

STATISTICAL NEWS

PA Department of Health ♦ Bureau of Health Statistics and Research ♦ Vol. 30 No. 3 ♦ May 2007

Child Poisoning Deaths Increase in Pennsylvania

PA Rates Now Higher Than U.S.; Rates Higher Among Black Children

During the five-year period of 2001-2005, Pennsylvania recorded 44 poisoning deaths to residents under 15 years old. The average annual age-specific poisoning death rate for residents aged 0-14 years increased from the five-year period of 2000-2004 to 2001-2005, marking the fourth consecutive time in which the average annual rate had increased.

During the sixteen year period of 1990-2005, the five-year average annual poisoning death rate for children for 2001-2005 (0.37 [±0.11] per 100,000) was over 68 percent higher than the rate recorded for 1990-1994 (0.22 [±0.08]). The lowest five-year average annual rate recorded during this period (0.18 [±0.08] per 100,000) occurred during 1996-2000 and 1997-2001.

This article also addresses a common problem experienced by many health data users. That is, how to reliably use rates when the number of events being studied are small. Please note that all statistics are subject to chance variation. However, rates based on an unusually small number of events should be of particular concern and used very cautiously.

(The) poisoning death rate for residents aged 0-14 years increased...marking the fourth consecutive time in which the average annual rate had increased.

The variability of a rate can be estimated by computing a confidence interval. That interval or range then has a 95 percent chance of containing the "true" rate or a rate unaffected by chance events. The confidence intervals are provided with the rates appearing in this article to assist the reader with evaluating the reliability of the rates.

The following will review statistics on poisoning deaths among children in Pennsylvania compared to the United States and by race, sex, and age for the state.

Pennsylvania and United States Comparisons:

Pennsylvania had a lower average annual age-specific poisoning death rate for children aged

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Leukemia Statistics for PA and U.S. Reviewed

Rates Increasing in Pennsylvania; No Trend Seen for U.S.

In 2004, leukemia cancers accounted for nearly 2.5 percent of all cancers diagnosed among residents of Pennsylvania and was the most common cancer diagnosed among children under 15 years old. Data for the state show that age-adjusted incidence rates for leukemia are higher among men than women, especially White men. Cases among Pennsylvania residents have also been increasing since 1990 when there were 1,266 cases for an age-adjusted rate of 9.9 per 100,000. By 2004, the number of leukemia cases (1,735) had increased by 37 percent for an age-adjusted rate of 12.2 per 100,000.

According to the American Cancer Society, leukemia is a type of cancer that starts in the soft inner part of the bones (bone marrow) and often moves quickly into the blood. It can then spread to other parts of the body such as the lymph nodes, spleen, liver, central nervous system and other organs. Leukemia can be further divided into four types: acute lymphocytic, acute myeloid, chronic lymphocytic, and chronic myeloid. Risk factors for which there are consis-

...age-adjusted incidence rates for leukemia are higher among men than women, especially White men.

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DEPARTMENT OF HEALTH

Edward G. Rendell, Governor

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Suicide Rate Remains High for 2nd Straight Year

Males, Especially Middle-Aged Whites, Have the Highest Rates

Among Pennsylvania residents, the number of deaths due to suicide and the age-adjusted rate for 2005 remained about the same as it was in 2004. During the five-year period of 2001-2005, the annual suicide rates have been higher in recent years. Also, suicide rates among males continued to be over four times higher than the rates for female residents.

In 2005, there were 1,404 suicides among residents of Pennsylvania—about the same as the 1,397 reported in 2004. The 2005 suicide rate of 11.0 per 100,000 (age-adjusted to the 2000 U.S. standard million population) was the same as the 2004 rate and was almost 9 percent higher than the 2001 rate of 10.1.

The following reviews selected statistics on suicides in Pennsylvania compared to the United States and for Pennsylvania by age, sex, race, and county.

Pennsylvania and United States Comparisons:

The latest available United States age-adjusted suicide rate (10.9 per 100,000) is for 2004. Age-adjusted rates by race and sex for Pennsylvania (2005) and the United States (2004) were similar but had some slight differences. The state rate for Whites was 11.5 compared to 12.0 for the U.S. However, the state rate for Blacks was much higher than the U.S. rate (8.1 vs. 5.3). The state rate for males was slightly higher (18.7 vs. 18.0) while the state rate for females was slightly lower (4.1 vs. 4.5).

Race and Sex:

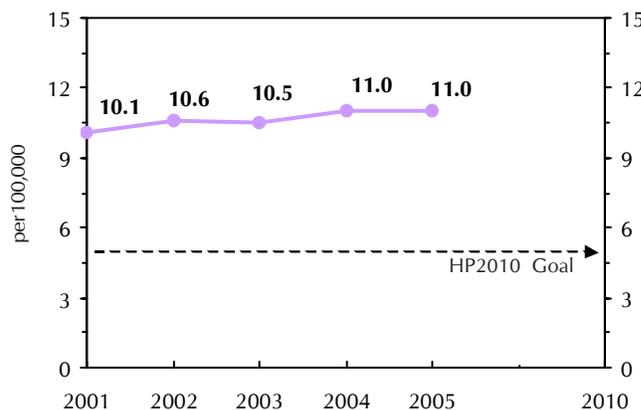
The 2005 age-adjusted death rate for suicide among White

...males accounted for 81 percent of all suicides (among residents) in 2005.

residents (11.5) was 42 percent higher than the rate for Blacks (8.1). There were 1,287 suicides for Whites in 2005, compared to 100 among Black residents.

The vast majority of suicides in Pennsylvania occurred among male residents. In 2005, the age-adjusted suicide rate among males was over four and one-half times higher than the rate for females (18.7 and 4.1, respectively). Of the 1,404 resident suicides recorded that year, 1,139 were among males. Thus, males accounted for over 81 percent of all resident suicides in 2005. Of those male suicides, 1,047 or 92 percent were among Whites (age-adjusted rate of 19.5 per 100,000) while 79 suicide deaths were among Black residents (rate of 14.5).

Age-Adjusted Suicide Rate*
Pennsylvania Residents, 2001-2005



* per 100,000 – age-adjusted to the 2000 U.S. standard million population

The method of suicide differed somewhat between males and females. For males, firearm-related suicide was the leading method, followed by suffocation, and then poisoning. Among females, poisoning ranked first, followed by firearm-related, and then suffocation.

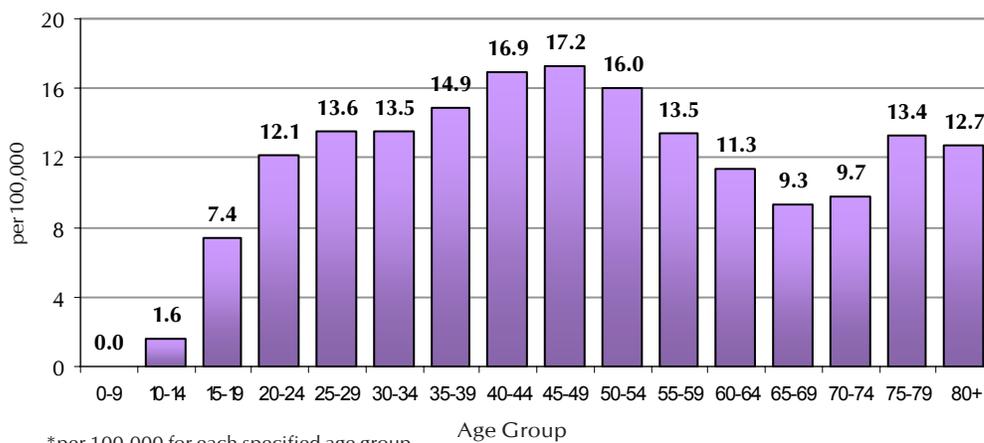
Age:

The bar chart below shows that the age-specific rates for suicide were highest among middle-aged

adults during the five-year period of 2001-2005. The age group 45-49 had the highest rate and the age group of 40-44 had the second highest rate. Combined, these two age groups accounted for 24 percent of the suicides among residents. The third highest rate, during this time period, occurred among those aged 50-54, followed by the age groups 35-39. These patterns were similar for Whites, but slightly different for

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Age-Specific Suicide Rates*
Pennsylvania Residents, 2001-2005



*per 100,000 for each specified age group

EpiQMS Enhancements and Website Updates

Additional Dataset, Features, and Updated Data Improve Online Tool; 2005 Birth Statistics Now Available

EpiQMS Enhancements:

An additional dataset has recently been added to EpiQMS, the Bureau's interactive health statistics web tool. The *sexually transmitted diseases* (STDs) dataset is now available on EpiQMS to allow for easy access by data users. The STD data are available at the state and county levels by year for 2003 through 2005.

EpiQMS (Epidemiologic Query and Mapping System) is a web tool that allows users to create customized data tables, charts, maps, and county assessments/profiles of birth, death, infant death, cancer incidence, teen pregnancy, population, adult behavioral risk factor, and now, STD statistics online.

Table and chart modules are available for the STD dataset at the state and county levels. The selected sexually transmitted diseases included on EpiQMS are:

- Chlamydia
- Gonorrhea
- Primary & secondary syphilis
- Primary syphilis (state only)
- Secondary syphilis (state only).

Enhancements to the county assessment modules now provide EpiQMS users with additional menus for the birth, death, infant death, teen pregnancies, and cancer incidence datasets. The county assessment modules allow data users to create tables that show the results of significance testing at the 95% confidence level. Through the menu selections, users are able to out-

The STD data are available at the state and county levels by year for 2003 through 2005.

put any specific county rates/ratios/percentages that are significantly higher, significantly lower, or not significantly different than the corresponding state statistic. With the additional menus, EpiQMS users now have more control over the output of detailed comparisons specific to their interests.

Additional statistics have also been added to the birth dataset based on the 2003 revisions to the Certificate of Live

Birth. Therefore, these new data items are only available for the years 2003-2005. The four new data items added are:

- Percent non-smoking mothers (3 months prior to pregnancy)
- Percent breastfeeding
- Percent WIC
- Percent Medicaid.

Three EpiQMS datasets (resident live births, infant deaths, and teen pregnancies) have also been recently updated with the latest available single year (2005) and three-year summary (2003-2005) data.

We are currently in the process of adding an additional dataset to EpiQMS for *other communicable diseases*. An

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Suicide Rate Remains High...

Blacks. Blacks had the highest suicides rates for those in the age groups of 30-34, 25-29, 20-24, and 35-39.

Method of Suicide:

Three types of suicide were most prevalent in 2005. Suicide by use of firearms (756 suicides) made up 53.8 percent of all suicides among residents. Suffocation (316) was second at 22.5 percent; and, poisoning (232) accounted for 16.5 percent.

County Suicide Rates:

During the five-year period of 2001-2005, seven counties – Bedford (rate of 17.9 based on 43

suicides), Cambria (15.4 based on 117 suicides), Lackawanna (13.4 based on 140 suicides), Luzerne (13.9 based on 221 suicides), Schuylkill (16.3 based on 125 suicides), Wayne (15.8 based on 40 suicides), and Wyoming (18.2 based on 26 suicides) – had a significantly higher age-adjusted suicide rate than the corresponding state rate (10.6 based on 6,723 suicides).

Six counties in the state – Chester (rate of 8.3 based on 192 suicides), Dauphin (rate of 8.8 based on 114 suicides), Delaware (rate of 9.3 based on 260 suicides), Lancaster (rate of 8.6 based on 208 suicides), Mont-

gomery (rate of 8.5 based on 334 suicides), and Northumberland (rate of 7.9 based on 37 suicides) – had a significantly lower rate compared to the state.

Trends:

The annual age-adjusted rates for suicides in Pennsylvania were slightly higher in recent years during the five-year period of 2001-2005. The national year 2010 objective is for an age-adjusted rate of 5.0 per 100,000. Pennsylvania is still a long way from reaching the goal, as is the United States. There also have been no obvious trends among the rates for Whites, Blacks,

males or females. However, the 2005 rates for Blacks and for males are at their highest point during the five-year period of 2001-2005.

For questions regarding the statistics presented in this article, please contact the Bureau of Health Statistics and Research at 717-783-2548. A variety of suicide statistics in the form of tables, charts, and maps for the state and all counties can be produced using our interactive web tool called EpiQMS. Access EpiQMS and various reports containing suicide statistics on the Health Statistics web pages at www.health.state.pa.us/stats.

Child Poisoning Deaths Increase in Pennsylvania

0-14 years than the United States for the five-year periods of 1990-1994 to 1998-2002. However, starting with the five-year period of 1999-2003, the rate for Pennsylvania has been higher than the U.S. (see Chart 1).

Race and Sex:

Both at the state and national level, Blacks had a higher age-specific death rate for children aged 0-14 years than Whites. Pennsylvania's age-specific death rate for poisoning (ages 0-14) among Black residents during the five-year period of 2001-2005 was 3.8 times higher than the rate for Whites (1.06 [±0.51] compared to 0.28 [±0.11]). The United States rate for Blacks during 2000-2004 (latest available) was 0.45 [±0.06], while the rate for Whites was 0.23 [±0.02] per 100,000.

For the fourth consecutive five-year period from 1998-2002 through 2001-2005, deaths among males in the 0-4 age group accounted for roughly 65 percent of all child poisoning deaths for that age group. The numbers were much more evenly split between males and females in the age groups 5-9 and 10-14.

Age:

Among children under 15, the age group 0-4 had the highest number of poisoning deaths with 38.6 percent (17 deaths) during the five-year period of 2001-2005. The age group 10-14 was a close second with 36.4 percent (16 deaths), while age group 5-9 had 25.0 percent (11 deaths) over the same time period. Nationally, the age group breakouts were slightly different than Pennsylvania's, with 48.4 percent attributed to the 0-4 age

group and 14.8 percent to the 5-9 age group. The age group 10-14 was similar to Pennsylvania with 36.8 percent during the years 2000-2004.

Accidental versus Violence-Related:

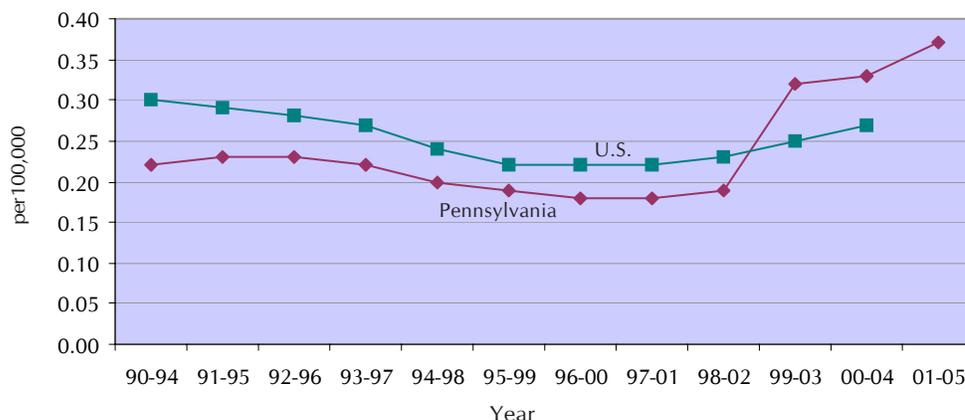
Out of the 44 child poisoning deaths in Pennsylvania during 2001-2005, seventy-five percent

(33 deaths) were accidental. Only 6 deaths (13.6 percent) were violence-related and 5 had an undetermined intent (11.4 percent). Note that violence-related deaths are intentional deaths that include homicide, suicide and legal intervention. Of the 33 accidental poisoning deaths, 22 deaths were accidental poisoning by and exposure to

other gases and vapors which include, but are not limited to, the following—carbon monoxide, tear gas, motor vehicle exhaust gas, nitrogen oxide, sulfur dioxide, utility gas. Between 2001 and 2005, 11 of the 22 deaths (50 percent) occurred in 2003 (see Chart 2).

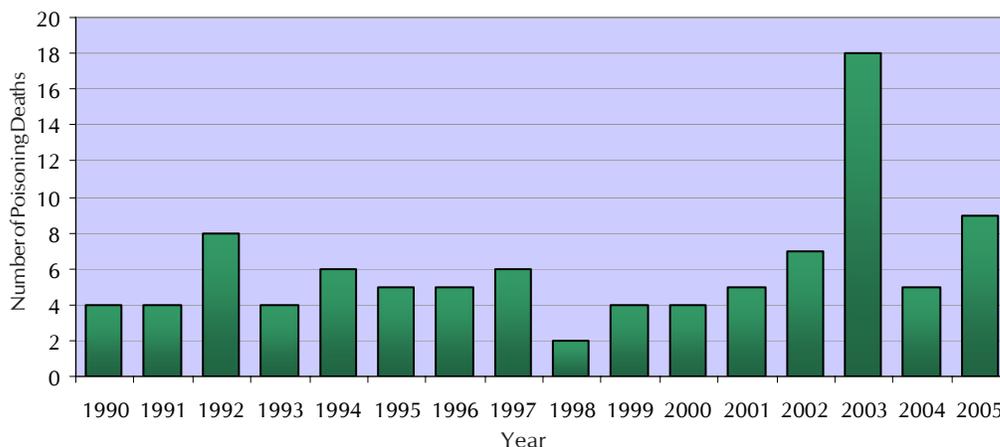
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Chart 1
Average Annual Age-Specific Poisoning Death Rates for Ages 0-14
Pennsylvania and United States
Five-Year Summary Periods of 1990-2004 Through 2001-2005



Sources: Pennsylvania rate – PA Department of Health, PA Certificates of Death
United States rate – CDC, WISQARS Injury Mortality Reports, 1981-1998 and Healthy People 2010

Chart 2
Annual Poisoning Deaths Among Children
Pennsylvania Residents (Aged 0-14 Years), 1990-2005



EpiQMS Enhancements and Website Updates

announcement will be made through our *Health e-stats* email once this new dataset is available. The selected communicable diseases planned for this dataset include:

- Campylobacter
- Giardiasis
- Hepatitis A
- Hepatitis B acute
- Hepatitis B chronic
- Lyme disease
- Salmonellosis
- Shigellosis
- Tuberculosis.

The additional data and improvements made to EpiQMS have required a lot of work and time to implement. However, we had identified them as being important for providing state-of-the-art online access to health statistics and analysis among

health data users in Pennsylvania. We hope that you find these improvements useful.

Bureau staff are available to conduct an online demonstration of EpiQMS for your office, meeting or conference as well as provide hands-on training. Please contact the Bureau at 717-783-2548 to discuss the availability of these services.

To access EpiQMS, go to the Health Statistics web pages at www.health.state.pa.us/stats and click on the EpiQMS logo.

2005 Birth Data:

A large volume and variety of data tables with 2005 birth statistics, including information for all counties and municipalities, have been added to the Bureau's Health Statistics web pages.

To access the 2005 data, go to www.health.state.pa.us/stats and click on **Vital Statistics** and then select **Birth and Death Statistics 1990-2005**.

Examples of birth data available on this website include births by age and race of mother, by sex of infant, birth weight, medical conditions, previous live births, previous preg-

nancies, trimester of entry into prenatal care for the state and all counties. Birth data tables are also available for all minor civil divisions (municipalities).

Beginning with the reporting of 2003 live births, Pennsylvania implemented the latest revision of the U.S. Standard Certificate of Live Birth. The Certificate of Live Birth has been the principal means for collecting uniform birth information across the United States since 1900. Because of this implementation, some categories on the birth dataset were added or changed from previous years.

For questions about these tables, please contact the Bureau at 717-783-2548 or via an email link from our web pages at www.health.state.pa.us/stats.

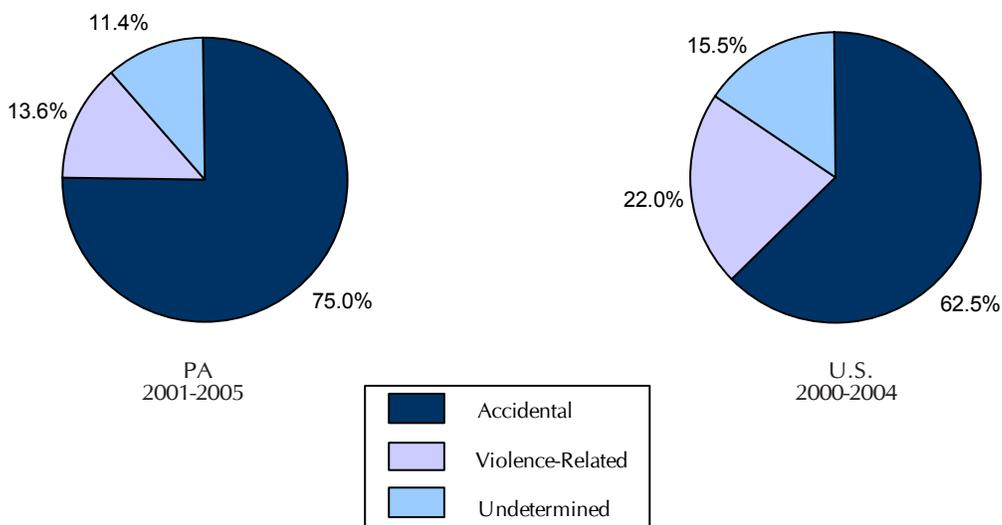
To access the 2005 (birth) data, go to www.health.state.pa.us/stats and click on **Vital Statistics** and then select **Birth and Death Statistics 1990-2005**.

Child Poisoning Deaths...

For the five-year period of 2000-2004, the United States had 805 poisoning deaths to residents aged 0-14. Of those, 62.5 percent (503 deaths) were accidental, 22.0 percent (177 deaths) were violence-related, and 15.5 percent (125 deaths) had an undetermined intent (see Chart 3).

For more statistics on poisoning deaths among Pennsylvania residents, visit the Health Statistics web pages at www.health.state.pa.us/stats/ (select EpiQMS or review the Vital Statistics report under the Vital Statistics link). For more national statistics, visit the CDC website at www.cdc.gov/ncipc/wisqars/.

Chart 3
Poisoning Deaths, Percent by Type
Pennsylvania and United States, Five-Year Summary Comparison



Leukemia Statistics for PA and U.S. Reviewed

tent and well-documented associations with leukemia include: male gender, down syndrome/ select genetic abnormalities, cigarette smoking, benzene exposure, radiation, and certain retroviruses.

Compared to the United States data from the National Cancer Institute's Surveillance, Epidemiology, and End Results Program (SEER), Pennsylvania's annual age-adjusted incidence rates for leukemia were lower from 1990 through 2002. However, during the fifteen-year period of 1990-2004, the Pennsylvania rates had increased and by 2003, the state rate surpassed the corresponding U.S. rate, as shown in Chart 3. In 2004, the state age-adjusted rate was also slightly higher than the comparable U.S. rate (12.2 per 100,000 compared to 12.0 for the U.S.).

In 2004, about 5.7 percent of the leukemias diagnosed among residents were to children under 15 years of age and nearly 80 percent were to adults 50 years of age or older. Although leukemia is mainly diagnosed among adults, it is important to note that it is the most common cancer diagnosed in children aged 0-14 years. In 2004, about 29 percent of all childhood (under 15) cancers in Pennsylvania were for leukemia.

Although leukemia is mainly diagnosed among adults... it is the most common cancer diagnosed in children aged 0-14 years.

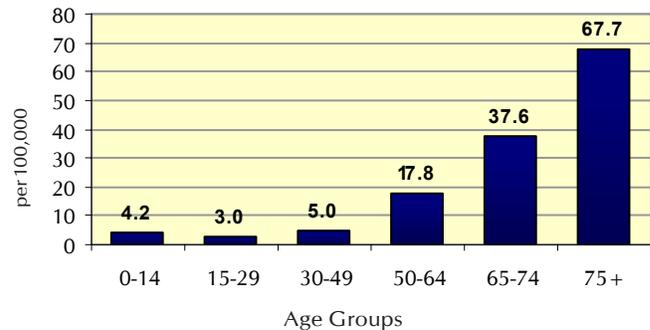
Chart 1 shows that the age-specific rate for the 0-14 age group (4.2 per 100,000) is 40 percent higher than the 15-29 age group (3.0). It also shows that the rates increase dramatically with age starting with those around 50 years old.

Men are more likely to be diagnosed with leukemia than women. During 2004, nearly 57 percent of leukemia cases were diagnosed among male residents in Pennsylvania. The age-adjusted incidence rate was 12.2 per 100,000 among men compared to 9.2 per 100,000 among women.

Incidence rates by sex for leukemia were higher among Whites compared to Black residents (Chart 2). During 2004, the age-adjusted incidence rate for White females was almost 20 percent higher than the rate for Black females. Among males, rates for Whites were nearly 23 percent higher than for Blacks.

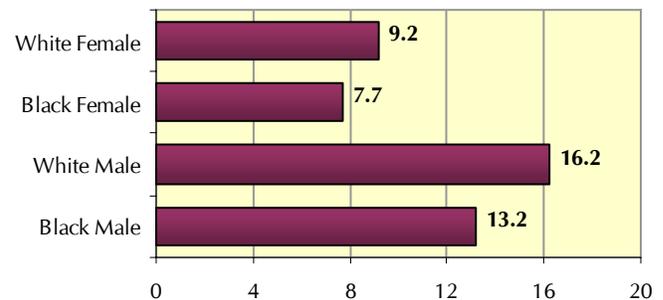
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Chart 1
Leukemia Incidence Rates* by Age Group
Pennsylvania Residents, 2004



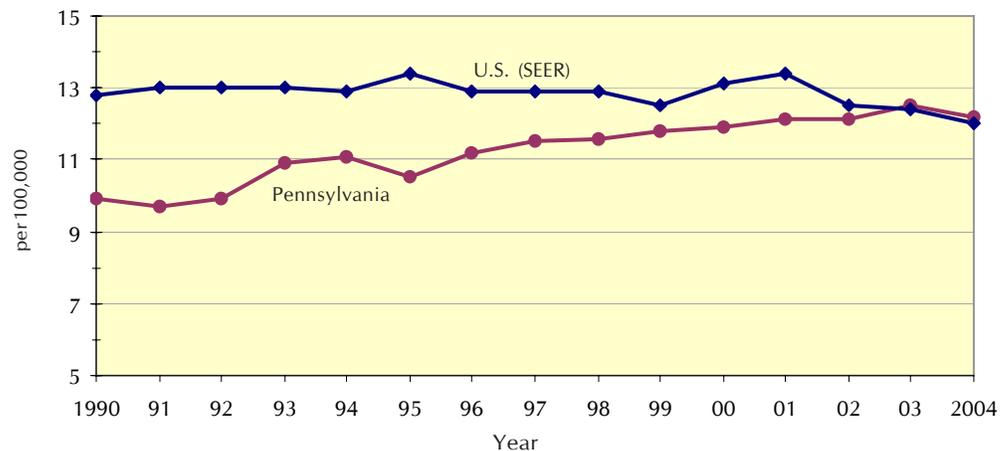
*per 100,000 for each specified age group

Chart 2
Leukemia Incidence Rates* by Race/Sex
Pennsylvania Residents, 2004



*per 100,000 – age-adjusted to the 2000 U.S. standard million population

Chart 3
Leukemia Annual Incidence Rates*
Pennsylvania and United States (SEER), 1990-2004



* Rates are per 100,000 – age-adjusted to the 2000 U.S. standard million population.

Sources: Pennsylvania rate – PA Department of Health, PA Cancer Registry

United States rate – National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) program

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 has remained high in recent years and increased very slightly from 8.2 in 2004 to 8.3 in 2005. 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 2005 (4,282 to 5,172).

All of the low birth weight percentages by race increased in 2005. However, the percentage for Hispanic residents decreased from 9.2 to 8.8. The highest annual percentages, by far, consistently occurred for births to Black mothers during the five-year period of 2001-2005. In 2005, the second highest percentage of

low birth weight infants was to Hispanic mothers (8.8), followed by Asians/Pacific Islanders (8.0) and Whites (7.3).

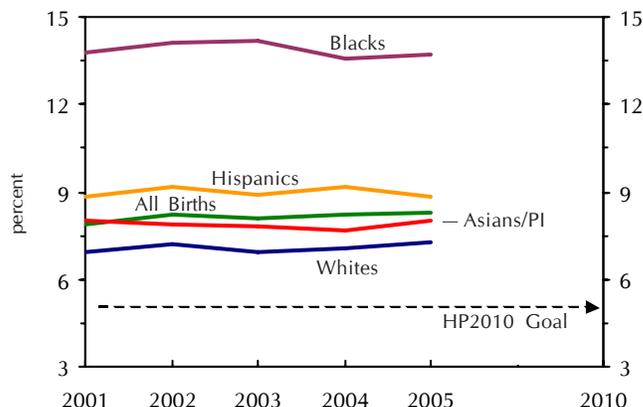
Age of Mother:

With the exception of mothers aged 30-34, the percentage of low birth weight for all other age groups increased in 2005. The percentage remained the same as recorded in 2004 for mothers in the 30-34 age category.

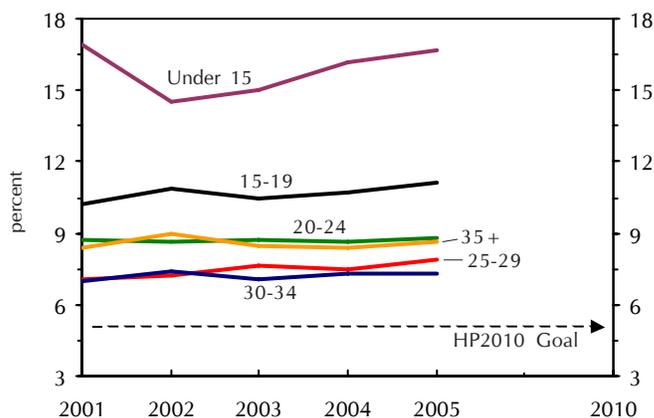
Births to the youngest (under 15 and 15-19) mothers consistently had the highest percentages of low birth weight and these percentages have been on the increase in recent years. No discernable trends were observed for mothers in the other age groups (20-24 through 35+) during the 2001-2005 period.

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 reached.

Percent Low Birth Weight By Race and Hispanic Origin* of Mother, PA Resident Live Births 2001-2005



Percent Low Birth Weight By Age of Mother Pennsylvania Resident Live Births 2001-2005



*Hispanics can be of any race

Percent Low Birth Weight By Race/Ethnicity and Age of Mother, PA Resident Live Births 2001-2005

Race/Ethnicity	2001	2002	2003	2004	2005
All Births	7.9	8.2	8.1	8.2	8.3
White	6.9	7.2	6.9	7.1	7.3
Black	13.8	14.1	14.2	13.6	13.7
Asian/Pacific Islander	8.0	7.9	7.8	7.7	8.0
Hispanic	8.8	9.2	8.9	9.2	8.8
Age	2001	2002	2003	2004	2005
Under 15	16.9	14.5	15.0	16.2	16.7
15-19	10.2	10.9	10.5	10.7	11.1
20-24	8.7	8.6	8.7	8.6	8.8
25-29	7.1	7.2	7.6	7.5	7.9
30-34	7.0	7.4	7.1	7.3	7.3
35+	8.4	9.0	8.5	8.4	8.6

NOTE: Hispanic can be of any race.

Important: Pennsylvania birth weight figures originally reported for 2004 were incorrect. All reports/tables (and EpiQMS) that contained these figures have been corrected and can be accessed at www.health.state.pa.us/stats.

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.

Leukemia Statistics...

With the exception of cases identified via death certificates, which are staged as unknown, leukemias are always staged as distant within the SEER Summary Staging classification. However, myeloid sarcomas, which are included in the leukemia category, can be staged as other than distant. It is believed that early detection is difficult since leukemia symptoms resemble those of other, less serious conditions (American Cancer Society).

The National Cancer Institute estimates that the 5-year relative overall survival rate for leukemia is 50.9 percent for diagnoses made during the period 1996-2003. However, the survival rates are quite different for certain leukemia sub-categories. The survival rate was 65.3 percent for acute lymphocytic leukemia, 74.8 percent for chronic lymphocytic, 20.7 percent for acute myeloid, and 44.4 percent for chronic myeloid leukemia.

In 2004, chronic lymphocytic leukemias accounted for 33.8 percent (587 cases) of all leukemias diagnosed among Pennsylvania residents. Acute myeloid leukemias had the second highest percentage (30.5 or 529 cases), followed by chronic myeloid leukemias (11.8 percent) and acute lymphocytic leukemias (10.4 percent). The remaining 13.5 percent of all leukemias diagnosed in 2004 were listed in the "other" leukemia category.

Additional leukemia statistics among Pennsylvania residents, including mortalities due to leukemia, can be obtained from the Health Statistics web pages at www.health.state.pa.us/stats (click on the **Cancer Incidence and Mortality** link or **EpiQMS**).

For questions about this article, please contact the Bureau of Health Statistics and Research at 717-783-2548 or via an email link from our web pages.

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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