 65 and above (70%). In 2011, 60% of non-Hispanic White adults age 50 and above reported receiving a flu shot or nasal flu vaccine in the past year. The highest percentage was 70% for age 65 and above. The lowest percentage was 49% for income below \$25,000 followed by age 50-64 (53%). Values were not reported for non-Hispanic Black and Hispanic adults age 50 and above.

**Immunization Location** In 2011, for all adults aged 18 and above, 40% received their flu vaccination at a doctor's office or health maintenance organization (HMO), 24% at their workplace, 16% at a store (e.g., supermarket, drug store), 8% at a hospital, 4% at a senior, recreation, or community center, 3% at another type of clinic or health center, 3% at some other kind of place, 1% at a health department, 1% at a school, and less than 1% at an emergency room.

**Children and Youth** As part of the adult BRFSS, one seasonal influenza question focuses on children over the age of 6 months who are part of the household. In 2011, 396 surveyed households reported having a total of 808 children under the age of 18 but older than 6 months. Of these, 363 (45%) had been vaccinated for seasonal flu in the past year.

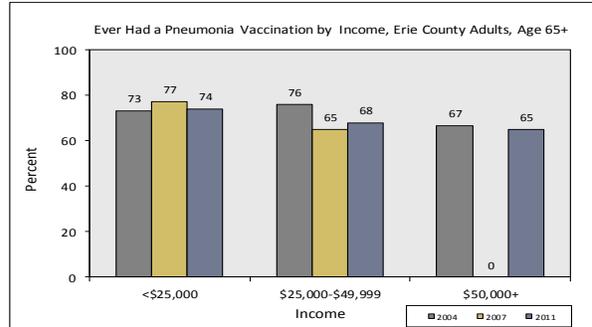
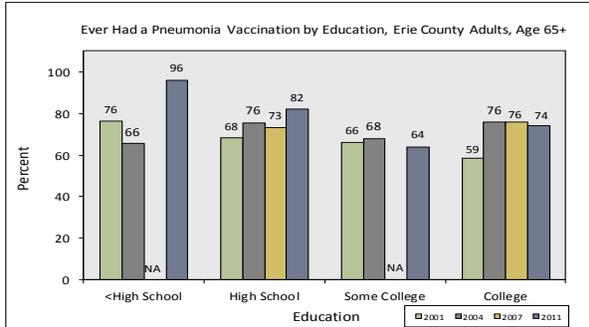
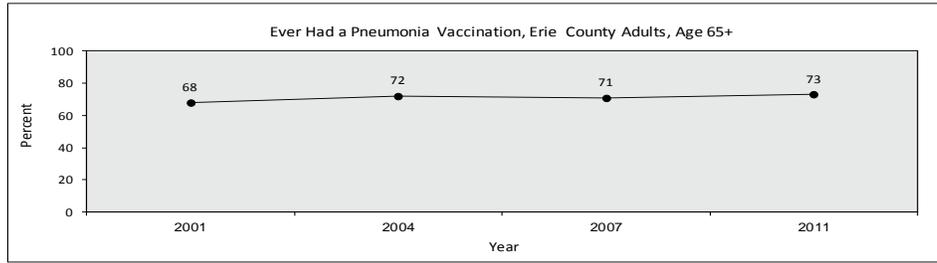
## **Pneumonia Immunization**

Based on the BRFSS, the self-reported percentage of Erie County adults aged 65 and above who ever had a pneumonia vaccination increased to 73% in 2011 compared with 71% in 2007 (Figure 9). This was higher than PA at 71% (2010) and the U.S. at 67% (2010), but lower than the Healthy People Goal of 90%.

From 2007 to 2011, the highest percentage point increases were seen for males (13%) and high school graduates (9%) (Table 10).

In 2011, differences in prevalence were seen within education groups and income groups. Comparatively lower percentages were seen for those with some college education (64%), those with household incomes of \$25,000-\$49,999 (68%), and those with household income of \$50,000 and above (65%). Comparatively higher percentages were seen for those with less than a high school education (96%) and high school graduates (82%). In 2011, 73% of non-Hispanic White adults age 65 and above reported ever receiving a pneumonia vaccination. Values were not reported for non-Hispanic Black and Hispanic adults age 65 and above.

**Figure 9. Pneumonia Vaccination Prevalence, 2001-2011**



**Table 10. Pneumonia Vaccination Prevalence, 2007 & 2011**

Ever Had a Pneumonia Vaccination, Age 65+ Erie County Adult BRFS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
	71%	65% - 77%	73%	67% - 79%	2%		71%
<b>Adults Age 65+</b>							
<u>Gender</u>							
Male	61%	50% - 70%	74%	64% - 83%	13%		68%
Female	78%	71% - 84%	72%	64% - 80%	-6%		72%
<u>Education</u>							
<High School	NSR		96%	87% - 100%			64%
High School	73%	64% - 81%	82%	75% - 90%	9%		70%
Some College	NSR		64%	51% - 77%			75%
College Graduate	76%	64% - 85%	74%	60% - 89%	-2%		72%
<u>Income</u>							
<\$25,000	77%	66% - 85%	74%	64% - 85%	-3%		NA
\$25,000-\$49,999	65%	54% - 75%	68%	55% - 81%	3%		73%
\$50,000+	NSR		65%	49% - 82%			NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	71%	65% - 77%	73%	67% - 79%	2%		71%
Black, non-Hispanic	NA		NSR				60%
Hispanic	NA		NSR				NSR

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

## Oral Health

**Dental Visits** Regular dental visits provide early detection and treatment of cavities, professional removal of tartar and plaque, and early diagnosis of oral cancer. Left untreated, tooth decay can result in infection and tooth loss, while plaque, and the bacteria it harbors, can lead to periodontal gum disease. Oral infections and gum disease have been linked to diabetes, heart disease, stroke, and premature, low-weight births.

Based on the 2011 BRFSS, 70% of Erie County adults aged 18 and above visited the dentist in the past year for any reason (Table 11). This is lower than PA at 71% (2010), but comparable to the U.S. at 70% (2010).

**Table 11. Annual Dental Visit Prevalence, 2011**

Visited a Dentist Within the Past Year Erie County Adult BRFSS, 2011					
	2007		2011		PA 2010
		<u>CI</u>		<u>CI</u>	
All Adults	NA		70%	67% – 72%	71%
<b>Gender</b>					
Male	NA		66%	63% – 70%	68%
Female	NA		73%	69% – 76%	73%
<b>Age</b>					
18-29	NA		73%	68% – 78%	68%
30-44	NA		72%	67% – 77%	72%
45-64	NA		72%	68% – 77%	73%
65+	NA		59%	52% – 65%	67%
<b>Education</b>					
<High School	NA		61%	50% – 71%	49%
High School	NA		68%	63% – 72%	62%
Some College	NA		69%	64% – 73%	70%
College Graduate	NA		82%	78% – 86%	84%
<b>Income</b>					
<\$25,000	NA		50%	45% – 56%	NA
\$25,000-\$49,999	NA		66%	60% – 71%	65%
\$50,000+	NA		92%	89% – 94%	NA
<b>Race/Ethnicity</b>					
White, non-Hispanic	NA		70%	67% – 73%	73%
Black, non-Hispanic	NA		68%	55% – 81%	55%
Hispanic	NA		76%	60% – 91%	71%
<small>Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available</small>					

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In 2011, differences in prevalence were seen within age groups, gender, education groups, and income groups. Significantly lower percentages were seen for those with household incomes below \$25,000 (50%) and \$25,000-\$49,999 (66%) compared with household income of \$50,000 and above (92%), for age 65 and above (59%) compared with all other age groups, and for college graduates (82%) compared with all other education groups. The percentage of females who visited the dentist in the past year was 73% compared with 66% for males. Annual dental visit prevalence increased with increasing income and increasing education.

The lowest percentage for annual dental visits was 50% for those with income below \$25,000 followed by age 65 and above (59%) and less than a high school education (61%).

The highest prevalence of annual dental visits was seen for those with household income \$50,000 and above (92%) and college graduates (82%). In 2011, 70% of non-Hispanic White, 68% of non-Hispanic Black, and 76% of Hispanic adults reported visiting the dentist in the past year for any reason.

**Children and Youth** The Pennsylvania Department of Health (PA DOH) annually reports services provided to students in kindergarten and grades 1, 3, and 7 (K,1,3,7) through the mandated dental examination program, the dental hygiene services program, and the fluoride tablet program.

For the 2008-2009 school year, 11,240 students (K,1,3,7) in Erie County were seen by a dentist. Of these, 54% visited their family dentist (74% for PA), while 46% were seen by the school dentist (26% for PA) (Table 12).

Differences in these percentages were seen among schools and school districts. For the Wattsburg Area School District, 85% of students in grades K,1,3,7 visited their family dentist for their mandated dental exam while only 15% were seen by the school dentist. Other school districts with high percentages of students seen by a family dentist were General McLane (84%), Harbor Creek (83%), and Fairview (76%).

For the Corry School District only 11% of students in grades K,1,3,7 visited a family dentist for their mandated dental exam while 89% were seen by the school dentist. Other schools or school districts with low percentages of students seen by a family dentist were Union City School District (18%), Perseus House Charter School of Excellence (20%), and Robert Benjamin Wiley Community Charter School (24%).

No data was reported for the dental hygiene services program in Erie County. The Wattsburg Area School District was the only school or school district to enter statistics in the fluoride tablet program. Wattsburg Area reported that 370 students participated in the program.

**Table 12. Student Dental Examination Prevalence, Grades K,1,3, & 7**

Pennsylvania Mandated Dental Examination Program, Grades K,1,3,7 Number and Percent of Students Examined During the 2008-2009 School Year							
School or School District	Grades K,1,3,7				Other Grades	All Examined Students	
	Family Dentist*		School Dentist**		School Dentist***	Referred for Further Trtmnt	Completed Referral Returned
	# students	% of all K,1,3,7	# students	% of all K,1,3,7			
Wattsburg Area SD	330	85%	58	15%	1	25	3
General McLane SD	409	84%	77	16%	3	33	18
Harbor Creek SD	366	83%	73	17%	0	16	2
Fairview SD	263	76%	81	24%	0	5	4
Iroquois SD	116	68%	55	32%	0	7	1
Northwestern SD	212	67%	103	33%	10	34	12
Millcreek Township SD	2,408	66%	1,222	34%	127	382	90
Montessori Regional CS	42	63%	25	37%	6	8	3
Girard SD	193	46%	230	54%	10	42	14
Fort LeBoeuf SD	202	45%	249	55%	12	53	18
North East SD	171	43%	224	57%	38	71	6
Erie City SD	1,196	37%	2,074	63%	682	1,394	48
Robert Benjamin Wiley Community CS	11	24%	34	76%	25	32	0
Perseus House CS of Excellence	7	20%	28	80%	0	10	1
Union City SD	56	18%	250	82%	3	14	5
Corry Area SD	52	11%	423	89%	11	78	3
Erie County Total	6,034	54%	5,206	46%	928	2,204	228
PA Total	249,793	74%	88,680	26%	9,776	45,173	8,185

Note: \*indicates that students were examined by a family dentist; \*\*indicates that students were examined by a school dentist; \*\*\*indicates students from other grades who were examined by a school dentist; Includes all students in both public and private/non-public schools, combined, served by the school district

**Water Fluoridation** Fluoride treatment has been shown to aid in preventing cavities. Both the American Dental Association (ADA) and the Department of Health and Human Services (HHS) recommend fluoride levels of 0.7 parts per million (ppm) in drinking water to achieve optimal cavity prevention. In Erie County, fluoridated water (0.7 ppm) is provided to everyone served by the following public water systems: North East water supply, Edinboro water supply, and the City of Erie water supply. In addition to residents of Erie City, the City of Erie water supply services most of Millcreek Township, parts of Summit Township, parts of Fairview, parts of Wesleyville, parts of Lawrence Park, and parts of Harborcreek.

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## Health Risk Behaviors

### Alcohol Use

Despite its socially acceptable status, alcohol is harmful when used excessively. Excessive alcohol use impairs judgment and affects behavior which can result in dangerous outcomes such as motor vehicle crashes, risky sexual behaviors, and intimate partner violence. Chronic, long term alcohol use can lead to alcohol dependence, liver disease, high blood pressure, heart attack, stroke, certain types of cancer, and early death. Women who drink excessively while pregnant can cause fetal alcohol spectrum disorders in their children. Socially, excessive alcohol use can potentially isolate an individual from family, friends, and coworkers. Excessive alcohol use includes binge drinking, heavy drinking, and chronic drinking.

**Binge Drinking** The CDC defines binge drinking as males having five or more drinks or females having four or more drinks on one occasion. Current statistics released by the CDC identify binge drinking as a growing national problem with drinkers bingeing about four times a month and consuming an average of eight drinks per binge. In 2011, Erie County residents age 18 and above who binge drank did so an average of four times a month and consumed an average of seven drinks per binge. Binge drinking prevalence in Erie County has been decreasing since 2001 but still remains a problem.

Based on the Behavioral Risk Factor Surveillance Survey (BRFSS), the self-reported percentage of Erie County adults aged 18 and above who binge drank in the past thirty days dropped to 19% in 2011 compared with 21% in 2007, 22% in 2004, and 25% in 2001 (Figure 1). Erie County remains higher than PA at 15% (2010) and the U.S. at 15% (2010) but lower than the Healthy People 2020 goal of 24.3%.

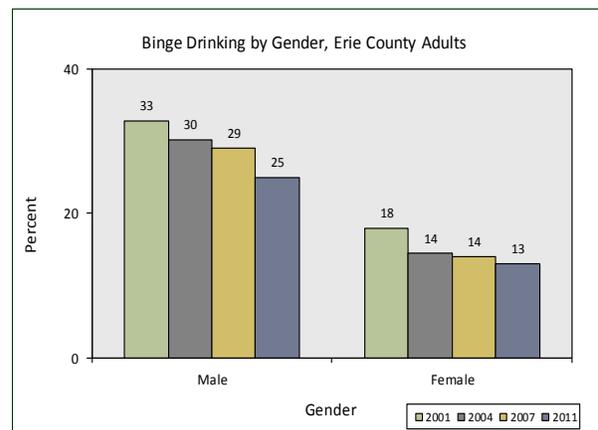
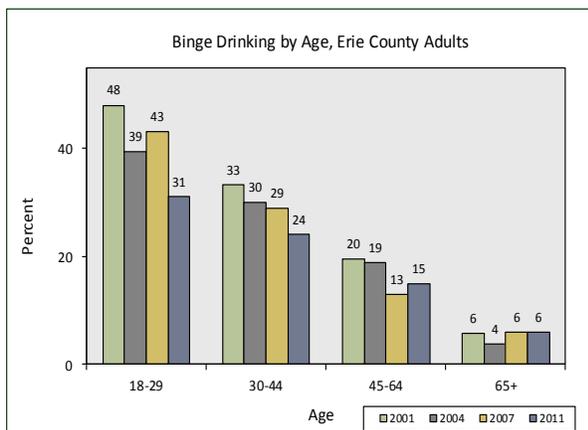
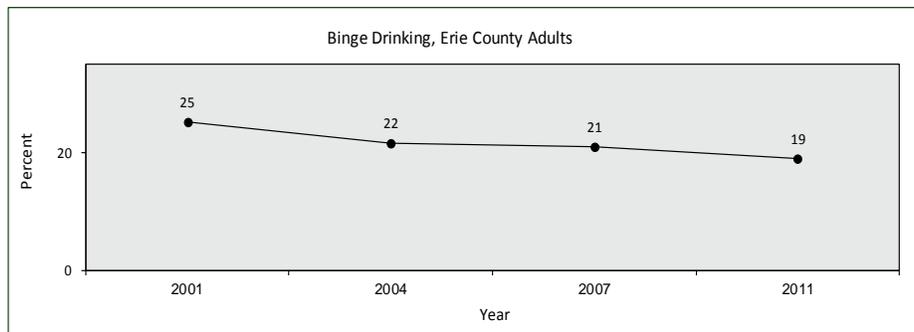
From 2007 to 2011, college graduates, those with household income of \$50,000 and above, and age 45-64 were the only subgroups with an increase in binge drinking. Among the other subgroups, age 18-29 and those with some college education saw the largest decrease in binge drinking (-13 and -10 percentage points, respectively) followed by those with household incomes below \$25,000 and those with household incomes of \$25,000 to \$49,999.

In 2011, differences in prevalence were seen among demographic groups (Table 1). A significant difference in binge drinking was seen between males (25%) and females (13%) despite steady decreases for both genders. Binge drinking was significantly higher for those with household income of \$50,000 and above (31%) compared with other income groups. Among age groups, age 18-29 remains highest in binge drinking prevalence at 31% (despite a 13 percentage point

decrease from 2007), while age group 30-44 follows at 24% (despite a 5 percentage point decrease from 2007). A significantly higher percentage was seen for college graduates (25%) compared with those with less than a high school education and high school graduates. In 2011, 19% of non-Hispanic White, 28% of non-Hispanic Black, and 19% of Hispanic adults reported binge drinking within the past month.

The highest prevalence of monthly binge drinking was seen among age 18-29 (31%) and those with household incomes of \$50,000 and above (31%) followed by non-Hispanic Blacks (28%), males (25%), college graduates (25%), and age 30-44 (24%).

**Figure 1. Binge Drinking Prevalence, 2001-2011**



**Table 1. Binge Drinking Prevalence, 2007 & 2011**

Binge Drinking at Least Once in the Past 30 Days Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	21%	18% - 25%	19%	17% - 21%	-2%		15%
<u>Gender</u>							
Male	29%	24% - 35%	25%	22% - 29%	-4%		21%
Female	14%	12% - 18%	13%	10% - 16%	-1%		10%
<u>Age</u>							
18-29	43%	32% - 55%	31%	25% - 36%	-13%		26%
30-44	29%	23% - 35%	24%	19% - 29%	-5%		21%
45-64	13%	10% - 17%	15%	11% - 18%	2%		13%
65+	6%	3% - 10%	6%	2% - 9%	-1%		3%
<u>Education</u>							
<High School	NSR		10%	4% - 17%			12%
High School	17%	13% - 22%	17%	13% - 20%	0%		15%
Some College	28%	21% - 36%	18%	14% - 22%	-10%		17%
College Graduate	21%	16% - 27%	25%	21% - 30%	4%		15%
<u>Income</u>							
<\$25,000	22%	15% - 29%	14%	10% - 18%	-8%		NA
\$25,000-\$49,999	23%	17% - 30%	16%	12% - 20%	-7%		16%
\$50,000+	24%	19% - 30%	31%	26% - 36%	7%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	22%	19% - 25%	19%	16% - 21%	-4%		16%
Black, non-Hispanic	NA		28%	15% - 40%			13%
Hispanic	NA		19%	4% - 33%			11%
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change; The CDC defines binge drinking as males having five or more drinks or females having four or more drinks on one occasion</small>							

**Heavy Drinking** The CDC defines heavy drinking as males having more than two drinks per day or females having more than one drink per day. Heavy drinking prevalence in Erie County has been tracked since 2007.

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who drank heavily remained at 6% in 2011 (Figure 2, Table 2). This is higher than PA at 4% (2010) and the U.S. at 5% (2010).

Figure 2. Heavy Drinking Prevalence, 2007 & 2011

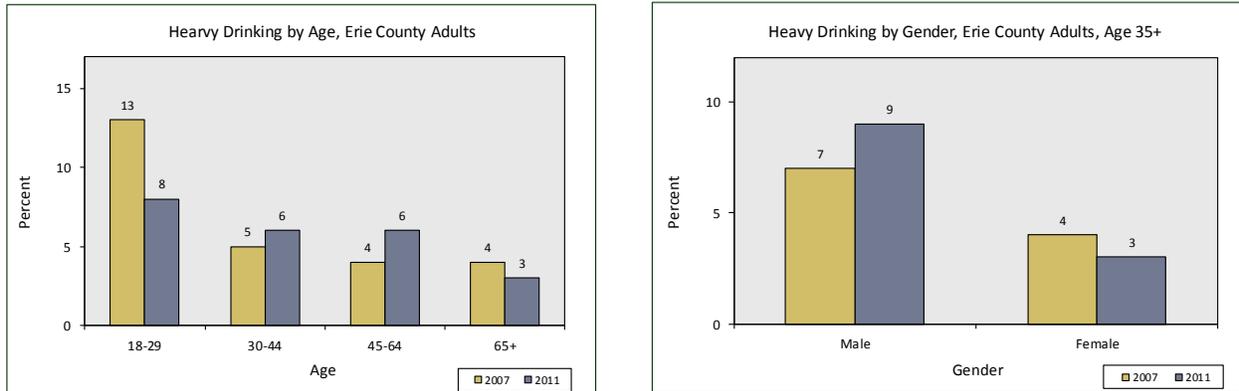


Table 2. Heavy Drinking Prevalence, 2007 & 2011

Heavy Drinking Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	6%	4% – 8%	6%	4% – 7%	0%		4%
<u>Gender</u>							
Male	7%	4% – 12%	9%	6% – 11%	2%		5%
Female	4%	3% – 6%	3%	2% – 4%	-1%		3%
<u>Age</u>							
18-29	13%	7% – 25%	8%	5% – 11%	-5%		6%
30-44	5%	3% – 8%	6%	3% – 9%	1%		4%
45-64	4%	2% – 6%	6%	3% – 8%	2%		4%
65+	4%	2% – 7%	3%	1% – 5%	-1%		3%
<u>Education</u>							
<High School	2%	1% – 10%	3%	0% – 6%	1%		4%
High School	6%	4% – 10%	6%	4% – 9%	0%		4%
Some College	6%	2% – 15%	5%	3% – 8%	-1%		5%
College Graduate	6%	3% – 11%	7%	4% – 9%	1%		3%
<u>Income</u>							
<\$25,000	3%	2% – 6%	6%	3% – 9%	3%		NA
\$25,000-\$49,999	6%	3% – 13%	5%	2% – 7%	-1%		3%
\$50,000+	7%	4% – 12%	7%	5% – 10%	0%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	6%	4% – 8%	6%	4% – 7%	-1%		4%
Black, non-Hispanic	NA		6%	0% – 13%			3%
Hispanic	NA		10%	0% – 21%			2%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change; The CDC defines heavy drinking as males having more than two drinks per day or females having more than one drink per day

A significant difference in heavy drinking was seen between males (9%) and females (3%). When compared with other age groups, a higher percentage was seen for age 18-29 (8%), despite a 5 percentage point decrease from 2007. The highest prevalence of heavy drinking among all demographic groups was reported for Hispanic adults (10%).

**Chronic Drinking** The CDC defines chronic drinking as having an average of two or more drinks per day for the past 30 days. Chronic drinking prevalence in Erie County has been tracked since 2007.

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who indicated that they were chronic drinkers remained at 6% in 2011 (Figure 3). This mirrors PA at 6% (2010). Values were not available for the U.S.

From 2007 to 2011, a significant decrease in chronic drinking was seen for females (2% to 1%, respectively) (Table 3). During this same period, a large decrease was seen for age 18-29 (12% to 5%, respectively).

In 2011, a significant difference in chronic drinking was seen between males (11%) and females (1%). When compared with other income groups, a higher percentage was also seen for those with household income of \$50,000 and above (9%). The highest prevalence of chronic drinking among all demographic groups was reported for males (11%) followed by Hispanic adults (10%).

**Figure 3. Chronic Drinking Prevalence, 2007 & 2011**

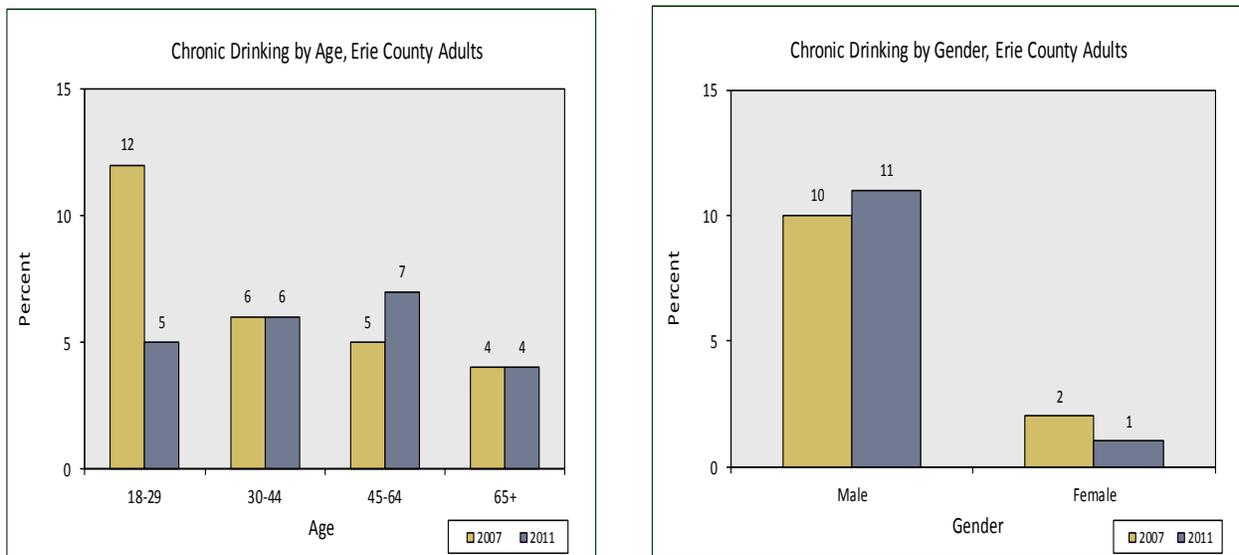


Table 3. Chronic Drinking Prevalence, 2007 & 2011

Chronic Drinking Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	6%	4% – 9%	6%	4% – 7%	0%		6%
<u>Gender</u>							
Male	10%	7% – 15%	11%	8% – 13%	1%		9%
Female	2%	1% – 4%	1%	0% – 1%	-2%	***	3%
<u>Age</u>							
18-29	12%	5% – 24%	5%	2% – 7%	-7%		6%
30-44	6%	3% – 11%	6%	3% – 9%	0%		6%
45-64	5%	3% – 7%	7%	4% – 9%	2%		6%
65+	4%	2% – 7%	4%	1% – 7%	0%		5%
<u>Education</u>							
<High School	4%	1% – 11%	3%	0% – 6%	-1%		8%
High School	7%	4% – 11%	6%	3% – 8%	-1%		7%
Some College	6%	2% – 15%	6%	4% – 8%	0%		6%
College Graduate	6%	3% – 11%	6%	4% – 9%	0%		5%
<u>Income</u>							
<\$25,000	5%	2% – 9%	6%	3% – 8%	1%		NA
\$25,000-\$49,999	6%	3% – 13%	3%	1% – 6%	-3%		5%
\$50,000+	8%	5% – 13%	9%	6% – 12%	1%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	6%	4% – 9%	6%	4% – 7%	0%		6%
Black, non-Hispanic	NA		4%	0% – 10%			6%
Hispanic	NA		10%	0% – 21%			8%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change; The CDC defines chronic drinking as having an average of two or more drinks per day for the past 30 days

**Drinking and Driving** Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who drove in the past month with perhaps too much to drink decreased to 4% in 2011 compared with 6% in 2007 (Figure 4). This was higher than PA at 3% (2010). Values are not available for the U.S.

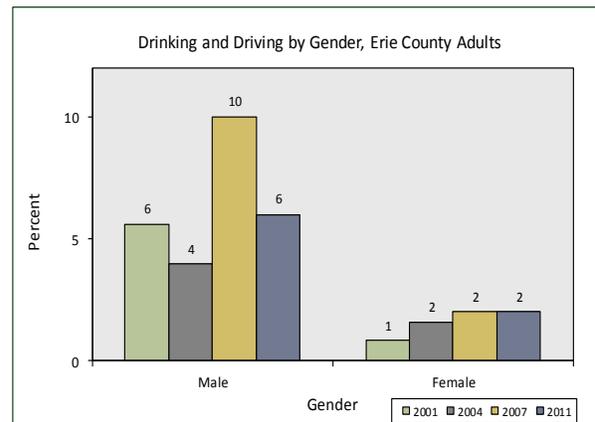
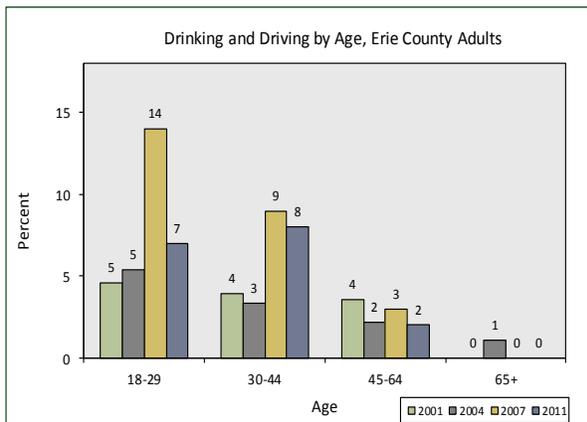
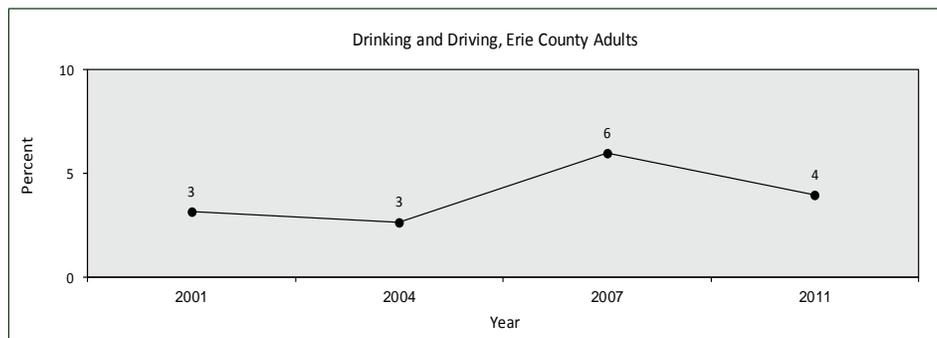
From 2007 to 2011, every demographic group saw a decrease in the prevalence of drinking and driving except females (no change), high school graduates (no change), and age 65 and above (constant at 0%). The largest percentage point decreases were seen for age 18-29 (7%), males (4%), and college graduates (4%).

In 2011, a significant difference in drinking and driving was seen between males (6%) and females (2%) (Table 4). Differences in prevalence were seen among age groups, with ages 18-29 (7%) and 30-44 (8%) significantly higher than ages 45-64 (2%) and 65 and above (0%).

The highest prevalence of drinking and driving among all demographic groups was reported for Hispanic adults (10%) followed by ages 30-44 (8%) and 18-29 (7%), males (6%), and those with household income of \$50,000 and above (6%).

In 2011, 4% of non-Hispanic White and 2% of non-Hispanic Black adults reported drinking and driving in the past month with perhaps too much to drink.

**Figure 4. Drinking and Driving Prevalence, 2001-2011**



**Table 4. Drinking and Driving Prevalence, 2007 & 2011**

Drinking and Driving in the Past Month with Perhaps Too Much to Drink Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	6%	4% – 8%	4%	3% – 5%	-2%		3%
<u>Gender</u>							
Male	10%	7% – 15%	6%	4% – 8%	-4%		5%
Female	2%	1% – 4%	2%	1% – 3%	0%		1%
<u>Age</u>							
18-29	14%	7% – 25%	7%	4% – 10%	-7%		5%
30-44	9%	5% – 14%	8%	5% – 11%	-1%		4%
45-64	3%	1% – 5%	2%	1% – 3%	-1%		3%
65+	0%	0% – 3%	0%	0% – 1%	0%		1%
<u>Education</u>							
<High School	NSR		3%	0% – 6%			0%
High School	4%	2% – 8%	4%	2% – 6%	0%		4%
Some College	8%	4% – 14%	5%	3% – 7%	-3%		3%
College Graduate	8%	4% – 13%	4%	2% – 6%	-4%		3%
<u>Income</u>							
<\$25,000	5%	2% – 10%	4%	2% – 7%	-1%		NA
\$25,000-\$49,999	5%	3% – 9%	3%	1% – 5%	-2%		4%
\$50,000+	8%	5% – 14%	6%	3% – 8%	-2%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	6%	4% – 9%	4%	3% – 5%	-2%		3%
Black, non-Hispanic	NA		2%	0% – 6%			3%
Hispanic	NA		10%	0% – 21%			4%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

## Youth Alcohol Use

Since 2005, Erie County has participated in the biannual Pennsylvania Youth Survey (PAYS) sponsored by the Pennsylvania Commission on Crime and Delinquency (PCCD). PAYS surveys 6<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade students to determine youth behaviors and attitudes. In 2005, 2,465 students from four public schools participated. In 2009, 5,160 students representing ten school districts participated.

Alcohol is the most used drug among students in both Erie County and Pennsylvania. Four alcohol behaviors were evaluated: lifetime alcohol use, past-30-day alcohol use, binge drinking,

and drinking and driving. For Erie County, prevalence decreased from 2007 to 2009 for all behaviors except drinking and driving which remained relatively constant.

**Lifetime Alcohol Use** From 2007 to 2009, the overall lifetime use of alcohol among Erie County students decreased (Table 5). In 2009, 46.1% (55.9% in 2007) of Erie County students reported that they had used alcohol at least once in their lifetime compared with 49.3% for PA (55.4% in 2007). Usage ranged from 22.9% in 6<sup>th</sup> grade (25.4% in 2007) to 69.3% in 12<sup>th</sup> grade (82.9% in 2007). These rates were higher for 8<sup>th</sup> graders, similar for 10<sup>th</sup> graders, and lower for 12<sup>th</sup> graders compared with the nation. From 2007 to 2009, lifetime alcohol usage prevalence in Erie County decreased for all grades.

**Table 5. Youth Alcohol Use Prevalence, 2007 & 2009**

Alcohol Use Among Erie County Middle and High School Students Erie County 2007 & 2009 PAYS												
Grade	Lifetime Use*			Past-30-Day Use**			Binge Drinking***			Drinking and Driving****		
	Erie County	PA	PA	Erie County	PA	PA	Erie County	PA	PA	Erie County	PA	PA
	2007	2009	2009	2007	2009	2009	2007	2009	2009	2007	2009	2009
6th	25.4%	22.9%	20.8%	3.6%	4.8%	5.1%	1.5%	1.3%	1.2%	0.4%	0.6%	0.5%
8th	53.5%	45.1%	45.0%	14.3%	19.9%	17.2%	7.0%	9.0%	8.0%	1.3%	2.6%	1.9%
10th	74.4%	59.3%	56.7%	36.3%	29.4%	30.5%	20.0%	18.0%	16.0%	4.4%	4.7%	3.2%
12th	82.9%	69.3%	70.0%	50.6%	42.9%	46.0%	32.2%	25.8%	27.6%	21.7%	17.3%	16.5%
Overall	55.9%	46.1%	49.3%	23.2%	21.8%	25.5%	13.1%	11.6%	13.6%	5.5%	5.3%	5.8%

Note: \*Indicates that the student ever used alcohol; \*\*Indicates that the student used alcohol within the past 30 days; \*\*\*Indicates that the student reported having five or drinks in a row within the past two weeks; \*\*\*\*Indicates driving while or shortly after drinking

**Past-30-Day Alcohol Use** From 2007 to 2009, the overall 30 day use of alcohol among Erie County students decreased. In 2009, 21.8% (23.2% in 2007) of Erie County students reported that they had used alcohol within the past 30 days compared with 25.5% for PA (23.2% in 2007). Usage ranged from 4.8% in 6<sup>th</sup> grade (3.6% in 2007) to 42.9% in 12<sup>th</sup> grade (50.6% in 2007). These rates were higher for 8<sup>th</sup> and similar for 10<sup>th</sup> and 12<sup>th</sup> graders compared with the nation. From 2007 to 2009, past-30-day alcohol usage prevalence in Erie County increased for 6<sup>th</sup> and 8<sup>th</sup> graders and decreased for 10<sup>th</sup> and 12<sup>th</sup> graders.

**Binge Drinking** PAYS defines binge drinking as having five or more drinks in a row within the past two weeks. From 2007 to 2009, the prevalence of binge drinking among Erie County students decreased. In 2009, 11.6% (13.1% in 2007) of Erie County students reported that they had at least one episode of binge drinking within the past two weeks compared with 13.6% for

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PA (12.5% in 2007). Usage ranged from 1.3% in 6<sup>th</sup> grade (1.5% in 2007) to 25.8% in 12<sup>th</sup> grade (32.2% in 2007). These rates were similar for 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders compared with the nation. From 2007 to 2009, binge drinking prevalence in Erie County remained relatively constant for 6<sup>th</sup> graders, increased for 8<sup>th</sup> graders, and decreased for 10<sup>th</sup> and 12<sup>th</sup> graders.

**Drinking and Driving** In 2009, 5.3% (5.5% in 2007) of Erie County students reported having driven a car shortly after drinking compared with 5.8% for PA (5.6% in 2007).

In 2009, 9.8% (9.7% in 2007) of Erie County students reported that they had ever been drunk or high at school compared with 9.7% in PA (7.5% in 2007).

## **Youth Drug Use**

Since 2005, Erie County has participated in the biannual Pennsylvania Youth Survey (PAYS) sponsored by the Pennsylvania Commission on Crime and Delinquency (PCCD). PAYS surveys 6<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade students to determine youth behaviors and attitudes. In 2005, 2,465 students from four public schools participated. In 2009, 5,160 students representing ten school districts participated.

**Lifetime Marijuana Use** Marijuana is the third most used drug among students in both Erie County and Pennsylvania. From 2007 to 2009, the overall lifetime use of marijuana among Erie County students decreased (Table 6). In 2009, 17.3% (18.9% in 2007) of Erie County students reported that they had used marijuana at least once in their lifetime compared with 20.0% for PA (16.4% in 2007). Usage ranged from 1.3% in 6<sup>th</sup> grade (2.1% in 2007) to 40.2% in 12<sup>th</sup> grade (44.9% in 2007). These rates were lower for 8<sup>th</sup> and 10<sup>th</sup> graders and similar for 12<sup>th</sup> graders compared with the nation. From 2007 to 2009, lifetime marijuana usage prevalence in Erie County decreased for all grades with the exception of 8<sup>th</sup> grade.

**Past-30-Day Marijuana Use** From 2007 to 2009, the overall 30 day use of marijuana among Erie County students remained stable. In 2009, 9.8% (9.9% in 2007) of Erie County students reported that they had used marijuana within the past 30 days compared with 11.4% for PA (8.5% in 2007). Usage ranged from 0.8% in 6<sup>th</sup> grade (0.9% in 2007) to 22.4% in 12<sup>th</sup> grade (24.0% in 2007). These rates were similar for 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders compared with the nation. From 2007 to 2009, past-30-day marijuana usage prevalence in Erie County increased for 8<sup>th</sup> graders (4.0% to 7.5%, respectively) and decreased for other grades.

**Table 6. Youth Marijuana Use Prevalence, 2007 & 2009**

Marijuana Use Among Erie County Middle and High School Students Erie County 2007 & 2009 PAYS									
Grade	Lifetime Use*			Past-30-Day Use**			Driving Under Influence***		
	Erie County		PA	Erie County		PA	Erie County		PA
	2007	2009	2009	2007	2009	2009	2007	2009	2009
6th	2.1%	1.3%	0.6%	0.9%	0.8%	0.3%	0.1%	0.2%	0.1%
8th	9.1%	12.4%	9.8%	4.0%	7.5%	5.4%	1.0%	1.7%	1.2%
10th	31.0%	27.8%	25.1%	16.5%	15.1%	14.2%	5.5%	5.3%	4.7%
12th	44.9%	40.2%	41.1%	24.0%	22.4%	23.7%	19.6%	17.0%	18.5%
Overall	18.9%	17.3%	20.0%	9.9%	9.8%	11.4%	5.3%	4.9%	6.5%

Note: \*Indicates that the student ever used marijuana; \*\*Indicates that the student used marijuana within the past 30 days; \*\*\*Indicates driving while or shortly after using marijuana

**Driving Under the Influence of Marijuana** In 2009, 4.9% (5.3% in 2007) of Erie County students reported driving a car shortly after or while using marijuana compared with 6.5% for PA.

**Prescription Drug Use** Illicit use of prescription drugs is a growing problem among students in both Erie County and Pennsylvania.

In 2009, the overall lifetime use of pain relievers by students was 7.9% for Erie County compared with PA at 7.4%, while the past-30-day use was 5.5% for Erie County compared with 5.0% for PA (Table 7).

In 2009, the overall lifetime use of tranquilizers by students was 2.7% for Erie County compared with PA at 3.2%, while the past-30-day use was 1.8% for Erie County compared with 1.9% for PA.

In 2009, the overall lifetime use of stimulants by students was 5.1% for Erie County compared with PA at 4.2%, while the past-30-day use was 3.3% for Erie County compared with 2.8% for PA.

**Other Drug Use** Prevalence of other drug use among Erie County students is reported in Table 8. From 2007 to 2009, lifetime use of inhalants increased from 10.5% to 12.8% (11.5% for PA) and past-30-day use of inhalants increased from 3.5% to 7.2% (5.9% for PA).

**Table 7. Youth Illicit Prescription Drug Use Prevalence, 2009**

Illicit Prescription Drug Use Among Erie County Middle and High School Students Erie County 2009 PAYS													
Grade	Pain Relievers				Tranquilizers				Stimulants				
	<i>Lifetime Use*</i>		<i>30-Day-Use**</i>		<i>Lifetime Use*</i>		<i>30-Day-Use**</i>		<i>Lifetime Use*</i>		<i>30-Day-Use**</i>		
	Erie County	PA	Erie County	PA	Erie County	PA	Erie County	PA	Erie County	PA	Erie County	PA	
6th	1.7%	1.6%	1.6%	1.0%	0.3%	0.2%	0.5%	0.2%	0.6%	0.4%	0.3%	0.2%	
8th	5.6%	3.7%	4.9%	3.6%	1.1%	0.7%	1.1%	0.8%	2.0%	1.5%	1.7%	1.2%	
10th	13.4%	8.3%	9.6%	6.1%	5.3%	3.0%	4.0%	2.1%	9.9%	4.3%	7.8%	3.2%	
12th	16.1%	14.8%	8.7%	8.7%	7.1%	8.4%	3.2%	4.2%	13.3%	10.1%	6.9%	6.0%	
Overall	7.9%	7.4%	5.5%	5.0%	2.7%	3.2%	1.8%	1.9%	5.1%	4.2%	3.3%	2.8%	

Note: \*Indicates ever using the drug; \*\*Indicates using the drug in the past 30 days

**Table 8. Youth Other Drug Use Prevalence, 2007 & 2009**

Other Drug Use Among Erie County Middle and High School Students Erie County 2007 & 2009 PAYS						
Substance	<i>Lifetime Use*</i>			<i>Past-30-Day Use**</i>		
	Erie County		PA	Erie County		PA
	<u>2007</u>	<u>2009</u>	<u>2009</u>	<u>2007</u>	<u>2009</u>	<u>2009</u>
Inhalants	10.5%	12.8%	11.5%	3.5%	7.2%	5.9%
Hallucinogens	4.2%	2.9%	3.3%	1.9%	1.7%	1.8%
Cocaine	2.8%	1.9%	1.9%	1.0%	0.8%	0.6%
Crack Cocaine	1.0%	0.7%	0.8%	0.3%	0.3%	0.3%
Ecstasy	2.2%	1.9%	2.1%	0.5%	1.0%	1.1%
Methamphetamine	0.4%	0.5%	0.6%	0.1%	0.5%	0.3%
Steroids	1.4%	0.9%	0.8%	0.6%	0.8%	0.6%
Heroin	0.7%	0.7%	0.7%	0.3%	0.3%	0.2%

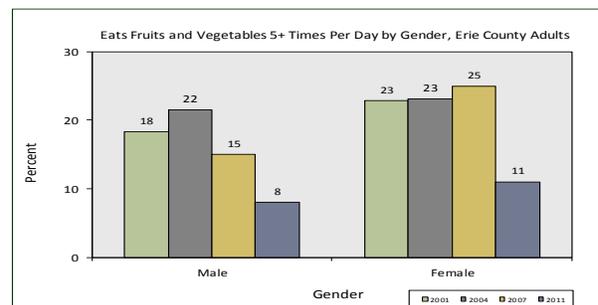
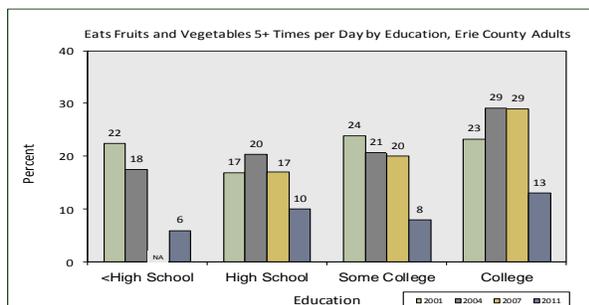
Note: \*Indicates ever using the drug; \*\*Indicates using the drug within the past 30 days

## Nutrition

Poor nutrition has been associated with high serum cholesterol, high blood pressure, cardiovascular disease, diabetes, obesity, and dental caries as well as other diseases. The *Dietary Guidelines for Americans, 2010*, established by the United States Department of Agriculture (USDA) and Health and Human Services (HHS), provides recommendations to help individuals make healthy food choices and reduce their risk for disease. Consumers are advised to eat more fruits, vegetables, whole grains, fat-free and low-fat dairy products, lean meats, seafood and other protein sources while limiting consumption of refined grains, solid fats, alcohol, and foods that contain a high content of cholesterol, saturated fats, trans fats, sodium, and added sugar.

**Fruits and Vegetables** Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who eat fruits and vegetables five or more times per day significantly decreased to 10% in 2011 compared with 21% in 2007 (Figure 5). Erie County remains lower than the PA value of 24% (2009) and the U.S. value of 24% (2009). Note that the wording of this question changed in the 2011 BRFSS survey. Before 2011, the number of *servings* of fruits and vegetables per day was reported. In 2011, the number of *times* fruits and vegetables were eaten per day was reported.

Figure 5. Fruit and Vegetable Consumption Prevalence, 2001-2011



From 2007 to 2011, significant decreases in prevalence were seen for all demographic groups with the exception of those which were not reported in 2007 (non-Hispanic Blacks, Hispanics, and those with less than a high school education)(Table 9). The highest percentage point

decreases in fruit and vegetable consumption were seen for college graduates (-16%), ages 18-29 (-15%) and 65 and above (-15%), females (-14%), and those with household income below \$25,000 (-13%).

In 2011, differences in prevalence occurred within demographic groups. Comparatively lower percentages were seen for those with less than a high school education (6%), those with household incomes below \$25,000 (7%) and \$25,000-\$49,999 (8%), males (8%), and those with some college (8%).

In 2011, the highest prevalence of five fruit and vegetable consumption per day was seen for Hispanic adults (14%) followed by college graduates (13%), those with household income \$50,000 and above (13%), and females (11%). In 2011, 10% of non-Hispanic White and 10% of non-Hispanic Black adults reported eating five fruits and vegetables per day.

**Table 9. Fruit and Vegetable Consumption Prevalence, 2007 & 2011**

Eats Fruits and Vegetables 5+ Times Per Day* Erie County Adult BRFS, 2007 & 2011							
	2007		2011		Point Change ^	Sig	PA 2009
		CI		CI			
All Adults	21%	18% – 24%	10%	8% – 11%	-12%	***	24%
<u>Gender</u>							
Male	15%	11% – 20%	8%	6% – 10%	-7%	***	20%
Female	25%	22% – 29%	11%	9% – 14%	-14%	***	28%
<u>Age</u>							
18-29	25%	17% – 37%	10%	6% – 13%	-15%	***	25%
30-44	16%	12% – 22%	9%	5% – 12%	-7%	***	21%
45-64	19%	15% – 23%	10%	7% – 13%	-9%	***	24%
65+	25%	20% – 30%	10%	5% – 14%	-15%	***	26%
<u>Education</u>							
<High School	NSR		6%	1% – 11%			20%
High School	17%	13% – 21%	10%	7% – 12%	-7%	***	19%
Some College	20%	15% – 27%	8%	5% – 11%	-12%	***	24%
College Graduate	29%	23% – 35%	13%	9% – 16%	-16%	***	31%
<u>Income</u>							
<\$25,000	20%	15% – 27%	7%	4% – 9%	-13%	***	NA
\$25,000-\$49,999	18%	13% – 23%	8%	5% – 11%	-10%	***	22%
\$50,000+	24%	19% – 29%	13%	9% – 16%	-11%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	20%	17% – 23%	10%	8% – 11%	-11%	***	24%
Black, non-Hispanic	NA		10%	2% – 19%			27%
Hispanic	NA		14%	1% – 27%			22%

Note: \*The wording of this question changed in 2011; \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Whole Grains** Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who ate one or more servings of whole grains per day significantly decreased to 64% in 2011 compared with 82% in 2007 (Table 10). Values are not available for PA or the U.S.

**Table 10. Whole Grain Consumption Prevalence, 2007 & 2011**

Eats 1+ Servings of Whole Grains Per Day Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA
		CI		CI			
All Adults	82%	79% – 85%	64%	62% – 67%	-18%	***	NA
<u>Gender</u>							
Male	81%	76% – 86%	62%	58% – 66%	-19%	***	NA
Female	83%	80% – 86%	66%	63% – 70%	-17%	***	NA
<u>Age</u>							
18-29	86%	75% – 92%	65%	59% – 70%	-21%	***	NA
30-44	87%	82% – 91%	61%	56% – 67%	-26%	***	NA
45-64	77%	73% – 81%	63%	58% – 67%	-15%	***	NA
65+	81%	76% – 86%	71%	64% – 77%	-10%		NA
<u>Education</u>							
<High School	80%	69% – 88%	64%	54% – 75%	-16%		NA
High School	82%	77% – 85%	70%	66% – 75%	-12%	***	NA
Some College	80%	73% – 86%	61%	56% – 66%	-19%	***	NA
College Graduate	85%	81% – 89%	68%	63% – 73%	-17%	***	NA
<u>Income</u>							
<\$25,000	82%	76% – 87%	58%	52% – 63%	-24%	***	NA
\$25,000-\$49,999	78%	71% – 83%	58%	53% – 64%	-20%	***	NA
\$50,000+	86%	82% – 89%	74%	69% – 78%	-12%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	82%	79% – 85%	65%	62% – 68%	-17%	***	NA
Black, non-Hispanic	NA		61%	48% – 75%			NA
Hispanic	NA		40%	22% – 58%			NA

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; calculated; NA indicates the data is not available; ^ indicates a percentage point change

From 2007 to 2011, significant decreases in prevalence were seen for all demographic groups except for those aged 65 and above and those with less than a high school education. The highest percentage point decreases in whole grain consumption were seen for ages 30-44 (-26%) and 18-29 (-21%), and those with household income of \$25,000-\$49,999 (-20%).

In 2011, differences in prevalence occurred within demographic groups. Significantly lower percentages were seen for those with household incomes below \$25,000 (58%) and \$25,000-

\$49,999 (58%) compared with household income of \$50,000 and above (74%). Comparatively lower percentages were seen for Hispanic adults (40%), those with household incomes below \$25,000 (58%) and \$25,000-\$49,999 (58%), those with some college education (61%), ages 30-44 (61%) and 45-64 (63%), and males (62%).

The highest prevalence of one or more servings of whole grain per day was seen for those with household income of \$50,000 and above (74%), age 65 and above (71%), and high school graduates (70%). In 2011, 65% of non-Hispanic White and 61% of non-Hispanic Black adults reported eating one or more servings of whole grain per day.

**Dairy** Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who ate two or more servings of dairy per day significantly decreased to 39% in 2011 compared with 69% in 2007 (Table 11). Values are not available for PA or the U.S.

**Table 11. Dairy Consumption Prevalence, 2007 & 2011**

Eats 2+ Servings of Dairy Per Day Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA
		CI		CI			
All Adults	69%	65% – 73%	39%	36% – 41%	-30%	***	NA
<u>Gender</u>							
Male	67%	60% – 73%	34%	30% – 38%	-33%	***	NA
Female	71%	66% – 75%	43%	39% – 47%	-28%	***	NA
<u>Age</u>							
18-29	77%	64% – 86%	45%	39% – 51%	-32%	***	NA
30-44	74%	66% – 81%	42%	36% – 47%	-32%	***	NA
45-64	62%	56% – 67%	37%	33% – 42%	-25%	***	NA
65+	67%	58% – 74%	29%	23% – 35%	-38%	***	NA
<u>Education</u>							
<High School	NSR		39%	29% – 49%			NA
High School	68%	61% – 73%	38%	33% – 42%	-30%	***	NA
Some College	70%	61% – 78%	37%	32% – 42%	-33%	***	NA
College Graduate	74%	68% – 80%	45%	40% – 51%	-29%	***	NA
<u>Income</u>							
<\$25,000	62%	52% – 71%	34%	29% – 40%	-28%	***	NA
\$25,000-\$49,999	71%	64% – 78%	37%	31% – 42%	-34%	***	NA
\$50,000+	72%	66% – 77%	47%	42% – 52%	-25%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	69%	65% – 73%	40%	37% – 43%	-29%	***	NA
Black, non-Hispanic	NA		27%	14% – 39%			NA
Hispanic	NA		21%	6% – 35%			NA

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

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From 2007 to 2011, significant decreases in prevalence were seen for all demographic groups with the exception of those with less than a high school education, non-Hispanic Blacks, and Hispanics. Prevalence was not reported in 2007 for these groups. The highest percentage point decreases in dairy consumption were seen for age 65 and above (38%), those with household income of \$25,000-\$49,999 (34%), those with some college (33%), and males (33%).

In 2011, differences in prevalence were seen within demographic groups. A significantly lower percentage was seen for males (34%) compared with females (43%) and for those with household income below \$25,000 (34%) compared with those with income of \$50,000 and above (47%). Comparatively lower percentages were seen for Hispanic (21%) and non-Hispanic Black (27%) adults. The highest prevalence of dairy consumption per day was seen for those with household income of \$50,000 and above (47%), college graduates (45%), and age 18-29 (45%).

Dairy consumption prevalence decreased with increasing age: 18-29 (45%), 30-44 (42%), 45-64 (37%), and 65 and above (29%) and increased with increasing income: household income below \$25,000 (34%), household income of \$25,000-\$49,999 (37%), and household income of \$50,000 and above (47%).

In 2011, 40% of non-Hispanic White, 27% of non-Hispanic Black, and 21% of Hispanic adults reported consuming two or more servings of dairy per day.

**Sugar Sweetened Beverages** Based on the BRFSS, 6% of Erie County adults aged 18 and above reported drinking three or more sugar sweetened beverages per day (Table 12). Values are not available for PA or the U.S.

Hispanic adults reported the highest percentage of consumption at 18% followed by non-Hispanic Black adults at 14%, age 30-44 at 11%, and some college education at 9%. Age 65 and above reported the lowest percentage of consumption at 1% followed by college graduates at 4%, and females, age 45-64, and those with household income of \$50,000 and above at 5%.

Table 12. Sugar Sweetened Beverage Consumption Prevalence, 2011

Drinks 3+ Sugar Sweetened Beverages Per Day Erie County Adult BRFSS, 2011					
	2007	2011	PA		
	CI	CI			
All Adults	NA	6%	5% – 8%	NA	
<u>Gender</u>					
Male	NA	7%	5% – 10%	NA	
Female	NA	5%	4% – 7%	NA	
<u>Age</u>					
18-29	NA	8%	5% – 11%	NA	
30-44	NA	11%	7% – 15%	NA	
45-64	NA	5%	3% – 7%	NA	
65+	NA	1%	0% – 3%	NA	
<u>Education</u>					
<High School	NA	6%	1% – 11%	NA	
High School	NA	7%	4% – 9%	NA	
Some College	NA	9%	6% – 12%	NA	
College Graduate	NA	4%	2% – 6%	NA	
<u>Income</u>					
<\$25,000	NA	8%	5% – 11%	NA	
\$25,000-\$49,999	NA	7%	4% – 11%	NA	
\$50,000+	NA	5%	3% – 8%	NA	
<u>Race/Ethnicity</u>					
White, non-Hispanic	NA	6%	4% – 7%	NA	
Black, non-Hispanic	NA	14%	4% – 24%	NA	
Hispanic	NA	18%	4% – 32%	NA	

Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available

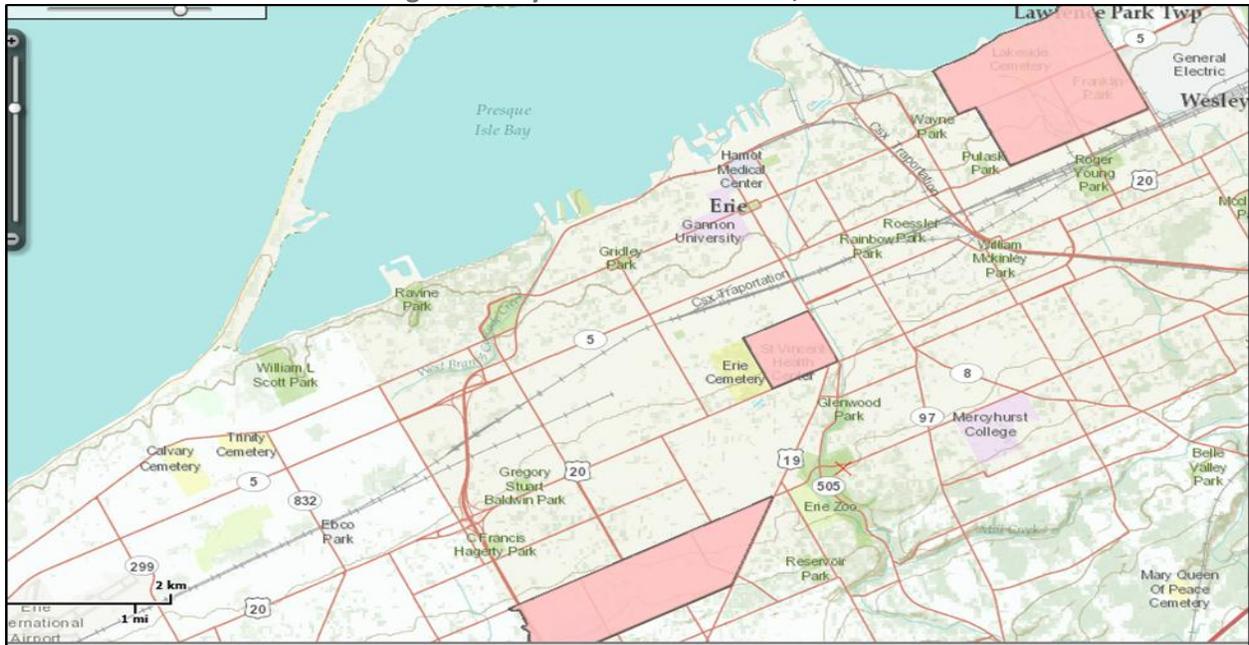
## Food Deserts

As defined by the United States Department of Agriculture, a food desert is a geographic area where residents, especially those with low-income, do not have ready accessibility to healthy and affordable food retailers.

Erie County has five food deserts which are identified by their census tract number. Three are in the City of Erie: Census Tract 6 which is bordered by Franklin Avenue to Brandes Street and 12<sup>th</sup> Street to Lake Erie, Census Tract 19 which is bordered by West 18<sup>th</sup> to West 26<sup>th</sup> Street and

State Street to Chestnut Street, and Census Tract 30 which is bordered by Peach Street to Pittsburgh Avenue and West 38<sup>th</sup> Street to West Grandview Boulevard (Figure 6).

Figure 6. City of Erie Food Deserts, 2012



The other two food deserts in Erie County are : Census Tract 101.09, Albion Borough and Census Tract 122.02, Edinboro Borough. (Figure 7).

Figure 7. Erie County Food Deserts, 2012

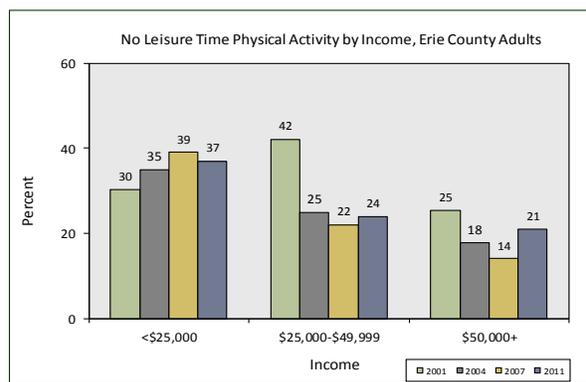
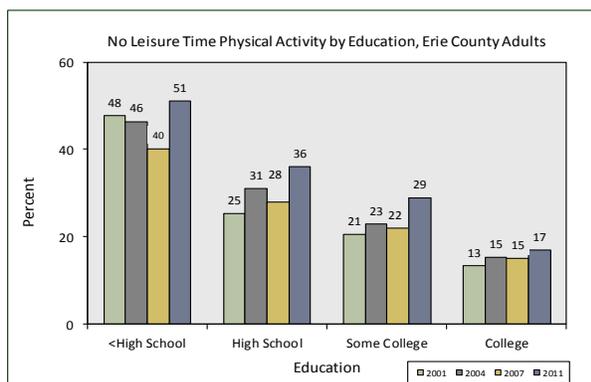
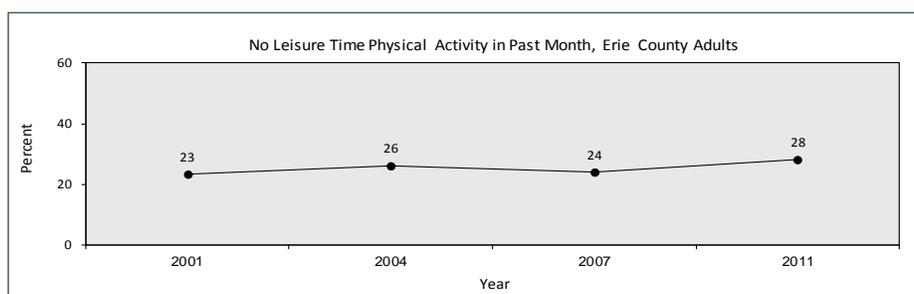


## Physical Activity

Physical activity is important to good health and is one of the most effective ways to maintain body weight. It reduces blood pressure, arthritis pain, disability associated with arthritis, depression symptoms, and anxiety symptoms, and reduces the risk for type 2 diabetes, heart attack, stroke, several types of cancer, osteoporosis, and falls.

**No Leisure Time Physical Activity** Based on the BRFSS, the percentage of Erie County adults aged 18 and above who reported having no leisure physical activity in the past month increased to 28% in 2011 compared with 24% in 2007 (Figure 8). This was higher than PA at 26% (2010) and the U.S. at 24% (2010), but lower than the Healthy People 2020 Goal of 33%.

Figure 8. Physical Inactivity Prevalence, 2001-2011



From 2007-2011, all demographic groups saw an increase in the prevalence of no leisure physical activity with the exception of those age 65 and above (-2%) and those with household income below \$25,000 (-2%). The highest percentage point increase (+11%) was seen for those with less than a high school education.

In 2011, differences in prevalence occurred within demographic groups (Table 13). A significantly lower percentage was seen for college graduates (17%) compared with all other education groups. A significantly higher percentage was seen for those with household income

below \$25,000 (37%) compared with all other income groups. Higher percentages were seen for age 65 and above (33%) compared with other age groups and females (31%) compared with males (25%). A comparatively higher percentage was also seen for Hispanic adults (48%).

The highest prevalence of no leisure time physical activity was seen for those with less than a high school education (51%) followed by Hispanic adults (48%).

No leisure time physical activity prevalence decreased with increasing education: less than high school (51%), high school (36%), some college (29%), and college graduate (17%), and decreased with increasing income: household income below \$25,000 (37%), household income of \$25,000-\$49,999 (24%), and household income of \$50,000 and above (21%).

In 2011, 27% of non-Hispanic White and 29% of non-Hispanic Black adults reported no leisure time physical activity in the past month.

**Table 13. Physical Inactivity Prevalence, 2007 & 2011**

No Leisure Time Physical Activity in the Past Month Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	PA 2010
		CI		CI	Sig	
All Adults	24%	21% – 27%	28%	25% – 31%	4%	26%
<u>Gender</u>						
Male	19%	15% – 24%	25%	21% – 28%	6%	23%
Female	29%	25% – 33%	31%	28% – 35%	2%	28%
<u>Age</u>						
18-29	18%	11% – 27%	24%	19% – 29%	6%	17%
30-44	22%	17% – 28%	28%	23% – 33%	6%	23%
45-64	24%	20% – 28%	28%	24% – 32%	4%	26%
65+	35%	29% – 41%	33%	27% – 39%	-2%	34%
<u>Education</u>						
<High School	40%	28% – 53%	51%	40% – 61%	11%	43%
High School	28%	24% – 33%	36%	31% – 40%	8%	33%
Some College	22%	17% – 29%	29%	24% – 33%	7%	24%
College Graduate	15%	11% – 21%	17%	13% – 21%	2%	16%
<u>Income</u>						
<\$25,000	39%	32% – 47%	37%	32% – 42%	-2%	NA
\$25,000-\$49,999	22%	17% – 27%	24%	19% – 29%	2%	28%
\$50,000+	14%	10% – 19%	21%	16% – 25%	7%	NA
<u>Race/Ethnicity</u>						
White, non-Hispanic	24%	21% – 27%	27%	25% – 30%	3%	24%
Black, non-Hispanic	NA		29%	16% – 41%		33%
Hispanic	NA		48%	30% – 66%		36%
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change</small>						

**Leisure Time Physical Activities** Based on the BRFSS, for those individuals who reported some leisure time physical activity in the past month, walking (53%) was the most prevalent followed by running (10%), gardening (5%), weight lifting (4%), bicycling (3%), aerobics video or class (3%), elliptical/EFX machine (3%), and bicycling machine (2%). Participation in other activities ranged from below 1% to 1% of the survey population.

**Exercise Per Week** In 2011, for all demographic groups except Hispanic, individuals who participated in leisure time physical activity exercised an average of four times per week. Hispanic adults reported exercising 5 times per week.

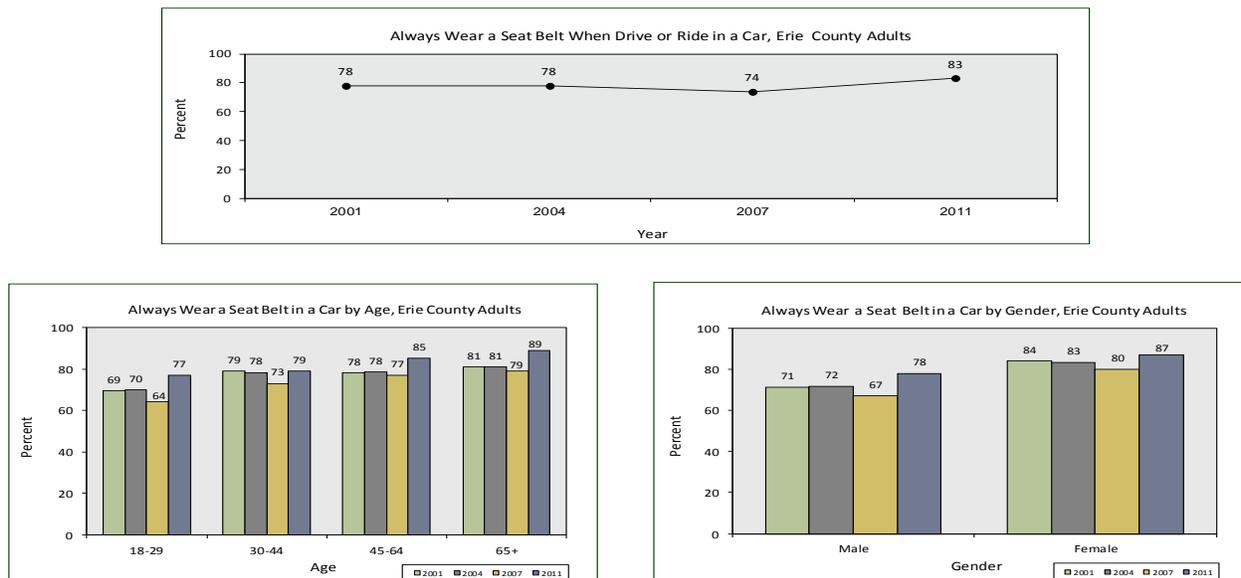
**Muscle Strength Activities Per Week** In 2011, for all demographic groups, individuals who participated in leisure time physical activity spent an average of one time per week participating in muscle strengthening activities.

### Seat Belt Use

The CDC reports that seat belt use reduces serious injuries and deaths in motor vehicle crashes by 50%.

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who always wear a seat belt when they drive or ride in a car significantly increased to 83% in 2011 compared with 74% in 2007 (Figure 9). This was higher than PA at 77% (2010), but lower than the U.S. at 85% (2010) and the Healthy People 2020 Goal of 92.4%.

**Figure 9. Seat Belt Use Prevalence, 2001-2011**



From 2007 to 2011, all demographic groups, with the exception of those with some college education, reported an increase in seat belt use (Table 14). Significant increases were seen for males (67% to 78%, respectively), females (80% to 87%, respectively), ages 45-64 (77% to 85%, respectively) and 65 and above (79% to 89%, respectively), those with a high school education (73% to 88%, respectively), college graduates (81% to 90%, respectively), those with household income of \$50,000 and above (77% to 92%, respectively), and non-Hispanic White adults (74% to 83%, respectively). The highest percentage point increases in seat belt use were seen for high school graduates (+15%) and those with a household income of \$50,000 and above (+15%), followed by age 18-29 (+13%), males (+11%), and age 65 and above (+10%).

**Table 14. Seat Belt Use Prevalence, 2007 & 2011**

Always Wear a Seat Belt When Drive or Ride In a Car Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	74%	70% – 77%	83%	80% – 85%	9%	***	77%
<u>Gender</u>							
Male	67%	62% – 73%	78%	75% – 82%	11%	***	70%
Female	80%	75% – 83%	87%	84% – 89%	6%	***	84%
<u>Age</u>							
18-29	64%	52% – 74%	77%	72% – 82%	13%		68%
30-44	73%	66% – 79%	79%	74% – 84%	6%		76%
45-64	77%	72% – 81%	85%	82% – 89%	8%	***	78%
65+	79%	73% – 84%	89%	85% – 93%	10%	***	82%
<u>Education</u>							
<High School	NSR		93%	87% – 100%			63%
High School	73%	67% – 78%	88%	85% – 91%	15%	***	72%
Some College	76%	69% – 82%	75%	71% – 80%	-1%		76%
College Graduate	81%	75% – 86%	90%	86% – 93%	9%	***	85%
<u>Income</u>							
<\$25,000	68%	60% – 75%	73%	69% – 78%	5%		NA
\$25,000-\$49,999	77%	70% – 82%	79%	75% – 84%	2%		72%
\$50,000+	77%	72% – 82%	92%	90% – 95%	15%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	74%	71% – 77%	83%	81% – 85%	9%	***	78%
Black, non-Hispanic	NA		65%	52% – 79%			72%
Hispanic	NA		79%	65% – 94%			81%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

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In 2011, differences in prevalence were seen within demographic groups. Significantly lower percentages were seen for males (78%) compared with females (87%), ages 18-29 (77%) and 30-44 (79%) compared with 65 and above (89%), those with some college education (75%) compared with all other education groups, and those with household incomes below \$25,000 (73%) and \$25,000-\$49,999 (79%) compared with household income of \$50,000 and above (92%).

The highest prevalence of seat belt use was seen for those with less than a high school education (93%), those with household income of \$50,000 and above (92%), and college graduates (90%). In 2011, 83% of non-Hispanic White, 65% of non-Hispanic Black, and 79% of Hispanic adults reported always wearing a seat belt when they drive or ride in a car. The lowest overall percentage of seat belt use was seen for non-Hispanic Black adults at 65%.

## **Sleep**

The health community has begun to recognize the importance of adequate sleep in maintaining good health and preventing chronic disease. Inadequate sleep has been associated with diabetes, cardiovascular disease, obesity, and depression and is a cause of motor vehicle and machinery-related crashes. The CDC recommends 7 to 9 hours of sleep for adults.

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who slept less than 7 hours in a 24 hour period was 37% in 2011 (Table 15). Values were not available for PA or the U.S.

In 2011, differences in prevalence were seen within age groups, education groups, and income groups. Higher percentages were seen for age 30-44 (44%) compared with ages 18-29 (38%), 45-64 (34%), and 65 and above (30%), those with less than a high school education (41%) and high school graduates (41%) compared with other education groups, and those with household income of \$50,000 and above (42%) compared with those with household incomes below \$25,000 (38%) and \$25,000-\$49,999 (33%). For gender, 37% of both males and females slept less than 7 hours in a 24 hour period.

The highest prevalence of inadequate sleep was seen for age 30-44 (44%) followed by those with household income of \$50,000 and above (42%), those with less than a high school education (41%), and high school graduates (41%). In 2011, 37% of non-Hispanic White, 27% of non-Hispanic Black, and 32% of Hispanic adults reported sleeping less than 7 hours in a 24 hour period. The lowest overall percentage of inadequate sleep was seen for non-Hispanic Black adults at 27%.

Table 15. Inadequate Sleep Prevalence, 2011

Slept Less Than 7 Hours in a 24 Hour Period Erie County Adult BRFSS, 2011				
	2007		2011	PA 2010
		<u>CI</u>		
All Adults	NA		37% 34% - 39%	NA
<u>Gender</u>				
Male	NA		37% 33% - 41%	NA
Female	NA		37% 33% - 41%	NA
<u>Age</u>				
18-29	NA		38% 32% - 44%	NA
30-44	NA		44% 38% - 50%	NA
45-64	NA		34% 30% - 39%	NA
65+	NA		30% 24% - 37%	NA
<u>Education</u>				
<High School	NA		41% 30% - 52%	NA
High School	NA		41% 36% - 46%	NA
Some College	NA		37% 32% - 42%	NA
College Graduate	NA		35% 30% - 40%	NA
<u>Income</u>				
<\$25,000	NA		38% 32% - 43%	NA
\$25,000-\$49,999	NA		33% 27% - 38%	NA
\$50,000+	NA		42% 37% - 47%	NA
<u>Race/Ethnicity</u>				
White, non-Hispanic	NA		37% 34% - 40%	NA
Black, non-Hispanic	NA		27% 14% - 39%	NA
Hispanic	NA		32% 15% - 49%	NA
<small>Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available</small>				

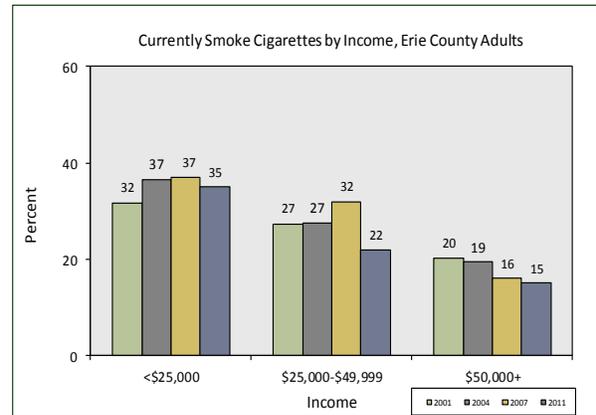
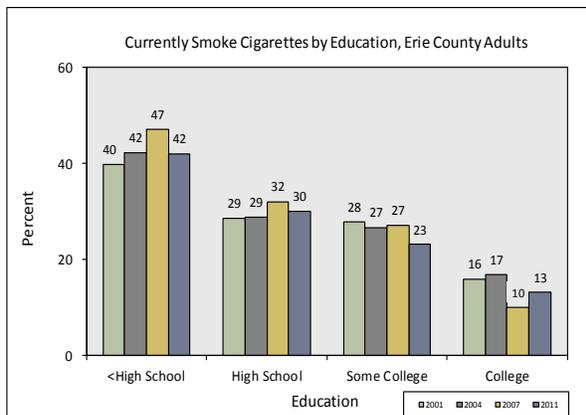
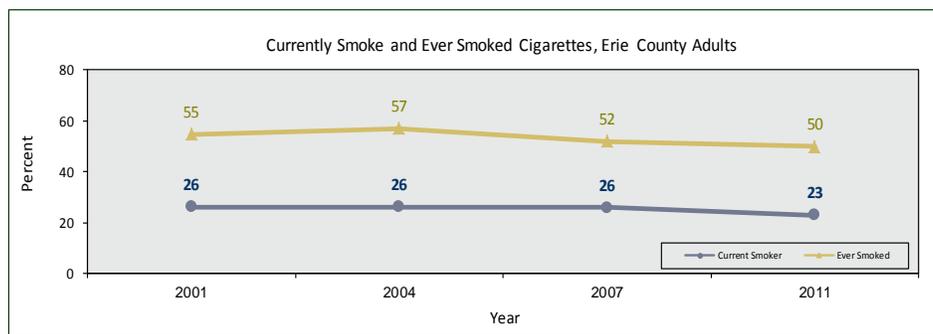
## Tobacco

Tobacco use causes disease, disability, and death. Cigarette smoking is associated with lung cancer and cancers of the lip, oral cavity, pharynx, esophagus, pancreas, larynx, uterine cervix, urinary bladder, and kidney. It causes coronary heart disease, stroke, and abdominal aortic aneurysms and increases the risk of developing peripheral vascular disease. It also increases the risk of dying from chronic obstructive pulmonary disease (COPD). Pregnant women who smoke

have a greater risk of pregnancy complications, premature birth, low-birth-weight infants, and stillbirths. Infants of mothers who smoked during pregnancy have a greater risk of sudden infant death syndrome (SIDS).

**Current Smoker** Based on the BRFSS, the percentage of Erie County adults aged 18 and above who currently smoke dropped to 23% in 2011 compared with 26% in 2007, 26% in 2004, and 26% in 2001 (Figure 10). This remains higher than PA at 18% (2010), the U.S. at 17% (2010), and the Healthy People 2020 Goal of 12.0%.

**Figure 10. Cigarette Smoking Prevalence, 2001-2011**



From 2007 to 2011, the prevalence of current smoking among demographic groups decreased or remained unchanged for all groups with the exception of age 65 and above (+2%) and college graduates (+3%) (Table 16). Higher percentage decreases were seen for those with household income of \$25,000-\$49,999 (-10%), ages 18-29 (-8%) and 30-44 (-6%), males (-6%), and those with less than a high school education (-5%).

Table 16. Current Smoking Prevalence, 2007 & 2011

Current Smokers Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	26%	23% – 29%	23%	21% – 25%	-3%		18%
<u>Gender</u>							
Male	28%	23% – 34%	22%	19% – 26%	-6%		19%
Female	24%	21% – 28%	24%	20% – 27%	0%		18%
<u>Age</u>							
18-29	35%	25% – 47%	27%	22% – 32%	-8%		22%
30-44	34%	28% – 40%	28%	23% – 33%	-6%		22%
45-64	26%	22% – 30%	23%	19% – 27%	-3%		21%
65+	8%	5% – 13%	10%	6% – 14%	2%		8%
<u>Education</u>							
<High School	47%	33% – 60%	42%	31% – 52%	-5%		33%
High School	32%	27% – 38%	30%	26% – 35%	-2%		25%
Some College	27%	21% – 34%	23%	19% – 27%	-4%		21%
College Graduate	10%	7% – 15%	13%	9% – 16%	3%		7%
<u>Income</u>							
<\$25,000	37%	30% – 45%	35%	30% – 40%	-2%		NA
\$25,000-\$49,999	32%	26% – 38%	22%	17% – 27%	-10%		20%
\$50,000+	16%	13% – 21%	15%	11% – 19%	-1%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	25%	22% – 29%	22%	19% – 24%	-3%		18%
Black, non-Hispanic	NA		35%	21% – 48%			26%
Hispanic	NA		31%	14% – 48%			19%
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change</small>							

In 2011, differences in prevalence were seen within age groups, education groups, and income groups. Higher percentages were seen for ages 18-29 (27%) and 30-44 (28%) compared with 45-64 (23%), and 65 and above (10%). The prevalence of smoking for age 65 and above was significantly lower than all other age groups. A higher percentage was seen for those with less than a high school education (42%) compared with other education groups. The prevalence of smoking was significantly lower for college graduates and higher for those with less than a high school education compared with other education groups. A higher percentage was seen for those with household income below \$25,000 (35%) compared with other income groups.

Smoking prevalence decreased with increasing education and with increasing income.

In 2011, the prevalence of smoking among females was 24% (24% in 2007) compared with 22% (28% in 2007) for males. Among racial and ethnic groups, 22% of non-Hispanic White, 35% of non-Hispanic Black, and 31% of Hispanic adults are current smokers.

Among all demographic groups, the highest prevalence of cigarette smoking was seen for those with less than a high school education (42%).

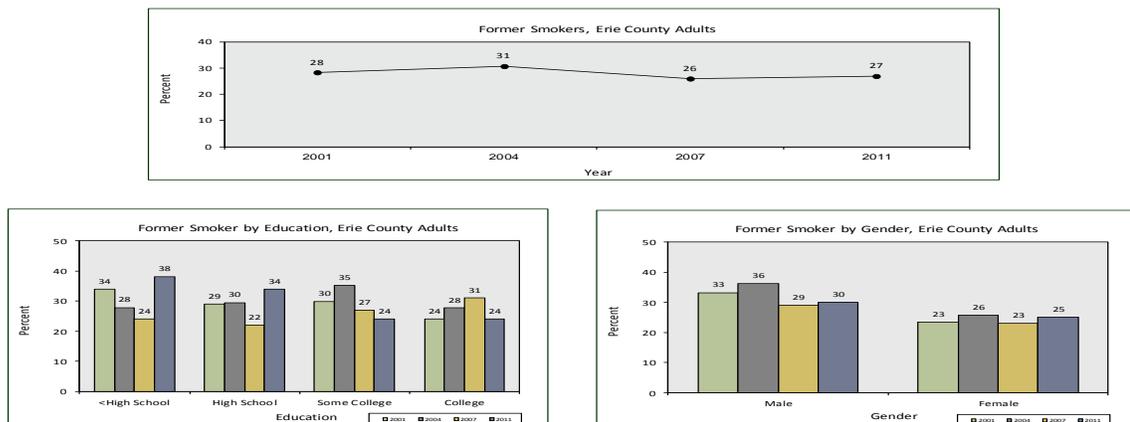
**Ever Smoked** Based on the BRFSS, the percentage of Erie County adults aged 18 and above who smoked at least 100 cigarettes in their lifetime (ever smoked) decreased to 50% in 2011 compared with 52% in 2007, 57% in 2004, and 55% in 2001 (Figure 10). This is higher than PA at 44% (2010) and higher than the U.S. at 43% (2010).

In 2011, differences in prevalence were seen within age groups, education groups, and income groups. Higher percentages were seen for ages 65 and above (59%) and 45-64 (56%) compared with ages 30-44 (46%), and 18-29 (39%). A significantly higher percentage was seen for those with less than a high school education (80%) compared with high school graduates (64%), those with some college education (47%) and college graduates (37%). A higher percentage was seen for those with household income below \$25,000 (58%) compared with those with incomes of \$25,000-\$49,999 (49%) and \$50,000 and above (44%).

In 2011, 48% of females compared with 52% of males ever smoked. Among racial and ethnic groups, 50% of non-Hispanic White, 55% of non-Hispanic Black, and 52% of Hispanic adults smoked at least 100 cigarettes in their lifetime.

**Former Smoker** Based on the BRFSS, the percentage of Erie County adults aged 18 and above who are former smokers increased to 27% in 2011 compared with 26% in 2007 (Figure 11). This is higher than PA at 26% (2010) and higher than the U.S. at 25% (2010).

Figure 11. Former Smoker Prevalence, 2001-2011



From 2007 to 2011, the prevalence of former smokers among demographic groups increased or remained unchanged for all groups with the exception of college graduates (-7 percentage points) and those with some college education (-3 percentage points) (Table 17). A significant increase was seen for high school graduates (22% to 34%, respectively), while a high increase was seen for those with less than a high school education (24% to 38%, respectively).

**Table 17. Former Smoker Prevalence, 2007 & 2011**

Former Smoker Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	26%	23% – 29%	27%	25% – 30%	1%		26%
<u>Gender</u>							
Male	29%	25% – 34%	30%	26% – 34%	1%		29%
Female	23%	20% – 27%	25%	21% – 28%	2%		24%
<u>Age</u>							
18-29	10%	6% – 19%	12%	8% – 16%	2%		12%
30-44	18%	14% – 24%	18%	13% – 22%	0%		19%
45-64	30%	25% – 34%	32%	28% – 37%	2%		29%
65+	45%	39% – 52%	48%	42% – 55%	3%		42%
<u>Education</u>							
<High School	24%	15% – 36%	38%	27% – 48%	14%		27%
High School	22%	18% – 26%	34%	30% – 39%	12%	***	27%
Some College	27%	22% – 34%	24%	19% – 28%	-3%		27%
College Graduate	31%	26% – 37%	24%	20% – 29%	-7%		25%
<u>Income</u>							
<\$25,000	22%	17% – 27%	23%	18% – 27%	1%		NA
\$25,000-\$49,999	25%	21% – 31%	28%	23% – 33%	3%		29%
\$50,000+	27%	23% – 32%	29%	24% – 34%	2%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	26%	24% – 29%	28%	25% – 31%	2%		28%
Black, non-Hispanic	NA		20%	9% – 32%			19%
Hispanic	NA		21%	6% – 35%			19%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

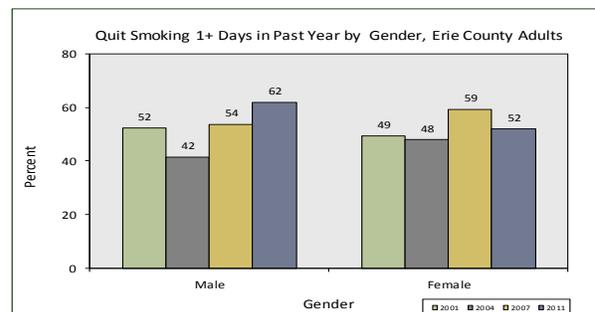
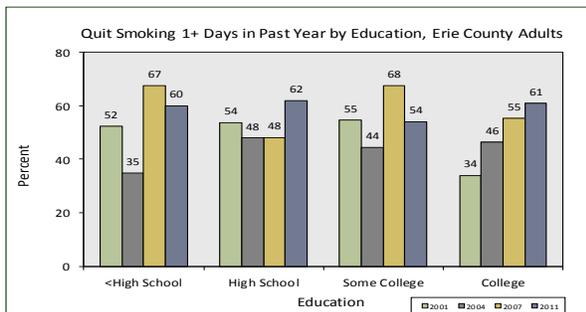
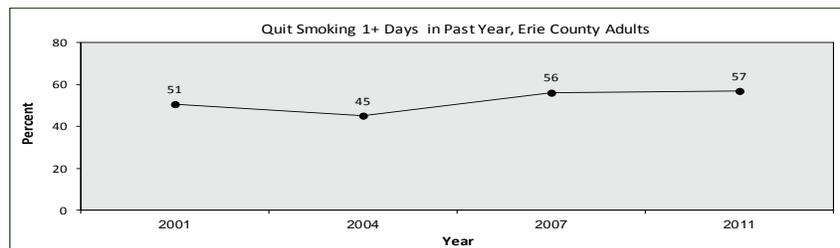
In 2011, differences in prevalence were seen within age groups, education groups, income groups, and gender. Higher percentages were seen for ages 65 and above (48%) and 45-64 (32%) compared with ages 30-44 (18%), and 18-29 (12%). The prevalence of smoking was significantly higher for ages 45-64 and 65 and above compared with other age groups. A higher

percentage was seen for those with less than a high school education (38%) compared with other education groups and a lower percentage was seen for those with household income below \$25,000 (23%) compared with other income groups.

The percentage of former smokers increased with increasing age, increasing income, and decreasing education. In 2011, 25% of females and 30% of males were former smokers. Among racial and ethnic groups, 28% of non-Hispanic White, 20% of non-Hispanic Black, and 21% of Hispanic adults were former smokers. Among all demographic groups, the highest prevalence of former smokers was seen for those aged 65 and above (48%).

**Quit Smoking at Least 1 Day in Past Year** Based on the BRFSS, the percentage of Erie County adults aged 18 and above who quit smoking at least 1 day in the past year increased to 57% in 2011 compared with 56% in 2007, 45% in 2004, and 51% in 2001 (Figure 12). This is higher than PA at 55% (2010). Values are not available for the U.S.

Figure 12. Smoking Cessation Prevalence, 2001-2011



From 2007 to 2011, the prevalence of smokers who quit smoking at least 1 day in the past year fluctuated among demographic groups (Table 18). Higher increases in quit attempts were seen for high school graduates (48% to 62%, respectively) and males (54% to 62%, respectively). Higher decreases in quit attempts were seen for those with some college education (68% to 54%, respectively) and those with household income \$25,000-\$49,999 (59% to 49%, respectively).

In 2011, differences in prevalence were seen within age groups, education groups, income groups, and gender. A higher percentage was seen for age 18-29 (69%) compared with ages 30-44 (53%), 45-64 (52%) and 65 and above (48%). A lower percentage was seen for those with some college education (54%) compared with the other education groups. A lower percentage was seen for those with household income of \$25,000-\$49,999 (49%) compared with the other income groups. A higher percentage of quit attempts was seen for males (62%) compared with females (52%)

**Table 18. Smoking Cessation Prevalence, 2007 & 2011**

Quit Smoking 1+ Days in the Past Year Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	PA 2010
		CI		CI		
All Adults	56%	NA	57%	51% - 63%	1%	55%
<u>Gender</u>						
Male	54%	NA	62%	53% - 70%	8%	53%
Female	59%	NA	52%	44% - 61%	-7%	56%
<u>Age</u>						
18-29	71%	NA	69%	59% - 80%	-2%	62%
30-44	52%	NA	53%	42% - 65%	1%	53%
45-64	50%	NA	52%	42% - 61%	2%	54%
65+	54%	NA	48%	27% - 68%	-6%	52%
<u>Education</u>						
<High School	67%	NA	60%	42% - 78%	-7%	49%
High School	48%	NA	62%	53% - 71%	14%	53%
Some College	68%	NA	54%	44% - 65%	-14%	59%
College Graduate	55%	NA	61%	47% - 76%	6%	56%
<u>Income</u>						
<\$25,000	57%	NA	54%	45% - 63%	-3%	NA
\$25,000-\$49,999	59%	NA	49%	38% - 61%	-10%	51%
\$50,000+	54%	NA	57%	43% - 71%	3%	NA
<u>Race/Ethnicity</u>						
White, non-Hispanic	56%	NA	56%	50% - 62%	0%	52%
Black, non-Hispanic	NA		NSR			68%
Hispanic	NA		NSR			NSR
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change</small>						

The percentage of smokers who quit smoking at least 1 day in the past year decreased with increasing age. The percentage of quit attempts steadily increased from 2001 to 2011 for college graduates.

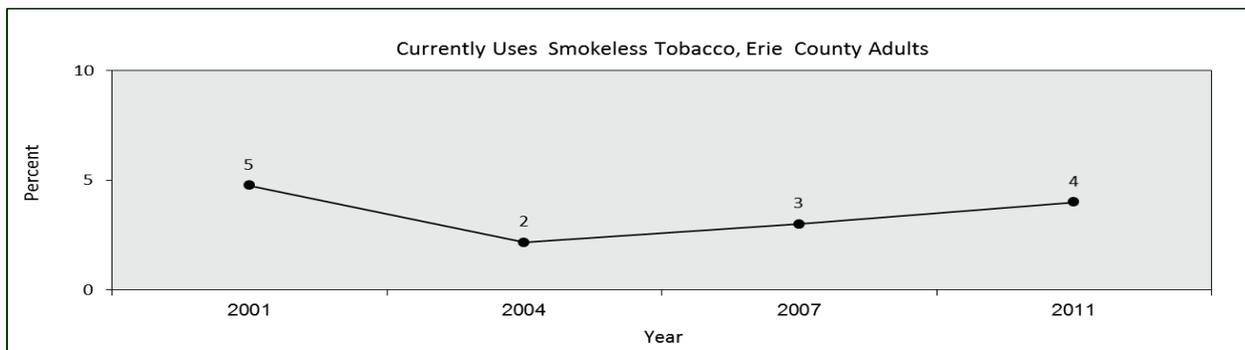
In 2011, 56% of non-Hispanic White adults tried to quit smoking in the past year. Values were not available for non-Hispanic Black and Hispanic adults. Among all demographic groups, the highest percentage of quit attempts was seen for those aged 18-29 (69%).

**Smokeless Tobacco** Based on the BRFSS, the percentage of Erie County adults aged 18 and above who currently use smokeless tobacco such as chewing tobacco, snuff, or snus increased to 4% in 2011 compared with 3% in 2007 (Figure 13). This is higher than PA at 2% (2010). Values are not available for the U.S.

In 2011, differences in prevalence were seen within age groups, education groups, and gender. Higher percentages were seen for age 18-29 (7%) compared with ages 30-44 (4%), 45-64 (3%), and 65 and above (3%). Higher percentages were seen for high school graduates (6%) and those with some college (6%) compared with those with less than a high school education (0%) and college graduates (2%). Percentages for those with household income below \$25,000 (4%), \$25,000-\$49,999 (3%) and \$50,000 and above (5%) were similar. A higher percentage was seen for males (8%) compared with females (0%).

In 2011, 4% of non-Hispanic White, 0% of non-Hispanic Black, and 7% of Hispanic adults reported currently using smokeless tobacco. Among all demographic groups, the highest prevalence of smokeless tobacco use was seen for males (8%) followed by age 18-29 (7%) and Hispanic adults (7%).

Figure 13. Smokeless Tobacco Use Prevalence, 2001-2011



**Secondhand Smoke** Based on the BRFSS, the percentage of Erie County adults age 18 and above who never allow smoking in their house significantly decreased to 43% in 2011 compared with 68% in 2007 (Table 20). Values for PA and the U.S. are not available. Note that the wording of this question changed in the 2011 BRFSS survey. In 2007, the question stated “Which statement best describes the rules about smoking inside your home? 1) Smoking is not allowed

anywhere inside the house”. In 2011, the question stated “Not counting decks, porches, or garages, inside your home, smoking is ... 1) Never allowed”.

From 2007 to 2011, the percentage of households that never allowed smoking in the house significantly decreased for all demographic groups with the exception of age 18-29 and those with household income of \$50,000 and above.

**Table 20. Secondhand Smoke in Homes, 2007 & 2011**

Smoking is Never Allowed in the House* Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change^	Sig	PA 2010
		CI		CI			
All Adults	68%	64% – 71%	43%	37% – 49%	-25%	***	NA
<u>Gender</u>							
Male	68%	62% – 73%	46%	37% – 55%	-22%	***	NA
Female	67%	63% – 71%	39%	31% – 47%	-28%	***	NA
<u>Age</u>							
18-29	65%	53% – 75%	54%	43% – 65%	-11%		
30-44	67%	60% – 74%	47%	36% – 59%	-20%	***	NA
45-64	69%	64% – 73%	31%	21% – 40%	-38%	***	NA
65+	69%	62% – 74%	39%	19% – 59%	-30%	***	NA
<u>Education</u>							
<High School	NSR		41%	23% – 59%			
High School	61%	55% – 66%	41%	32% – 51%	-20%	***	NA
Some College	67%	59% – 74%	42%	31% – 52%	-25%	***	NA
College Graduate	82%	77% – 86%	57%	42% – 71%	-25%	***	NA
<u>Income</u>							
<\$25,000	60%	52% – 67%	32%	24% – 41%	-28%	***	NA
\$25,000-\$49,999	60%	54% – 67%	37%	26% – 49%	-23%	***	NA
\$50,000+	81%	76% – 85%	73%	61% – 86%	-8%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	68%	64% – 71%	43%	36% – 49%	-26%	***	NA
Black, non-Hispanic	NA		NSR				NA
Hispanic	NA		NSR				NA

Note: \*The wording of this question changed in 2011; \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

## Youth Tobacco Use

Since 2005, Erie County has participated in the biannual Pennsylvania Youth Survey (PAYS) sponsored by the Pennsylvania Commission on Crime and Delinquency (PCCD). PAYS surveys 6<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade students to determine youth behaviors and attitudes. In 2005,

2,465 students from four public schools participated. In 2009, 5,160 students representing ten school districts participated.

Tobacco is the second most used drug among students in both Erie County and Pennsylvania. Four tobacco behaviors were evaluated: lifetime cigarette use, past-30-day cigarette use, lifetime smokeless tobacco use, and past-30-day smokeless tobacco use.

**Lifetime Cigarette Use** From 2007 to 2009, the overall lifetime use of cigarettes among Erie County students slightly decreased. In 2009, 26.3% (26.7% in 2007) of Erie County students reported that they had smoked a cigarette at least once in their lifetime compared with 26.3% for PA (23.9% in 2007) (Table 19). Usage ranged from 7.3% in 6<sup>th</sup> grade (8.2% in 2007) to 47.4% in 12<sup>th</sup> grade (47.4% in 2007). These rates were higher for 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders compared with the nation. From 2007 to 2009, the average age of onset for cigarette smoking among Erie County students decreased from 13.7 to 12.7 years.

**Table 19. Youth Tobacco Use Prevalence, 2007 & 2009**

Tobacco Use Among Erie County Middle and High School Students Erie County 2007 & 2009 PAYS												
Grade	Cigarette Use						Smokeless Tobacco Use					
	Lifetime Use*			Past-30-Day Use**			Lifetime Use*			Past-30-Day Use**		
	Erie County		PA	Erie County		PA	Erie County		PA	Erie County		PA
	2007	2009	2009	2007	2009	2009	2007	2009	2009	2007	2009	2009
6th	8.2%	7.3%	4.6%	2.2%	1.8%	0.9%	2.6%	1.9%	2.5%	0.8%	1.0%	0.6%
8th	23.7%	24.4%	20.6%	7.2%	7.7%	6.7%	8.7%	9.0%	8.8%	4.1%	4.3%	4.7%
10th	36.0%	37.2%	32.0%	17.3%	15.8%	13.9%	17.2%	23.8%	14.2%	8.6%	12.6%	7.6%
12th	47.4%	47.4%	44.3%	24.8%	22.1%	20.8%	27.8%	25.6%	21.4%	13.3%	14.8%	10.9%
Overall	26.7%	26.3%	26.3%	11.5%	10.2%	11.0%	12.5%	12.6%	12.1%	5.9%	6.8%	6.2%

Note: \*Indicates that the student ever used cigarettes or smokeless tobacco; \*\*Indicates that the student used cigarettes or smokeless tobacco within the past 30 days; Smokeless tobacco includes chewing tobacco, snuff, and snus

**Past-30-Day Cigarette Use** From 2007 to 2009, the overall past-30-day use of cigarettes among Erie County students decreased. In 2009, 10.2% (11.5% in 2007) of Erie County students reported that they had smoked a cigarette within the past 30 days compared with 11.0% for PA (10.2% in 2007). Usage ranged from 1.8% in 6<sup>th</sup> grade (2.2% in 2007) to 22.1% in 12<sup>th</sup> grade (24.8% in 2007). These rates were similar for 8<sup>th</sup> graders and higher for 10<sup>th</sup> and 12<sup>th</sup> graders compared with the nation. From 2007-2009, past-30-day cigarette use decreased for all grades with the exception of 8<sup>th</sup> graders.

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**Lifetime Smokeless Tobacco Use** From 2007 to 2009, the overall lifetime use of smokeless tobacco among Erie County students remained stable. In 2009, 12.6% (12.5% in 2007) of Erie County students reported that they had used smokeless tobacco at least one in their lifetime compared with 12.1% for PA (9.8% in 2007). Usage ranged from 1.9% in 6<sup>th</sup> grade (2.6% in 2007) to 25.6% in 12<sup>th</sup> grade (27.8% in 2007). These rates were similar for 8<sup>th</sup> graders and higher for 10<sup>th</sup> and 12<sup>th</sup> graders compared with the nation. From 2007 to 2009, the highest change in lifetime smokeless tobacco use was an increase in use for 10<sup>th</sup> graders (17.2% to 23.8%, respectively).

**Past-30-Day Smokeless Tobacco Use** From 2007 to 2009, the overall past-30-day use of smokeless tobacco among Erie County students increased. In 2009, 6.8% (5.9% in 2007) of Erie County students reported that they had used smokeless tobacco within the past 30 days compared with 6.2% for PA (5.0% in 2007). Usage ranged from 1.0% in 6<sup>th</sup> grade (0.8% in 2007) to 14.8% in 12<sup>th</sup> grade (13.3% in 2007). These rates were similar for 8<sup>th</sup> graders and higher for 10<sup>th</sup> and 12<sup>th</sup> graders compared with the nation. From 2007 to 2009, past-30-day smokeless tobacco use prevalence in Erie County increased for all grades, especially 10<sup>th</sup> grade (8.6% to 12.6%, respectively) and 12<sup>th</sup> grade (13.3% to 14.8%, respectively).

## **Weight Control**

Body Mass Index (BMI) is a calculated variable based on an individual's height and weight and is used as an indicator to categorize weight status. A BMI below 18.5 is labeled as underweight, 18.5–24.9 as normal weight, 25.0–29.9 as overweight, and 30.0 and above as obese. A BMI of 25 or above is labeled as overweight including obese.

Overweight and obesity are known risk factors for type 2 diabetes, heart disease, stroke, hypertension, osteoarthritis, sleep apnea, respiratory problems, and some cancers (endometrial, breast, and colon). Obesity is also associated with high blood cholesterol, high levels of triglycerides, pregnancy complications, liver and gallbladder disease, menstrual irregularities, infertility, stress incontinence, and increased surgical risk.

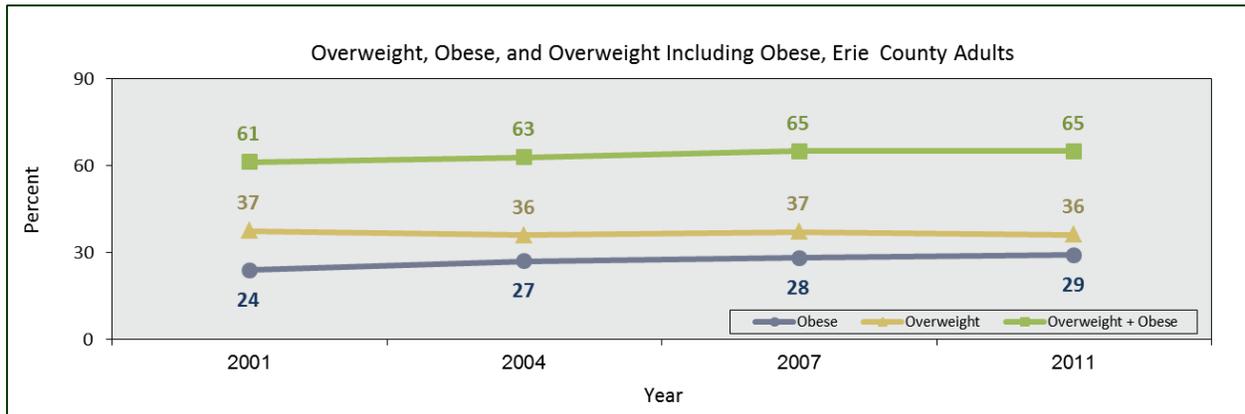
The CDC estimates that 42% of Americans will be obese and 11% severely obese by 2030 with an estimated associated health care cost of \$550 billion.

In the BRFSS survey, respondents are asked to report their height and weight. BMI is calculated using this information.

From 2001 to 2011, the percentage of Erie County residents aged 18 and above who were overweight has remained relatively stable (Figure 14). However, during this same period, the

prevalence of obesity has increased by 5 percentage points (24% to 29%, respectively) and this is reflected in the 4 percentage point increase for overweight including obese (61% to 65%, respectively).

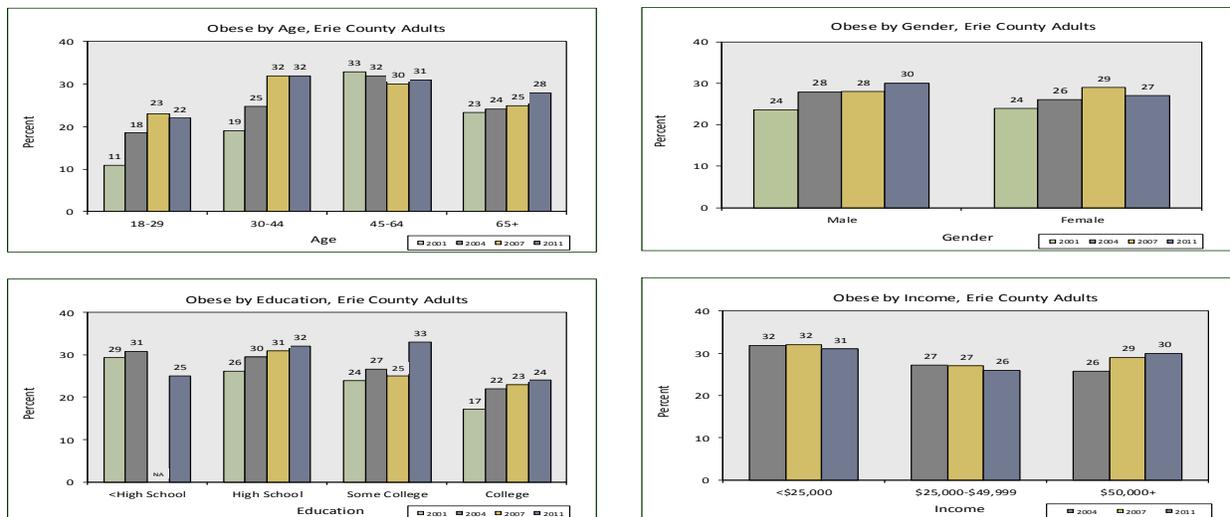
**Figure 14. Overweight, Obese, & Overweight Including Obese Prevalence, 2001-2011**



**Obese** Based on the BRFSS, the percentage of Erie County adults aged 18 and above who were obese (BMI  $\geq 30$ ) increased to 29% in 2011 compared with 28% in 2007, 27% in 2004, and 24% in 2001 (Figure 14). This mirrors PA at 29% (2010), but it is higher than the U.S. at 28% (2010) and lower than the Healthy People 2020 Goal of 30.6% of those aged 20 and above.

From 2007-2011, obesity prevalence among demographic groups remained relatively stable with the exception of those with some college education, those aged 65 and above, males, and females (Figure 15, Table 21). The highest percentage point increase (+8%) was seen for those with some college education.

**Figure 15. Obese Prevalence, 2001-2011**



In 2011, differences in prevalence were seen within education groups, income groups, age groups, and gender. Higher percentages were seen for ages 30-44 (32%), 45-64 (31%), and 65 and above (28%) compared with 18-29 (22%), those with some college education (33%) and high school graduates (32%) compared with other education groups, those with household incomes below \$25,000 (31%) and \$50,000 and above (30%) compared with household income of \$25,000-\$49,999 (26%), and males (30%) compared with females (27%). Highest percentages were seen for non-Hispanic Black adults (38%), Hispanic adults (35%), and those with some college education (33%). Prevalence for non-Hispanic White adults was 28%.

From 2001 to 2011, obesity prevalence has steadily increased for those aged 65 and above, males, high school graduates, and college graduates. From 2004 to 2011, increases were seen for those with household income of \$50,000 and above.

**Table 21. Obese Prevalence, 2007 & 2011**

Obese (BMI ≥30) Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	PA 2010
		CI		CI	Sig	
All Adults	28%	25% – 31%	29%	26% – 31%	1%	29%
<u>Gender</u>						
Male	28%	23% – 33%	30%	26% – 34%	2%	30%
Female	29%	25% – 33%	27%	23% – 31%	-2%	28%
<u>Age</u>						
18-29	23%	15% – 34%	22%	17% – 27%	-1%	22%
30-44	32%	26% – 39%	32%	27% – 38%	0%	28%
45-64	30%	25% – 34%	31%	27% – 36%	1%	35%
65+	25%	20% – 31%	28%	22% – 34%	3%	27%
<u>Education</u>						
<High School	NSR		25%	15% – 34%		35%
High School	31%	26% – 36%	32%	27% – 37%	1%	34%
Some College	25%	19% – 32%	33%	28% – 38%	8%	32%
College Graduate	23%	18% – 28%	24%	19% – 29%	1%	21%
<u>Income</u>						
<\$25,000	32%	26% – 39%	31%	26% – 36%	-1%	NA
\$25,000-\$49,999	27%	22% – 33%	26%	21% – 31%	-1%	31%
\$50,000+	29%	24% – 34%	30%	25% – 34%	1%	NA
<u>Race/Ethnicity</u>						
White, non-Hispanic	27%	24% – 31%	28%	25% – 31%	1%	29%
Black, non-Hispanic	NA		38%	24% – 51%		41%
Hispanic	NA		35%	17% – 52%		34%

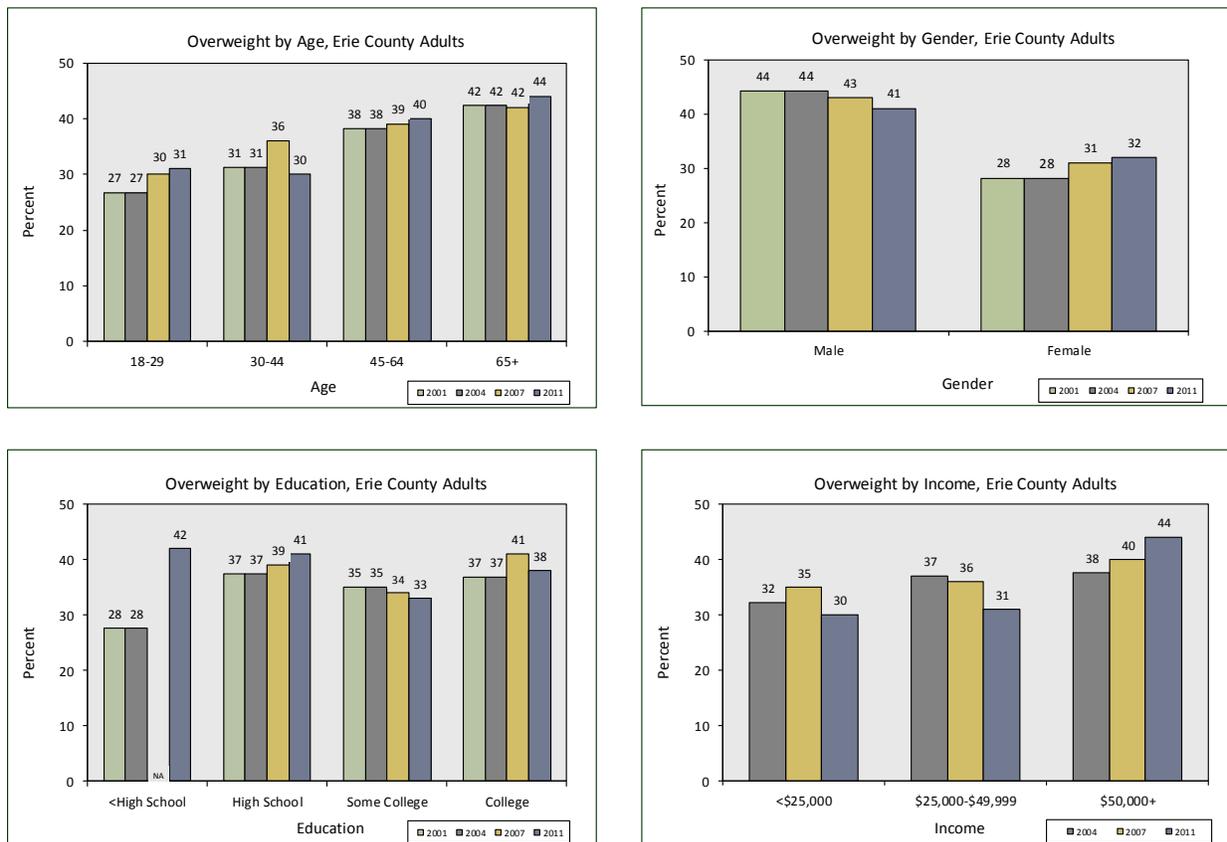
Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

**Overweight** Based on the BRFSS, the percentage of Erie County adults aged 18 and above who were overweight (BMI = 25.0-29.9) decreased to 36% in 2011 compared with 37% in 2007. (Figure 14). This is lower than PA at 37% (2010) and the same as the U.S. at 36% (2010).

From 2007-2011, overweight prevalence among demographic groups fluctuated but the overall trend favored a percentage point decrease or a nominal increase (Table 22). The highest percentage point decrease (-7%) was seen for age 30-44, while the highest percentage point increase (+5%) was seen for those with household income of \$50,000 and above.

In 2011, differences in prevalence were seen within education groups, income groups, age groups, and gender (Figure 16). A significantly higher percentage was seen for those with household income of \$50,000 and above compared with other income groups. Higher percentages were seen for ages 45-64 (40%) and 65 and above (44%) compared with ages 18-29 (31%) and 30-44 (29%), those with less than a high school education (42%) and high school graduates (41%) compared with other education groups, and males (40%) compared with females (32%). The prevalence of overweight increased with increasing income.

**Figure 16. Overweight Prevalence, 2001-2011**



Among all demographic groups, the highest prevalence of overweight was seen for those with household income of \$50,000 and above (45%). In 2011, 37% of non-Hispanic White, 23% of non-Hispanic Black, and 31% of Hispanic adults were overweight.

From 2004 to 2011, overweight prevalence has steadily increased for ages 18-29 and 45-64, females, those with less than high school and high school educations, and those with household income of \$50,000 and above. During the same period, overweight prevalence has steadily decreased for males.

**Table 22. Overweight Prevalence, 2007 & 2011**

Overweight (BMI 25.0-29.9) Erie County Adult BRFS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	37%	NA - NA	36%	33% - 39%	-1%		37%
<u>Gender</u>							
Male	43%	NA - NA	40%	36% - 44%	-3%		43%
Female	31%	NA - NA	32%	28% - 36%	1%		30%
<u>Age</u>							
18-29	30%	NA - NA	31%	25% - 37%	1%		29%
30-44	36%	NA - NA	29%	24% - 35%	-7%		37%
45-64	39%	NA - NA	40%	35% - 45%	1%		37%
65+	42%	NA - NA	44%	37% - 51%	2%		40%
<u>Education</u>							
<High School	NA	NA - NA	42%	32% - 53%			33%
High School	39%	NA - NA	41%	36% - 46%	2%		36%
Some College	34%	NA - NA	33%	28% - 38%	-1%		36%
College Graduate	41%	NA - NA	37%	32% - 43%	-4%		38%
<u>Income</u>							
<\$25,000	35%	NA - NA	30%	25% - 35%	-5%		NA
\$25,000-\$49,999	36%	NA - NA	32%	26% - 37%	-4%		37%
\$50,000+	40%	NA - NA	45%	40% - 50%	5%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	38%	NA - NA	37%	34% - 40%	-1%		37%
Black, non-Hispanic	NA		23%	11% - 35%			36%
Hispanic	NA		31%	14% - 48%			34%
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change</small>							

**Overweight Including Obese** Based on the BRFSS, the percentage of Erie County adults aged 18 and above who were overweight including obese (BMI  $\geq 25$ ) remained at 65% in 2011 compared with 65% in 2007, 63% in 2004, and 61% in 2001 (Figure 14). This is lower than PA at 66% (2010), but higher than the U.S. at 64% (2010).

From 2007-2011, overweight including obese prevalence among demographic groups fluctuated (Table 23). The highest percentage point decreases were seen for age 30-44 (-7%), those with household incomes below \$25,000 (-6%), and those with household income of \$25,000-\$49,999 (-6%), while the highest percentage point increases were seen for those with some college education (+7%) and those with household income of \$50,000 and above (+5%).

**Table 23. Overweight Including Obese Prevalence, 2007 & 2011**

Overweight Including Obese (BMI $\geq 25$ ) Erie County Adult BRFSS, 2007 & 2011						
	2007		2011		Point Change <sup>^</sup>	PA 2010
		CI		CI		
All Adults	65%	62% – 69%	65%	62% – 68%	0%	66%
<u>Gender</u>						
Male	71%	65% – 76%	71%	67% – 74%	-1%	73%
Female	60%	56% – 64%	59%	55% – 63%	-1%	58%
<u>Age</u>						
18-29	53%	42% – 65%	53%	47% – 59%	0%	51%
30-44	68%	62% – 74%	62%	56% – 67%	-7%	64%
45-64	69%	65% – 74%	71%	67% – 75%	2%	72%
65+	67%	60% – 72%	72%	66% – 78%	5%	66%
<u>Education</u>						
<High School	65%	51% – 77%	67%	57% – 77%	2%	68%
High School	70%	64% – 75%	73%	68% – 77%	3%	70%
Some College	59%	51% – 67%	66%	61% – 71%	7%	69%
College Graduate	64%	58% – 70%	62%	56% – 67%	-3%	59%
<u>Income</u>						
<\$25,000	67%	59% – 73%	61%	55% – 66%	-6%	NA
\$25,000-\$49,999	63%	57% – 69%	57%	52% – 63%	-6%	69%
\$50,000+	69%	63% – 74%	74%	70% – 79%	5%	NA
<u>Race/Ethnicity</u>						
White, non-Hispanic	65%	61% – 68%	65%	62% – 68%	0%	66%
Black, non-Hispanic	NA		59%	45% – 73%		77%
Hispanic	NA		66%	48% – 83%		68%

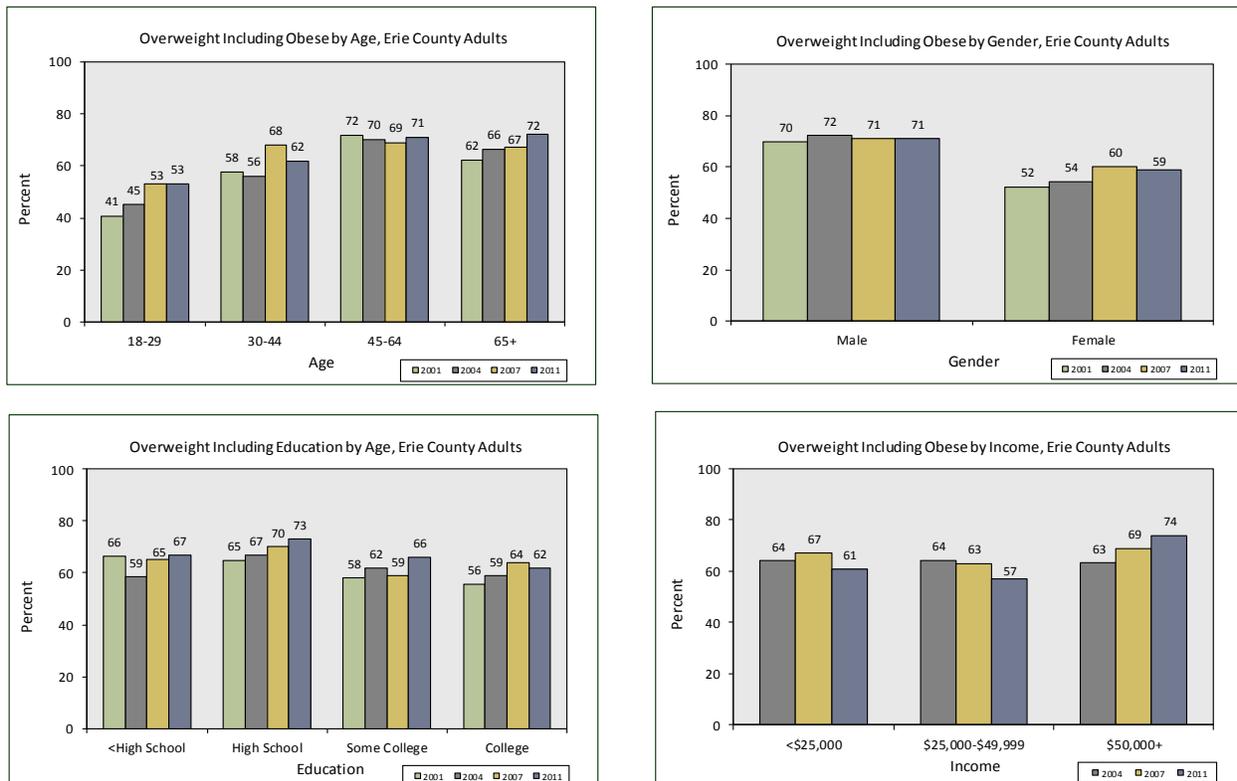
Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

In 2011, differences in prevalence were seen within education groups, income groups, age groups, and gender. A significant difference was seen between males (71%) and females (59%), age 18-29 (53%) and older age groups, and those with household income of \$50,000 and above (74%) and other income groups. Higher percentages were seen for high school graduates (73%) compared with other education groups. A significant difference was seen between college graduates (62%) and high school graduates (73%). Lower percentages were seen for age 18-29 (53%) and those with household income of \$25,000-\$49,999 (57%). The prevalence of overweight including obese increased with increasing age.

Among all demographic groups, the highest prevalence of overweight including obese was seen for those with household income of \$50,000 and above (74%), while the lowest was seen for age group 18-29 (53%). In 2011, 65% of non-Hispanic White, 59% of non-Hispanic Black, and 66% of Hispanic adults were overweight including obese.

From 2001 to 2011, the prevalence of overweight including obese has steadily increased for those aged 18-29 and high school graduates (Figure 17). From 2004 to 2011, the prevalence of overweight including obese has steadily increased for those with household income of \$50,000 and above and steadily decreased for those with household income of \$25,000-\$49,999.

**Figure 17. Overweight Including Obese Prevalence, 2001-2011**



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## Children and Youth BMI-for-Age

The Pennsylvania Department of Health (PA DOH) has reported growth screens/BMI-for-age-percentiles for school children in grades K-6 since the 2006-07 school year and grades K-6 and 7-12 since the 2007-08 school year. The growth screens/BMI-for-age-percentiles are as follows: <5<sup>th</sup> percentile, at risk for underweight; 5<sup>th</sup> to <85<sup>th</sup> percentile, healthy weight; 85<sup>th</sup> to 95<sup>th</sup> percentile, overweight; and ≥95<sup>th</sup> percentile, obese.

**Grades K-6** In Erie County, for the 2009-2010 school year, 2.3% of students in grades K-6 were at risk for underweight (2.1% in 2008-2009; 2.3% in 2007-2008), 65.2% were a healthy weight (64.6% in 2008-2009; 65.4% in 2007-2008), 15.2% were overweight (15.6% in 2008-2009; 15.6% in 2007-2008), and 17.3% were obese (16.9% in 2008-2009; 16.8% in 2007-2008). In PA, for the 2009-2010 school year, 2.5% of students in grades K-6 were underweight, 65.1% a healthy weight, 15.6% overweight, and 16.8% obese.

Prevalence for grades K-6 by school district was available for school year 2007-2008 (Table 24). The highest percentage of overweight students was in the Iroquois School District (18.5%) followed by Union City (17.6%), Girard (17.4%), and Harbor Creek (17.3%). The lowest percentage of overweight students was seen in the General McLane School District (11.5%), followed by Fairview (12.1%), Wattsburg Area and North East (14.2%), Fort LeBoeuf (14.6%), and Northwestern (14.8%).

For the 2007-2008 school year, the highest percentage of obese students in grades K-6 was in the Northwestern School District (20.2%) followed by Union City (19.6%) and Erie City (19.3%). The lowest percentage of obese students was seen in the General McLane School District (11.6%) followed by Fairview (12.7%) and Millcreek (13.8%).

**Table 24. BMI-For-Age-Percentiles, Grades K-6, 2007-2008 School Year**

Growth Screens/BMI-For-Age Percentiles, Grades K-6 Erie County School Districts, 2007-2008 School Year									
School District	# Students Screened	Underweight Risk		Healthy Weight		Overweight		Obese	
		# Students	Percent	# Students	Percent	# Students	Percent	# Students	Percent
Corry Area SD	1,199	27	2.3%	781	65.1%	204	17.0%	187	15.6%
Erie City SD	8,596	173	2.0%	5,451	63.4%	1,314	15.3%	1,658	19.3%
Fairview SD	762	25	3.3%	548	71.9%	92	12.1%	97	12.7%
Fort LeBoeuf SD	1,310	44	3.4%	861	65.7%	191	14.6%	214	16.3%
General McLane SD	1,099	40	3.6%	806	73.3%	126	11.5%	127	11.6%
Girard SD	1,087	22	2.0%	703	64.7%	189	17.4%	173	15.9%
Harbor Creek SD	1,253	32	2.6%	773	61.7%	217	17.3%	231	18.4%
Iroquois SD	654	17	2.6%	401	61.3%	121	18.5%	115	17.6%
Millcreek Township SD	5,276	91	1.7%	3,584	67.9%	871	16.5%	730	13.8%
North East SD	839	41	4.9%	552	65.8%	119	14.2%	127	15.1%
Northwestern SD	845	14	1.7%	535	63.3%	125	14.8%	171	20.2%
Union City SD	647	10	1.5%	396	61.2%	114	17.6%	127	19.6%
Wattsburg Area SD	887	29	3.3%	594	67.0%	126	14.2%	138	15.6%
Erie County Total	24,454	565	2.3%	15,985	65.4%	3,809	15.6%	4,095	16.7%
PA Total	982,238	23,580	2.4%	646,987	65.9%	148,602	15.1%	163,069	16.6%

Note: Includes students in both public and private/non-public schools combined, served by the school district; <5th percentile = at risk for underweight; 5th to <85th percentile = healthy weight; 85th to 95th percentile = overweight; ≥95th percentile = obese

**Grades 7-12** In Erie County, for the 2009-2010 school year, 2.3% of students in grades 7-12 were at risk for underweight (1.7% in 2008-2009; 1.7% in 2007-2008), 62.9% were a healthy weight (65.5% in 2008-2009; 64.3% in 2007-2008), 16.4% were overweight (15.7% in 2008-2009; 15.9% in 2007-2008), and 18.3% were obese (17.1% in 2008-2009; 18.1% in 2007-2008). In PA, for the 2009-2010 school year, 2.3% of students in grades 7-12 were at risk for underweight, 63.2% a healthy weight, 16.3% overweight, and 18.2% obese.

Prevalence for grades 7-12 by school district was available for school year 2007-2008 (Table 25). The highest percentage of overweight students was in the Iroquois School District (20.3%) followed by Fort Leboeuf (17.8%), Harbor Creek (17.3%), and Girard (17.1%). The lowest

percentage of overweight students was seen in the Union City School District (6.1%) followed by Wattsburg Area (7.1%).

For the 2007-2008 school year, the highest percentage of obese students was in the Northwestern School District (23.9%) followed by Iroquois (22.3%), Erie City (21.7%), and Corry Area (21.1%). The lowest percentage of obese students was seen in the Union City School District (8.2%) followed by Wattsburg Area (10.9%).

**Table 25. BMI-For-Age Percentiles, Grades 7-12, 2007-2008 School Year**

Growth Screens/BMI-For-Age Percentiles, Grades 7-12 Erie County School Districts, 2007-2008 School Year									
School District	# Students Screened	Underweight Risk		Healthy Weight		Overweight		Obese	
		# Students	Percent	# Students	Percent	# Students	Percent	# Students	Percent
Corry Area SD	1,224	20	1.6%	745	60.9%	201	16.4%	258	21.1%
Erie City SD	6,896	116	1.7%	4,132	59.9%	1,155	16.7%	1,493	21.7%
Fairview SD	901	9	1.0%	628	69.7%	147	16.3%	117	13.0%
Fort LeBoeuf SD	1,276	39	3.1%	756	59.2%	227	17.8%	254	19.9%
General McLane SD	1,149	42	3.7%	745	64.8%	175	15.2%	187	16.3%
Girard SD	1,054	18	1.7%	648	61.5%	180	17.1%	208	19.7%
Harbor Creek SD	1,013	18	1.8%	653	64.5%	175	17.3%	167	16.5%
Iroquois SD	587	6	1.0%	331	56.4%	119	20.3%	131	22.3%
Millcreek Township SD	4,339	73	1.7%	2,924	67.4%	693	16.0%	649	15.0%
North East SD	1,108	19	1.7%	795	71.8%	153	13.8%	141	12.7%
Northwestern SD	858	8	0.9%	512	59.7%	133	15.5%	205	23.9%
Union City SD	522	4	0.8%	443	84.9%	32	6.1%	43	8.2%
Wattsburg Area SD	808	7	0.9%	656	81.2%	57	7.1%	88	10.9%
Erie County Total	21,735	379	1.7%	13,968	64.3%	3,447	15.9%	3,941	18.1%
PA Total	865,969	18,156	2.1%	560,462	64.7%	138,503	16.0%	148,848	17.2%

Note: Includes students in both public and private/non-public schools combined, served by the school district; <5th percentile = at risk for underweight; 5th to <85th percentile = healthy weight; 85th to 95th percentile = overweight; ≥95th percentile = obese

## Mental and Behavioral Health

### Depression

Based on the Behavioral Risk Factor Surveillance Survey (BRFSS), the self-reported percentage of Erie County adults aged 18 and above who were ever told they had a depressive disorder was 19% in 2011 (Table 1).

Table 1. Depressive Disorder Prevalence, 2011

Ever Told Had a Depressive Disorder Erie County Adult BRFSS, 2011					
	2007		2011		PA
		<u>CI</u>		<u>CI</u>	
All Adults	NA		19%	17% – 22%	NA
<u>Gender</u>					
Male	NA		17%	13% – 20%	NA
Female	NA		22%	19% – 25%	NA
<u>Age</u>					
18-29	NA		24%	19% – 29%	NA
30-44	NA		16%	12% – 20%	NA
45-64	NA		22%	18% – 26%	NA
65+	NA		13%	8% – 17%	NA
<u>Education</u>					
<High School	NA		28%	18% – 38%	NA
High School	NA		22%	18% – 26%	NA
Some College	NA		21%	17% – 26%	NA
College Graduate	NA		15%	11% – 19%	NA
<u>Income</u>					
<\$25,000	NA		29%	24% – 34%	NA
\$25,000-\$49,999	NA		16%	11% – 20%	NA
\$50,000+	NA		14%	10% – 17%	NA
<u>Race/Ethnicity</u>					
White, non-Hispanic	NA		20%	17% – 22%	NA
Black, non-Hispanic	NA		14%	4% – 24%	NA
Hispanic	NA		29%	12% – 45%	NA
Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available					

Differences in prevalence occurred within demographic groups. Prevalence was lower for ages 65 and above (13%) and 30-44 (16%) compared with other age groups, lower for college graduates (15%) and higher for those with less than a high school education (28%) compared

with other education groups, higher for those with household income below \$25,000 (29%) compared with the other income groups, and higher for females (22%) compared with males (17%).

In 2011, 20% of non-Hispanic White, 14% of non-Hispanic Black, and 29% of Hispanic adults reported being diagnosed with a depressive disorder. Depression decreased with increasing education and increasing income. The highest prevalence of depression diagnosis was seen for those with household income below \$25,000 (29%) and Hispanic adults (29%) followed by those with less than a high school education (28%).

### Youth Depression Symptoms

Since 2005, Erie County has participated in the biannual Pennsylvania Youth Survey (PAYS) sponsored by the Pennsylvania Commission on Crime and Delinquency (PCCD). PAYS surveys 6<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade students to determine youth behaviors and attitudes. In 2005, 2,465 students from four public schools participated. In 2009, 5,160 students representing ten school districts participated.

Associations have been shown between mental health and substance abuse, especially substance abuse during adolescence. Four questions were asked to determine student feelings of sadness, worthlessness, and hopelessness. They are: 1) In the past year, I felt depressed or sad most days, 2) Sometimes I think that life is not worth it, 3) At times, I think I am no good at all, and 4) All in all, I am inclined to think that I am a failure. For Erie County, prevalence decreased or remained stable for these behaviors from 2007 to 2009 but remains higher than PA (Table 2).

**Table 2. Youth Symptoms of Depression, 2007 & 2009**

Symptoms of Depression Erie County 2007 & 2009 PAYS												
Grade	<i>Felt Depressed or Sad Most Days in Past Year</i>			<i>Sometimes Think That Life is Not Worth It</i>			<i>At Times Think That I Am No Good At All</i>			<i>Think I Am a Failure</i>		
	Erie County		PA	Erie County		PA	Erie County		PA	Erie County		PA
	2007	2009	2009	2007	2009	2009	2007	2009	2009	2007	2009	2009
6th	35.4%	32.5%	26.8%	17.5%	19.0%	14.7%	29.6%	26.2%	23.6%	12.8%	11.6%	10.6%
8th	41.5%	36.8%	32.1%	27.3%	25.8%	23.0%	36.6%	31.8%	29.1%	16.8%	15.9%	13.6%
10th	39.5%	34.6%	33.2%	28.3%	26.4%	22.9%	34.0%	33.7%	29.0%	16.5%	17.7%	14.9%
12th	35.1%	39.2%	33.2%	22.1%	25.8%	21.0%	30.3%	32.8%	28.9%	13.2%	16.7%	15.2%
Overall	38.3%	35.7%	31.6%	23.9%	24.0%	20.6%	32.9%	30.8%	27.8%	15.0%	15.2%	13.7%

From 2007 to 2009, the percentage of students who 1) felt depressed or sad most days in the past year dropped from 38.3% to 35.7%, but remained higher than PA at 31.6%, 2) sometimes think that life is not worth it remained stable (23.9% to 24.0%, respectively), but remained higher than PA at 20.6%, 3) at times, think that they are no good at all dropped from 32.9% to 30.8%, but remained higher than PA at 27.8%, and 4) think they are a failure remained stable (15.0% to 15.2%, respectively), but remained higher than PA at 13.7%.

## Anxiety Disorder

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who were ever told they had an anxiety disorder was 17% in 2011 (Table 3).

Table 3. Anxiety Disorder Prevalence, 2011

Ever Told Had an Anxiety Disorder Erie County Adult BRFSS, 2011						
		2007		2011	PA	
			CI			
				CI		
All Adults	NA			17%	15% - 19%	NA
<b>Gender</b>						
Male	NA			13%	11% - 16%	NA
Female	NA			21%	17% - 24%	NA
<b>Age</b>						
18-29	NA			25%	20% - 30%	NA
30-44	NA			17%	12% - 21%	NA
45-64	NA			16%	12% - 19%	NA
65+	NA			10%	6% - 13%	NA
<b>Education</b>						
<High School	NA			22%	13% - 31%	NA
High School	NA			20%	16% - 24%	NA
Some College	NA			17%	13% - 21%	NA
College Graduate	NA			15%	11% - 19%	NA
<b>Income</b>						
<\$25,000	NA			28%	23% - 33%	NA
\$25,000-\$49,999	NA			15%	11% - 19%	NA
\$50,000+	NA			11%	8% - 14%	NA
<b>Race/Ethnicity</b>						
White, non-Hispanic	NA			17%	15% - 20%	NA
Black, non-Hispanic	NA			10%	2% - 19%	NA
Hispanic	NA			17%	3% - 30%	NA
<small>Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available</small>						

Differences in prevalence occurred within demographic groups. Prevalence was lower for age 65 and above (10%) and highest for age 18-29 (25%) compared with other age groups, lower for

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college graduates (15%) and highest for those with less than a high school education (22%) compared with other education groups, significantly higher for those with household income below \$25,000 (28%) compared with the other income groups, and higher for females (21%) compared with males (13%).

In 2011, 17% of non-Hispanic White, 10% of non-Hispanic Black, and 17% of Hispanic adults reported being diagnosed with an anxiety disorder. Anxiety decreased with increasing education, increasing income, and increasing age. The highest prevalence of anxiety diagnosis was seen for those with household income below \$25,000 (28%) followed by age 18-29 (25%).

### **Attention Deficit Disorder/Hyperactivity (ADD/ADHD)**

Attention deficit hyperactivity disorder (ADHD) is a developmental and behavioral disorder of children that can carry into adolescence and adulthood. Hallmark behaviors of this disease are severe and frequent inattention, hyperactivity, and impulsivity.

The Pennsylvania Department of Health (PA DOH), Division of School Health reports the prevalence of ADD/ADHD among students in public and non-public/private schools for each school year. For the 2008-2009 school year, 6.7% of Erie County students (6.4% in 2007-2008) were diagnosed with ADD/ADHD compared with 5.2% for PA.

### **Financial Stress**

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who were worried about money was 32% in 2011 (Table 4).

Differences in prevalence occurred within demographic groups. Prevalence was significantly lower for age 65 and above (15%) compared with other age groups, significantly lower for college graduates (21%) compared with other education groups, significantly higher for those with household income below \$25,000 (50%) compared with the other income groups, and significantly higher for females (37%) compared with males (26%).

In 2011, 31% of non-Hispanic White, 44% of non-Hispanic Black, and 35% of Hispanic adults reported being worried about money. Financial stress decreased with increasing age, increasing education, and increasing income.

The highest prevalence of financial stress was seen for those with household income below \$25,000 (50%) followed by age 18-29 (47%), those with less than a high school education (46%), non-Hispanic Black adults (44%), and age 30-44 (43%). The lowest prevalence was seen for age

65 and above (15%) followed by those with household income of \$50,000 (20%) and above and college graduates (21%).

Table 4. Financial Stress Prevalence, 2011

Worried or Stressed About Having Enough Money Erie County Adult BRFSS, 2011					
	2007	2011	PA		
	<u>CI</u>	<u>CI</u>			
All Adults	NA	32% 29% - 35%	NA		
<u>Gender</u>					
Male	NA	26% 23% - 30%	NA		
Female	NA	37% 33% - 41%	NA		
<u>Age</u>					
18-29	NA	47% 40% - 54%	NA		
30-44	NA	43% 37% - 49%	NA		
45-64	NA	26% 22% - 30%	NA		
65+	NA	15% 10% - 20%	NA		
<u>Education</u>					
<High School	NA	46% 35% - 58%	NA		
High School	NA	39% 34% - 44%	NA		
Some College	NA	35% 30% - 40%	NA		
College Graduate	NA	21% 17% - 26%	NA		
<u>Income</u>					
<\$25,000	NA	50% 45% - 56%	NA		
\$25,000-\$49,999	NA	30% 24% - 35%	NA		
\$50,000+	NA	20% 16% - 25%	NA		
<u>Race/Ethnicity</u>					
White, non-Hispanic	NA	31% 28% - 34%	NA		
Black, non-Hispanic	NA	44% 30% - 59%	NA		
Hispanic	NA	35% 16% - 53%	NA		

Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available

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## Special Populations

### Refugees and Immigrants

Refugees are individuals who flee their country because of fear of persecution, including injury or death, while immigrants are individuals who leave their country for other opportunities. Each year, 3% to 4% of refugees and eligible immigrants admitted to the United States settle in Pennsylvania. Refugees and eligible immigrants (including secondary migrants from other states) currently live in 36 different Pennsylvania counties. Erie County is the leading refugee resettlement county in Pennsylvania.

From October 1, 2010 to September 30, 2011, 3,026 newly arrived refugees settled in Pennsylvania. For individual counties, the highest number of refugees (790 [26%]) settled in Erie County, followed by Philadelphia County (687 [23%]), Lancaster County (552 [18%]), Allegheny County (434 [14%]), Dauphin County (226 [7%]), Lackawanna County (191 [6%]), and Lehigh County (69 [2%]). Less than 20 refugees settled in each of the remaining counties. Of the 790 refugees who settled in Erie County, 704 (89%) were from Bhutan, 18 (2%) from Eritrea, 17 (2%) from Iraq, 10 (1%) from the Central African Republic, and 10 (1%) from the Democratic Republic of Congo.

From October 1, 2011 to March 31, 2012, 1,299 newly arrived refugees settled in Pennsylvania. For individual counties, the highest number of refugees (377 [29%]) settled in Erie County, followed by Lancaster County (267 [21%]), Philadelphia County (237 [18%]), Allegheny County (219 [17%]), Lackawanna County (82 [6%]), Dauphin County (70 [5%]), and Lehigh County (23 [2%]). Less than 10 refugees settled in each of the remaining counties.

In Erie County, the International Institute of Erie and the Catholic Charities Refugee Resettlement Program assist refugees in settling in Erie County. The Multicultural Community Resource Center provides services to refugees, eligible immigrants, and secondary migrants.

Because of the high rate of communicable diseases in their country of origin, each new refugee and eligible immigrant is required to undergo a health assessment. Components of the screening are: 1) medical history and physical exam, 2) immunization of both children and adults, 3) screenings for tuberculosis, sexually transmitted infection, HIV, hepatitis B, intestinal parasites, malaria, and childhood blood levels, and 4) referral for any chronic disease.

In Erie County, the Multicultural Health Evaluation Delivery System (MHEDS) has signed a Participating Provider Agreement with the Pennsylvania Refugee Resettlement Program and

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provides services regularly to refugees, eligible immigrants, and secondary migrants. The Erie County Department of Health also provides case management services for this population.

In 2011, MHEDS provided approximately 12,600 services to its clients. All services were equally distributed among males and females. The greatest percentage of services were provided to Bhutanese refugees (35%) followed by natives of Nepal (16%), natives of Iraq (9%), natives of Somalia (8%), and natives of Puerto Rico (4%). MHEDS also provided 2,362 WIC program services to non-migrants and 681 WIC program services to migrants. Statistics for the eligible immigrant and secondary migrant populations in Erie County are not available.

## **Homeless**

Through its Continuum of Care (CoC) Program, the Department of Housing and Urban Development (HUD) awards homeless assistance grants to address homelessness and its effect on people's lives. There are three separate programs under the umbrella of the CoC program. They are: 1) the Supportive Housing Program (SHP), 2) the Shelter Plus Care (S+C) Program, and 3) the Section 8 Moderate Rehabilitation Program for Single-Room Occupancy Dwellings for Homeless Individuals (Section 8/SRO) Program.

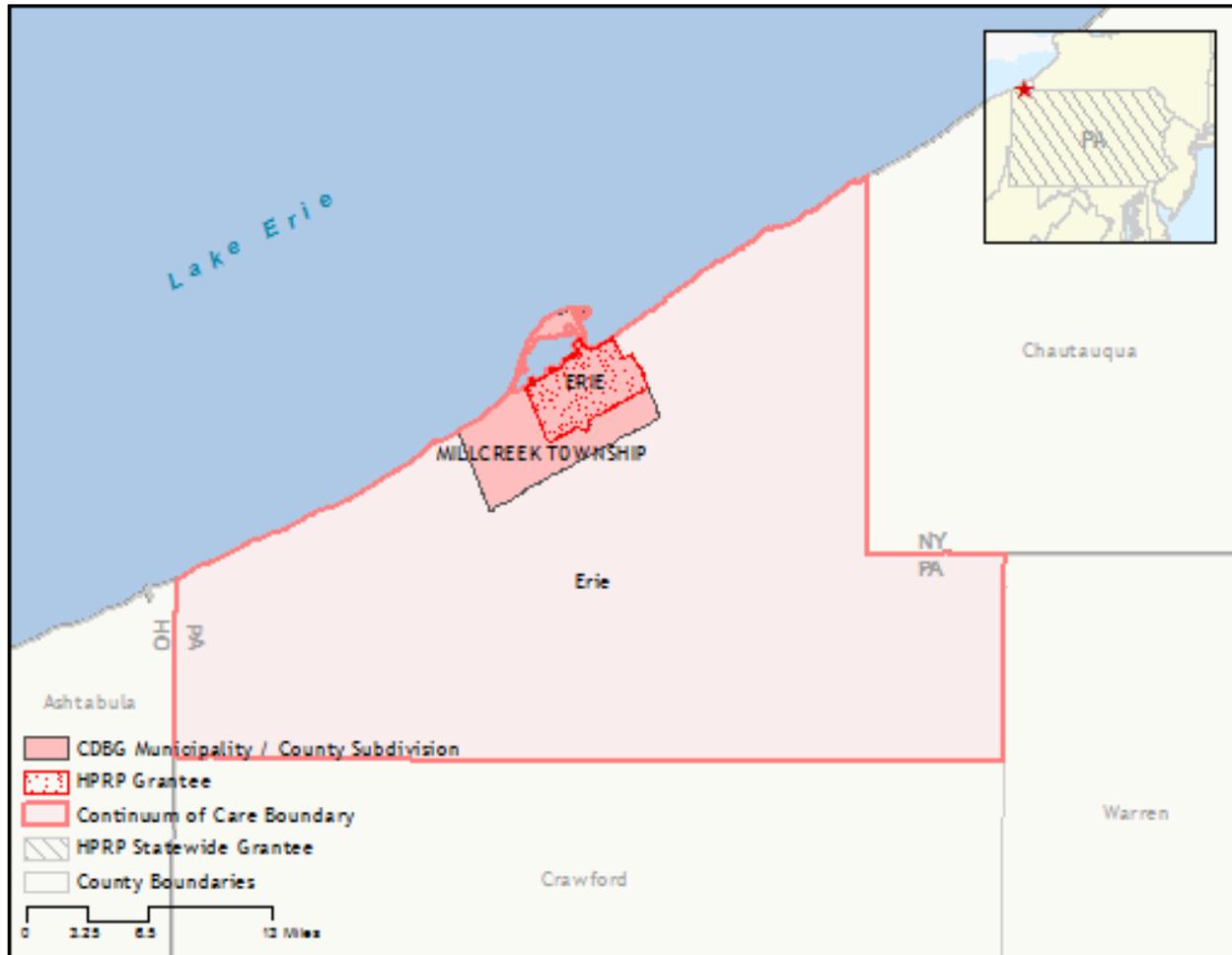
As described by HUD, the Supportive Housing Program helps develop housing and related supportive services for people moving from homelessness to independent living. SHP helps homeless people who are sleeping in places not meant for human habitation or those who are sleeping in an emergency shelter as a primary nighttime residence. SHP has six program components. They are: transitional housing, permanent housing for persons with disabilities, supportive services only, safe havens, homeless management information systems (HMIS), and innovative supportive housing,

As described by HUD, the Shelter Plus Care Program provides rental assistance in connection with supportive services. S+C assists hard to serve homeless individuals with disabilities and their families. These individuals primarily include those with serious mental illness, chronic problems with alcohol and/or drugs, and HIV/AIDS or related diseases.

As described by HUD, the Single Room Occupancy Program provides rental assistance in connection with the moderate rehabilitation of residential properties. It is designed to move people into the permanent housing phase within the Continuum of Care. The SRO Program assists unaccompanied homeless persons.

Erie City & County is a CoC grantee (Figure 1) and Community Health Net, the Federally Qualified Health Center (FQHC) in Erie County, provides health services for this population.

Figure 1. PA-605-Erie City & County Continuum of Care (CoC) Map, 2011



Homeless population counts are provided to HUD annually as point-in-time counts. The point-in-time count for 2011 was taken on January 28, 2011. On that day, the Erie City & County CoC serviced 405 individuals (15,096 for PA) (Table 1). Of these, 44% (176) were persons in households with adults and children compared with 48% for PA, 56% (229) were persons in households with only individuals compared with 52% for PA, and 63% (255) were emergency shelter compared with 49% for PA.

The point-in-time count for households serviced was 277 households (10,189 for PA). Of these, 19% (52) were households with adults and children compared with 24% for PA, 81% (225) were households with individuals only compared with 76% for PA, and 60% (165) were persons in emergency shelters compared with 53% for PA.

**Table 1. Homeless Population by Household Type, 2011**

Point-in-Time Counts of Homeless Population by Household Type Erie County & PA, January 28, 2011								
Household Type	Sheltered				Unsheltered		Total	
	<i>Emergency Shelter</i>		<i>Transitional Housing</i>					
	Erie County	PA	Erie County	PA	Erie County	PA	Erie County	PA
	<u>1/28/2011</u>		<u>1/28/2011</u>		<u>1/28/2011</u>		<u>1/28/2011</u>	
<u>Households</u>								
Households with Only Individuals	132	4,464	71	2,355	22	974	225	7,793
Households with Adults and Children	33	950	15	1,423	4	23	52	2,396
Total	165	5,414	86	3,778	26	997	277	10,189
<u>Persons in Households</u>								
Persons in Households with Only Individuals	134	4,504	71	2,368	24	995	229	7,867
Persons in Households with Adults and Children	121	2,883	46	4,281	9	65	176	7,229
Total	255	7,387	117	6,649	33	1,060	405	15,096
Note: Point-in-time counts are taken annually to provide an unduplicated count of homeless persons								

**Table 2. Homeless Population by Subpopulation, January 28, 2011**

Point-in-Time Counts of Homeless Population by Subpopulation Erie County & PA, January 28, 2011						
Subpopulation	Sheltered		Unsheltered		Total	
	Erie County	PA	Erie County	PA	Erie County	PA
	<u>1/28/2011</u>		<u>1/28/2011</u>		<u>1/28/2011</u>	
	Chronically Homeless	56	938	5	570	61
Severely Mentally Ill	81	2,363	10	382	91	2,745
Chronic Substance Abuse	28	2,765	9	398	37	3,163
Veterans	28	1,262	8	130	36	1,392
Persons with HIV/AIDS	0	157	0	13	0	170
Victims of Domestic Violence	27	1,518	0	13	27	1,531
Unaccompanied Youth (Under age 18)	0	31	0	1	0	32
Total	220	9,034	32	1,507	252	9,033
Note: Point-in-time counts are taken annually to provide an unduplicated count of homeless persons						

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Point-in time counts also were taken for subpopulations serviced. For Erie County, 252 individuals were identified by subpopulation (9,033 for PA) (Table 2). Of these, 36% (91) were severely mentally ill compared with 30% for PA, 24% (61) were chronically homeless compared with 17% for PA, 15% (37) were chronic substance abusers compared with 35% for PA, 14% (36) were veterans compared with 15% for PA, and 11% (27) were victims of domestic violence compared with 17% for PA.

## **Disabled**

A disabled person can be defined as someone with a physical, sensory (deafness, blindness), intellectual, or mental health impairment significant enough to make a difference in their daily lives.

**Arthritis Disability** Based on the Behavioral Risk Factor Surveillance Survey (BRFSS), the self-reported percentage of Erie County adults aged 18 and above with arthritis whose arthritis or joint pain limits their activity was 43% in 2011 (Table 3). This was higher than PA at 42% (2009). Values for the U.S. are not available.

In 2011, differences in prevalence occurred within demographic groups. Prevalence was higher for males (49%) compared with females (39%), higher for age 30-44 (58%) compared with other age groups, higher for those with less than a high school education (58%) compared with other education groups, and higher for those with household income below \$25,000 (47%) compared with the other income groups.

In 2011, 42% of non-Hispanic White adults with arthritis reported arthritis or joint pain that limits their usual activities. Values were not reported for non-Hispanic Black and Hispanic adults. Limited activity due to arthritis or joint pain decreased with increasing age, education, and income. The highest prevalence of arthritis disability was seen for age 30-44 (58%) and those with less than a high school education (58%) followed by males (49%), high school graduates (49%), and those with household income below \$25,000 (47%). The lowest prevalence was seen for those aged 65 and above (37%), college graduates (37%), and those with household income of \$25,000-\$49,999 (37%).

Table 3. Arthritis Disability Prevalence, 2011

Arthritis or Joint Symptoms that Limit Usual Activities Erie County Adult BRFSS, 2011					
	2007	CI	2011	CI	PA 2009
All Adults	NA		43%	38% - 48%	42%
<u>Gender</u>					
Male	NA		49%	41% - 57%	37%
Female	NA		39%	32% - 45%	45%
<u>Age</u>					
18-29	NA		NSR		NA
30-44	NA		58%	42% - 73%	42%
45-64	NA		43%	36% - 50%	43%
65+	NA		37%	29% - 45%	40%
<u>Education</u>					
<High School	NA		58%	41% - 75%	52%
High School	NA		49%	41% - 56%	39%
Some College	NA		41%	32% - 51%	46%
College Graduate	NA		37%	26% - 49%	38%
<u>Income</u>					
<\$25,000	NA		47%	38% - 56%	NA
\$25,000-\$49,999	NA		37%	27% - 48%	41%
\$50,000+	NA		38%	27% - 49%	NA
<u>Race/Ethnicity</u>					
White, non-Hispanic	NA		42%	37% - 48%	40%
Black, non-Hispanic	NA		NSR		50%
Hispanic	NA		NSR		NA
<p>Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available</p>					

**Use of Special Equipment** Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who have health problems that require the use of special equipment was 8% in 2011 compared with 6% in 2007 (Table 4). This mirrored PA at 8% (2010) and the U.S. at 8% (2010).

**Table 4. Use of Special Equipment Prevalence, 2007 & 2011**

Health Problems that Require the Use of Special Equipment Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	6%	4% – 7%	8%	7% – 10%	2%		8%
<u>Gender</u>							
Male	4%	3% – 7%	8%	6% – 10%	4%		8%
Female	7%	5% – 9%	8%	6% – 10%	1%		9%
<u>Age</u>							
18-29	1%	0% – 8%	2%	0% – 4%	1%		3%
30-44	2%	1% – 6%	6%	3% – 9%	4%		4%
45-64	6%	5% – 9%	9%	6% – 12%	3%		9%
65+	13%	9% – 18%	17%	12% – 22%	4%		18%
<u>Education</u>							
<High School	7%	3% – 15%	22%	13% – 31%	15%		19%
High School	6%	4% – 8%	10%	7% – 13%	4%		10%
Some College	6%	4% – 10%	7%	4% – 10%	1%		9%
College Graduate	5%	3% – 8%	6%	3% – 8%	1%		5%
<u>Income</u>							
<\$25,000	11%	7% – 15%	17%	13% – 22%	6%		NA
\$25,000-\$49,999	4%	2% – 6%	5%	3% – 8%	1%		7%
\$50,000+	3%	1% – 5%	4%	2% – 6%	1%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	5%	4% – 7%	8%	6% – 10%	3%		8%
Black, non-Hispanic	NA		2%	0% – 6%			15%
Hispanic	NA		17%	3% – 31%			7%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

From 2007 to 2011, the prevalence of those who have health problems that require the use of special equipment increased for all demographic groups, but most especially for those with less than a high school education (7% to 22%, respectively).

In 2011, differences in prevalence occurred within demographic groups. Prevalence was higher for age 65 and above (17%) compared with other age groups, significantly higher for those with

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less than high school education (22%) compared with those with some college education and college graduates, and significantly higher for household income below \$25,000 (17%) compared with other income groups.

In 2011, 8% of males, 8% of females, 8% of non-Hispanic White, 2% of non-Hispanic Black, and 17% of Hispanic adults reported that they had health problems that required the use of special equipment.

The highest prevalence was seen for those with less than a high school education (22%) followed by those with household income below \$25,000 (17%), Hispanic adults (17%), and those aged 65 and above (17%). The lowest prevalence was seen for age 18-29 (2%) and non-Hispanic Black adults (2%). In 2011, the use of special equipment increased with increasing age and decreased with increasing education and income.

**Vision Impairment** Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who have ever been told that they have vision impairment, even when wearing glasses was 14% in 2011 (Table 5). PA and U.S. values were not available.

In 2011, differences in prevalence occurred within demographic groups. Prevalence was significantly higher for age 65 and above (28%) compared with other age groups and for those with household income below \$25,000 (22%) compared with the other income groups. Higher percentages were seen for females (17%) compared with males (11%) and for those with less than a high school education (21%) compared with other education groups.

In 2011, 14% of non-Hispanic White, 10% of non-Hispanic Black, and 10% of Hispanic adults reported that they were ever told they had vision impairment, even when wearing glasses. Vision impairment increased with increasing age and decreased with increasing education, and increasing income. The highest prevalence of vision impairment was seen for age 65 and above (28%) followed by those with household income below \$25,000 (22%) and those with less than a high school education (21%).

Table 5. Vision Impairment Prevalence, 2011

Ever Told Have a Vision Impairment, Even When Wearing Glasses Erie County Adult BRFSS, 2011					
		2007		2011	PA
			CI	CI	
All Adults	NA			14% 12% – 16%	NA
<u>Gender</u>					
Male	NA			11% 9% – 14%	NA
Female	NA			17% 14% – 20%	NA
<u>Age</u>					
18-29	NA			10% 6% – 13%	NA
30-44	NA			10% 7% – 14%	NA
45-64	NA			13% 9% – 16%	NA
65+	NA			28% 22% – 34%	NA
<u>Education</u>					
<High School	NA			21% 12% – 30%	NA
High School	NA			16% 12% – 19%	NA
Some College	NA			15% 11% – 18%	NA
College Graduate	NA			13% 9% – 16%	NA
<u>Income</u>					
<\$25,000	NA			22% 17% – 26%	NA
\$25,000-\$49,999	NA			10% 7% – 14%	NA
\$50,000+	NA			11% 8% – 14%	NA
<u>Race/Ethnicity</u>					
White, non-Hispanic	NA			14% 12% – 16%	NA
Black, non-Hispanic	NA			10% 2% – 19%	NA
Hispanic	NA			10% 0% – 21%	NA

Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available

**Disability – American Community Survey** As defined by the U.S. Census Bureau, a disability is a long-lasting physical, mental, or emotional condition. Among the civilian noninstitutionalized population in Erie County in 2010, 15.6% had a disability (Table 6). For those 65 years and older, 24.9% had ambulatory difficulty, 18.6% had hearing difficulty, and 16.8% had independent living difficulty. The corresponding percentages for Pennsylvania were 22.4%, 14.6%, and 16.0%, respectively.

Table 6. Disability Characteristics, 2010

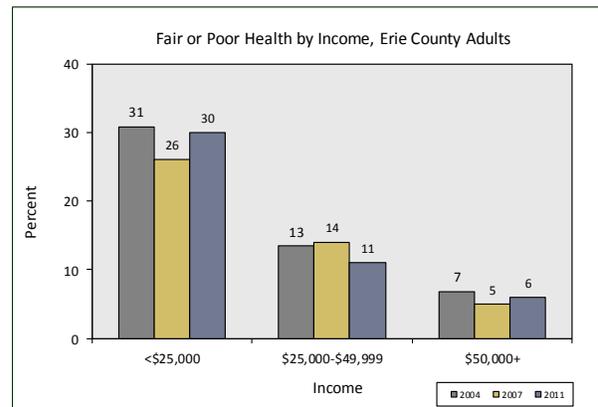
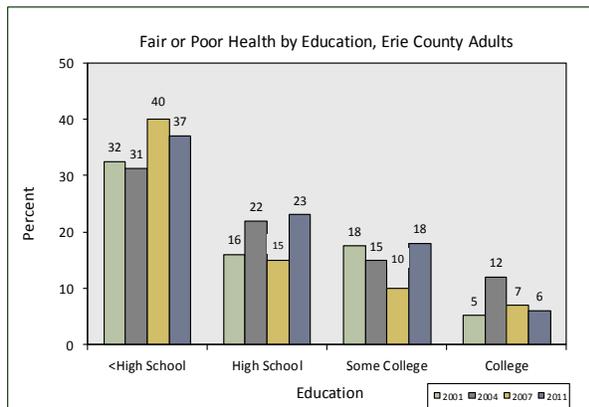
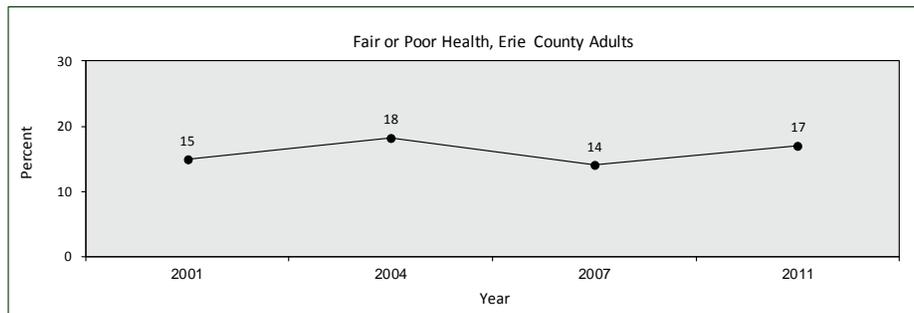
Erie County and Pennsylvania, 2010		
<u>Subject</u>	Percent with a Disability	
	<u>Erie County</u>	<u>Pennsylvania</u>
Total civilian noninstitutionalized population	15.6	13.1
Male	15.4	12.8
Female	15.9	13.4
White	15.9	13.1
Black or African American	16.7	14.8
Hispanic or Latino (of any race)	10.1	12.6
Population under 5 years	0.5	0.7
With a hearing difficulty	0.0	0.5
With a vision difficulty	0.5	0.3
Population 5 to 17 years	8.5	6.4
With a hearing difficulty	0.5	0.6
With a vision difficulty	1.1	0.7
With a cognitive difficulty	7.3	5.2
With an ambulatory difficulty	0.9	0.6
With a self-care difficulty	1.1	1.0
Population 18 to 64 years	13.5	10.5
With a hearing difficulty	2.7	2.1
With a vision difficulty	1.7	1.5
With a cognitive difficulty	6.0	4.7
With an ambulatory difficulty	6.9	5.1
With a self-care difficulty	2.5	1.7
With an independent living difficulty	4.1	3.7
Population 65 years and over	39.7	35.9
With a hearing difficulty	18.6	14.6
With a vision difficulty	5.6	6.1
With a cognitive difficulty	8.6	8.6
With an ambulatory difficulty	24.9	22.4
With a self-care difficulty	10.4	7.9
With an independent living difficulty	16.8	16.0

# Health-Related Quality of Life

## Fair or Poor Health

Based on the Behavioral Risk Factor Surveillance Survey (BRFSS), the self-reported percentage of Erie County adults aged 18 and above with fair or poor health increased to 17% in 2011 compared with 14% in 2007 (Figure 1). This was higher than PA at 16% (2010) and the U.S. at 15% (2010).

**Figure 1. Fair or Poor Health Prevalence, 2001-2011**



From 2007 to 2011, fair or poor health status increased for all demographic groups with the exception of those with less than a high school education, those with a household income of \$25,000-\$49,999, and college graduates (Table 1). Significant increases were seen for males (11% to 18%, respectively) and those with a high school education (15% to 23%, respectively). Higher percentage point increases were seen for those with some college (10% to 18%, respectively) and age 18-29 (5% to 11%, respectively).

In 2011, differences in prevalence occurred within demographic groups (Table 1). Prevalence was significantly higher for age 65 and above (26%) compared with younger age groups, significantly lower for college graduates (6%) compared with other education groups, and

significantly higher for those with a household income below \$25,000 (37%) compared with the other income groups.

In 2011, 16% of non-Hispanic White, 25% of non-Hispanic Black, and 41% of Hispanic adults reported fair or poor health. Fair or poor health increased with age and decreased with increasing education and increasing income. The highest prevalence of fair or poor health was seen for Hispanic adults (41%) followed by those with less than a high school education (37%), and those with a household income below \$25,000 (30%).

**Table 1. Fair or Poor Health Prevalence, 2007 & 2011**

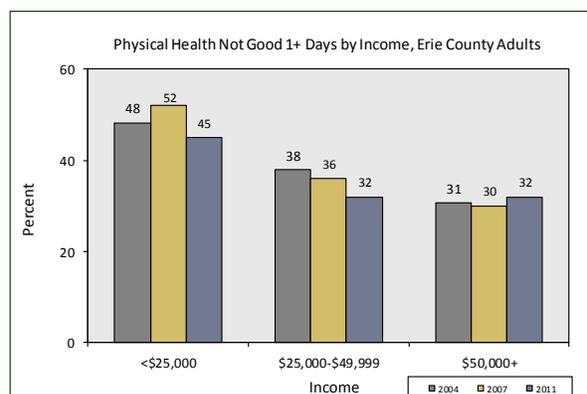
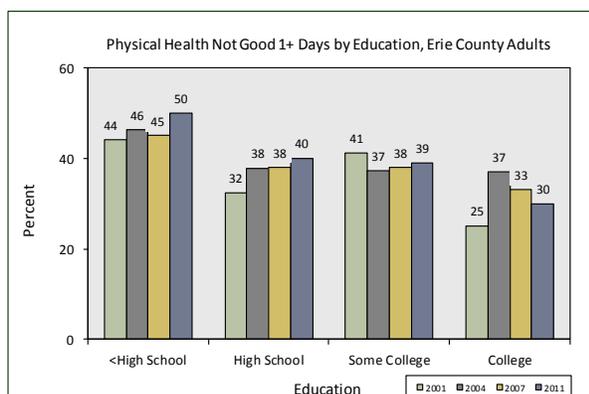
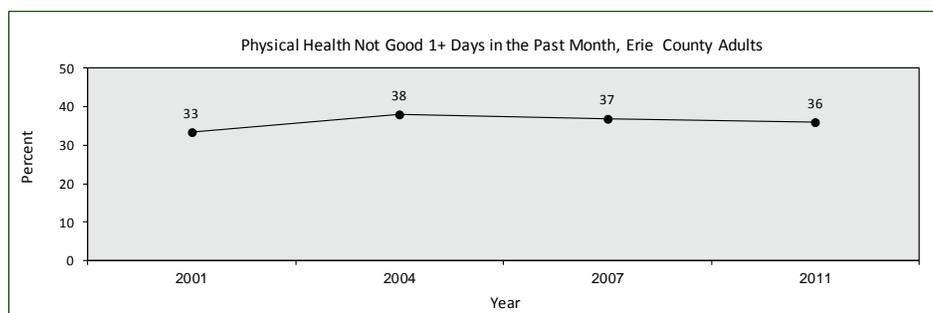
Fair or Poor Health Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	14%	12% – 16%	17%	15% – 19%	3%		16%
<u>Gender</u>							
Male	11%	8% – 15%	18%	15% – 21%	7%	***	15%
Female	16%	14% – 19%	16%	13% – 19%	0%		17%
<u>Age</u>							
18-29	5%	2% – 12%	11%	8% – 15%	6%		9%
30-44	8%	5% – 12%	12%	8% – 16%	4%		10%
45-64	17%	14% – 21%	19%	15% – 23%	2%		18%
65+	25%	19% – 31%	26%	20% – 31%	1%		26%
<u>Education</u>							
<High School	40%	27% – 53%	37%	26% – 47%	-3%		33%
High School	15%	12% – 19%	23%	19% – 27%	8%	***	21%
Some College	10%	7% – 15%	18%	14% – 22%	8%		16%
College Graduate	7%	5% – 10%	6%	3% – 8%	-1%		8%
<u>Income</u>							
<\$25,000	26%	21% – 32%	30%	25% – 36%	4%		NA
\$25,000-\$49,999	14%	10% – 19%	11%	8% – 15%	-3%		16%
\$50,000+	5%	3% – 7%	6%	4% – 9%	1%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	14%	12% – 16%	16%	13% – 18%	2%		15%
Black, non-Hispanic	NA		25%	12% – 37%			23%
Hispanic	NA		41%	23% – 59%			16%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

## Poor Physical Health

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above whose physical health was not good one or more days in the past month decreased to 36% in 2011 compared with 37% in 2007 (Figure 2). This mirrored PA at 36% (2010). U.S. values were not available.

Figure 2. Poor Physical Health Prevalence, 2001-2011



From 2007 to 2011, higher decreases in poor physical health status were seen for age 65 and above (44% to 32%, respectively) and those with a household income below \$25,000 (52% to 45%, respectively) (Table 2).

In 2011, differences in prevalence occurred within demographic groups. Prevalence was lower for age 65 and above (32%) compared with other age groups, significantly lower for college graduates (30%) compared with high school graduates and those with less than a high school education, and significantly higher for household income below \$25,000 (45%) compared with other income groups. From 2001 to 2011, prevalence of poor physical health steadily increased for those with less than a high school education and high school graduates, while steadily decreasing (from 2004 to 2011) for household income of \$25,000-\$49,999.

In 2011, 36% of non-Hispanic White, 32% of non-Hispanic Black, and 43% of Hispanic adults reported that their physical health was not good one or more days in the past month. The highest prevalence of poor physical health was seen for those with less than a high school education (50%) followed by those with household income below \$25,000 (45%), Hispanic adults (43%), and high school graduates (40%). In 2011, poor physical health decreased with increasing education and increasing income.

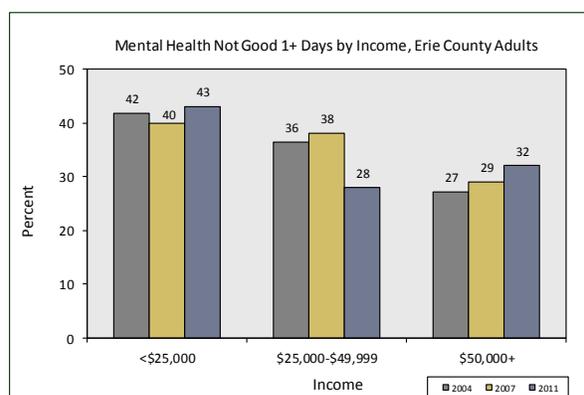
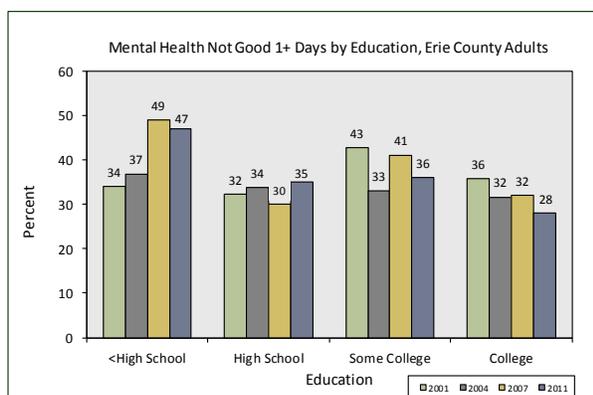
**Table 2. Poor Physical Health Prevalence, 2007 & 2011**

Physical Health Not Good 1+ Days in the Past Month Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	37%	34% – 41%	36%	34% – 39%	-1%		36%
<u>Gender</u>							
Male	31%	26% – 37%	35%	31% – 39%	4%		32%
Female	43%	38% – 47%	38%	34% – 42%	-5%		39%
<u>Age</u>							
18-29	35%	25% – 47%	37%	31% – 43%	2%		34%
30-44	34%	28% – 41%	38%	32% – 43%	4%		32%
45-64	37%	32% – 42%	38%	33% – 42%	1%		37%
65+	44%	37% – 50%	32%	26% – 38%	-12%		40%
<u>Education</u>							
<High School	45%	32% – 59%	50%	40% – 61%	5%		47%
High School	38%	33% – 43%	40%	36% – 45%	2%		37%
Some College	38%	31% – 45%	39%	33% – 44%	1%		38%
College Graduate	33%	28% – 39%	30%	25% – 35%	-3%		31%
<u>Income</u>							
<\$25,000	52%	44% – 59%	45%	39% – 50%	-7%		NA
\$25,000-\$49,999	36%	30% – 42%	32%	27% – 37%	-4%		36%
\$50,000+	30%	25% – 35%	32%	27% – 37%	2%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	37%	33% – 40%	36%	34% – 39%	-1%		36%
Black, non-Hispanic	NA		32%	19% – 45%			40%
Hispanic	NA		43%	25% – 61%			39%
<small>Note: *** indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change</small>							

## Poor Mental Health

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above whose mental health was not good one or more days in the past month decreased to 33% in 2011 compared with 35% in 2007 (Figure 3). This mirrored PA at 33% (2010). U.S. values were not available.

Figure 3. Poor Mental Health Prevalence, 2001-2011



From 2007 to 2011, higher decreases in poor mental health status were seen for age 18-29 (52% to 42%, respectively) and those with household income of \$25,000-\$49,999 (38% to 28%, respectively) (Table 3).

In 2011, differences in prevalence occurred within demographic groups. Prevalence was significantly higher for females (40%) compared with males (25%), significantly lower for age 65 and above (17%) compared with other age groups, lower for college graduates (28%) compared with other education groups, and significantly higher for those with household income below \$25,000 (43%) compared with other income groups. From 2001 to 2011, prevalence of poor mental health steadily decreased for college graduates but increased (from 2004 to 2011) for those with a household income of \$50,000 and above.

In 2011, 32% of non-Hispanic White, 44% of non-Hispanic Black, and 41% of Hispanic adults reported that their mental health was not good one or more days in the past month. The highest prevalence of poor mental health was seen for those with less than a high school education (47%) followed by non-Hispanic Black adults (44%), those with household income below \$25,000 (43%), age 18-29 (42%), and females (40%). In 2011, poor mental health decreased with increasing age, increasing education, and increasing income.

**Table 3. Poor Mental Health Prevalence, 2007 & 2011**

Mental Health Not Good 1+ Days in the Past Month Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	35%	31% – 38%	33%	30% – 35%	-2%		33%
<u>Gender</u>							
Male	29%	24% – 35%	25%	21% – 28%	-4%		27%
Female	40%	36% – 44%	40%	36% – 44%	0%		38%
<u>Age</u>							
18-29	52%	41% – 63%	42%	36% – 48%	-10%		41%
30-44	38%	31% – 44%	37%	31% – 43%	-1%		36%
45-64	32%	28% – 37%	32%	28% – 37%	0%		34%
65+	16%	12% – 22%	17%	12% – 22%	1%		21%
<u>Education</u>							
<High School	49%	35% – 62%	47%	36% – 57%	-2%		38%
High School	30%	25% – 35%	35%	30% – 39%	5%		34%
Some College	41%	33% – 49%	36%	31% – 41%	-5%		36%
College Graduate	32%	26% – 38%	28%	23% – 33%	-4%		29%
<u>Income</u>							
<\$25,000	40%	33% – 47%	43%	37% – 48%	3%		NA
\$25,000-\$49,999	38%	31% – 45%	28%	22% – 33%	-10%		34%
\$50,000+	29%	24% – 35%	32%	27% – 37%	3%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	34%	30% – 37%	32%	29% – 35%	-2%		33%
Black, non-Hispanic	NA		44%	29% – 58%			38%
Hispanic	NA		41%	23% – 59%			33%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

## Activity Limits

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above whose poor physical and/or mental health prevented their usual activity one or more days in the past month increased to 21% in 2011 compared with 20% in 2007 (Table 4). This mirrored the U.S. at 21% (2010). Values were not available for PA.

Table 4. Restricted Activity Prevalence, 2007 & 2011

Poor Physical and/or Mental Health Prevented Usual Activity 1+ Days in the Past Month Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA
		CI		CI			
All Adults	20%	17% – 23%	21%	19% – 23%	1%		NA
<u>Gender</u>							
Male	14%	11% – 19%	19%	16% – 22%	5%		NA
Female	25%	21% – 29%	23%	20% – 27%	-2%		NA
<u>Age</u>							
18-29	20%	12% – 21%	22%	17% – 27%	2%		NA
30-44	20%	15% – 25%	24%	19% – 29%	4%		NA
45-64	22%	19% – 27%	24%	19% – 28%	2%		NA
65+	15%	11% – 20%	11%	7% – 15%	-4%		NA
<u>Education</u>							
<High School	20%	12% – 31%	21%	12% – 30%	1%		NA
High School	19%	15% – 23%	23%	19% – 27%	4%		NA
Some College	24%	18% – 31%	25%	20% – 30%	1%		NA
College Graduate	18%	13% – 23%	17%	13% – 20%	-2%		NA
<u>Income</u>							
<\$25,000	31%	25% – 38%	33%	28% – 39%	2%		NA
\$25,000-\$49,999	15%	11% – 19%	17%	13% – 22%	2%		NA
\$50,000+	17%	13% – 21%	16%	12% – 20%	-1%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	19%	17% – 22%	21%	19% – 23%	2%		NA
Black, non-Hispanic	NA		28%	15% – 40%			NA
Hispanic	NA		21%	6% – 37%			NA

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

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In 2011, differences in prevalence occurred within demographic groups. Prevalence was higher for females (23%) compared with males (19%), significantly lower for age 65 and above (11%) compared with other age groups, lower for college graduates (17%) compared with other education groups, and significantly higher for those with a household income below \$25,000 (33%) compared with other income groups.

In 2011, 21% of non-Hispanic White, 28% of non-Hispanic Black, and 21% of Hispanic adults reported that poor physical and/or mental health prevented their usual activity one or more days in the past month. The highest prevalence of restricted activity was seen for those whose income was below \$25,000 (33%) followed by non-Hispanic Black adults (28%). In 2011, poor mental health decreased with increasing income.

### **Emotional Support**

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who rarely or never get the social or emotional support they need was 8% in 2007 compared with 7% for PA in 2007 (8% in 2010) (Table 5).

Table 5. Emotional and Social Support Prevalence, 2007

Rarely or Never Get Needed Emotional or Social Support Erie County Adult BRFSS, 2007				
	2007		2011	PA 2007
		CI		
			CI	
All Adults	8%	6% - 10%	NA	7%
<u>Gender</u>				
Male	9%	7% - 13%	NA	9%
Female	6%	4% - 9%	NA	6%
<u>Age</u>				
18-29	7%	3% - 15%	NA	7%
30-44	8%	5% - 13%	NA	6%
45-64	8%	5% - 11%	NA	7%
65+	7%	5% - 11%	NA	9%
<u>Education</u>				
<High School	NSR		NA	13%
High School	9%	7% - 13%	NA	10%
Some College	7%	4% - 12%	NA	7%
College Graduate	2%	1% - 4%	NA	4%
<u>Income</u>				
<\$25,000	12%	8% - 17%	NA	15%
\$25,000-\$49,999	6%	4% - 10%	NA	8%
\$50,000+	4%	2% - 7%	NA	3%
<u>Race/Ethnicity</u>				
White, non-Hispanic	7%	6% - 10%	NA	7%
Black, non-Hispanic	NSR		NA	NA
Hispanic	NSR		NA	NA
<p>Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available</p>				

The highest prevalence occurred for those with income below \$25,000 (12%), while the lowest prevalence was seen for college graduates (2%).

### Life Satisfaction

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who are satisfied or very satisfied with their life was 93% in 2007 compared with 94% for PA in 2007 (94% in 2010) (Table 6).

Table 6. Life Satisfaction Prevalence, 2007

Satisfied or Very Satisfied with Their Life Erie County Adult BRFSS, 2007				
	2007		2011	PA 2007
		<u>CI</u>		
All Adults	93%	91% - 95%	NA	94%
<u>Gender</u>				
Male	94%	92% - 96%	NA	95%
Female	92%	89% - 94%	NA	94%
<u>Age</u>				
18-29	94%	86% - 97%	NA	95%
30-44	92%	88% - 95%	NA	95%
45-64	92%	89% - 94%	NA	93%
65+	96%	92% - 98%	NA	96%
<u>Education</u>				
<High School	NSR		NA	89%
High School	92%	88% - 94%	NA	94%
Some College	95%	91% - 97%	NA	94%
College Graduate	96%	93% - 98%	NA	97%
<u>Income</u>				
<\$25,000	87%	82% - 91%	NA	88%
\$25,000-\$49,999	94%	91% - 96%	NA	95%
\$50,000+	98%	96% - 99%	NA	98%
<u>Race/Ethnicity</u>				
White, non-Hispanic	94%	92% - 95%	NA	95%
Black, non-Hispanic	NSR		NA	NA
Hispanic	NSR		NA	NA

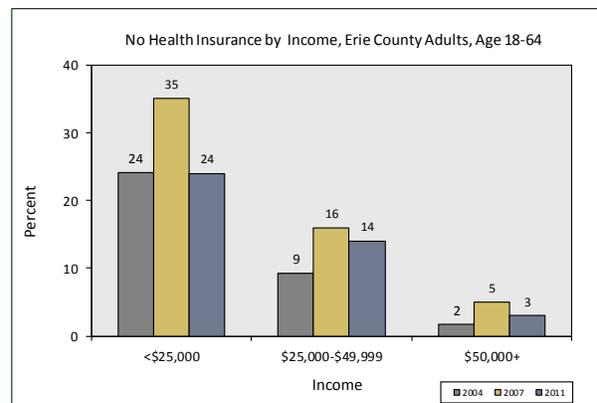
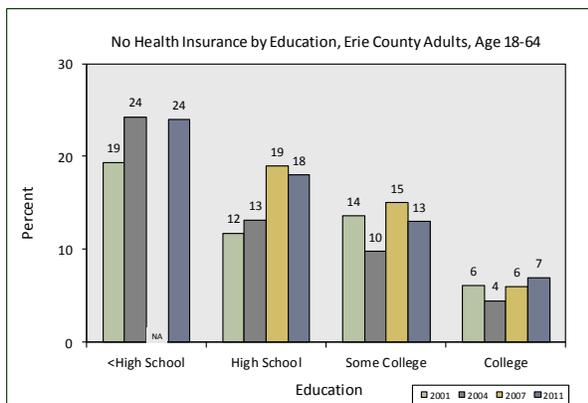
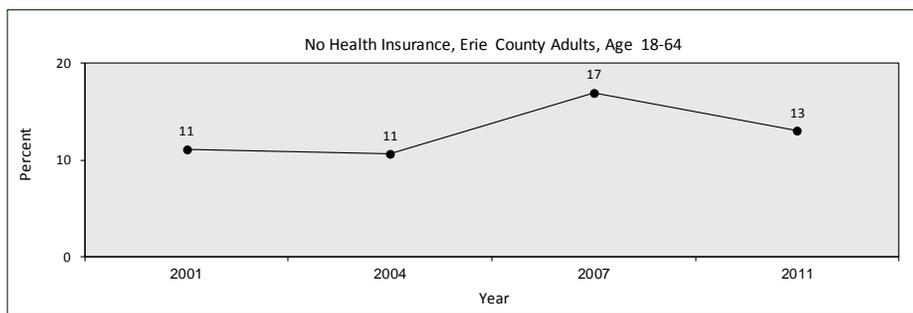
Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available

# Health Care Access

## Health Insurance

Based on the Behavioral Risk Factor Surveillance Survey (BRFSS), the self-reported percentage of Erie County adults aged 18-64 with no health insurance decreased to 13% in 2011 compared with 17% in 2007 (Figure 1). This was lower than PA at 14% (2010) and the U.S. at 18% (2010), but higher than the Healthy People 2020 Goal of 0% (100% with health insurance).

**Figure 1. No Health Insurance Prevalence, 2001-2011**



From 2007 to 2011, the percentage of those who had no health insurance decreased or remained stable for all demographic groups with the exception of females (11% to 13%, respectively) (Table 1). A significant decrease was seen for males (22% to 13%, respectively). High decreases were seen for age 18-29 (33% to 19%, respectively) and those with household income below \$25,000 (35% to 24%, respectively).

In 2011, differences in prevalence occurred within demographic groups. Prevalence was significantly lower for age 45-64 (8%) compared with other age groups and significantly lower for those with household income of \$50,000 and above (3%) compared with other income

groups. A higher percentage was seen for those with less than a high school education (24%) compared with the other education groups.

In 2011, 12% of non-Hispanic White, 29% of non-Hispanic Black, and 29% of Hispanic adults reported having no health insurance. Lack of health insurance decreased with increasing age, increasing education, and increasing income. The highest prevalence of no health insurance was seen for non-Hispanic Black adults (29%) and Hispanic adults (29%) followed by those with less than a high school education (24%) and those with household income below \$25,000 (24%). The lowest prevalence of no health insurance was seen for those with household income of \$50,000 and above (3%) followed by college graduates (7%) and age 45-64 (8%).

**Table 1. No Health Insurance Prevalence, 2007 & 2011**

No Health Insurance, Age 18-64 Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	17%	13% – 21%	13%	11% – 15%	-4%		14%
<u>Gender</u>							
Male	22%	17% – 29%	13%	10% – 16%	-9%	***	15%
Female	11%	7% – 15%	13%	10% – 15%	2%		12%
<u>Age</u>							
18-29	33%	22% – 45%	19%	14% – 24%	-14%		25%
30-44	15%	10% – 21%	15%	11% – 19%	0%		12%
45-64	9%	6% – 12%	8%	5% – 10%	-2%		11%
<u>Education</u>							
<High School	NSR		24%	13% – 35%			35%
High School	19%	14% – 26%	18%	13% – 22%	-1%		18%
Some College	15%	9% – 23%	13%	9% – 17%	-2%		16%
College Graduate	6%	3% – 12%	7%	4% – 10%	1%		5%
<u>Income</u>							
<\$25,000	35%	25% – 45%	24%	18% – 29%	-11%		NA
\$25,000-\$49,999	16%	11% – 24%	14%	9% – 18%	-2%		19%
\$50,000+	5%	3% – 11%	3%	1% – 5%	-2%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	16%	13% – 20%	12%	9% – 14%	-5%		12%
Black, non-Hispanic	NA		29%	16% – 41%			23%
Hispanic	NA		29%	12% – 45%			19%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

## Medicaid

For 2011, 61,807 Erie County residents received medical assistance (Table 2). This represents 22.1% of the population compared with 16.5% for Pennsylvania. Of all 67 counties in Pennsylvania, Erie County ranked third in percent of Medicaid recipients. Highest was Philadelphia County at 31.5% followed by Fayette County at 23.6%.

**Table 2. Medicaid Recipients, 2011**

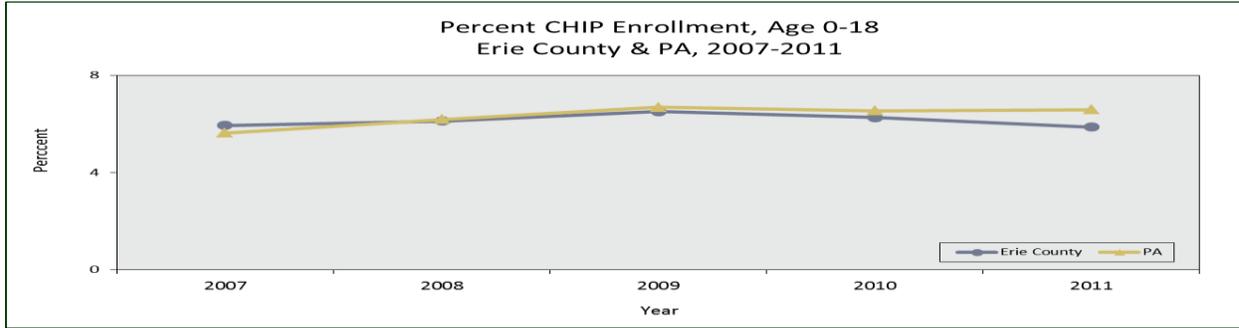
Medicaid Recipients Erie County & PA, 2011		
	Erie County	PA
	<u>Number</u>	<u>Number</u>
Total Population*	280,149	12,632,780
Medicaid Recipients		
Elderly	7,503	296,129
Disabled	13,654	469,334
Children & Families	38,102	1,210,489
Chronically Ill**	2,548	107,069
Total Medicaid Recipients	61,807	2,083,021
% of Population Receiving Medicaid	22.1%	16.5%

Note: \*July, 2010 estimated population; \*\* for single adults, age 21-64

## Children's Health Insurance Program (CHIP)

In 2011, 5.9% (6.6% for PA) of Erie County children under 19 years of age were enrolled in the Children's Health Insurance Program (CHIP) compared with 6.3% in 2010 (6.5% for PA) (Figure 2).

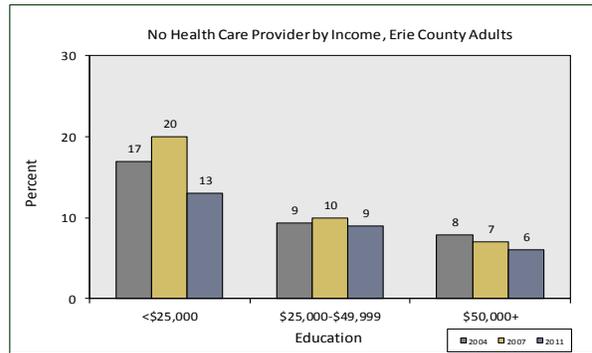
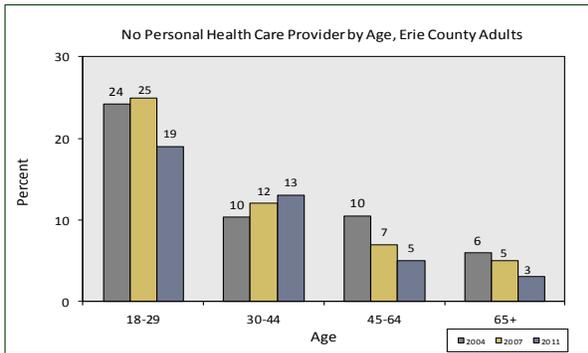
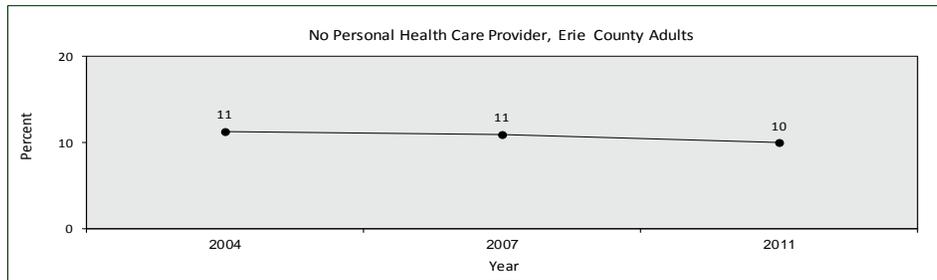
Figure 2. CHIP Enrollment, 2007-2011



### Personal Health Care Provider

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who did not have a personal health care provider decreased to 10% in 2011 compared with 11% in 2007 and 11% in 2004 (Figure 3). This was lower than PA at 11% (2010). U.S. values were not available.

Figure 3. No Personal Health Care Provider Prevalence, 2004-2011



From 2007 to 2011, decreases or nominal increases were seen in the prevalence of no health care provider for all demographic groups. Higher decreases were seen for age 18-29 (25% to 19%, respectively) and those with household income below \$25,000 (20% to 13%, respectively) (Table 3).

In 2011, differences in prevalence occurred within demographic groups. Prevalence was significantly higher for ages 18-29 (19%) and 30-44 (13%) compared with other age groups, significantly higher for males (14%) compared with females (6%), higher for those with less than a high school education (17%) compared with other education groups, and higher for household income below \$25,000 (13%) compared with other income groups. From 2004 to 2011, the prevalence of no personal health care provider steadily decreased for ages 45-64 and 65 and above, steadily increased for age 30-44, and steadily decreased for those with household income of \$50,000 and above.

In 2011, 9% of non-Hispanic White, 17% of non-Hispanic Black, and 21% of Hispanic adults reported that they did not have a personal health care provider. The highest prevalence was seen for Hispanic adults (21%) followed by age 18-29 (19%) and non-Hispanic Black adults (17%). In 2011, lack of a personal health care provider decreased with increasing age, increasing education, and increasing income.

**Table 3. No Personal Health Care Provider Prevalence, 2007 & 2011**

Does Not Have a Personal Health Care Provider Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	11%	9% – 14%	10%	8% – 12%	-1%		11%
<b>Gender</b>							
Male	15%	11% – 20%	14%	11% – 17%	-1%		15%
Female	8%	6% – 11%	6%	4% – 8%	-2%		7%
<b>Age</b>							
18-29	25%	17% – 36%	19%	14% – 24%	-6%		25%
30-44	12%	8% – 17%	13%	9% – 17%	1%		14%
45-64	7%	5% – 10%	5%	3% – 8%	-2%		8%
65+	5%	3% – 8%	3%	1% – 5%	-2%		3%
<b>Education</b>							
<High School	NSR		17%	8% – 25%			16%
High School	11%	8% – 16%	10%	7% – 13%	-1%		11%
Some College	12%	8% – 18%	12%	9% – 16%	0%		12%
College Graduate	8%	5% – 12%	7%	4% – 10%	-1%		9%
<b>Income</b>							
<\$25,000	20%	14% – 27%	13%	10% – 17%	-7%		NA
\$25,000-\$49,999	10%	6% – 15%	9%	6% – 13%	-1%		11%
\$50,000+	7%	5% – 11%	6%	4% – 9%	-1%		NA
<b>Race/Ethnicity</b>							
White, non-Hispanic	11%	9% – 14%	9%	8% – 11%	-2%		9%
Black, non-Hispanic	NA		17%	6% – 28%			18%
Hispanic	NA		21%	6% – 35%			18%

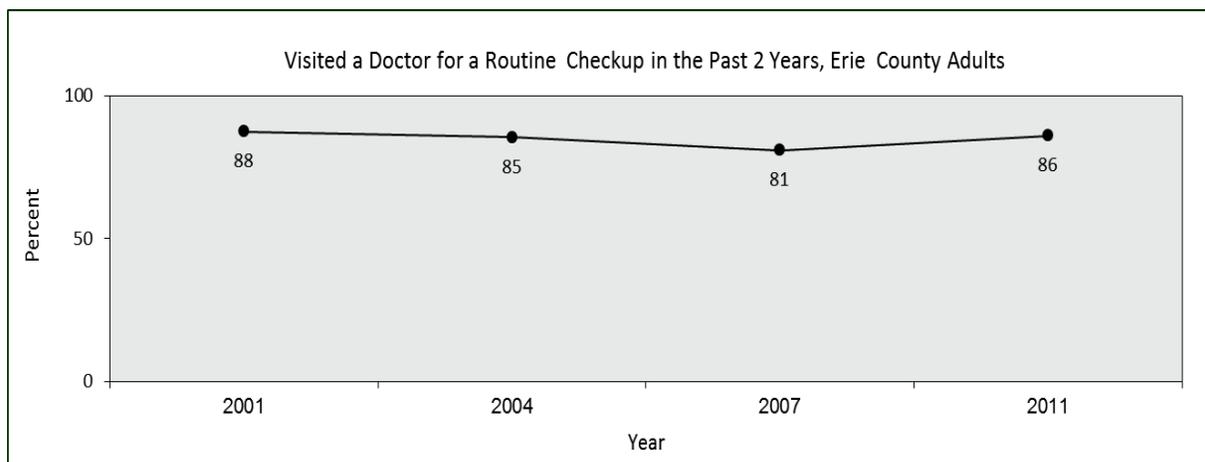
Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

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## Routine Checkup

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who visited a doctor for a routine checkup in the past two years significantly increased to 86% in 2011 compared with 81% in 2007 (Figure 4). Values for PA and U.S. were not available.

Figure 4. Routine Checkup Prevalence, 2001-2011



From 2007 to 2011, increases in the prevalence of routine checkups were seen for all demographic groups with the exception of those with household income of \$25,000-\$49,999 and those with some college education (Table 4). Significant increases were seen for males (77% to 85%, respectively), age 30-44 (71% to 83%, respectively), high school graduates (82% to 94%, respectively), college graduates (77% to 88%, respectively), those with household income of \$50,000 and above (78% to 98%, respectively), and non-Hispanic White adults (80% to 86%, respectively). A significant decrease was seen for those with household income of \$25,000-\$49,999 (85% to 73%, respectively).

In 2011, differences in prevalence occurred within demographic groups. Prevalence was significantly higher for age 65 and above (95%) compared with other age groups, higher for those with less than a high school education (99%) and high school graduates (94%) compared with other education groups, and significantly higher for those with household income of \$50,000 and above (98%) compared with other income groups.

In 2011, 88% of females, 85% of males, 86% of non-Hispanic White, 94% of non-Hispanic Black, and 75% of Hispanic adults reported a routine checkup within the past two years. The highest prevalence was seen for those with less than a high school education (99%) followed by those with household income of \$50,000 and above (98%), age 65 and above (95%), and non-Hispanic Black adults and high school graduates (94%).

**Table 4. Routine Checkup Prevalence, 2007 & 2011**

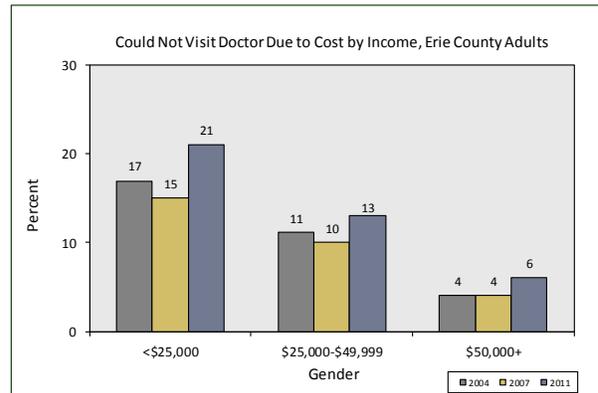
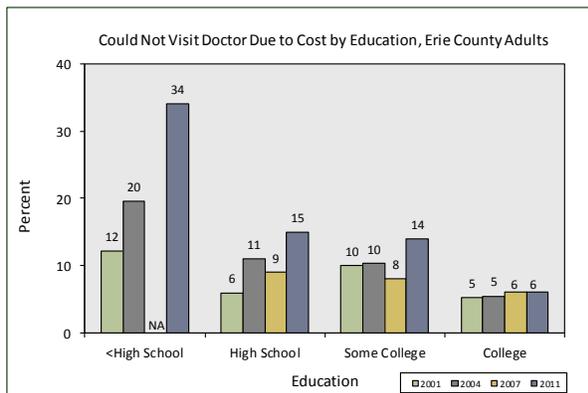
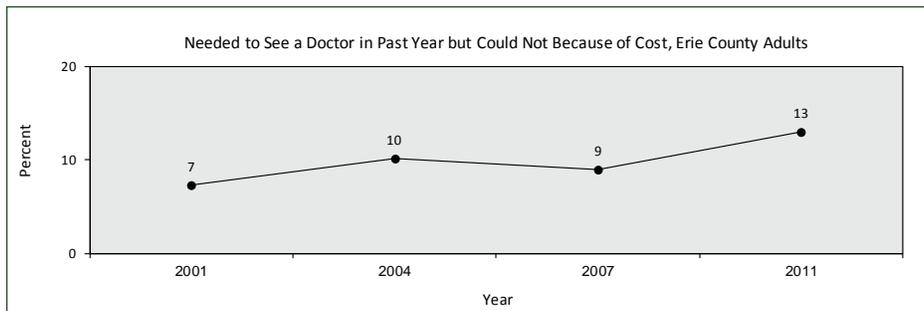
Visited a Doctor for a Routine Checkup Within the Past 2 Years Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	81%	77% - 83%	86%	84% - 88%	5%	***	NA
<u>Gender</u>							
Male	77%	72% - 82%	85%	82% - 88%	8%	***	NA
Female	84%	80% - 87%	88%	85% - 90%	4%		NA
<u>Age</u>							
18-29	70%	58% - 79%	78%	73% - 83%	8%		NA
30-44	71%	65% - 77%	83%	78% - 87%	12%	***	NA
45-64	86%	82% - 89%	89%	86% - 92%	3%		NA
65+	94%	90% - 96%	95%	93% - 98%	1%		NA
<u>Education</u>							
<High School	NSR		99%	97% - 100%			NA
High School	82%	77% - 87%	94%	92% - 97%	12%	***	NA
Some College	85%	78% - 90%	82%	78% - 86%	-3%		NA
College Graduate	77%	71% - 82%	88%	85% - 92%	11%	***	NA
<u>Income</u>							
<\$25,000	79%	72% - 85%	84%	80% - 88%	5%		NA
\$25,000-\$49,999	85%	79% - 89%	73%	68% - 79%	-12%	***	NA
\$50,000+	78%	73% - 83%	98%	97% - 100%	20%	***	NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	80%	77% - 83%	86%	84% - 88%	6%	***	NA
Black, non-Hispanic	NA		94%	87% - 100%			NA
Hispanic	NA		75%	59% - 91%			NA

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

### Lack of Care Due to Cost

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who needed to see a doctor in the past year but could not because of cost significantly increased to 13% in 2011 compared with 9% in 2007 (Figure 5). This is higher than PA at 11% (2010). Values for the U.S. were not available.

Figure 5. Lack of Needed Care Due to Cost Prevalence, 2001-2011



From 2007 to 2011, increases in foregoing medical care due to cost were seen for all demographic groups with the exception of age 65 and above and college graduates (Table 5). Higher increases in prevalence were seen for ages 18-29 (13% to 19%, respectively) and 30-44 (13% to 19%, respectively), high school graduates (9% to 15%, respectively), those with some college education (8% to 14%, respectively), and those with household income below \$25,000 (15% to 21%, respectively).

In 2011, differences in prevalence occurred within demographic groups. Prevalence was significantly higher for those with less than a high school education (34%) compared with all other education groups and for those with household income below \$25,000 (21%) compared with all other income groups. Higher percentages were seen for females (15%) compared with males (10%) and ages 18-29 (19%) and 30-44 (19%) compared with other age groups.

In 2011, 12% of non-Hispanic White, 20% of non-Hispanic Black, and 31% of Hispanic adults needed to visit a doctor in the past year but did not because of cost. The highest prevalence was seen for those with less than a high school education (34%) followed by Hispanic adults (31%). The lowest prevalence was seen for age 65 and above (2%) followed by college graduates (6%) and those with household income of \$50,000 and above (6%).

**Table 5. Lack of Needed Care Due to Cost Prevalence, 2007 & 2011**

Needed to See a Doctor in the Past Year but Could Not Because of Cost Erie County Adult BRFSS, 2007 & 2011							
	2007		2011		Point Change <sup>^</sup>	Sig	PA 2010
		CI		CI			
All Adults	9%	7% - 11%	13%	11% - 15%	4%	***	11%
<u>Gender</u>							
Male	8%	5% - 11%	10%	8% - 13%	2%		10%
Female	10%	8% - 13%	15%	12% - 18%	5%		12%
<u>Age</u>							
18-29	13%	7% - 21%	19%	15% - 24%	6%		18%
30-44	13%	9% - 18%	19%	14% - 23%	6%		13%
45-64	7%	5% - 10%	11%	8% - 14%	4%		12%
65+	4%	2% - 7%	2%	0% - 4%	-2%		4%
<u>Education</u>							
<High School	NSR		34%	23% - 44%			21%
High School	9%	7% - 13%	15%	12% - 19%	6%		13%
Some College	8%	5% - 12%	14%	11% - 18%	6%		13%
College Graduate	6%	4% - 10%	6%	3% - 8%	0%		7%
<u>Income</u>							
<\$25,000	15%	11% - 21%	21%	17% - 26%	6%		NA
\$25,000-\$49,999	10%	7% - 15%	13%	9% - 16%	3%		13%
\$50,000+	4%	2% - 7%	6%	4% - 9%	2%		NA
<u>Race/Ethnicity</u>							
White, non-Hispanic	8%	7% - 11%	12%	10% - 14%	4%		10%
Black, non-Hispanic	NA		20%	9% - 32%			19%
Hispanic	NA		31%	14% - 48%			21%

Note: \*\*\* indicates significant difference between 2007 and 2011; CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available; ^ indicates a percentage point change

### Lack of Medication Due to Cost

Based on the BRFSS, the self-reported percentage of Erie County adults aged 18 and above who needed prescribed medication in the past year but did not get it due to cost was 12% in 2011 (Table 6).

Table 6. Lack of Needed Medication Due to Cost Prevalence, 2011

Did Not Get Needed Prescribed Medication in Past Year Due to Cost Erie County Adult BRFSS, 2011					
	2007	2011	PA		
	CI	CI			
All Adults	NA	12%	10% - 14%		NA
<u>Gender</u>					
Male	NA	8%	6% - 10%		NA
Female	NA	16%	13% - 19%		NA
<u>Age</u>					
18-29	NA	16%	12% - 20%		NA
30-44	NA	15%	11% - 19%		NA
45-64	NA	11%	8% - 14%		NA
65+	NA	4%	1% - 7%		NA
<u>Education</u>					
<High School	NA	19%	10% - 27%		NA
High School	NA	15%	11% - 18%		NA
Some College	NA	13%	9% - 16%		NA
College Graduate	NA	8%	5% - 11%		NA
<u>Income</u>					
<\$25,000	NA	21%	17% - 26%		NA
\$25,000-\$49,999	NA	11%	7% - 15%		NA
\$50,000+	NA	6%	4% - 8%		NA
<u>Race/Ethnicity</u>					
White, non-Hispanic	NA	12%	10% - 13%		NA
Black, non-Hispanic	NA	14%	4% - 24%		NA
Hispanic	NA	14%	1% - 26%		NA
<small>Note: CI indicates confidence interval; NSR indicates the total is less than 20 and the percentage is considered not statistically reliable; NCI indicates the percentage was 0.0% or 100.0% and no confidence interval was calculated; NA indicates the data is not available</small>					

In 2011, differences in prevalence occurred within demographic groups. Prevalence was significantly higher for those with household income below \$25,000 (21%) compared with all other income groups and for females (16%) compared with males (8%). Prevalence was higher for those with less than a high school education (19%) compared with other education groups and for ages 18-29 (16%) and 30-44 (15%) compared to the older age groups.

In 2011, 12% of non-Hispanic White, 14% of non-Hispanic Black, and 14% of Hispanic adults needed prescribed medication in the past year but did not get it because of cost. The highest prevalence was seen for those with household income below \$25,000 (21%) followed by those with less than a high school education (19%). The lowest prevalence was seen for age 65 and above (4%) followed by household income of \$50,000 and above (6%).

### Health Care Provider Location

When Erie County adults aged 18 and above needed health care due to illness, 71% usually went to a doctor’s office. But in the past 12 months, 64% went to the doctor’s office for health care when they were sick (Table 7).

**Table 7. Health Care Choice When Ill Prevalence, 2011**

Choice of Health Care Provider When Ill Erie County Adult BRFSS, 2011		
<u>Location</u>	<u>Where Go For Care When Sick</u>	
	<u>Usually Go</u>	<u>Past 12 Months</u>
Doctor's Office	71%	64%
No Usual Place	15%	23%
Hospital Emergency Room	5%	9%
Urgent Care Center	4%	5%
Hospital Outpatient Department	3%	4%
Public Health Clinic or Community Health Center	2%	2%
Some Other Kind of Place	1%	2%

Note: Total is greater than 100% because some respondents visited more than one type of health care provider within the past twelve months

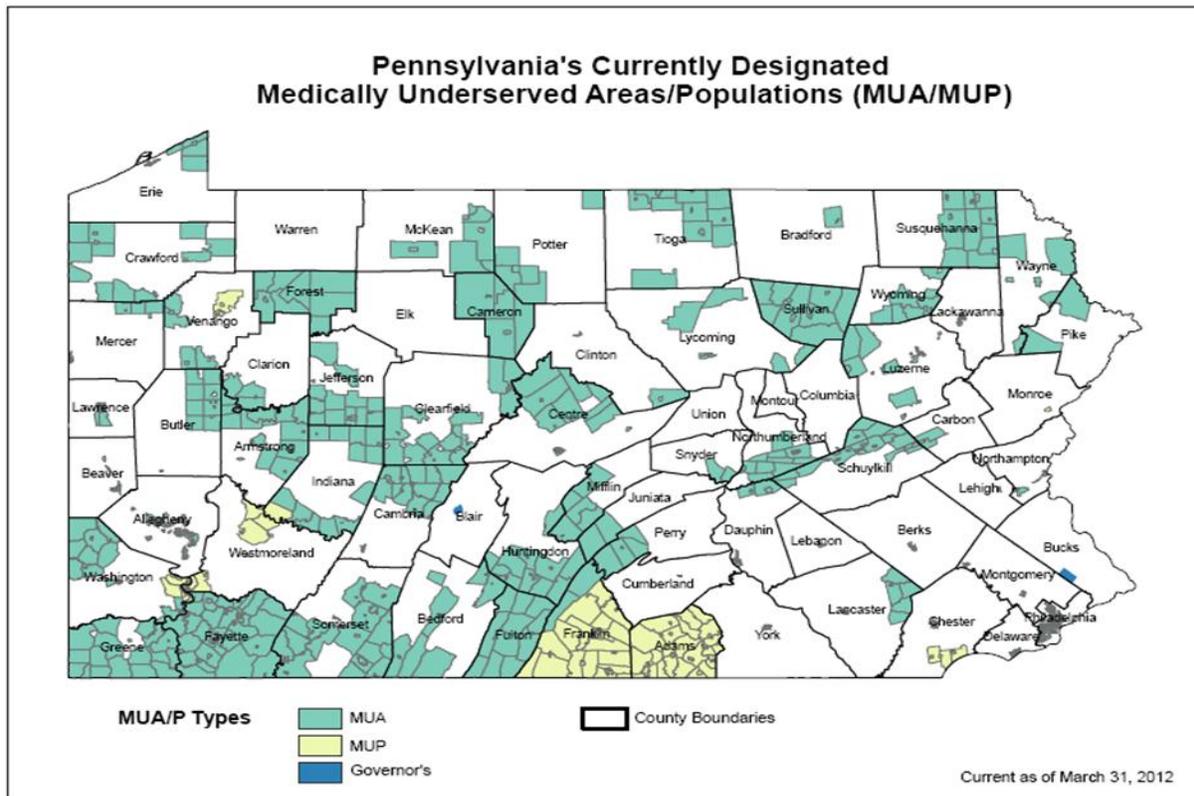
# Health Care Providers

## Federally Designated Underserved Areas

Not all communities or populations have equal access to needed medical, dental, or mental health care. The federal government classifies areas within the United States that are deficient in access to this health care as a Medically Underserved Area (MUA), a Medically Underserved Population (MUP), or a Health Professional Shortage Area (HPSA). MUA/MUPs are geographic areas or populations with a shortage of health services. The MUA/MUP designation is determined by the availability of health care providers, infant mortality, poverty rate, and percentage of the population aged 65 and above. A HPSA can be a geographic area (a county or service area), a target population group within a geographic area (low income population), or an institution (comprehensive health center, federally qualified health center, prison).

The Health Resources and Services Administration (HRSA) Division of the U.S. Department of Health and Human Services (HHS) has designated three areas within Erie County as MUA/MUP service areas (Figure 1).

Figure 1. Pennsylvania MUA/MUP, 2012



The first service area includes Census Tracts 115.05, 116, 117.01, and 117.02 (North East and surrounding area) (Figure 2), the second service area includes Census Tracts 13, 15, 18, and 19 (City of Erie), and the third service area includes Census Tracts 1 and 12 (City of Erie) (Figure 3).

Figure 2. Erie County Census Tract Map

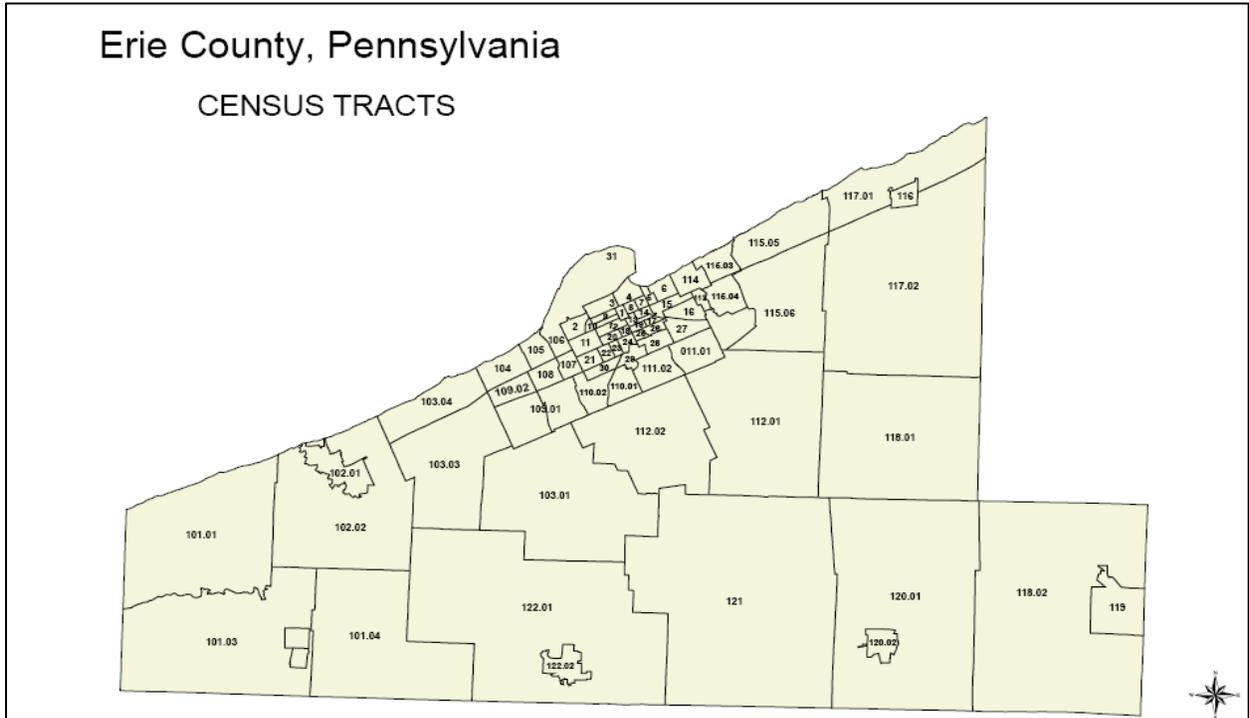
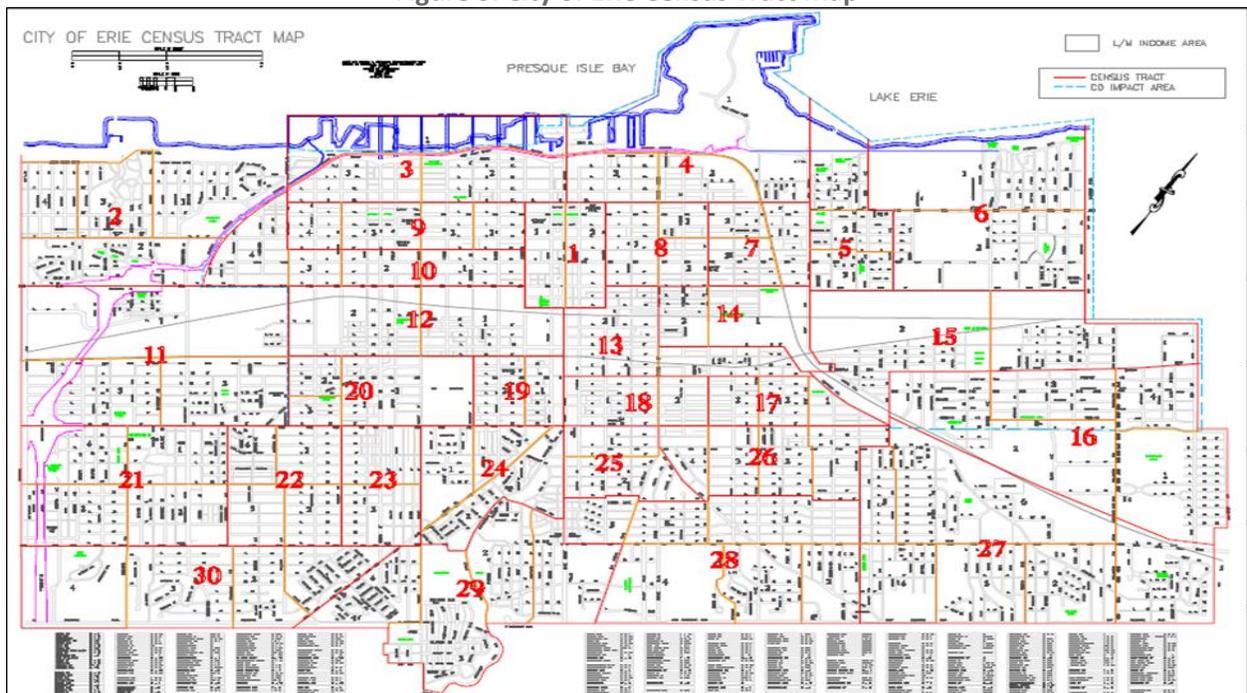


Figure 3. City of Erie Census Tract Map



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HRSA has also designated the entire low income population of Erie County as a Dental HPSA lacking 16 full time equivalent (FTE) dentists and the Union City/Corry service area as a Primary Medical Care HPSA lacking 2 FTE primary care providers. There are no mental health provider shortages in Erie County.

### **Community Health Net (FQHC)**

In 2011, 61,807 (22.1%) of Erie County residents received medical assistance. A Federally Qualified Health Center (FQHC) is a community-based organization that provides comprehensive primary care and preventive care, including health, oral, and mental health/substance abuse services to persons of all ages, regardless of their ability to pay or their health insurance status. FQHCs are called Community/Migrant Health Centers (C/MHC), Community Health Centers (CHC), or 330 Funded Clinics and provide services to MUA/MUPs, migrants and seasonal agricultural workers, the homeless population, and residents of public housing.

Community Health Net is a community health center. It consists of a main facility, four satellite health care satellite locations (Barber Institute, Harborcreek Youth Services, Sarah Reed Children's Home, and Highpoint Towers) and two satellite dental locations (Booker T. Washington Center and Stairways).

In 2011, Community Health Net provided 14,890 services to individuals with residence addresses in Erie County. Although many of these clients resided throughout Erie County, 92% lived in the City of Erie. The demographic profile is as follows: males (49%), females (51%), ages 0 to 19 (32%), ages 20 to 64 (63%), ages 65 and above (5%), and Hispanic (9%). For those who reported their race, 65% were White and 32% were Black/African-American. For ages 0-19, 89% were insured by regular Medicaid (not CHIP), 7% were covered by private insurance, and 4% were uninsured. For ages 20 and above, 51% were insured by regular Medicaid, 29% were uninsured, 12% were covered by Medicare, and 8% were covered by private insurance. For patients with a primary diagnosis, the most common diagnosis was hypertension (29%) followed by diabetes mellitus (20%), asthma (8%), depression and other mood disorders (7%), anxiety disorders including PTSD (5%), otitis media and Eustachian tube disorders (5%), and chronic bronchitis and emphysema (4%).

A total of 1,200 services were provided for homeless individuals by Community Health Net in 2011.

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## Rural Health Centers

Even though the Pennsylvania Office of Rural Health classifies Erie County as an urban county, much of Erie County is rural (Figures 4,5).

Figure 4. Pennsylvania Rural and Urban Municipalities, 2003

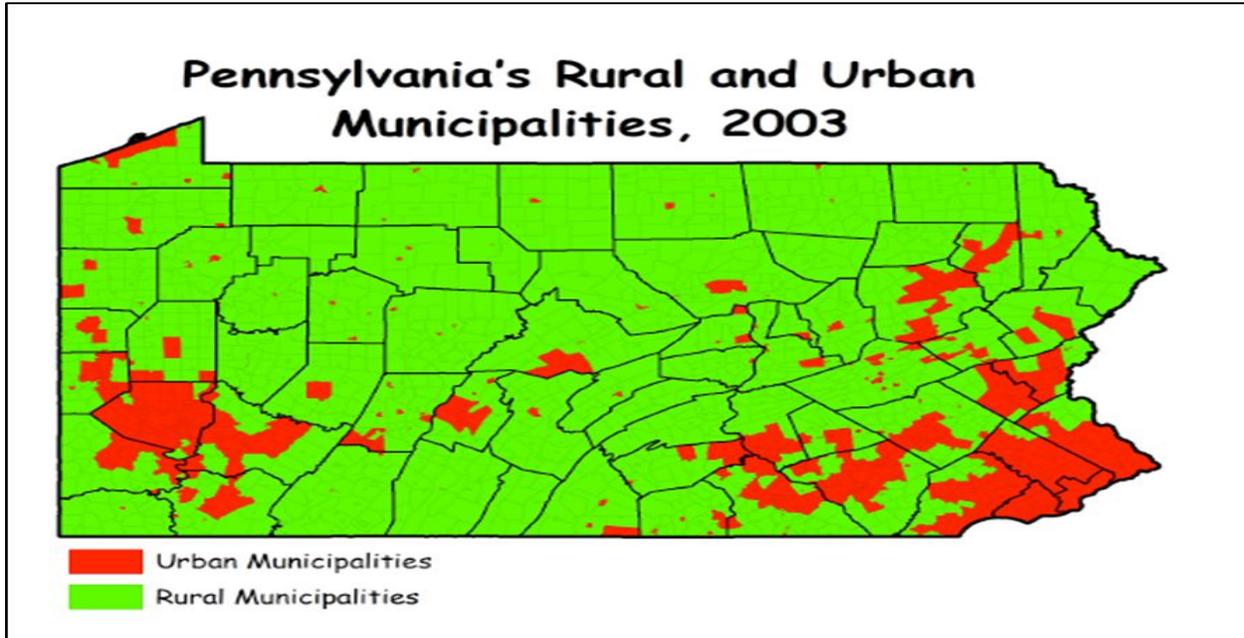
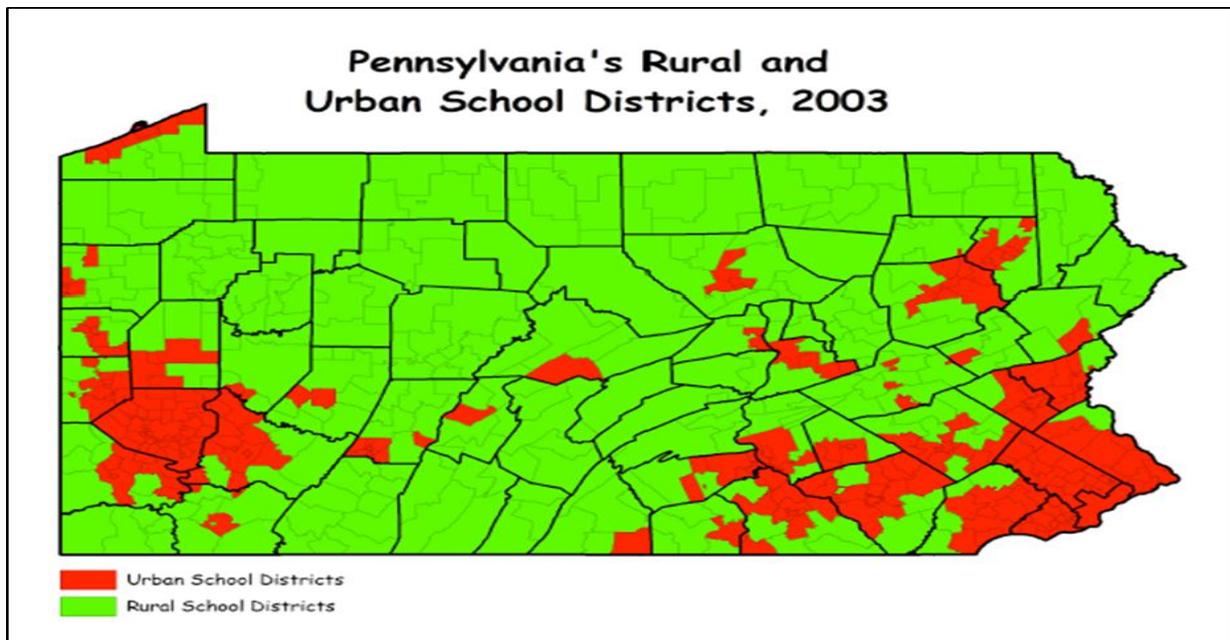


Figure 5. Pennsylvania Rural and Urban School Districts, 2003



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As defined by the Rural Assistance Center, a Rural Health Clinic/Center (RHC) is a clinic certified to receive special Medicare and Medicaid reimbursement. The purpose of the RHC program is improving access to primary care in underserved rural areas. RHCs are required to use a team approach of physicians and midlevel practitioners such as nurse practitioners, physician assistants, and certified nurse midwives to provide services. The clinic must be staffed at least 50% of the time with a midlevel practitioner. RHCs are required to provide out-patient primary care services and basic laboratory services.

There are two RHCs in Erie County. They are the Medical Group of Corry in Corry, PA and John E. Balmer, DO in Union City, PA.

### **Multi-Cultural Health Evaluation Delivery System (MHEDS)**

MHEDS was developed in 1972 as a joint project of the Erie Diocesan Mission Office and the Erie Council of Churches to meet the health care needs of Black and Hispanic Farm Workers.

MHEDS currently serves indigent populations as well as migrant farm workers, including Puerto Ricans, Mexicans, and Haitians. In addition to health care, it provides mental health/mental retardation case management and counseling services for special populations, WIC services, and drug and alcohol treatment programs. MHEDS is the designated primary care service provider in the Erie area for the Keystone Migrant Farmworker Program.

In 2011, MHEDS provided 12,615 services to its clients. The percentage of services per demographic group is as follows: males (46%), females (54%), ages under 14 (29%), ages 14-19 (11%), ages 20-29 (16%), ages 30-39 (13%), ages 40-49 (13%), ages 50 and above (18%), Bhutanese (35%), Nepali (16%), Iraqi (9%), Somali (8%), Puerto-Rican (4%), Mexican (4%), Sudanese (3%), and Bosnian (3%). Percentages for types of services provided is as follows: clinic visits [sick patients and physicals] (49%), blood pressure screens (20%), hospitals [translation, ER, etc.] (7%), immunizations (5%), vision screens (3%), hearing screens (3%), and early and periodic, screening, diagnosis and treatment (EPSDT) (3%). MHEDS also provided 2,220 interpreting and translation services.

### **Mental Health Services**

The Erie County Office of Mental Health/Mental Retardation (MH/MR) administers funds for the delivery of behavioral health services to Erie County residents. Statistics are available for mental health services funded by 1) HealthChoices, Pennsylvania's behavioral health managed care program for Medical Assistance recipients, and 2) Base funded services for persons who do

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not have sufficient public funded or private insurance. Statistics about clients with private insurance are excluded because the data is not available. In Erie County, 66,494 residents (23.7% of the population) are eligible for medical assistance.

In 2011, 18,409 Erie County residents received mental health services from the Erie County Office of MH/MR compared with 17,687 in 2010. For 2011, the demographic profile for these clients is: 49% male, 51% female, 16% age 0-11, 14% age 12-17, 13% age 18-24, 10% age 25-29, 22% age 30-44, 22% age 45-64, and 3% age 65 and above. These percentages remained stable compared with 2010.

In 2011, 39% of services provided for children and adults were for episodic mood disorders followed by schizophrenic disorders (14%), adjustment reaction (9%), pervasive developmental disorders (8%), hyperkinetic syndrome of children (8%), anxiety, dissociative and somatoform disorders (4%), and drug dependence (3%).

Compared with males, females had higher percentages of services received for episodic mood disorders (53% to 46%, respectively), schizophrenic disorders (53% to 47%, respectively), adjustment reaction (51% to 48%, respectively) and anxiety, dissociative and somatoform disorders (51% to 49%, respectively), but lower percentages of females were diagnosed with pervasive developmental disorders (43% to 57%, respectively), hyperkinetic syndrome of children (32% to 67%, respectively), and drug dependence (44% to 56%, respectively).

Percentages for services received among age groups were 1) for ages 0-11, hyperkinetic syndrome of children (27%), adjustment reaction (21%), episodic mood disorders (20%), and pervasive developmental disorders (12%), 2) for ages 12-17, episodic mood disorders (30%), hyperkinetic syndrome of children (21%), and adjustment reaction (15%), 3) for ages 18-24, episodic mood disorders (43%) and schizophrenic disorders (12%), 4) for ages 25-29, episodic mood disorders (46%) and schizophrenic disorders (16%), 5) for ages 30-44, episodic mood disorders (46%) and schizophrenic disorders (20%), 6) for ages 45-64, episodic mood disorders (47%) and schizophrenic disorders (25%), and 7) for ages 65 and above, episodic mood disorders (61%), neuroendocrine tumors (18%), and schizophrenic disorders (9%).

## **Free Clinics**

The St. Paul's Neighborhood Free Clinic is a nonprofit clinic that provides free medical and dental care by volunteer health professionals to qualified individuals. Services offered are: primary care, diagnostic management to moderate chronic diseases, disease screening for

hypertension and diabetes, medication reviews, and dental care. The clinic does not offer pediatric care or emergency services. Appointments are required for care.

## Medical Professionals

In 2010, there were 599 physicians who were employed in health care and provided direct patient care in Erie County (Table 1). Of these, 533 (89%) accepted Medicaid and 564 (94%) accepted Medicare. The average age of a physician in Erie County is 48.

In 2010, there were 142 dentists who were employed in health care and provided direct patient care in Erie County. Of these, 19 (13%) accepted Medicaid and 16 (11%) accepted Medicare. For the 61,807 Medicaid recipients in Erie County, population per dentist is 3,253 compared with 1,976 for the total population. The average age of a dentist in Erie County is 53.

**Table 1. Medical Professionals, 2010**

Medical and Dental Professionals Erie County and Pennsylvania, 2010						
Profession*	Erie County			PA		
	Number of Professionals	% of Total	Population per Professional	Number of Professionals	% of Total	Population per Professional
All Physicians	599	-	468	27,190		467
Primary Care	219	36.6%	1,281	9,479	34.9%	1,340
Family Medicine	146	24.4%	1,922	3,700	13.6%	3,433
General Practice	-	-	-	210	0.8%	60,488
Internal Medicine	36	6.0%	7,794	3,003	11.0%	4,230
Pediatrics^	20	3.3%	3,190	1,418	5.2%	1,969
Obstetrics & Gynecology^^	11	1.8%	11,002	911	3.4%	6,191
Gynecology (Only)	-	-	-	237	0.9%	23,797
All Dentists	142	-	1,976	6,248	-	2,033
General Dentists	111	78.2%	2,528	4,837	77.4%	2,626
Registered Nurses (2008)	2,897	-	97	119,106	-	107
Licensed Practical Nurses (2008)	914	-	307	35,196	-	361
Physician Assistants	111	-	2,528	3,972	-	3,198
Dental Hygienists	134	-	2,094	5,783	-	2,197

Note: \*Health practitioners who are employed in health care and provide direct patient care in Erie County; Population per professionals is the population per capita that is served per medical profession; ^ For pediatrics, per population age 0-17; ^^For obstetrics & gynecology, per female population age 13 and above

## Hospital Utilization

There are seven hospitals in Erie County. Corry Memorial Hospital, Millcreek Community Hospital, Saint Vincent Health Center, and UPMC Hamot are acute care facilities. HealthSouth Rehabilitation Hospital of Erie and Select Specialty Hospital Erie are specialty facilities, while the Veterans Affairs Medical Center is part of the federal system and provides services for veterans. Erie Shriners Ambulatory Surgery Center and Outpatient Specialty Care Center is a pediatric specialty facility.

Acute care hospital utilization data for Erie County and Pennsylvania is shown in Tables 2 and 3.

**Table 2. Acute Care Hospital Utilization, 2010-2011**

Acute Care Hospital Utilization Erie County & PA, 2010-2011*						
<u>Utilization Variables</u>	<u>Corry Memorial</u>	<u>Millcreek Community Hospital</u>	<u>Saint Vincent Health Center</u>	<u>UPMC Hamot</u>	<u>Total</u>	<u>PA</u>
Long Term Care Unit	No	No	No	No	-	-
Licensed Beds	35	144	428	412	1,019	35,671
Beds Set Up and Staffed	35	144	428	387	994	33,603
Admissions	1,006	4,711	17,485	16,777	39,979	1,617,306
Discharges	1,003	4,714	17,485	17,068	40,270	1,616,898
Patient Days of Care	5,182	21,803	89,214	82,167	198,366	8,006,327
Discharge Days	5,188	21,939	89,214	83,301	199,642	8,048,981
Bed Days Available	12,775	50,040	155,509	136,596	354,920	12,210,154
Average Length of Stay (Days)	5.17	4.65	5.10	4.88	4.96	4.98
Occupancy Rate	40.6	43.6	57.4	60.2	55.9	65.6
Live Births	0	140	1,893	1,456	3,489	124,402

Note: \*Reporting period July 1, 2010 through June 30, 2011

**Table 3. Acute Care Hospital Emergency Services, 2010-2011**

Acute Care Hospital Emergency Services Capability and Utilization Erie County & PA, 2010-2011*						
Utilization Variables	Corry	Millcreek	Saint Vincent		Total	PA
	Memorial	Community Hospital	Health Center	UPMC Hamot		
Emergency Services Capability	General	General	Comprehensive	Comprehensive	-	-
Visits to Emergency Room	9,973	15,027	69,199	64,833	159,032	6,042,760
Inpatient Admissions from Emergency Room	939	3,738	12,930	8,474	26,081	1,078,322
Doctors with Clinical Privileges in Emergency Medicine (Total)	4	1	19	18	42	2,562
Board Certified	3	1	15	13	32	2,079
Other	1	0	4	5	10	483
Hospital Owned/Leased Ambulance Services**						
ALS	Yes	No	No	Yes	-	-
BLS	Yes	No	No	Yes	-	-
AIR	No	No	No	Yes	-	-
MICU	No	No	No	Yes	-	-
MCCU	No	No	No	Yes	-	-

Note: \*Reporting period July 1, 2010 through June 30, 2011; \*\*ALS = Advanced Life Support; BLS = Basic Life Support; AIR = Air Ambulance; MICU = Mobile Intensive Care Unit; MCCU = Mobile Critical Care Unit

### Potentially Preventable Hospitalizations

In 2010, slightly more than 12% of Pennsylvania adults aged 18 and above were hospitalized in general acute care hospitals with potentially preventable hospitalizations. As defined by the Pennsylvania Health Care Cost Containment Council (PHC4), potentially preventable hospitalizations are inpatient stays that might have been avoided with timely and effective outpatient care and management of twelve acute and chronic conditions and diseases. Of these twelve, heart failure, COPD or asthma among older adults, and bacterial pneumonia had the highest percentage of hospital stays. Potentially preventable hospitalizations are reported as number of hospitalizations per 10,000 adult residents aged 18 and above.

For 2010, rates of potentially preventable hospitalizations for Pennsylvania counties were reported for 1) all twelve acute and chronic conditions and diseases, 2) COPD and asthma among older adults, 3) heart failure, and 4) bacterial pneumonia.

For all twelve acute and chronic conditions and diseases, Erie County ranked 21<sup>st</sup> with a rate of 152.2 (186.9 for PA) (Table 4). Pike County ranked 1<sup>st</sup> with the lowest rate of 64.7 and Philadelphia County ranked 67<sup>th</sup> with the highest rate of 299.4.

For COPD and asthma among older adults, Erie County ranked 23<sup>rd</sup> with a rate of 44.5 (61.2 for PA). Pike County was 1<sup>st</sup> at 12.1 and Venango County was 67<sup>th</sup> at 122.3.

For heart failure, Erie County ranked 32<sup>nd</sup> along with Perry County with a rate of 41.1 (46.3 for PA). Union County was 1<sup>st</sup> at 23.8 and Philadelphia County was 67<sup>th</sup> at 78.8.

For bacterial pneumonia, Erie County ranked 17<sup>th</sup> with a rate of 28.6 (32.5 for PA). Union County was 1<sup>st</sup> at 10.6 and Cameron County was 67<sup>th</sup> with a rate of 60.4.

**Table 4. Potentially Preventable Hospitalizations, 2010**

Potentially Preventable Hospitalizations Erie County & PA, 2010		
	Erie County	PA
<u>Hospitalization</u>	<u>Rate*</u>	<u>Rate*</u>
All Acute and Chronic Conditions	152.2	186.9
COPD of Asthma in Older Adults	44.5	61.2
Heart Failure	41.1	46.3
Bacterial Pneumonia	28.6	32.5

Note: \*Rate per 10,000 adult residents age 18 and above

### **Ambulatory Surgery Center Utilization**

Ambulatory Surgery Centers are health care facilities focused on providing same-day surgical care, including diagnostic and preventive procedures. There are five ambulatory surgery centers in Erie County. Three are affiliated with acute care hospitals and two are independent. Utilization data for all centers is shown in Table 5.

**Table 5. Ambulatory Surgery Center Utilization, 2010-2011**

Ambulatory Surgery Center Utilization and Services Erie County & PA, 2010-2011*									
Utilization Variables	Acute Care Hospitals				Independent Centers			Total	
	Hamot Surgery Center	Saint Vincent Endoscopy Center	Saint Vincent Surgery Center of Erie	Acute Care Hospital Total	Greater Erie Surgery Center	Village SurgiCenter of Erie	Independent Total	Erie County	PA
Patient Surgical Visits (Total)	17,151	4,398	9,774	31,323	884	7,006	7,890	39,213	986,129
0-17 Years	1,267	0	1,500	2,767	2	723	725	3,492	50,386
18-64 Years	11,571	3,180	4,988	19,739	533	4,066	4,599	24,338	530,026
65 Years and Above	4,313	1,218	3,286	8,817	349	2,217	2,566	11,383	353,715
Ultrasound Exams	0	0	0	0	0	0	0	0	4,562
Diagnostic X-Rays	1,241	0	226	1,467	0	1,291	1,291	2,758	44,811
Total Operations	17,151	3,856	9,774	30,781	884	7,006	7,890	38,671	1,053,334
Total Operating Rooms	6	0	5	11	1	5	6	17	615
Availability of Services									
Cardiopulmonary Lab	No	No	No		No	No			
EKG	No	No	Yes		No	Yes			
Pharmacy	No	No	No		No	Yes			
Clinical Lab	No	No	No		No	Yes			
Inhalation Therapy	No	No	No		No	No			

Note: \*Reporting period July 1, 2010 through June 30, 2011

## Pediatric Care

In 2010, Allied Pediatric Health completed a Needs Analysis and Strategic Plan for Erie County and the surrounding counties serviced by the Erie County medical community. Results for Erie County alone are reported.

Three main challenges in overall pediatric health care for Erie County were identified. The first focused on access to pediatric subspecialty care. For calendar years 2008 and 2009 and including the CHIP, Medicaid, insured, and uninsured pediatric population of Erie County, an estimated 19,032 (16%) of all pediatric short stay visits (a physical health care service requiring less than a 24 hour stay) were outmigrations. Of all children in Erie County, 57% were covered by private insurance (including CHIP), 5% were uninsured, and 38% were Medicaid recipients. Most Erie County pediatricians did not accept Medicaid insurance and local pediatric subspecialists had a three to nine month waiting list for Medicaid patients.

The second challenge focused on obstacles to pediatric subspecialty care for the underserved community. For many children, lack of transportation to services in Pittsburgh, Cleveland,

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Buffalo, or other locations was a very real barrier to receiving care. Even for local pediatric subspecialists, parents listed lack of transportation, cost of transportation, inability to take time off from work, and caring for other children as barriers to initial and/or ongoing visits for their ill child.

The third challenge focused on awareness and coordination of existing local pediatric services. Many local health care providers and agencies were not aware of all available pediatric physical health services in Erie County and stated a need for coordinated and comprehensive information about local pediatric services including the ages and payers that the physicians accepted. Lack of coordination by existing providers and loss of pediatric subspecialists were also cited as needs.

### **Home Health Agencies**

Home Health Agencies provide health care services to ill, disabled, or vulnerable individuals in their homes or places of residence, enabling them to live as independently as possible. There are fourteen licensed home health agencies in Erie County.

### **Hospice**

As defined by the Pennsylvania Department of Health, hospice care is designed to provide comfort and support to patients and their families as they approach the end of life. There are eight licensed hospice providers in Erie County.

### **Nursing Home Utilization**

A nursing home provides care for individuals who need constant nursing care or significant assistance with daily living skills. Skilled nurses and nursing aides are usually available 24 hours a day. There are twenty-one licensed nursing homes in Erie County. Utilization data for these homes is shown in Table 6.

**Table 6. Nursing Home Utilization, Erie County, 2011**

Nursing Home Utilization by Facility Erie County & PA, 2011*										
Facility	Licensed Beds	Patient Days Medicare	Patient Days Medicaid	Patient Days VA	Patient Days Private Insurance	Patient Days Self Pay	Patient Days Other	Patient Days Total	Bed Days Available	Occupancy Rate
Abington Crest Nursing & Rehab Center	80	1,700	16,537	0	1,795	446	1	20,479	29,200	70.13
Ball Pavilion	85	2,387	17,781	0	983	8,362	0	29,513	31,025	95.13
Corry Manor	121	4,179	29,123	265	1,955	5,574	0	41,096	44,165	93.05
Edinboro Manor	121	3,849	26,776	1,415	2,490	6,932	25	41,487	44,165	93.94
Fairview Manor	121	5,106	28,894	647	196	7,997	5	42,845	44,165	97.01
Forestview	80	2,156	10,625	0	0	15,739	0	28,520	29,200	97.67
Golden Living Center Western Reserve	133	5,214	30,815	912	3,791	3,011	0	43,743	48,545	90.11
Golden Living Center Walnut Creek	115	6,140	17,649	0	7,904	1,726	0	33,419	41,975	79.62
Manchester Presbyterian Lodge	60	3,132	11,296	0	89	4,157	0	18,674	21,324	87.57
Millcreek Community Hosp Trans Care Unit	24	2,036	0	0	2,029	30	0	4,095	7,230	56.64
Millcreek Manor	50	1,735	12,415	0	720	2,656	0	17,526	18,250	96.03
Pannsylvania Soldiers & Sailors Home	107	0	8,792	28,105	0	2,126	0	39,023	39,055	99.92
Pleasant Ridge Manor East	76	1,837	21,196	0	86	2,554	0	25,673	27,740	92.55
Pleasant Ridge Manor West	312	7,965	79,879	0	137	7,564	0	95,545	113,880	83.90
Presbyterian Lodge	55	1,878	10,823	0	1,058	4,350	0	18,109	20,075	90.21
Presque Isle Rehab & Nursing Center	141	3,699	36,635	0	2,487	1,591	0	44,412	51,465	86.30
Saint Marys at Asbury Ridge	80	5,770	13,120	0	92	9,493	0	28,475	29,200	97.52
Saint Marys East	139	7,488	27,343	0	341	14,097	0	49,269	50,735	97.11
Sarah A Reed Retirement Center	106	2,753	21,155	0	0	13,012	0	36,920	38,690	95.43
Twinbrook Medical Center	120	3,739	29,294	633	3,604	2,785	5	40,060	43,800	91.46
Village at Luther Square	110	3,283	25,398	0	1,452	3,912	0	34,045	40,150	84.79
<b>Erie County Total</b>	<b>2,236</b>	<b>76,046</b>	<b>475,546</b>	<b>31,977</b>	<b>31,209</b>	<b>118,114</b>	<b>36</b>	<b>732,928</b>	<b>814,034</b>	<b>90.04</b>

Note: \*Reporting period January 1, 2011 through December 31, 2011

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## Environmental Health

The Erie County Department of Health (ECDH) has many programs to safeguard the health of county residents and of visitors to Erie County. What follows is a description of these programs as well as current statistics regarding air quality and childhood lead poisoning.

### Food Safety

The Food Protection Program utilizes inspection, enforcement, and education to protect the public who patronize public food facilities in Erie County. ECDH enforces the Pennsylvania Retail Food Act. The Department inspects approximately 1,900 permanent food facilities including restaurants, taverns, groceries, and convenience stores. In addition, over 500 temporary food facilities at events such as fairs and carnivals are inspected each year. The Department also holds a 2-day food safety and certification class for restaurant personnel every month. The students are given a nationally recognized test which certifies them as a food handler.

### Water Supply

The Water Supply Program enforces the rules and regulations of the Pennsylvania Safe Drinking Water Act in Erie County. ECDH inspects the municipal water supplies, as well as the water supplies of public facilities such as restaurants and businesses with more than 25 employees that use their own well. The Department also reviews the results of required routine bacteriological and chemical samples of the water supply. There are approximately 170 regulated water supplies in Erie County. The Department also conducts engineering reviews of water supply permit applications prior to permit issuance.

### Water Pollution

The Water Pollution Control Program enforces the rules and regulations of the Clean Streams Law and the Pennsylvania Sewage Facilities Act in Erie County. The goal is to protect the health of the public, terrestrial, and marine aquatic life by routinely inspecting permitted discharges from sewage and industrial waste treatment plants and by reviewing plant monitoring reports. ECDH also responds to unpermitted spills and discharges and assures that proper cleanup of the contaminants is achieved. The Department also conducts technical engineering reviews of treatment plant permit applications. There are approximately 70 permitted discharges that are regulated in Erie County. ECDH also issues an average of 130 on-lot septic permits annually.

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## **Public Bathing**

The Public Bathing Place Program enforces the rules and regulations of the Pennsylvania Department of Health in Erie County. In addition to the Public Beach Program, the Department inspects and monitors the bacteriological quality of all public swimming pools and water rides in the county. This involves routine inspections on outdoor pools during the summer as well as year-round monitoring of indoor pools. If a facility does not meet the required water quality standards, the pool is closed until the water quality is acceptable. There are 155 public pool facilities in Erie County.

## **School Environment**

The School Environment Program enforces the rules and regulations regarding the public safety conditions in schools. ECDH annually inspects 92 schools and requires that conditions in school buildings that potentially could cause injury to students or faculty are addressed by the school district.

## **Camps and Campgrounds**

The Recreational Environment Program regulates organized camps and campgrounds. This program focuses on inspection of the water supply, sewage disposal, availability of an adequate number of restrooms, and general maintenance of the facilities. There are 8 organized camps and 26 campgrounds in Erie County.

## **Vector Control**

The Vector Control Program addresses two disease vectors. The first is *Ixodes* tick identification and surveillance. This program identifies the species of ticks brought to the Department by citizens who find a tick on themselves, a family member, or a pet. The Department also receives ticks from physicians and hospitals. The Department determines if the tick is one that could potentially carry the Lyme disease spirochete and informs the client. The Department also provides these ticks to the Lake Erie College of Osteopathic Medicine (LECOM) for further analysis to determine if the spirochete is actually present. In 2011, ECDH identified 147 ticks.

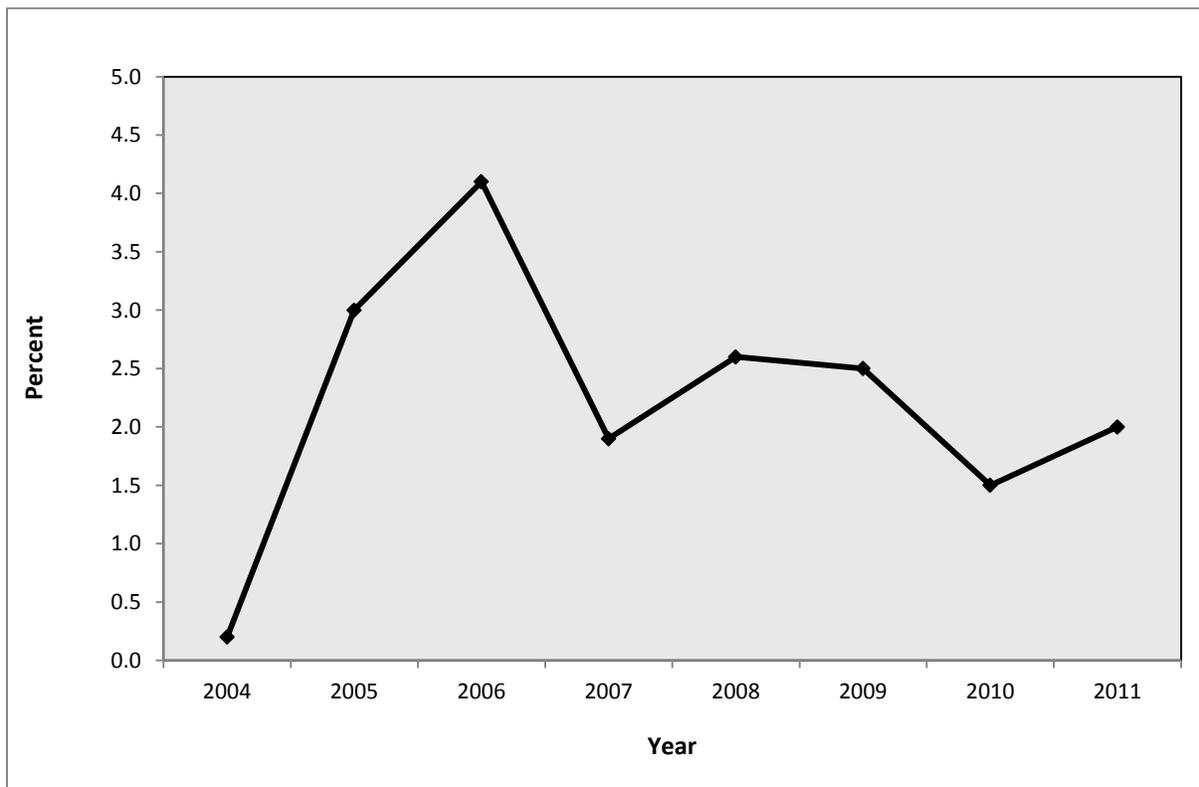
The second disease vector is the *Culex* mosquito which transmits the West Nile virus. The Department monitors and traps mosquitoes throughout Erie County, applies larvacide on areas of standing water, and applies adulticide if mosquitoes test positive for the virus. In addition, ECDH also collects select species of dead birds that are tested to determine if they carry West

Nile virus. In 2011, ECDH applied larvacide on 48 acres of water and adulticide over 296 linear miles of Erie County.

## Beach Monitoring and Notification

ECDH has administered the Pennsylvania Beach Monitoring and Notification Program since 2006. ECDH is the only local agency in the country that directly receives and administers the federal funds allocated for the National Beach Monitoring and Notification Program administered by the Environmental Protection Agency (EPA). The program is intended to increase the monitoring of beach water as well as to conduct sanitary surveys of the Lake Erie watershed to locate possible sources of bacterial contamination affecting beaches. It is also intended to provide additional means to inform the public of water quality at swimming beaches. In 2011, the percentage of beach days affected by beach notification actions (advisories or closings) for Lake Erie permitted beaches was only 2.0%. (for the United States, 5.0%) (Figure 1).

Figure 1. Percentage of Beach Days Under a Beach Action for Lake Erie Permitted Beaches, 2011



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## **Air Quality**

According to the American Lung Association, Erie County's 2008-2010 annual average year-round particle pollution (fine particulate matter) concentration level was 10.5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), which was below the national ambient air quality standard annual average of 15  $\mu\text{g}/\text{m}^3$ .

Overall, there was a weighted annual average of 2 days per year during 2008-2010 that Erie County experienced ozone air pollution in unhealthy ranges (greater than the national ambient air quality standard of 0.075 parts per million).

## **Childhood Lead Poisoning**

Among Erie County children under the age of seven that were tested in 2010, there were 98 confirmed cases of elevated blood lead levels greater than 10 micrograms per deciliter ( $\mu\text{g}/\text{dl}$ ). Overall, the percentage of children with levels greater than 10  $\mu\text{g}/\text{dl}$  was 1.9% (for Pennsylvania, 1.7%).

Among Erie County children under the age of seven that were tested in 2010, there were 37 confirmed cases of elevated blood lead levels greater than 15  $\mu\text{g}/\text{dl}$ . Overall, the percentage of children with levels greater than 15  $\mu\text{g}/\text{dl}$  was 0.7% (for Pennsylvania, 0.8%).

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## Quality of Life

In general, “quality of life” is defined as one’s personal satisfaction or dissatisfaction with the conditions in which one lives. States, counties, and municipalities across the country use various indicators to measure the quality of life or vital signs of their communities, such as employment trends, educational attainment, public transportation usage, home values, land use statistics, and crime rates. For the purpose of this assessment, quality of life is being measured by the number of available resources in the Erie County community that enhance the well-being of residents, and is limited to resources pertaining to mobility, public safety, leisure and recreation, and social engagement.

### Mobility

To understand the regional transportation system and how it contributes to an improved quality of life for residents, it is important to understand travel habits and patterns, as well as the availability of regional transportation resources.

Traditionally, trips to and from work make up nearly 25% of all travel and are a leading cause of traffic congestion during peak commuting hours. The average commute time to work for Erie County residents is 18 minutes, which is shorter than the state and national averages of 25 and 26 minutes, respectively. The majority of Erie County working residents are employed in the county.

The percentage of people using public transportation in Erie County (1.4%) is lower than the state and national averages (5.4% and 5.0%, respectively). This is mainly due to the rural nature of the county outside of the urbanized area, which includes the City of Erie, Wesleyville Borough, and Lawrence Park, Harborcreek, Millcreek, and Fairview Townships. With the exception of Edinboro and North East Boroughs, no other locations outside of the urbanized area have daily bus service. This is due to low population densities that make it challenging to sustain efficient, cost-effective service.

Transportation resources within Erie County include mass transit, taxi, air, and rail services. The Erie Metropolitan Transit Authority (EMTA, or the “e”) operates local public transit service in the county. The fixed bus route services include 12 daily routes traversing the City of Erie and the surrounding urban areas. In addition to these daily routes, the “e” also operates four routes on select days that serve outlying communities, and four routes serving Mercyhurst University, Mercyhurst North East, Gannon University, and Edinboro University.

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EMTA also operates the LIFT paratransit transportation system for residents who live beyond bus routes or are unable to utilize bus services. Included in this system are a rural transportation program for persons with disabilities and a medical assistance transportation program for qualified individuals. Additional EMTA services include welfare to work, bike rack, and senior citizen programs, as well as the free BayLiner Trolley which serves many downtown Erie destinations. During the 2009-2010 year, the “e” had 62 vehicles in service and served 3,028,000 total passengers, 151,000 of which were seniors.

Within Erie County, regularly scheduled inter-city motor coach service is provided by Greyhound Lines, with additional charter operations provided by the carriers Anderson Coach, Coach USA, and Gray Line of Niagara Falls. Greyhound Lines operates out of Erie’s Intermodal Center and provides both passenger motor coach service and package express services. Averaging just over 27,000 passengers annually, Greyhound service links Erie passengers to over 2,300 North American destinations.

Erie Yellow Cab is the largest taxi service provider within Erie County. Yellow Cab provides point-to-point transportation throughout the county and surrounding areas, as well as delivery and courier services. Public cab stands are located at the airport, Greyhound bus station, and within a few blocks of the Amtrak train station. Additional taxi services are provided by the Corry Cab Company and several private limousine services. Seasonal water taxi services are provided by the Erie-Western Pennsylvania Port Authority with connections between the Erie Bayfront and the Waterworks area at Presque Isle State Park.

There are two public airports that serve the Erie County region. These are the Erie International Airport/Tom Ridge Field, located in Millcreek Township, and the Corry-Lawrence Airport in the City of Corry. Erie International Airport/Tom Ridge Field is host to three airlines which provide connecting flights through each of their respective hubs. US Airways Express operates daily round-trip flights between Erie and Philadelphia, United Air Lines offers daily round-trip flights between Erie and its connecting hub in Cleveland, and Delta Air Lines offers round-trip flights to its connecting hub in Detroit. Total enplanements and deplanements have ranged from 250,000 to over 320,000 trips annually, with nearly 900 daily travelers during peak business months. The Corry-Lawrence Airport is operated by the Airport Authority of the City of Corry, and is a general aviation facility serving travelers and businesses in northwestern Pennsylvania and western New York. The airport operates one 4,100’ runway, handles over 3,700 air traffic operations annually, and is home to approximately 20 private aircraft.

Amtrak service is operated out of Union Station in the City of Erie. Amtrak provides passenger rail service through Erie County along the Lakeshore Limited Line from Chicago to Albany,

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where the line splits to serve New York City or Boston. Service is limited to one train in each direction daily (1:36 AM for the westbound train, and 7:22 AM for the eastbound train). Ridership volumes range from 900 to 1,500 trips per month with peaks occurring during the spring, summer, and winter holidays.

## **Public Safety**

Safety and perceptions of safety feature highly in people's view of their living environment, their sense of well-being, and their overall quality of life. For the purpose of this assessment, Neighborhood Watch groups are a quality of life resource in regards to public safety.

Neighborhood Watch is a crime prevention program that stresses education and teaches citizens how to help themselves by identifying and reporting suspicious activity in their neighborhoods. In addition, it provides citizens with the opportunity to make their neighborhoods safer and improve the quality of life. Neighborhood Watch groups typically focus on observation and awareness as a means of preventing crime.

Due to the nature of the program, Neighborhood Watch groups are typical for urban centers, of which Erie County has two - the City of Erie and the City of Corry. There are currently 66 Neighborhood Watch groups within the City of Erie, which are supported by the Erie Neighborhood Watch Council, a 'grass roots' nonprofit and advocate for Erie Watch groups that provides resources and technical support. The Council's services include organizing new Watch groups, training on crime prevention best practices and neighborhood alerts, and providing accessibility to representatives from the City of Erie Police Department, District Attorney's Office, Weed & Seed, City Council, and Mayor's Office.

The county's second largest urban center is the City of Corry. Although the 2009-2012 Corry 2020 survey results reported that 31% of responders were in support of establishing a Neighborhood Watch group within the City of Corry, it has yet to materialize.

## **Leisure and Recreation**

### **Parks and Trails**

Erie County boasts approximately 108 municipal parks and playgrounds, 15 separate State Game Lands which collectively encompass 16 square miles, and two State Parks. Presque Isle State Park is a 3,200 acre sandy peninsula that extends into Lake Erie. Presque Isle offers its visitors numerous recreational activities, including swimming, boating, fishing, hiking, bicycling,

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and in-line skating. Erie Bluffs is Pennsylvania's newest State Park, encompassing over 500 undeveloped acres along the Lake Erie shoreline in western Erie County.

Erie County's pedestrian, bicycle, and trail network serves many of the urban areas with an extensive public sidewalk system and multi-use pathways, while also connecting to rural areas with a combination of bicycle routes, off-road recreational trails, and rail-trail corridors.

Notable focal points of this system include:

**BicyclePA Route A** is a 199-mile route running north-south from Greene County at the Pennsylvania/West Virginia border to Erie County. Route A enters Erie County along PA 98 before turning onto PA 832 and connecting with Presque Isle. **BicyclePA Route Y** runs east-west through the entire state from Ohio to New York and enters Erie County from Crawford County along US 19 before turning east onto US 6 to Warren County. **BicyclePA Route Z** runs east-west from Ohio to New York, primarily following PA 5 and the Great Lakes Seaway Trail.

The **Great Lakes Seaway Trail** is a designated National Scenic Byway and a 518-mile route connecting the shores of Lake Erie to the Niagara River, Lake Ontario and the St. Lawrence River in New York. The trail runs east-west through Erie County for approximately 64 miles primarily along PA 5, but including portions of Alternate PA 5, the Bayfront Parkway, Presque Isle Drive and US 20. The Great Lakes Seaway Trail provides biking and driving links to historical locations, cultural heritage sites and scenic vistas.

The **PA Route 6 Heritage Corridor** is one of twelve Pennsylvania Heritage Areas. The corridor runs east-west across the state's northern tier through eleven counties along US Route 6. Through Erie County the corridor also includes US Route 6N, which turns off the main corridor west of Mill Village Borough and runs through the Boroughs of Albion and Edinboro. The corridor is managed by the Route 6 Alliance.

The **Bayfront District Trail Network** runs through the City of Erie connecting various amenities and providing public access to the waterfront for pedestrians and bicyclists. This network includes the Bayfront Connector Trail, a paved multipurpose trail that runs along the Bayfront Connector and connects Presque Isle State Park to Penn State Erie.

The **Karl Boyes Trail** is a designated National Recreation Trail. This multipurpose trail makes a circuit of Presque Isle State Park and is regularly used by walkers, bicyclists, in-line skaters, and joggers.

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The Northwest Pennsylvania Trail Association's **Corry Junction Greenway Trail** is Erie County's first rail-to-trail venture. It runs north-south for approximately seven miles through the Brokenstraw Valley and along the old Penn Central rail corridor to connect Corry to Clymer, New York.

### **Arts, Culture, and Entertainment**

Erie County is home to a diverse range of arts, culture, and entertainment resources. These resources include, but are not limited to, large organizations and venues in downtown Erie, heritage venues and sites in many communities, colleges and universities with arts and cultural programming, church-based cultural activities, arts councils, ethnic communities and traditions, and artists representing a wide range of disciplines. These resources contribute to the region's identity, economy, and quality of life.

The Arts Council of Erie (ArtsErie) has identified 79 nonprofit arts and cultural organizations which play a substantial role in the cultural life of the community by promoting participation in, appreciation for, and understanding of the visual, performing, folk, and media arts. The list includes government-owned or operated cultural facilities and institutions, municipal arts agencies and councils, private community arts organizations, unincorporated arts groups, living collections, university presenters, and arts programs that are embedded under the umbrella of a non-arts organization or facility.

Erie County has a rich and varied heritage stemming from the area's unique geographical location and natural harbor, and is home to 18 historical museums and societies (two of which are owned by the Pennsylvania Historical and Museum Commission), 12 organizations dedicated to historical research and living history demonstrations, and 15 ethnic heritage groups. The following is a list of museums and historical societies in Erie County: Erie Maritime Museum/Flagship Niagara League, Erie County Historical Society, Harborcreek Area Historical Society, North East Area Historical Society, Union City Museum, Hornby School Restoration Society, Corry Area Historical Society, Lake Shore Railway Museum, Museum of GE History, Lawrence Park Historical Society, Wattsburg Area Historical Society, Valley School Museum, Fairview Area Historical Society, Edinboro Area Historical Society, Hurry Hill Farm and Maple Syrup Museum, Goodell Gardens and Homestead, Judson House/Fort LeBeouf Museum and Hazel Kibler Museum.

In addition to arts and cultural resources, Erie County offers residents a variety of entertainment opportunities. The Erie Bayhawks (NBA D-League Basketball), Erie Otters (OHL Hockey), Erie Seawolves (AA Baseball), Erie Explosion (Indoor Football), Lake Erie Speedway,

and athletic teams from the region’s colleges call Erie County home. Lake Erie Wine Country, located in the largest grape-growing region east of the Rockies, extends roughly 50 miles from Silver Creek, New York to Harborcreek, Erie County. Eleven of the 23 commercial and estate wineries of the Lake Erie Wine Country are found in Erie County. The Erie County Convention Center Authority owns and operates four multi-use venues in downtown Erie - the Bayfront Convention Center, the 6,000-seat stadium Jerry Uht Park, the 7,000-seat Erie Civic Center, and the 2,250-seat Warner Theatre. The Erie Zoo is a 15-acre zoological park located within the City of Erie. Waldameer Park and Water World is an amusement/water park with 75 attractions located at the base of Presque Isle State Park. Splash Lagoon Indoor Waterpark Resort is approximately 80,000 square feet, and features seven water slides, two hot tubs, one large activity pool, a children's area, a 6,500-square-foot arcade, and a large Laser Tag area. Asbury Woods Nature Center/Asbury Park has over 200 acres of diverse habitats and 4.5 miles of walking trails. The Nature Center’s “green” building features live animal exhibits, hands-on displays, and educational programs. The Tom Ridge Environmental Center, also located at the base of Presque Isle State Park, offers 7,000 square feet of exhibits that highlight Presque Isle’s history, and a glass-enclosed 75-foot tower providing spectacular views of Lake Erie. The leading arts, culture, and entertainment venues for Erie County in 2009 are shown in Table 1.

**Table 1. Leading Erie County Area Attractions, 2009**

<b>Erie County</b>	
<u>Area Attractions</u>	<u>2009 Attendance</u>
Presque Isle State Park	3,965,643
Family First Sports Park (visits, not visitors)	2,467,081
Presque Isle Downs & Casino	2,290,000
Waldameer Amusement Park & Water World	550,000
Erie Zoo	462,000
Splash Lagoon Indoor Waterpark	393,382
Erie Civic Center/Tullio Arena	288,877
Jerry Uht Baseball Park	224,957
Asbury Woods Nature Center & Park	170,000
Tom Ridge Environmental Center	125,155
Warner Theater	105,617
Mazza Vineyards and Winery	50,000
expERIENCE Children's Museum	36,120
Erie Art Museum	35,000
Erie Maritime Museum & US Brig Niagara	23,950
Erie County Historical Society	23,646
Bicentennial Tower	22,515
Victorian Princess Cruise Ship	14,490
Wooden Nickel Buffalo Farm	10,000
Source: Erie County 2040 Long Range Transportation Plan	

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## **Festivals and Events**

There are more than 52 festivals and four county fairs occurring annually in Erie County. The Waterford Community Fair, Albion Area Fair, North East Community Fair, and Erie County Fair held in Wattsburg are agricultural fairs with a focus on education and the showcase of agriculture and horticulture.

The number and availability of ethnic festivals are of special note. Conveniently located on the shores of a Great Lake, Erie County has long been considered a prosperous region to settle for generations of immigrants from across the globe. Many of the 'old' neighborhoods continue to honor their rich cultural histories through community outreach and cultural education. Annual summertime festivals and events serve as celebrations of the rich ethnic diversity of our community. The Russian Troika Festival, Polish Zabawa, Greek Panegyri, and the Irish, Italian and Pan-Asian festivals allow the opportunity to experience and enjoy ethnic foods, drink, entertainment, architecture, and tradition.

## **Libraries**

The public libraries in the Commonwealth of Pennsylvania are divided into 29 library districts. The library district servicing Erie County is the Erie/Crawford District. The district is headquartered in the Erie County Public Library's Blasco Memorial Library which is known as the District Center. As the District Center, Blasco Memorial Library serves a population of 371,209.

Public libraries in Erie County include the Erie County Public Library System's five libraries and bookmobile and the following six independent public libraries: Albion Area Public Library, Rice Avenue Community Public Library, Waterford Public Library, Corry Public Library, McCord Memorial Library, and Union City Public Library.

In addition to these public libraries, several academic and special collections libraries are available to residents of Erie County as well. Academic libraries include Edinboro University's Baron-Forness Library, Penn State Erie's Lilley Library, Gannon University's Nash Library, Lake Erie College of Osteopathic Medicine's Health Sciences Library, and Mercyhurst University's Hammermill Library. Special collections libraries include but are not limited to the Erie County Law Library, Erie Business Center, Erie County Historical Society Library and Archives, Erie Insurance Group, Hamot Medical Center, Lord Corporation Information Center, Millcreek Community Hospital, Saint Vincent Health Center, Shriners Hospital for Children, and the VA Medical Center.

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## Social Engagement

A key indicator of quality of life is social belonging. In Erie County, the two large urban centers have all the amenities of a city, while providing residents with a small-town feel. Residents take pride in their communities, and commitment to community organizations, clubs, and religious activities is strong, as can be seen by the large number of civic groups and churches in the area.

Erie County is proud to have a vast offering of religious organizations and churches. Every major denomination can be found in the county including Baptist, Pentecostal, Catholic, Mennonite, Methodist, Presbyterian, Jewish and many more. Approximately 260 congregations reside in Erie County.

Civic organizations are comprised of people who join together to provide a service or services to their community. According to the PA Department of Labor and Industry, Erie County has 103 civic and social organizations, which are defined as organizations engaged in promoting the civic and social interests of their members. The American Legion, Loyal Order of Moose, Girl Scouts, Elks Lodge, Lions Club, YWCA, Masonic Lodge, Polish Falcons Club, Veterans of Foreign Wars, and Erie Yacht Club are all examples of civic and social organizations in Erie County.

With 14.6% of Erie County's population 65 years of age and older, senior centers are an important part of the social fabric of the county as they enrich and enhance the quality of life for senior citizens. There are currently ten senior centers located in Erie County - five centers are found in the City of Erie and the rest are located throughout the county in Albion, Corry, North East, Union City, and Fairview.

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## Focus Groups

### Introduction

Seven focus groups were conducted throughout Erie County. The purpose of the groups was to enrich and validate the quantitative data secured for the remaining portion of the Needs Assessment. Overall, five community focus groups and two targeted focus groups were conducted during the months of March to June, 2012. Questions for the sessions were determined by the Steering Committee members using the results of the 2011 Erie County Behavioral Risk Factor Surveillance Survey (BRFSS).

### Methodology

For the community sessions, invitees were identified by the Steering Committee based on geography and organizational function. They represented a broad list of agencies involved in education, government, religion, health, and social services. The targeted focus group invitees were chosen from racial and ethnic minority populations identified in the 2010 United States Census and in various reports from the Erie County Department of Health.

Focus group questions were derived and developed by the Steering Committee from the results of the Erie County BRFSS conducted in late 2011. There were five questions. The same questions were asked of each group. Each session was led by a facilitator who was supported by a staff member who took notes and performed the audio recordings. Attendees of the targeted focus groups were offered twenty dollars to defray any costs of transportation, loss of work, childcare, or other expense that may have occurred as a result of their presence at the session.

Each community group session was audio recorded with permission of the attendees. Recordings were transcribed verbatim by an outside service. Due to concerns on behalf of the attendees of the small focus groups, the sessions were not recorded. Instead, notes were taken by a staff member.

The qualitative data from the focus groups were reviewed and manually coded to determine common themes as well as those themes unique to specific groups. These findings were reviewed by the Steering Committee to determine conclusions and prioritized recommendations.

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## **Locations and Invitees**

### Community Focus Groups

North East Borough and Township- 4 participants, conducted on March 29, 2012

Girard Township/Albion Borough - 5 participants, conducted on April 12, 2012

City of Corry/Union City Borough/Union Township - 9 participants, conducted on April 16, 2012

City of Erie - 9 participants, conducted on May 1, 2012

Erie County - 27 participants, conducted on May 3, 2012

### Targeted Focus Groups

Immigrants, migrant workers, and resettled refugee interpreters - 17 participants, conducted on May 9, 2012. This group included interpreters from Bosnia, Burma (Myanmar), Colombia, Ecuador, Iraq, Mexico, Nepal, Puerto Rico, Russia, Somalia, Uganda, and the Ukraine.

African American - 7 women participants, conducted on June 26, 2012

## **Questions**

Prior to the presentation of questions, attendees were given background information about the Community Health Needs Assessment. This included why it was being done, who was involved in the performance of the Assessment, what will be contained in the final report, and the mechanism for release of the completed document. They were also instructed on the use of focus groups and participation in them.

The five questions asked of each group were as follows:

1. What is a healthy person? Describe what you think is a healthy person.
2. What is a healthy community? Describe what you think is a healthy community.
3. What keeps the residents of this community from being healthy? Note: Each group was given a definition of community. For example, the group from Girard was asked to consider the entire western section of Erie County. The African American group was asked to consider the entire population of African Americans in Erie County.

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4. What keeps this community from being a healthy community?

5. What are some of the things that could be done to improve the health of this community?

## Responses

The common themes from all focus groups were synthesized into the responses detailed below.

1. What is a healthy person? Describe what you think is a healthy person.

Health itself is an overall state comprised of physical, mental, and emotional well-being. A healthy person is in concert with their mind, body, and spirit. They have meaning and purpose in their lives and are able to conduct activities of daily living, in some cases with accommodations. If they have a chronic disease, it is stable because they have healthy practices. They are generally happy, enjoy life, have energy, and are socialized in a manner that involves activities with various groups that include all ages. A healthy person eats right and knows the value of preventive care. They are able to control their stress, strive to maintain independence while looking to the future. Operating from a standpoint of knowledge (health literacy and system navigation), a healthy person makes positive choices by not participating in unhealthy activities such as using tobacco, drugs, and alcohol. They have the ability to handle and adjust to the circumstances and changes that face them daily. The environment is also important in being healthy.

2. What is a healthy community? Describe what you think is a healthy community.

A healthy community is one that subscribes to all the tenets of a healthy lifestyle. It has low unemployment and low crime rates. It has resources for health, housing, and other social services across the board, evenly distributed. It is prosperous, vibrant, and developing. It is not separated into the “haves” and “have nots”. There is a lot of cultural diversity, people mingle and interact with one another. It spans age groups as well as race, ethnicity, and other characteristics. Tolerance is a measure of respect. There are other sources of cultural engagement including the arts as well as other activities. A healthy community is one with a strong leadership including those in government. There is order and predictability, not chaos. There is little disparity or negativity. There must be followership.

A healthy community is one where there is the presence of foundations including water, sanitation, food distribution, and other supports. Environmental efforts such as roadways that allow for bicycling and walking are important. There should be an effort to limit children’s exposure to billboards and other forms of advertising unhealthy activities such as tobacco and

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alcohol. Fresh fruits and vegetables should be readily accessible. Community members work together to make healthy choices the easy choices. There is an interdependence that results in growth and prosperity. Healthy communities are able to identify issues and implement effective measures before they become crises.

Those are the things that make the difference, not the physicians and the hospitals. However, when necessary, it is important to have equal access to high quality health care for everyone regardless of whether they have insurance or not.

3. What keeps the residents of this community from being healthy? Note: Each group was given the definition of community. In example, the group from Girard was asked to consider the entire western section of Erie County. The African American group was asked to consider the entire population of African Americans in Erie County.

Lack of sufficient personal resources was cited most often as the biggest barrier to being healthy. These resources were more specifically identified as poverty, low literacy including health literacy, lack of transportation, lack of health insurance, inability to navigate the health system, fear for personal safety, low self-esteem, and lack of time for personal health efforts. One participant commented (with others making similar comments throughout the county) that poverty results in a day-to-day approach to living rather than one that is planned over time and includes prevention and healthy choices. Unhealthy food choices are generally less expensive and easier to access.

Health and success were attributed to receiving a good education. Without education one may not be able to obtain a family-sustaining wage and never be able to get out of poverty, thus continuing that cycle which is accompanied by poor or failing health.

On the county level, attendees noted that the medical community does not always understand how to work with the chronically disabled. They are often scheduled in with and as regular patients, but they may have special needs just to be examined properly. The disabled sometimes feel they are confronted with a dismissive attitude rather than the help they are seeking.

There is sometimes a lack of trust of the health care provider community because, at times, it seems their personal beliefs affect their decision making. There is a lot of stereotyping of those in poverty. There appears to be a lot of depression among those in poverty. Basically, they appear to have given up.

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Inadequate, haphazard financing of the health care system in general is a major cause of the poor outcomes we see. Medicine in general in this country is built around the acute care model, but 80% of today's office visits are for the evaluation of chronic conditions. It is very difficult to provide the needed care within our current paradigm. With respect to children, it is sometimes the adults who are the barrier to them receiving care. They may not be able to leave work, may not have a high enough level of literacy, or may not be able to navigate the health care system.

For many people the emergency room is their health care. There are varied reasons for the choice to seek primary care in that venue. For some, their usual source of care, if the individual has one, may not be able to accommodate them at their office at the time of their need for care. For others, it is lack of knowledge, inability to effectively navigate the health care system, personal finance (belief that no one will be turned away from the local emergency room), work schedule does not allow for visit during office hours, and others. There were citations of emergency room experiences where individuals have been categorized as frequent visitors. They are recognized by the security guards when they arrive. Some with disabilities feel they are "stuck" with their usual source of primary care because they cannot travel anywhere else. Staff members (at physicians' offices) are burned out and, as a result, are often not helpful.

#### 4. What keeps this community from being a healthy community?

Lack of sufficient funds (both individual and organizational), lack of health insurance (or insurance other than medical assistance), transportation issues, poor communication between the community and organizations that provide resources (as well as between organizations), low literacy and education levels, individual pride, cultural values and beliefs, and lack of a uniform communal vision were identified as barriers to becoming a healthy community.

Organizational lack of knowledge of the major issues and any projects that are taking place to resolve those issues was also identified as a barrier. Other problems mentioned included gun violence, duplication of efforts by service providers, negative attitude ("Dreary Erie", "Mistake on the Lake"), negative advertising, and poor role models.

Efficient use of limited resources should be a priority. There are not enough options for the resources we have. There remains a large gap between the "haves" and "have nots".

#### 5. What are some of the things that could be done to improve the health of this community?

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Collaboration among providers was identified as a way to implement programming to improve community health. Coordination of efforts and/or communication would help with removing duplication of services and also result in less competition for funding and other resources. If one group is writing for a specific grant, another could join them and add resources to the proposal and the program if they knew about it. From one participant's observation, most non-profits are already doing this. Concern was voiced that promoting awareness of heightened efficiency and collaboration among nonprofits could potentially result in even less funding. A person-centered approach was identified by one participant as the key to enhanced collaboration.

Improving the accountability of the organizations that receive funding was also brought up. That would assure appropriate use and dispersal of funds, and it would provide improved transparency. There was discussion regarding funding at the local level. Several commented that they give directly to programs rather than through funders because it has become more difficult to acquire funding through the currently established application processes.

All groups recommended that information regarding available resources throughout the county should be accessible in a central location or manner. The library system was identified as a potential vehicle for this information. Programming designed to improve health literacy was identified as a means to assist residents in their health care or wellness journey. Hospital websites advertise free or low cost programming. The programming should be brought to the communities outside of the city. Transportation to Erie is a barrier for people (who really need the programming) to attend. Culturally tailored programming should be brought into the various neighborhoods, but not specifically as health fairs. Instead, blend the programming with other events that are occurring simultaneously. Work with members of the neighborhoods. Do not bother with pamphlets. They are not well received. Several groups mentioned the inclusion of faith based ministries to deliver messages as well as programming. Volunteers are a great resource, but organizations cannot rely totally on volunteerism to carry out their missions.

The issue of generational poverty needs to be addressed. It is difficult to break that cycle when the system rewards joblessness. An example was one woman who was in the system as a teen, who experienced many hardships including poverty, foster care, and drug abuse. She had never had a job. She entered a local social service program and tried to get out of "the system". She had three part-time jobs, but she had to quit two of them because otherwise she would lose her health insurance. She did not make enough money to pay for her care or for insurance, even with three jobs.

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Advocacy is important for all groups. Other suggestions included a zero tolerance for guns, talking to the community, using money for prevention programs for youth rather than spending it to incarcerate them and try to fix problems after the fact.

One question was raised regarding the school-based health centers - would these centers be available for family health and not just for students? This service delivery model is anticipated as an excellent opportunity to improve the health of Erie County. Two groups questioned how private corporations are included in this improvement process and suggested that they should be approached to participate.

The need for a solid, well thought out strategic plan that could be implemented in Erie County was echoed throughout several of the sessions. Residents could be made aware of issues, organizations and volunteers could work together to secure funding, develop strategies, and eliminate duplication of efforts. The county could share a common agenda. Note: There is currently a federally funded initiative through the Erie Regional Chamber and Growth Partnership to formulate a comprehensive regional plan. Information regarding the effort was presented to individuals who attended the Erie city focus group. This information has also been presented through local media including newspaper and television.

## **Conclusions**

All participants defined health in a holistic manner, aligning with the World Health Organization's definition that "health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". All groups included physical safety and the environment as factors that impact their personal and community health.

Common themes revolved around the presence or absence of personal and community resources including:

- health insurance or the ability to pay for services and supplies
- transportation and convenient appointments
- dentists who provide service to the uninsured and underinsured
- literacy, and in particular, health literacy
- the need for culturally and linguistically competent care and services

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- the need for a unified approach to health and a central source of information and programming for health and health care services.

All groups commented on the lack of adequate financial resources to enable more services, but all recognized the lack as a universal issue related to current economic times in the area. The leadership groups expressed the desire to work together to obtain funding for programming rather than compete for scarce resources. Health and overall success were attributed to education and the ability to utilize education to earn a family sustaining wage. The targeted focus groups identified cultural and linguistic barriers. They also indicated that their respective cultural groups practice a “navigator” approach to helping each other with obtaining appropriate services. Trust of providers and the health care system was identified as a necessary component for health management. The African American focus group commented that community leaders must be involved and engaged in the efforts.

While several individuals within the groups acknowledged that the Affordable Care Act is anticipated to help with removal of access barriers, its impact on this and related issues is unknown at this time.

## **Recommendations**

1. Develop a county-wide strategic plan for community health and wellness.
2. Identify a single source for collaboration and coordination between the community, health and social service providers, employers, government, and education. Removal of the duplication of efforts could be a function of this group as well. With emphasis being placed on resurrection of the State Health Improvement Plan partnerships, consider the PartnerSHIP for a Healthy Community as a potential entity to serve in this capacity.
3. Update existing resource directories to include information from the collaborators. Evaluate, modify, and spread any successful models of health improvement including access to care, especially for the uninsured and underinsured.
4. Adopt a county-wide approach to improve the health literacy of the community. A recently formed group called the Erie Community Healthcare Collaboration (led by businesses and manufacturers) is investigating this possibility at present. Findings and recommendations from this group could be implemented through this collaboration.

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5. Through the collaborative, develop culturally and linguistically competent programming to assist community members to remove identified barriers. Consider utilizing a Community Health Worker approach.
  6. Work together to obtain funding for the identified needs and accompanying initiatives designed to meet those needs.
  7. Identify and recruit primary care providers to fill the primary health care professional shortages identified by the federal government. This includes physicians, nurse practitioners, physician assistants, and general dentists.
  8. Identify at least one initiative that all acute care hospitals can adopt as an activity in the next year.

## Selected Healthy People 2010 and 2020 Goals

Healthy People Goals		
<u>Objective</u>	<u>2010</u>	<u>2020</u>
<b>Maternal, Infant and Child Health</b>		
Infant Mortality	4.5 deaths per 1,000 live births	6.0 deaths per 1,000 live births
Neonatal Mortality	2.9 deaths per 1,000 live births	4.1 deaths per 1,000 live births
Prenatal Care During First Trimester	90.0% of live births	77.9% of live births
Low Birth Weight Infants (< 5 lbs. 9 ozs.)	5.0% of live births	7.8% of live births
Nonsmoking Mother During Pregnancy	99.0% of live births	98.6% of live births
<b>Mortality, Cancer, and Injury</b>		
Cancer Age-Adjusted Death Rate	159.9 per 100,000 population	160.6 per 100,000 population
Lung Cancer Age-Adjusted Death Rate	44.9 per 100,000 population	45.5 per 100,000 population
Colorectal Cancer Age-Adjusted Death Rate	13.9 per 100,000 population	14.5 per 100,000 population
Female Breast Cancer Age-Adjusted Death Rate	22.3 per 100,000 population	20.6 per 100,000 population
Prostate Cancer Age-Adjusted Death Rate	28.8 per 100,000 population	21.2 per 100,000 population
Stroke Age-Adjusted Death Rate	48.0 per 100,000 population	33.8 per 100,000 population
Accident Age-Adjusted Death Rate	17.5 per 100,000 population	36.0 per 100,000 population
Motor Vehicle Accident Age-Adjusted Death Rate	9.2 per 100,000 population	12.4 per 100,000 population
Homicide Age-Adjusted Death Rate	3.0 per 100,000 population	5.5 per 100,000 population
<b>Infectious Diseases</b>		
AIDS Crude Incidence Rate	1.0 case per 100,000 pop age 13+	13.0 cases per 100,000 pop age 13+
Gonorrhea Crude Incidence Rate	19.0 cases per 100,000 population	----
Gonorrhea Crude Incidence Rate	----	257.0 cases per 100,000 females 15-44
Gonorrhea Crude Incidence Rate	----	198.0 cases per 100,000 males 15-44
Hepatitis A Crude Incidence Rate	4.3 cases per 100,000 population	0.3 cases per 100,000 population
Acute Hepatitis B Crude Incidence Rate	----	1.5 cases per 100,000 pop age 19+
Acute Hepatitis C Crude Incidence Rate	1.0 case per 100,000 population	0.2 cases per 100,000 population
Measles Incidence	0 cases per year	----
Meningococcal Disease Crude Incidence Rate	1.0 case per 100,000 population	0.3 cases per 100,000 population
Mumps Incidence	0 cases per year	----
Primary and Secondary Syphilis Crude Incidence Rate	0.2 cases per 100,000 population	----
Primary and Secondary Syphilis Crude Incidence Rate	----	1.4 cases per 100,000 females
Primary and Secondary Syphilis Crude Incidence Rate	----	6.8 cases per 100,000 males
Congenital Syphilis Incidence	1.0 case per 100,000 live births	9.1 cases per 100,000 live births
Tuberculosis (Active) Incidence	1.0 case per 100,000 population	1.0 case per 100,000 population

## Healthy People Goals (Continued)

<u>Objective</u>	<u>2010</u>	<u>2020</u>
<b>Chronic Diseases and Conditions</b>		
Hypertension	16.0% of pop age 20+ has hypertension	26.9% of pop age 18+ has hypertension
Cholesterol	80.0% age 18+ had chol. check last 5 yrs	82.1% age 18+ had chol. check last 5 yrs
Cholesterol	17.0% age 20+ have high cholesterol	13.5% age 20+ have high cholesterol
<b>Preventive Health Services</b>		
Mammogram	70.0% women 40+ had mammo in last 2 yrs	81.1% women 50-74 had a screening*
Pap Test	90.0% women 18+ had Pap test in last 3 yrs	93.0% women age 21-65 had screening*
Colonoscopy/Sigmoidoscopy	50.0% age 50+ ever had either procedure	70.5% of pop age 50-75 had a screening*
Fecal Occult Blood Test (FOBT)	50.0% age 50+ had test in past 2 years	70.5% of pop age 50-75 had a screening*
Flu Shot	90.0% age 65+ had flu shot in past year	90.0% age 65+ had flu shot in past year
Flu Shot	60.0% age 18-64 had flu shot in past year	80.0% age 18-64 had flu shot in past year
Pneumonia Vaccination	90% of pop age 65+ ever vaccinated	90.0% of pop age 65+ ever vaccinated
Pneumonia Vaccination	16.0% of pop age 18-64 ever vaccinated	60.0% of high risk 18-64 ever vaccinated
<b>Health Risk Behaviors</b>		
Smoking Cessation	75.0% of 18+ quit at least 1 day in past yr	80.0% of 18+ quit at least 1 day in past yr
Seat Belt	92.0% of age 18+ always use safety belt	92.4% of occupants always use safety belt
Smoke Alarms	100% of households have smoke alarm	-----
Binge Drinking	6.0% 18+ binge drink in past month	24.3% 18+ binge drink in past month
Binge Drinking	-----	22.7% h.s. seniors binge drink in past 2 wk
Exercise	20.0% age 18+ no leisure physical activity	32.6% age 18+ no leisure physical activity
Healthy Weight	60.0% of pop age 20+ at healthy weight	33.9% of pop age 20+ at healthy weight
Obese	15.0% of pop age 20+ are obese	30.6% of pop age 20+ are obese
<b>Health Care Access</b>		
Health Insurance	100% of pop age 18-64 have insurance	100% of pop has health insurance

Note: \* In Healthy People 2020, recommended cancer screenings are based on the most recent guidelines for that particular cancer

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## Peer County Comparison

As part of a comprehensive Community Health Needs Assessment, the CDC recommends peer county comparisons of health indicators and provides a list of counties similar in population composition and selected demographics. For Erie County, 24 peer counties representing 20 states were suggested. The decision to select a peer county in Pennsylvania was based on availability of data and the variability in health care coverage and delivery among different states. Luzerne County and Westmoreland County were the Pennsylvania peer counties. Of these, Westmoreland County was selected because of its location in western Pennsylvania and a health care coverage and delivery system similar to Erie County. The following tables present the peer county comparisons for over 100 selected health indicators.

## Demographics

<u>Subject*</u>	<u>Erie County</u>	<u>Westmoreland County</u>	<u>Pennsylvania</u>	<u>United States</u>
Population	280,566	365,169	12,702,379	308,745,538
Median age (years)	38.6	45.1	40.1	37.2
Percent of population ≥ 65 years old	14.6	18.9	15.4	13.0
Percent of labor force unemployed	9.4	8.3	9.6	10.8
Median household income	\$42,519	\$46,361	\$49,288	\$50,046
Per capita income	\$22,192	\$24,519	\$26,374	\$26,059
Percent of population below poverty level	17.4	10.1	13.4	15.3
Percent of population < 18 below poverty level	24.7	15.8	19.1	21.6
Percent of families below poverty level	12.9	7.4	9.3	11.3
Percent of families with related children < 18 below poverty level	22.9	15.2	15.9	17.9
Percent of population with no health insurance	9.6	7.9	10.2	15.5
Percent of population < 18 with no health insurance	4.2	1.8	5.2	8.0
Percent of population eligible for medical assistance	23.7	15.2	17.9	20.0 (2009)
Percent of population ≥ 25 high school graduate or higher	90.2	91.1	88.4	85.6
Percent of population ≥ 25 with bachelor's degree or higher	23.4	24.3	27.1	28.2
Percent of population ≥ 25 with graduate or professional degree	9.3	7.5	10.4	10.4
Note: * All values are for the year 2010 unless otherwise noted				

## Maternal, Infant, and Child Health

<u>Subject*</u>	<u>Erie County</u>	<u>Westmoreland County</u>	<u>Pennsylvania</u>	<u>United States</u>
Crude birth rate (live births per 1,000 population)	11.8	9.1	11.6	13.5 (2009)
Fertility rate (live births per 1,000 females aged 15-44)	58.0	52.2	59.0	66.7 (2009)
Birth rate for females 15-19 (live births per 1,000 females aged 15-19)	32.9	19.7	28.1	39.1 (2009)
Birth rate for females 15-17 (live births per 1,000 females aged 15-17)	18.9	7.8	15.0	20.1 (2009)
Birth rate for females 18-19 (live births per 1,000 females aged 18-19)	49.5	39.8	45.6	66.2 (2009)
Percent of births with low birth weight (< 5 lb. 9 oz.)	8.9	7.7	8.3	8.2 (2009)
Percent of mothers who received prenatal care in first trimester	74.8	83.4	70.9	69.0 (2006)
Percent of births to unmarried mothers	49.5	35.1	41.0	41.0 (2009)
Percent of births delivered by cesarean section	37.6	28.7	31.3	32.9 (2009)
Percent of mothers who did not smoke during pregnancy	72.7	78.9	83.5	86.8 (2006)
Percent of mothers who received WIC food during pregnancy	49.2	35.5	39.7	NA
Percent of mothers with Medicaid as source of payment for delivery	36.6	35.3	32.3	NA
Infant mortality rate (deaths per 1,000 live births)	9.2	7.1	7.3	6.4 (2009)

Note: \* All values are the years 2008-2010 unless otherwise noted; NA = Not available

## Mortality, Cancer, and Injury

<u>Subject*</u>	<u>Erie County</u>	<u>Westmoreland County</u>	<u>Pennsylvania</u>	<u>United States</u>
Crude death rate (deaths per 1,000 population)	9.6	11.9	9.9	8.1 (2008)
All causes age-adjusted death rate (per 100,000)	791.6	789.3	779.6	758.3 (2008)
Heart disease age-adjusted death rate (per 100,000)	199.9	202.1	195.3	186.5 (2008)
Cancer age-adjusted death rate (per 100,000)	189.1	181.6	183.8	175.3 (2008)
Chronic lower respiratory diseases age-adjusted death rate (per 100,000)	44.4	36.1	39.9	44.0 (2008)
Stroke age-adjusted death rate (per 100,000)	40.4	39.3	40.1	40.7 (2008)
Accidents (unintentional injuries) age-adjusted death rate (per 100,000)	35.0	49.4	40.4	38.8 (2008)
Alzheimer's disease age-adjusted death rate (per 100,000)	23.1	17.2	20.6	24.4 (2008)
Diabetes mellitus age-adjusted death rate (per 100,000)	24.3	23.3	20.4	21.8 (2008)
Nephritis (kidney diseases) age-adjusted death rate (per 100,000)	21.5	18.9	18.6	14.8 (2008)
Influenza and pneumonia age-adjusted death rate (per 100,000)	17.5	17.3	14.6	16.9 (2008)
Suicide age-adjusted death rate (per 100,000)	12.7	11.4	11.9	11.6 (2008)
Lung cancer age-adjusted death rate (per 100,000)	51.8	49.6	50.0	49.5 (2008)
Colorectal cancer age-adjusted death rate (per 100,000)	16.5	16.5	17.5	16.4 (2008)
Female breast cancer age-adjusted death rate (per 100,000)	26.3	25.7	23.8	22.5 (2008)
Pancreatic cancer age-adjusted death rate (per 100,000)	11.4	11.1	11.5	10.9 (2008)
Prostate cancer age-adjusted death rate (per 100,000)	26.9	24.0	22.0	22.3 (2008)
Note: * All values are the years 2008-2010 unless otherwise noted				

### Mortality, Cancer, and Injury (Continued)

<u>Subject</u>	<u>Erie County</u>	<u>Westmoreland County</u>	<u>Pennsylvania</u>	<u>United States</u>
All injuries age-adjusted death rate (per 100,000)	50.9 (2005-09)	62.6 (2005-09)	58.8 (2005-09)	58.1 (2008)
Accidents (unintentional injuries) age-adjusted death rate (per 100,000)	35.8 (2005-09)	47.9 (2005-09)	40.2 (2005-09)	38.8 (2008)
Suicide age-adjusted death rate (per 100,000)	11.9 (2005-09)	12.2 (2005-09)	11.4 (2005-09)	11.6 (2008)
Homicide age-adjusted death rate (per 100,000)	2.2 (2005-09)	1.8 (2005-09)	5.9 (2005-09)	5.9 (2008)
Poisonings age-adjusted death rate (per 100,000)	12.9 (2005-09)	17.1 (2005-09)	15.3 (2005-09)	13.4 (2008)
Motor vehicle accidents age-adjusted death rate (per 100,000)	9.5 (2005-09)	14.8 (2005-09)	11.5 (2005-09)	12.3 (2008)
Unintentional falls age-adjusted death rate (per 100,000)	7.7 (2005-09)	9.3 (2005-09)	7.2 (2005-09)	7.6 (2008)
Childhood (ages 0-14) accidents death rate (per 100,000)	8.9 (2000-09)	4.2 (2000-09)	6.5 (2000-09)	7.6 (2008)
All injuries age-adjusted hospitalization rate (per 100,000)	849.3 (2009)	1021.9 (2009)	1020.4 (2009)	653.0 (2005)
Accidents age-adjusted hospitalization rate (per 100,000)	677.3 (2009)	864.6 (2009)	856.6 (2009)	NA
Assaults age-adjusted hospitalization rate (per 100,000)	33.0 (2009)	29.5 (2009)	44.0 (2009)	NA
Unintentional falls age-adjusted hospitalization rate (per 100,000)	352.1 (2009)	443.5 (2009)	436.7 (2009)	NA
Poisonings age-adjusted hospitalization rate (per 100,000)	135.7 (2009)	136.3 (2009)	133.4 (2009)	NA
Self-inflicted injuries age-adjusted hospitalization rate (per 100,000)	106.4 (2009)	89.9 (2009)	79.1 (2009)	NA
Motor vehicle accidents age-adjusted hospitalization rate (per 100,000)	68.8 (2009)	93.0 (2009)	94.2 (2009)	NA
Childhood (ages 0-14) accidents hospitalization rate (per 100,000)	198.0 (2009)	233.7 (2009)	264.7 (2009)	NA
Note: NA = Not available				

Mortality, Cancer, and Injury (Continued)

<u>Subject*</u>	<u>Erie County</u>	<u>Westmoreland County</u>	<u>Pennsylvania</u>	<u>United States</u>
All cancer sites age-adjusted incidence rate (per 100,000)	483.9	490.0	507.7	464.9 (2009)
Female breast cancer age-adjusted incidence rate (per 100,000)	130.6	129.6	128.1	130.1 (2009)
Lung cancer age-adjusted incidence rate (per 100,000)	67.6	69.8	69.9	58.8 (2009)
Prostate cancer age-adjusted incidence rate (per 100,000)	147.4	134.9	151.7	151.9 (2009)
Colorectal cancer age-adjusted incidence rate (per 100,000)	45.0	52.2	49.6	42.6 (2009)

Note: \* All values are the years 2007-2009 unless otherwise noted

## Infectious Diseases

<u>Subject*</u>	<u>Erie County</u>	<u>Westmoreland County</u>	<u>Pennsylvania</u>	<u>United States</u>
AIDS crude incidence rate (per 100,000)	5.0	1.7 (2009)	4.9	11.4 (2009)
Percent of population aged 18-64 ever tested for HIV	40.0 (2011)	27.0 (2008-10)	35.0	NA
Campylobacteriosis crude incidence rate (per 100,000)	8.9	11.2	13.8	NA
Chlamydia crude incidence rate (per 100,000)	411.0	137.5	373.9	426.0
Gonorrhea crude incidence rate (per 100,000)	60.7	20.3	101.4	100.8
Primary and secondary syphilis crude incidence rate (per 100,000)	1.4	0.5	2.9	4.5
Hepatitis A crude incidence rate (per 100,000)	0.7	0.3	0.4	0.5
Acute hepatitis B crude incidence rate (per 100,000)	0.7	0.6	0.6	1.1
Chronic hepatitis B crude incidence rate (per 100,000)	5.4	4.7	11.6	NA
Lyme disease crude incidence rate (per 100,000)	19.6	3.8	30.0	9.8
Meningococcal disease crude incidence rate (per 100,000)	0.0	0.3 (2006-08)	0.2	0.3
Pertussis (whooping cough) crude incidence rate (per 100,000)	2.9	3.5 (2006-08)	7.8	9.1
Salmonellosis crude incidence rate (per 100,000)	30.0	12.3	15.1	17.9
Active tuberculosis crude incidence rate (per 100,000)	1.8	0.0	1.9	3.7
Varicella zoster (chickenpox) crude incidence rate (per 100,000)	5.7	41.3 (2006-08)	9.1	5.1
Note: * All values are for the year 2010 unless otherwise noted; NA = Not available				

## Chronic Diseases/Conditions and Preventive Health Services

<u>Subject</u>	<u>Erie County</u>	<u>Westmoreland County</u>	<u>Pennsylvania</u>	<u>United States</u>
Percent of population ≥ 18 ever diagnosed with asthma	12.0 (2011)	14.0 (2008-10)	14.0 (2010)	14.0 (2010)
Percent of population ≥ 18 currently have asthma	8.0 (2011)	10.0 (2008-10)	10.0 (2010)	9.0 (2010)
Percent of population ≥ 35 ever told they had a heart attack	6.0 (2011)	8.0 (2008-10)	6.0 (2010)	4.5 (2010)
Percent of population ≥ 35 ever told they had heart disease	7.0 (2011)	8.0 (2008-10)	6.0 (2010)	4.0 (2010)
Percent of population ≥ 35 ever told they had a stroke	5.0 (2011)	5.0 (2008-10)	4.0 (2010)	3.0 (2010)
Percent of population ≥ 18 ever told they had diabetes	10.0 (2011)	9.0 (2008-10)	10.0 (2010)	9.0 (2010)
Percent of population ≥ 50 had a flu shot in the past year	60.0 (2011)	57.0 (2006-08)	56.0 (2010)	NA
Percent of population ≥ 65 ever had a pneumonia vaccination	73.0 (2011)	76.0 (2008-10)	71.0 (2010)	67.0 (2010)

Note: NA = Not available

## Health Risk Behaviors

<u>Subject</u>	<u>Erie County</u>	<u>Westmoreland County</u>	<u>Pennsylvania</u>	<u>United States</u>
Percent of population ≥ 18 binge drank in past 30 days	19.0 (2011)	14.0 (2008-10)	15.0 (2010)	15.0 (2010)
Percent of population ≥ 18 heavy drinker	6.0 (2011)	4.0 (2008-10)	4.0 (2010)	5.0 (2010)
Percent of population ≥ 18 chronic drinker	6.0 (2011)	5.0 (2008-10)	6.0 (2010)	NA
Percent of population ≥ 18 with no leisure physical activity in past month	28.0 (2011)	25.0 (2008-10)	26.0 (2010)	24.0 (2010)
Percent of population ≥ 18 current smoker	23.0 (2011)	15.0 (2008-10)	18.0 (2010)	17.0 (2010)
Percent of population ≥ 18 ever smoker	50.0 (2011)	43.0 (2008-10)	44.0 (2010)	43.0 (2010)
Percent of population ≥ 18 former smoker	27.0 (2011)	28.0 (2008-10)	26.0 (2010)	25.0 (2010)
Percent of population ≥ 18 quit smoking at least 1 day in past year	57.0 (2011)	49.0 (2008-10)	55.0 (2010)	NA
Percent of population ≥ 18 obese	29.0 (2011)	28.0 (2008-10)	29.0 (2010)	28.0 (2010)
Percent of population ≥ 18 overweight and obese	65.0 (2011)	69.0 (2008-10)	66.0 (2010)	64.0 (2010)

Note: NA = Not available

## Health-Related Quality of Life and Health Care Access

<u>Subject</u>	<u>Erie County</u>	<u>Westmoreland County</u>	<u>Pennsylvania</u>	<u>United States</u>
Percent of population ≥ 18 with fair or poor health	17.0 (2011)	16.0 (2008-10)	16.0 (2010)	15.1 (2010)
Percent of population ≥ 18 with poor physical health in past month	36.0 (2011)	33.0 (2008-10)	36.0 (2010)	NA
Percent of population ≥ 18 with poor mental health in past month	33.0 (2011)	33.0 (2008-10)	33.0 (2010)	NA
Percent of population ≥ 18 with restricted activity due to poor health	21.0 (2011)	19.0 (2008-10)	21.0 (2010)	21.0 (2010)
Percent of population ≥ 18 lacking emotional and social support	8.0 (2007)	8.0 (2007-09)	7.0 (2007)	NA
Percent of population ≥ 18 satisfied or very satisfied with their lives	93.0 (2007)	95.0 (2007-09)	94.0 (2007)	NA
Percent of population aged 18-64 with no health insurance	13.0 (2011)	13.0 (2008-10)	14.0 (2010)	18.0 (2010)
Percent of population ≥ 18 with no personal health care provider	10.0 (2011)	8.0 (2008-10)	11.0 (2010)	NA
Percent of population ≥ 18 had routine checkup in past 2 years	86.0 (2011)	84.0 (2008-10)	82.0 (2010)	NA
Percent of population ≥ 18 with lack of needed care due to cost	13.0 (2011)	7.0 (2008-10)	11.0 (2010)	NA
Note: NA = Not available				

## Data Sources

Erie County Community Health Needs Assessment Data Sources	
American Cancer Society	Pennsylvania Department of Health
American Lung Association	Bureau of Communicable Diseases, Sexually Transmitted Diseases Program
ArtsErie	Bureau of Community Health Systems, School Health Program
Asbury Woods	Bureau of Epidemiology
Center for Rural Pennsylvania	Bureau of Family Planning
Centers for Disease Control and Prevention	Lead Poisoning Prevention and Control Program
Behavioral Risk Factor Surveillance System Surveys	Pennsylvania WIC Program
Diseases and Conditions	Bureau of Health Promotion and Risk Reduction, Asthma Control Program
Healthy People 2020	Bureau of Health Statistics and Research
Morbidity and Mortality Weekly Report Series	Behavioral Risk Factor Surveillance System Surveys
Corry 2020	Epidemiologic Query and Mapping System (EpiQMS)
CultureSpark, Erie County Cultural Master Plan	Pennsylvania Cancer Registry
Erie County Convention Center Authority	Pennsylvania Department of Labor and Industry
Erie County Department of Health	Pennsylvania Department of Public Welfare
Community Health Services	Pennsylvania Health Care Cost Containment Council
Environmental Health Services	Pennsylvania National Electronic Disease Surveillance System
Epidemiology	Pennsylvania Office of Rural Health
Behavioral Risk Factor Surveillance System Surveys	Pennsylvania Senior Centers
Erie County Department of Human Services	Pennsylvania State Association of County Fairs
Erie County Department of Planning	Pennsylvania State Data Center
Erie County Demographic Study, 2003	Erie County Data Books
Erie County 2040 Long Range Transportation Plan	Pennsylvania Abstracts
Erie County Public Library	Population Projections
Erie County Women, Infants, and Children (WIC) Program	Rural Assistance Center
Erie Neighborhood Watch Council	Scott Enterprises
Erie Yesterday	SEARCH for Diabetes in Youth Study
Health Resources Services Administration	Tom Ridge Environmental Center at Presque Isle
Hospital and Healthsystem Association of Pennsylvania	United States Census Bureau
Lake Erie Wine Country	American Community Surveys
National Center for Health Statistics	American FactFinder
Pennsylvania Commission on Crime and Delinquency, Pennsylvania Youth Surveys	Decennial Censuses
Pennsylvania Department of Aging	Population Estimates Program
Pennsylvania Department of Education	United States Department of Labor, Bureau of Labor Statistics
	United States Environmental Protection Agency, Beach Program
	Waldameer Park and Water World
Note: With the exception of the Erie County Department of Health, sources are not responsible for any of the analyses, interpretations, or conclusions that appear in this assessment	