

STATISTICAL NEWS

PA Department of Health ♦ Bureau of Health Statistics and Research ♦ Vol. 29 No. 2 ♦ March 2006

Health Status of Over and Under Weight Adults

Health Problems More Prevalent in Adults with Unhealthy Weights

Current interest in overweight and obese adults may leave some people forgetting that being underweight can also be detrimental to their health. In fact, according to recent statistics, being underweight can bring with it some of the same dangers as obesity. Underweight, overweight and obese adults all have higher health risks when compared to adults at a healthy weight.

In 2004, approximately 37 percent (95% CI = 36-39) of Pennsylvanians were of healthy weight. Thus, almost two thirds of the adult population were at an unhealthy weight; 37 percent (95% CI = 35-38) were overweight; 24 percent (95% CI = 23-26) were obese; and, two percent (95% CI = 1-2) were underweight (see Chart 1 on page 4). Adults at unhealthy weights are known to be at higher risk when it comes to health issues. In this article we will explore disparities between weight classification groups when looking at health risks and prevalence of selected chronic diseases.

Body Mass Index (BMI) is a common method used for determining whether an individual is of healthy weight. The Behav-

...almost two thirds of the adult population (in 2004) were at an unhealthy weight...

ioral Risk Factor Surveillance System (BRFSS)¹ estimates BMI based on reported height and weight. Adults with BMIs less than 18.50 are considered to be underweight while adults with BMIs greater than or equal to 18.50 but less than 25.00 are considered to be of healthy weight. Adults with BMIs of greater than or equal to 25.00 but less than 30.00 are overweight and adults with BMIs greater than or equal to 30.00 are considered obese. Please note that, for the purpose of this article, overweight numbers do not include those adults classified as obese.

Age is usually a major determinant for unhealthy weight status. As adults get older, a significantly higher percentage fall into the unhealthy weight category, with the exception of adults age 65 and older. Approximately 56 percent (95% CI = 51-60) of adults age 18-29 were at a healthy

Goto Page 4 or click here...

Homicide Rate Rises for Second Straight Year

Leading Method Is Firearms; Highest Rates for Young Black Males

The age-adjusted death rate for homicides among Pennsylvania residents increased slightly in 2004. This marked the second consecutive year in which the rate increased. There were 679 homicides among residents of Pennsylvania during the year 2004 for an age-adjusted death rate of 5.7 per 100,000 U.S. (2000) standard million population. Homicide rates among blacks (especially young black males) continued to be dramatically higher than the rates for white residents.

The following narrative reviews selected statistics on homicides in Pennsylvania by type, age, sex, race, and county.

Trends

The annual age-adjusted rates for homicides in Pennsylvania have increased slightly between 1999 and 2004 but are still somewhat lower than the annual rates for 1990-1997 (see line chart on page 6). The annual rates declined throughout most of the 1980s and then increased through the mid-1990s. The annual rates declined dramatically in 1998 and then have started to slowly increase again. The Healthy People

Goto Page 6 or click here...

Homicide by discharge of firearms accounted for 73.6 percent of all homicides among Pennsylvania residents (in 2004).

INSIDE THIS ISSUE

Birth Data Highlighted – Principal Source of Payment 2

EpiQMS and Website Updates 3

HP2010 Objectives: Low Birth Weight 7

DEPARTMENT OF HEALTH

*Edward G. Rendell, Governor
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Birth Data Highlighted – Principal Source of Payment

Revised Certificate Asks, "Principal Source of Payment for this Delivery?"

This is the third of a series of articles appearing in *Statistical News* that focuses on the new data items collected via the 2003 revisions to the certificate of live birth. The revised birth certificate now contains the new data item, "Principal source of payment for this delivery".

Private insurance was reported as the principal source of payment for 85,627 resident live births in 2003 or 69.3%, with Medicaid reported for 28,075 births or 22.7%, self-pay (4.1%), and all other sources (3.9%). Please note that review of the literal entries for all other sources indicates that close to 50% are actually medical assistant prod-

...younger mothers were more likely to have Medicaid as the principal source of payment than older mothers.

ucts and a large number are private insurance companies. This problem is mainly due to use of various terms for medical assistance or private insurance that are not familiar to those completing the birth certificates.

Analyses of the 2003 birth data show that births to younger mothers were more likely to have Medicaid reported as the principal source of payment than to older mothers. Over 52% of births to mothers under age 20 were paid for by Medicaid compared to 43.1% for mothers ages 20-24 and 12.5% for mothers 25 and older. The highest percentage of deliveries paid for by Medicaid was to mothers under age 15 (58.3) and the lowest percentage (6.4) was to mothers age 45 and older. There was a sharp decline in the Medicaid percentage between the age group 20-24 (43.1) and age group 25-29 (18.5).

The percent of private insurance as the principal source of payment increases with the age

Black and Hispanic mothers were more likely to have their delivery paid for by Medicaid than white and Asian/Pacific Islander mothers.

of the mother. Births to mothers under 15 had the lowest percent (33.9) and births to mothers age 35-39 and 45 and older tied with the highest percent (85.7). The age groups under 15, 15-19, and 20-24 all had a lower percentage than the one for all ages (69.3) for delivery of births paid for by private insurance.

Principal source of payment by race/ethnicity is shown in Chart 1. Births to black and Hispanic mothers were more likely to have the delivery paid for by Medicaid than births to white and Asian/Pacific Islander

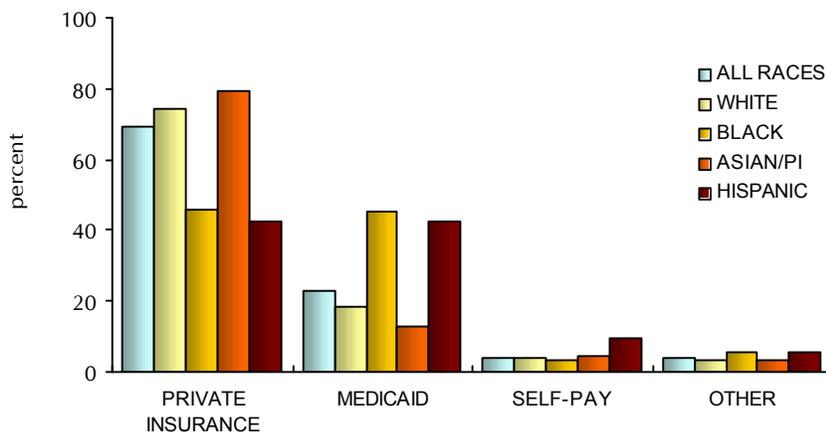
mothers. Medicaid paid for 45.0% of births to black mothers and 42.4% of births to Hispanic mothers compared to 18.5% for white mothers and only 12.8% for Asian/Pacific Islander mothers.

Percentages for private insurance as the principal source of payment were similar for births to black (46.0) and Hispanic (42.5) mothers. White and Asian/Pacific Islander percentages for private insurance were 74.1% and 79.1%, respectively. In the category of self-pay deliveries, percentages for white (3.8), black (3.4) and Asian/Pacific Islanders (4.7) were similar. However, the percentage for births to Hispanic mothers (9.5) was approximately two times higher.

In 2003, there were higher percentages of low birth weight babies to mothers on Medicaid (9.7) and in the category of other as the principal source of payment (10.0), compared to mothers with private insurance (6.8). Percent of very low birth weight babies followed the same pattern with 1.8% of births to mothers on Medicaid, 2.3% for other as the principal payment source, and 1.2% to births to mothers with private insurance.

Chart 2, on the next page, shows a direct relationship between trimester of first prenatal visit and payment source. Over 88% of births to mothers with private insurance had prenatal care in the first trimester compared to 69.7% for Medicaid and 44.5% for self-pay. Self-pay as the principal source of payment had the highest percentage (6.5) of births to mothers who had no prenatal care and Medicaid had the

Chart 1
Resident Live Births by Race/Ethnicity of Mother and Principal Source of Payment, Pennsylvania, 2003



NOTES: Unknowns excluded in calculations. Hispanics can be of any race.

Go to Page 3 or click here...

EpiQMS and Website Updates

Additional Data and Features Added to EpiQMS; Website Updated with Injury Death Report and Nursing Home and Cancer Incidence Standard Reports

EpiQMS:

EpiQMS, the Bureau of Health Statistics and Research's interactive health statistics web tool, has recently been updated with 2003 cancer incidence data. These data are available at the state, county, and municipal levels. Cancer incidence data for Hispanic residents are also now available back to 2002. In addition, the map palette options within the mapping modules have been enhanced to include a gray-scale option.

Staff are currently working to expand EpiQMS to include a resident infant death dataset and a reported teen pregnancy dataset (both at the state and county levels). Additional enhancements are also being planned so be sure to periodically

check EpiQMS to begin using the enhancements as soon as they are available. To access EpiQMS, go to www.health.state.pa.us/stats and click on the EpiQMS logo.

Injury Death Report:

The web-based report, *Injury Deaths in Pennsylvania*, has been updated with 1999-2003 mortality statistics and can be accessed at www.health.state.pa.us/stats (select "Vital Statistics").

This report combines five years of mortality data and presents various statistics at the state and county levels for nine major types of injuries, as follows:

- Unintentional Injuries
- Motor Vehicle Crashes
- Drug Poisoning

- Falls/Fall-Related Injuries
- Fire and Flames
- Drowning/Submersion
- Suicide
- Homicide
- Firearm-Related Injuries

Nursing Home Reports:

The five nursing home reports on the Health Statistics web pages have been updated with 2004 data. The data found in these reports were obtained from the Bureau's Annual Long Term Care Facilities Questionnaire. To access the reports, go to www.health.state.pa.us/stats (select "Health Facilities"). The five reports include:

- Utilization data
- Private daily charges and per diem reimbursement rates

- Selected data by facility
- 23 categories of personnel data
- Resident census by age group

Cancer Incidence Data:

A large variety of cancer incidence data tables, including statistics for all counties and municipalities in Pennsylvania have been updated with 2003 data on the Health Statistics web pages at www.health.state.pa.us/stats (select "Cancer Incidence & Mortality" then select "Cancer Incidence & Mortality Statistics...").

Each year when a new annual cancer data file is released, staff create and update numerous data tables containing thousands of pages. The 2003 files have been added to our website and provide data users with an abundant variety of cancer statistics.

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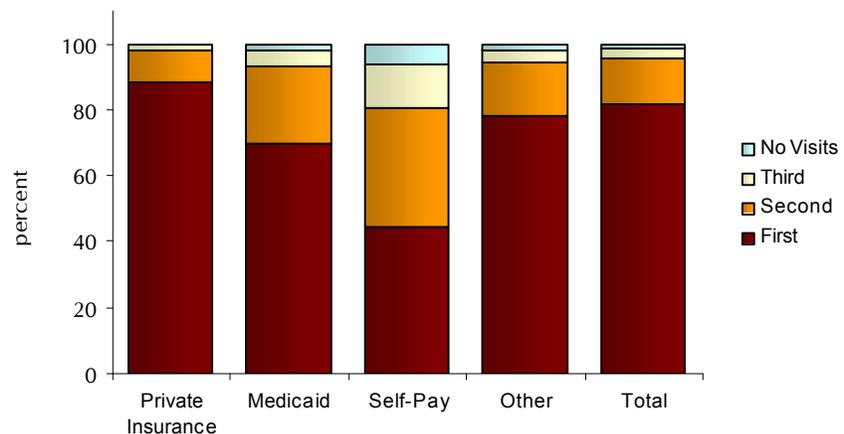
Birth Data Highlighted...

second highest percentage (2.1). There were only 0.4% of births to mothers with private insurance that received no prenatal care.

Further analysis of the 2003 birth data showed that 88.1% of births were to mothers with private insurance who did not smoke during their pregnancy, compared to 63.5% of births to mothers on Medicaid, 89.5% for self-pay, and 74.3% for all other sources.

After more review and evaluation, the new data items from the birth certificate will eventually be incorporated into our regular reports. If you have any questions concerning this article, contact the Bureau at 717-783-2548.

Chart 2
Resident Live Births by Trimester of First Prenatal Visit and Principal Source of Payment, Pennsylvania, 2003



NOTE: Unknowns excluded in calculations.

Health Status of Over and Under Weight Adults

weight, compared to 38 percent (95% CI = 35-41) of adults age 30-44; 29 percent (95% CI = 27-31) of adults age 45-64; and, 32 percent (95% CI = 30-35) of adults age 65 and older. However, a significantly lower percentage of adults age 65 and older (23 percent, 95% CI = 20-25) were obese when compared to adults age 30-44 (27 percent, 95% CI = 24-29) and adults age 45-64 (30 percent, 95% CI = 27-32).

General Health

One of the questions asked of Pennsylvanians in the 2004 BRFSS survey was, "Would you say your health is excellent, very good, good, fair, or poor?" Twenty-four percent of obese adults and 28 percent of underweight adults reported themselves as having fair or poor health. Percentages for obese and underweight individuals were significantly higher when compared to the other weight groups – 11 percent of healthy weight and 14 percent of overweight adults reported themselves as having fair or poor health.

Asked about their physical health, a significantly higher percent of underweight individuals (58 percent) reported their physical health was not good one or more times in the past month compared to each of the other weight groups. Obese adults re-

ported the second highest percentage (42 percent) which was significantly higher than both healthy weight and overweight individuals (both at 34 percent).

General health issues can affect everyday tasks. In fact, 32 percent of underweight and 24 percent of obese individuals reported one or more days in the past month when poor physical and mental health prevented their usual activities – both were significantly higher than the percentages reported for adults who were at a healthy weight (19 percent) or overweight (17 percent). The bar chart on page 5 shows prevalence rates and 95 percent confidence intervals based on the 2004 BRFSS survey.

Lack of Physical Activity

A person's lifestyle can affect many aspects of their health, including their weight. It is well-known that getting enough physical activity is essential to staying healthy. Supporting this fact, 35 percent of obese adults engaged in no leisure time physical activity during the month before they were surveyed. This is significantly higher than adults with a healthy weight (19 percent) and adults who were overweight (22 percent). Although not significantly different, the survey results suggest that underweight individuals may have a higher rate of inactivity than healthy weight adults.

Chronic Health Problems

Some chronic health issues are more prevalent in adults with unhealthy weights when compared to those at healthy levels. Diabetes, asthma, cardiovascular problems and other disabili-

Diabetes, asthma, cardiovascular problems and other disabilities all appear to coincide with having an unhealthy BMI.

ties all appear to coincide with having an unhealthy BMI. Approximately three percent of adults who fell in the healthy weight range had diabetes. In comparison, about seven percent of overweight adults and 16 percent of obese adults had diabetes, both significantly higher than adults with healthy BMIs.

Asthma also appears to be more prevalent in heavier adults. Thirteen percent of obese adults reported currently having asthma. Individuals with healthy weights and those who were overweight had significantly lower percentages (7 and 8 percent, respectively) when compared to obese adults.

Obese adults age 35 and older had a significantly higher prevalence (15 percent) for ever being told they had a heart attack, heart disease or a stroke

when compared to adults age 35 and older who fall in the healthy weight range (9 percent).

When defining a disability as physical, mental, emotional, or communication-related, a significantly higher percentage of underweight and obese adults (both 21 percent) considered themselves to have a disability compared to adults with a healthy weight (9 percent). The percentage for obese adults was also significantly higher than for overweight adults (11 percent).

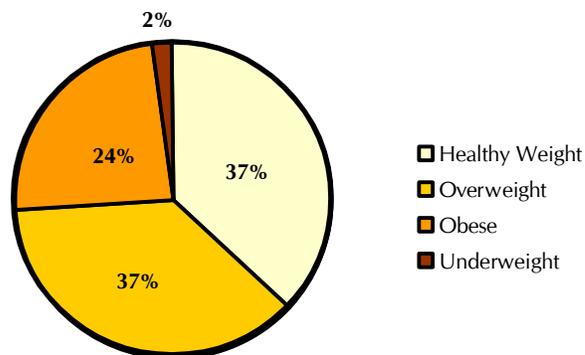
Conclusion

Adults at unhealthy weights have a higher risk for health-related problems and have increased mortality rates when compared to healthy weighted adults. As quoted from the American Medical Association's article titled, *Excess Deaths Associated With Underweight, Overweight, and Obesity*, "Underweight and obesity, particularly higher levels of obesity, were associated with increased mortality relative to the normal weight category. The impact of obesity on mortality may have decreased over time, perhaps because of improve-

Continued on next page...

As adults get older a significantly higher percentage fall into the unhealthy weight category, with the exception of adults age 65 and older.

Chart 1
Pennsylvania Weight Distribution in 2004



Health Status of Over and Under Weight Adults

ments in public health and medical care. These findings are consistent with the increases in life expectancy in the United States and the declining mortality rates from ischemic heart disease." For a copy of the article, *Excess Deaths Associated With Underweight, Overweight, and Obese*

city, go to <http://dceg.cancer.gov/pdfs/flegal29318612005.pdf>.

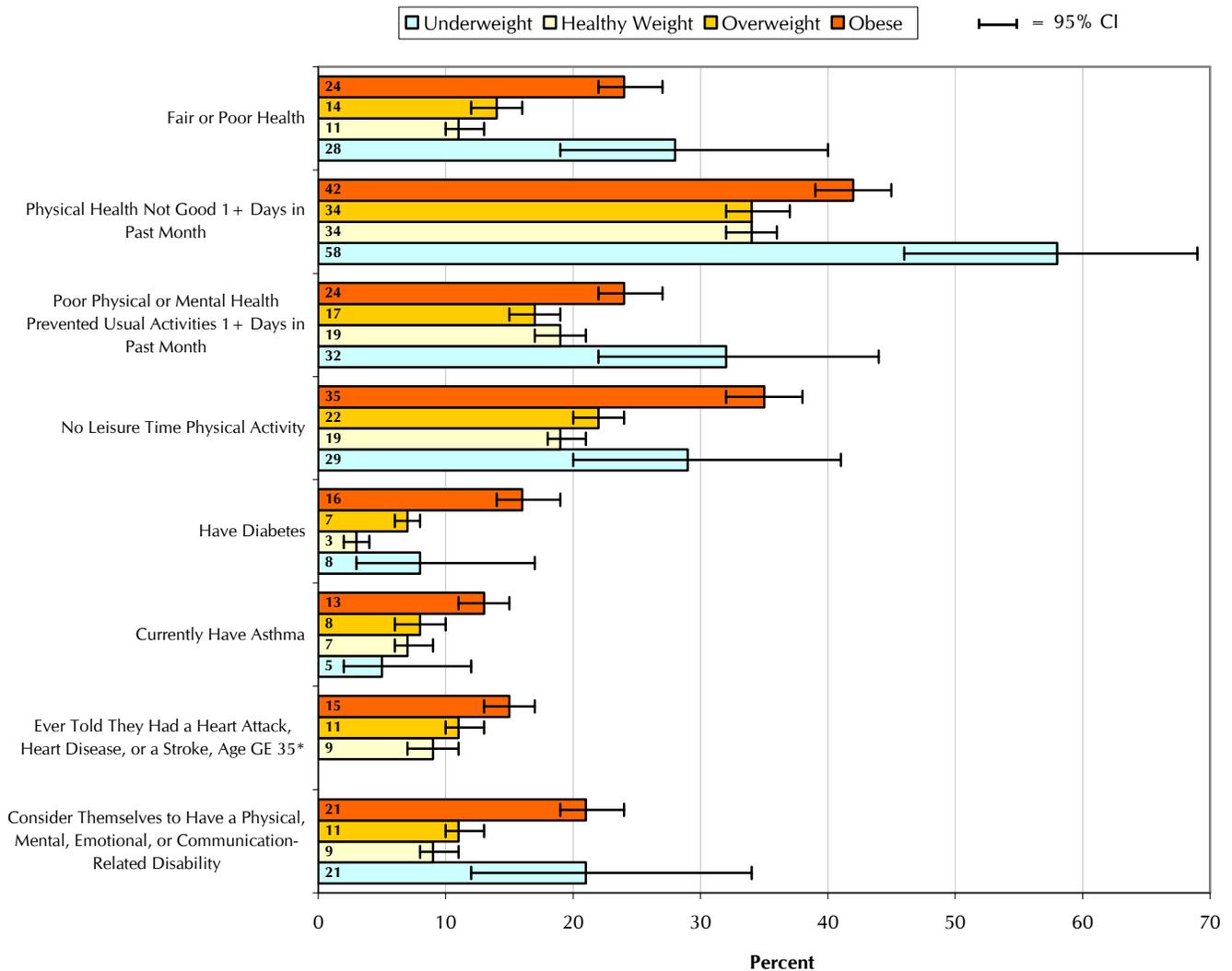
Please contact the Bureau at 717-783-2548 if you have any questions about the BRFSS data presented in this article. Also, please note that the 2004 BRFSS annual report, *2004 Behavioral Health Risks Of Pennsylvania*

Adults, is now available and can be viewed on the Health Statistics web page at www.health.state.pa.us/stats [select "Behavioral Risk Data (BRFSS)"].

¹ The BRFSS is a public health surveillance system that is conducted with support from the Centers for Disease Control and Prevention (CDC). Its purpose

is to collect data on risk behaviors linked to chronic disease, injury, and infectious diseases as well as preventative health practices supportive of community health. The BRFSS survey consists of telephone interviews using randomly generated telephone numbers to determine the household contacted. The survey contains a core set of questions provided by CDC to gather comprehensive, standard information nationwide.

Chart 2
2004 BRFSS Survey – Percent Prevalence and 95% Confidence Interval Bars



* Underweight data was statistically unreliable due to small sample size.

Homicide Rate Rises for Second Straight Year

2010 national goal for homicides is an age-adjusted death rate of 3.0. Pennsylvania's 2004 rate of 5.7 is still a long way from reaching that goal and the recent increase starting in 1999 should be of particular concern.

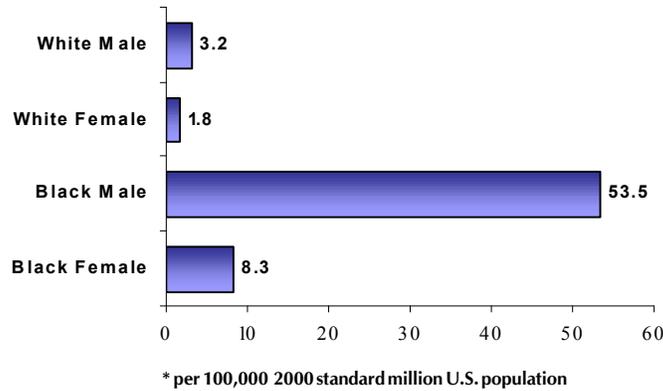
Type

Three types of homicide were most prevalent in the year 2004. Homicide by discharge of firearms (500 homicides) accounted for 73.6 percent of all homicides among Pennsylvania residents. Homicide by use of sharp objects (60 homicides) was second at 8.8 percent and suffocation (25) accounted for 3.7 percent in 2004.

Race and Sex

The age-adjusted death rate for homicide among male residents (8.9) for Pennsylvania during 2004 was approximately 3.6 times higher than the rate for females (2.5). There were 529 resident homicides for males, compared to 150 for females. The leading methods of homicide among males and females were similar.

**Age-Adjusted Death Rate* for Homicide By Race/Sex
Pennsylvania Residents, 2004**



Of the 679 resident homicides recorded in 2004, 410 occurred to blacks while only 259 occurred among whites. A closer look at black homicides shows that 353 were among males (age-adjusted rate of 53.5) while 57 were among females (rate of 8.3).

Age-adjusted rates by race and sex show that black males had dramatically higher figures than any of the other three race/sex groups. The 2004 age-adjusted rate for homicides was 53.5 among black males, com-

pared to 3.2 for white males, 8.3 for black females and only 1.8 for white females (see the bar chart above).

Age

Reviewing the number of homicides by age group for the five-year period of 2000-2004 showed that young adults in the age group 20-24 had the highest number, accounting for 20.5 percent of all homicides (see bar chart on page 8). The second highest number occurred among

...young adults in the age group 20-24 had the highest number (of homicides), accounting for 20.5 percent of all homicides (during 2000-2004)...

those aged 25-29, followed by the age groups 15-19 and 30-34. Over 84 percent of all homicides for Pennsylvania occurred among residents between the ages of 15 and 54. There were 327 homicides among males aged 15-19 and 191 for males aged 40-44, compared to 53 and 75, respectively, for females.

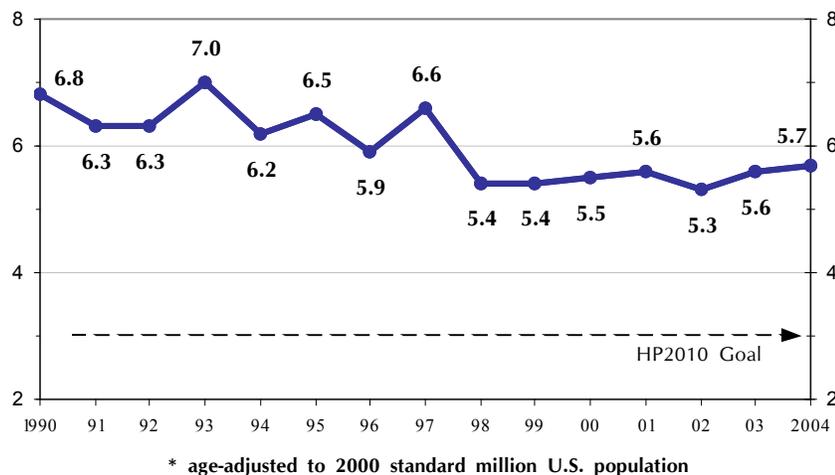
The median age at death for homicides in 2004 among males was 27.9 and 31.8 for females. Among the four sex/race groups, black males had the lowest median age at death for homicides (27.0) and white females had the highest (33.2) in 2004.

Go to Page 8 or click here...

...the age-adjusted homicide rate in Pennsylvania among black residents was approximately 12 times higher than the rate for whites...

In 2004, the age-adjusted homicide rate in Pennsylvania among black residents was approximately 12 times higher than the rate for whites – 30.3 compared to only 2.5 among whites.

**Age-Adjusted Death Rate* for Homicide
Pennsylvania Residents, 1990-2004**



Update: Healthy People 2010 Objectives

Focus Area 16: Maternal, Infant, and Child Health

16-10a - Decrease percent of infants born at low birth weight...

2010 Target: 5.0%

All Births and

Race/Ethnicity of Mother:

The percent of low birth weight infants born to Pennsylvania residents increased between 2000 and 2002 and then decreased in 2003 but only very slightly from 8.2 in 2002 to 8.1. Until 2002, the percentage of low birth weight infants had not been above 8.0 since the late 1960s. In addition to recent medical advances that help smaller babies survive, the higher percentages in recent years may also be related to more women having multiple births—nearly 20 percent more between 1995 and 2003 (4,282 to 5,135).

All of the low birth weight percentages by race and ethnicity also decreased in 2003, except the percentage for black residents which increased but only very slightly from 14.1 to 14.2. The highest 2003 percentage, by far, occurred for births to black mothers and was the third consecutive annual increase recorded between 1999 and 2003. The second highest percentage of low birth weight

infants was to Hispanic mothers (8.9), followed by Asians/Pacific Islanders (7.8) and whites (6.9).

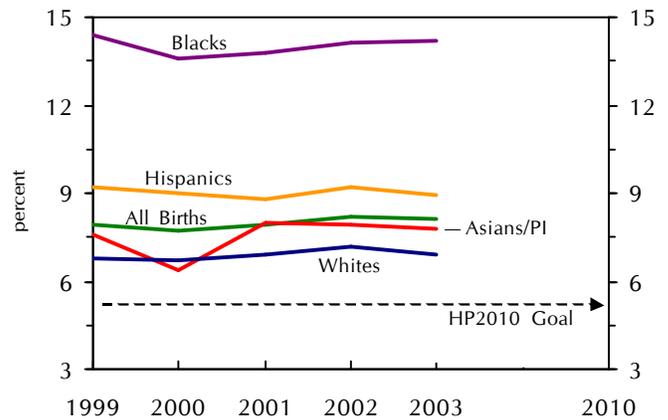
Age of Mother:

The percentage of low birth weight increased in 2003 for births to the youngest (under 15) mothers, to those mothers aged 20-24, and to mothers aged 25-29. All other age groups experienced decreases.

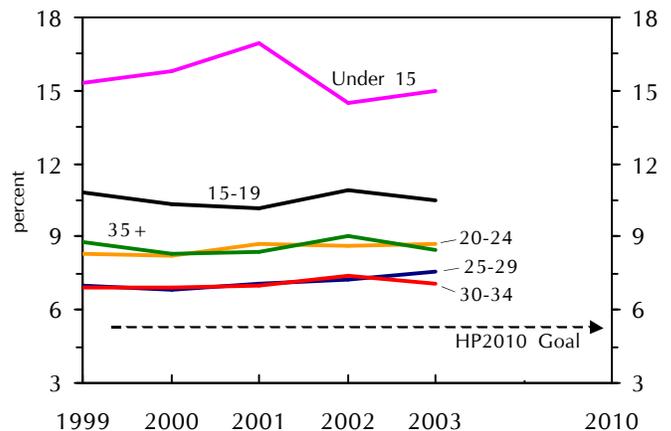
Births to the youngest (under 15 and 15-19) mothers consistently had the highest percentages of low birth weight. Births to the oldest mothers (35+) also had higher percentages of low birth weight throughout most of the five-year period of 1999-2003. Five-year trends show slightly lower percentages in recent years for mothers under 15 and generally higher percentages for all other age groups.

Among all of the age groups (and race/ethnic groups), it seems the national Healthy People 2010 goal of 5.0 is very unlikely to be obtained.

Percent Low Birth Weight By Race and Hispanic Ethnicity of Mother, PA Resident Live Births 1999-2003



Percent Low Birth Weight By Age of Mother Pennsylvania Resident Live Births 1999-2003



Percent Low Birth Weight By Race/Ethnicity and Age of Mother, PA Resident Live Births 1999-2003

Race/Ethnicity	2003	2002	2001	2000	1999
All Births	8.1	8.2	7.9	7.7	7.9
White	6.9	7.2	6.9	6.7	6.8
Black	14.2	14.1	13.8	13.6	14.4
Asian/Pacific Islander	7.8	7.9	8.0	6.4	7.6
Hispanic	8.9	9.2	8.8	9.0	9.2

Age	2003	2002	2001	2000	1999
Under 15	15.0	14.5	16.9	15.8	15.3
15-19	10.5	10.9	10.2	10.3	10.8
20-24	8.7	8.6	8.7	8.2	8.3
25-29	7.6	7.2	7.1	6.8	7.0
30-34	7.1	7.4	7.0	6.9	6.9
35+	8.5	9.0	8.4	8.3	8.8

NOTE: Hispanic can be of any race.

HP2010 State and County Data on the Web

To access the Department of Health's web page of Healthy People 2010 statistics for the state and counties, go to www.health.state.pa.us/stats. The latest available statistics as well as trend data are shown. You can view data for the state, all counties, a specific demographic element (age, sex, race, etc.) or just for a specific county. Complete data sets for the state and counties can be downloaded. There is also a link to the national HP2010 web site.

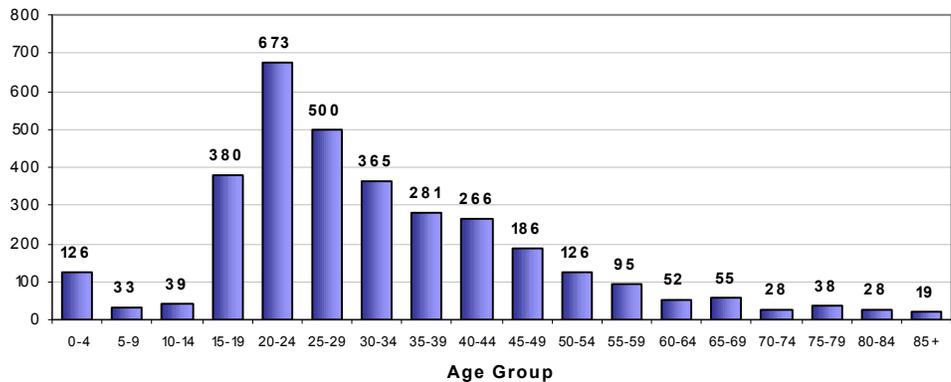
Homicide Rate Rises for Second Straight Year

County

For the five-year period of 2000-2004, Philadelphia County had the highest age-adjusted homicide rate (20.7 based on 1,593 homicides). The second highest rate occurred in Allegheny County (rate of 7.2, based on 432 homicides). Third highest was Berks County (6.8 and 126 homicides), followed by Delaware (6.2 and 167) and Dauphin (5.8 and 68) Counties.

Three counties had no homicides reported among residents during the five-year period of 2000-2004 – Cameron, Elk, and Tioga.

Number of Homicides by Age Group, Pennsylvania Residents, 2000-2004



If you have any questions regarding the statistics presented here, please contact the Bureau of Health Statistics and

Research at 717-783-2548. A variety of homicide statistics in the form of tables, charts, and maps for the state and all coun-

ties can be produced using our interactive web tool called EpiQMS, located at www.health.state.pa.us/stats/.

Statistical News is published bimonthly by the Bureau of Health Statistics and Research, Pennsylvania Department of Health, 555 Walnut St., 6th Floor, Harrisburg, PA, 17101. Please write, telephone (717-783-2548) or FAX (717-772-3258) us if you have any questions regarding the contents of this newsletter. Visit the Health Statistics section of the Department's web site at www.health.state.pa.us/stats to access additional health statistics and reports.

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